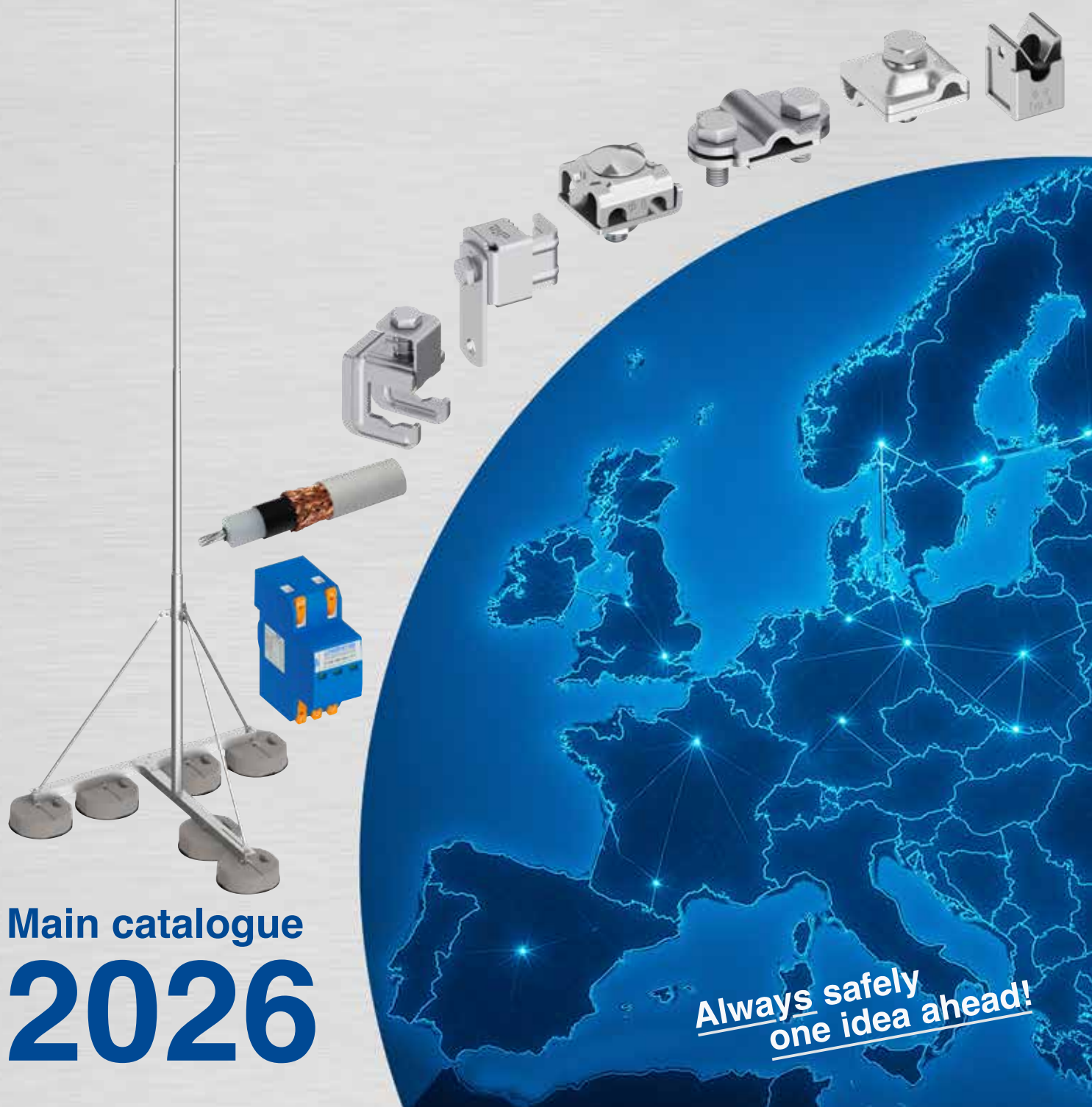


External lightning protection

Insulated lightning protection

Earthing material

Surge protection



Main catalogue
2026

*Always safely
one idea ahead!*

A strong family business - past, present and future



Humanity & emotion

shape our thinking, our actions and our company culture. A company I enjoy visiting, where I can experience the unexpected and where people listen to me.



Reliability & honesty

are among our greatest strengths. You can always rely on receiving proven, dependable quality. You can count on honest advice and reliable commitments.



Respect & trust

form the basis of our mutual appreciation. With the customer in mind, we turn problems and requests into solutions - quickly and professionally. Your contacts are specialists who actively support you in achieving your goals.



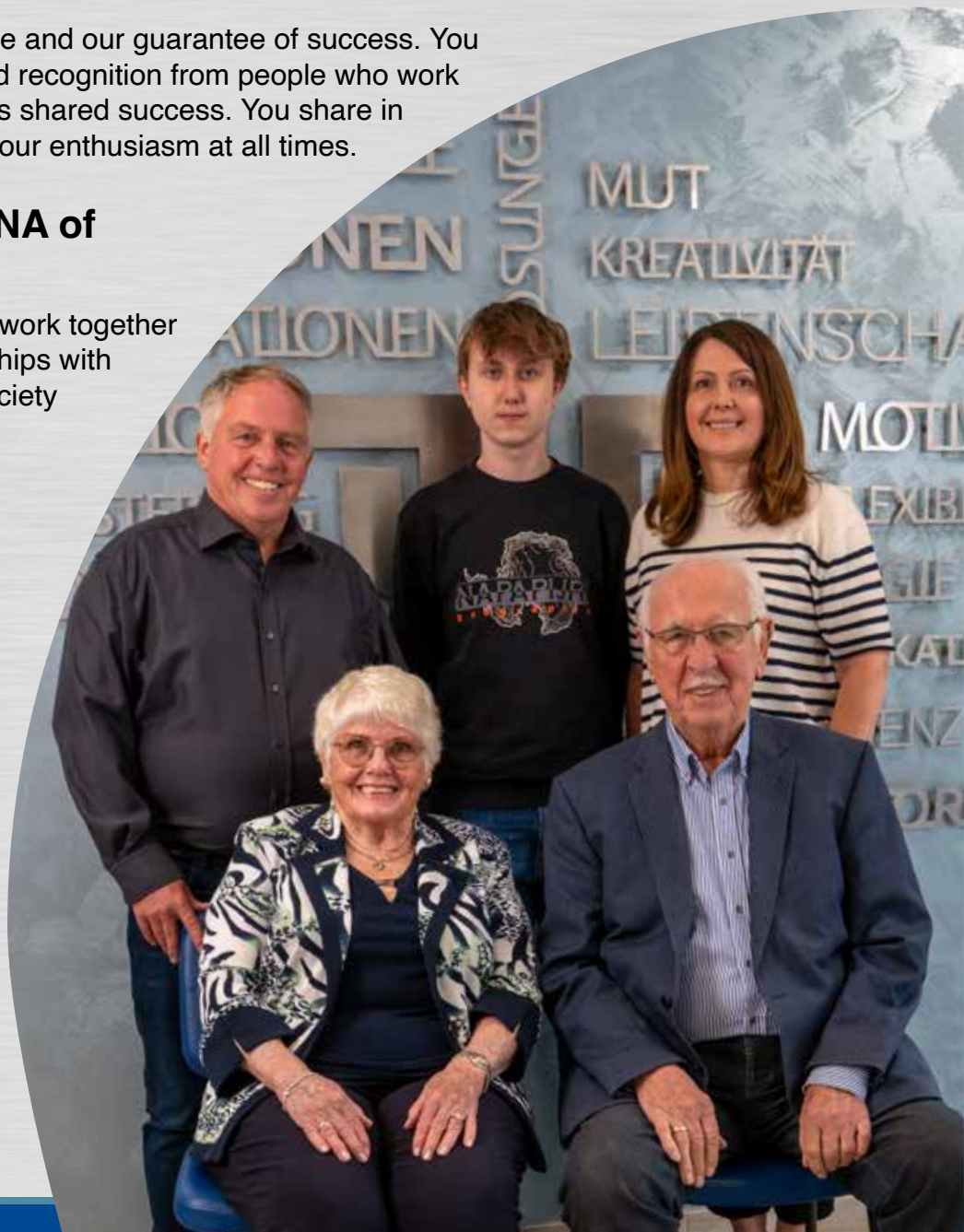
Joy & enthusiasm

are both our driving force and our guarantee of success. You receive appreciation and recognition from people who work with enthusiasm towards shared success. You share in this joy and experience our enthusiasm at all times.



Values are the DNA of our company

They guide the way we work together and shape our relationships with customers, partners, society and the environment.



Our promise

**"Always safely
one idea ahead!"**



This means more than innovation and inventiveness. It is about simplifying work, ensuring safety and delivering uncompromising quality at stable prices with reliable availability. Quality accompanies us every step of the way, from support in project planning to the delivery of cost-effective special components with reliable delivery service.

Our mission:

"With passion and expertise, we work together to develop, manufacture and market innovative and user-friendly products for trade professionals and industry that deliver real customer benefits - protecting people and structures from lightning hazards."

For over 40 years, you as our customer have been at the center of our thoughts and actions. Our free winter seminars, which are training courses and not sales events, are proof of our commitment to your success.

Our vision:

"We are an independent family business and a leading manufacturer of innovative and future-proof lightning protection components in Europe."

To secure our long-term growth and promote new developments, we have expanded our facilities in the Deining industrial area, just 3 km south of our main plant, by adding six double halls with 20,000 m² of production and storage space.

Together, we are shaping the future – safely, innovatively and with a focus on our customers.



Factory I Neumarkt



Factory II Frankenberg



Factory III Deining

Inventions and innovations in lightning protection

by J. Pröpster from 1979 - 2025.

System
Diagonal-cross clamp



System Niro-Clip
(J:PP-patent)



Trapezoidal support - 100% stainless steel 



Roof conductor holder
with clamping bracket



System
USV-clamp



Systematic introduction of
aluminium alloy components



Introduction of stainless steel
wires and tapes

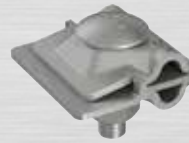


Complete product range made of
stainless steel:
clamps, pipe clamps and holders
for lightning protection
and earthing systems

Straightening-
device for tapes



System Multi Plus
(J:PP-patent)



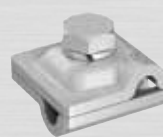
System bimetal
(J:PP-patent)



System Vario-clamp



System
Multi-clamp



Earth lead in rods
with terminal lug - insulated



Fixed earthing terminals
with different connections



1979 - 1984

Our

With passion and expertise, we work together to develop, manufacture and market innovative and user-friendly products for trade professionals and industry that deliver real customer benefits - protecting people and structures from lightning hazards.

Explanation: Our mission forms the bridge between today and the future. It shows us the way to make our vision a reality.

Universal downpipe clamp



Full range of earthing busbars and equipotential bonding bars



Öko 1-Roof conductor holder for flat roofs



Öko 2-Roof conductor holder for flat roofs (J.P.-patent)



Wedge connector with screw lock



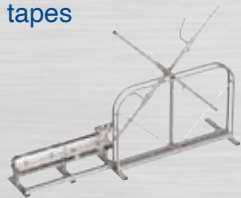
Parallel- and cross-terminal clamp



Air-termination rod as system component for the insulated lightning protection



Straightening device for round wires and tapes



Roof conductor holder - universal (J.P.-utility model)



Duo-Gutter clamp (J.P.-patent)



DIN ISO 9001 certification



Roof conductor holder (J.P.-patent)



PRÖ COLOR



1985 - 1994

Friendly

We treat others with kindness, respect each other and maintain our composure regardless of origin or language.



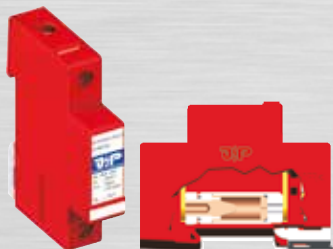
Saddle clamp
(JP-utility model)



Niro-Clip with
loose conductor leading
(JP-patent)



Lightning current arrester
P-BM, type 1 (JP-patent)



Optimal air-termination rod
ø 16 mm / ø 10 mm



Test badge for
lightning protection system



ISO-Fugal -
down conductor wire ø 8 mm



Sheet-metal terminal
clamp (JP utility patent)



Fixed earthing terminal -
System (JP-patent)



Terminal clamp, heavy-
duty type (JP-patent)



Öko 3-Roof conductor
holder for flat roofs with
stainless steel clip
(JP-patent)



Roof conductor holder with
tension springs (JP-patent)
for the roof ridge



Roof conductor holder for
Kalzip-Roofs (JP-patent)



Clamps and pipe clamps
for safe connections in
hazardous areas
(JP-patent)



Earthing kits for lightning
protection systems and
railway, bridge and tunnel
structures, approved by
the German Federal
Railway Authority (EBA)



Combined arrester
P-HMS, Type 1+2



Screwless tape
conductor holder
(JP-patent)



JP-MBF lightning
protection system
(JP-utility patent)



1995 - 2004



Respectfully

We tell the truth, act fairly,
show respect and own up to our mistakes.
This creates reliability and strong cohesion.

Connection clamp for earth rods



Roof conductor holder for RIB-ROOF 500 System (J.P.-patent)



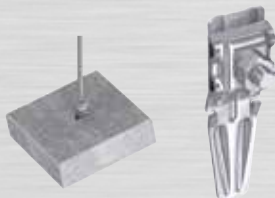
Protection against touch voltages in lightning protection systems



CC Clamp system



Concrete base with J. Pröpster wedge technology (J.P.-patent)



Telescopic insulated stand-off with tape clamp



Surge arrester for photovoltaic systems with integrated decoupling coil



Clamping piece



Air-termination rod holder for ridge tiles



Fixing system for insulated stand-offs **16plus+**



Connecting clamp (J.P. utility patent)



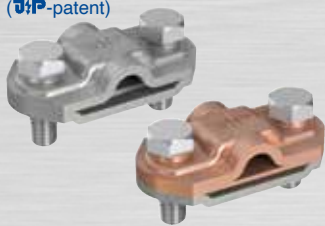
2005 - 2009

Interested

We ask questions, discover new things and learn something new every day.



System Vario-clamp - M8-Plus with cylindrical collar
(J.P.-patent)



Support tool for concrete base with wedge



Connection set for safety rope systems



Connection clamp



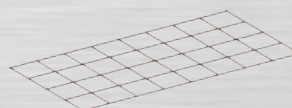
Niro-Clip conductor fastener - high version -



Quick connector



Protection measures against step voltages



Disconnection clamp with terminal angle



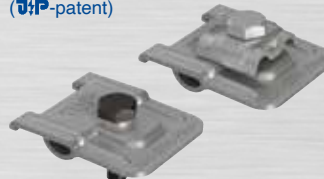
PröCu/Al-wire



k_c-clamp (J.P.-patent)



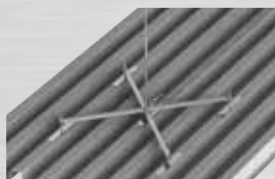
Multi-flat/round connecting clamp
(J.P.-patent)



Parallel saddle clamp



Air-termination rod system for metal / tin roofs
(J.P. utility patent)



Fixed earthing terminal with foam cover



ES reinforcement clamp
(J.P.-patent)



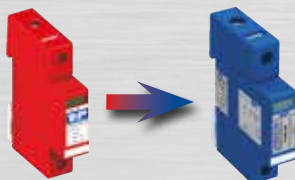
Protective cap for earthing conductors



Conductor fastener for metal / tin roofs



A change of colour for all our surge protection devices from red to blue, our company colour



Surge protection device for energy technology and photovoltaic systems



2010 - 2014



Solution-oriented

We recognize changes in good time, act flexibly and develop suitable solutions.

Connection clamp with clamping bracket and spring



Mounting aid for connection clamps



Manual straightening tool - light and heavy version



Surge arrester MOV + GDT



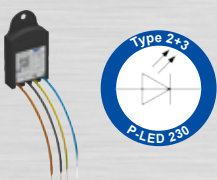
Air-termination pole stand with 2-piece pole base frame



Equipotential bonding bar with metal cover (J:P utility patent)



Surge arrester P-LED 230



Adjustable test joint box



Multi-Quattro connecting and terminal clamp (J:P-patent)



Roof inclination adjustment of base frames



Telescopic air-termination pole, free-standing, aluminium



Heavy connecting - disconnecting clamp (J:P-patent)



Attic saddle clamp



Diagonal - swiveling cross connecting clamp



Surge arrester for high-frequency signal circuits



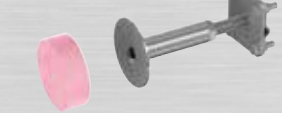
Air-termination rod stainless steel/aluminium with angle-base frame stainless steel for concrete base



Multi-Mini saddle clamp



New fixed earthing terminal system



Connecting clamp - small



Quick connector for reinforcements up to $\varnothing$ 16 mm



2015 - 2016

Passionate

We work with joy and enthusiasm. This creates appreciation, motivation and mutual success.



Air-termination rod-SET
insulated GRP/
stainless steel/aluminium



HVC-protected

High voltage resistant
conductor HVC-85



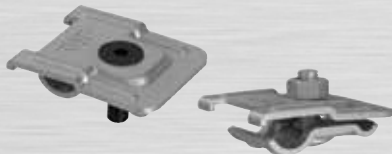
Conductor fastener and
air-termination poles
for HVC-85 conductor



Multi-Plus saddle clamp



Multi-flat/round
connecting clamp
(J.P.-patent)



Air-termination rod holder
for ridge tiles (J.P.-patent)



Multi-Max reinforcement clamp
50 x 50 mm and 75 x 75 mm



RS-Telescopic-air-
termination-pole insulated,
free-standing



Terminal clamp "Perfect"
heavy-duty type (J.P.-patent)



Connecting clamp
for flat 40 mm



Combined arrester
P-HF BOX



HVC-protected

High voltage resistant
conductor HVC-50



Conductor fasteners and
air-termination poles
for HVC-50 conductor



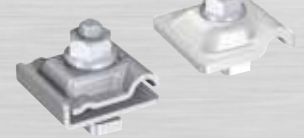
Saddle clamp "Flex"



Smart connector for
earth rod



PV-Connector



HVC-protected

Conductor fastener for
exterior air-termination
installation of the HVC-
conductor



HVC-protected

Beam clip for
HVC-50 and HVC-85



2017 - 2020



Responsible

We act sustainably, invest in energy-saving measures and
use resources consciously.

"Germany's
innovation leader"
2021



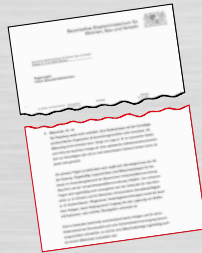
"Top 100"
Top-Innovator
2022



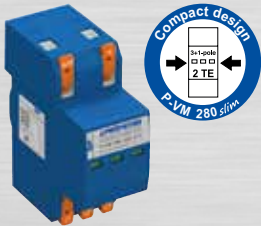
"Germany's
innovation leader"
2022



Lightning
Protection –
Implementation
Guidelines for
Article 44 of the
Bavarian Building
Code



Surge arrester type
P-VM 280 slim



HVC-protected
Roof conductor holder
for standing seam roofs



Roof conductor holder
for interlocking tiles



Connection clamp max



Disconnecting clamp



Air-termination pole
with flange plate



HVC-protected
Insulation test for
HVC-50 and HVC-85



Air-termination pole systems
for HVC-50 and HVC-85



Earthing pipe clamp for
Air-termination rod/
Air-termination tip



HVC-protected
Divisible base piece for
insulation testing of the
HVC-conductor (J/P-patent)



Rope safeguarding clamp
(J/P-utility model)



2021 - 2022

Team-oriented

For us, teamwork means
finding solutions together,
sharing responsibility and
celebrating successes together.



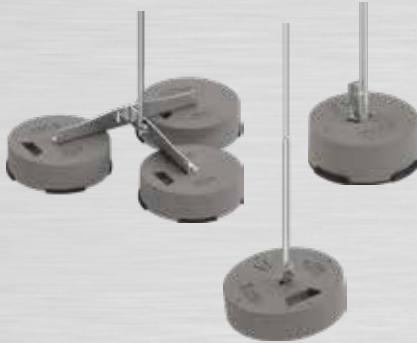
Fixed earthing terminal with plastic cover including connection cable and connection clamp



Surge arrester P-HM 280



Conversion of all concrete bases - new design, proven technology!



Roof conductor holder for RIB-ROOF 465



"Germany's innovation leader" 2023



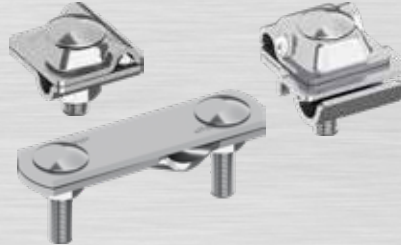
"Fastest-Growing Mid-Sized Companies" 2024



Vario-clamp with welded threaded stud



Proven components in stainless steel V4A



"Germany's innovation leader" 2024



"Employer of the future" 2024



Earth rod connection clamp



Slide chart



"Highest Quality" 2024



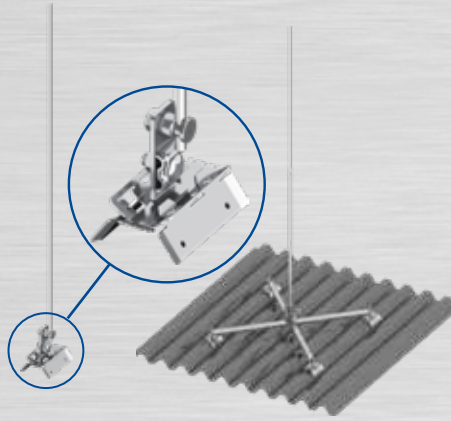
2023 - 2024



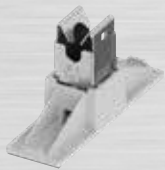
Reliability

Our statements are clear, our commitments binding.
We keep our promises.

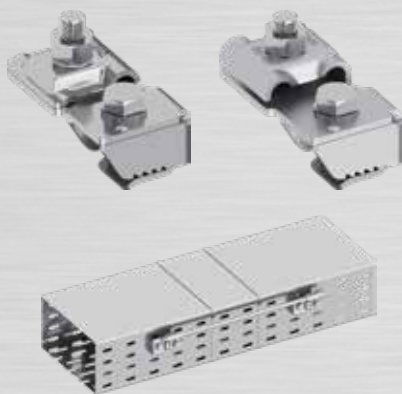
Air-termination rod holder for trapezoidal roof (J.P.-patent)



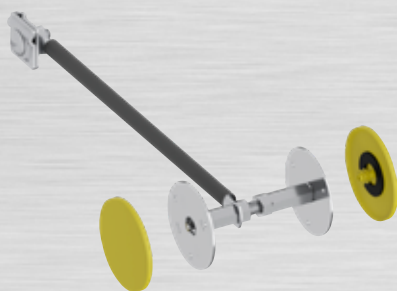
Roof conductor fastener for trapeze roofs



Cable tray clamp



Fixed earthing terminal/Wall bushing



Square downpipe clamp



"Employer of the Future" 2025



Corrosion protection box



"Fastest-Growing Mid-Sized Companies" 2025



"Innovation Champions" 2025



"Highest Quality" 2025



Test laboratory with impulse current generator 200 kA (10/350 μ s)

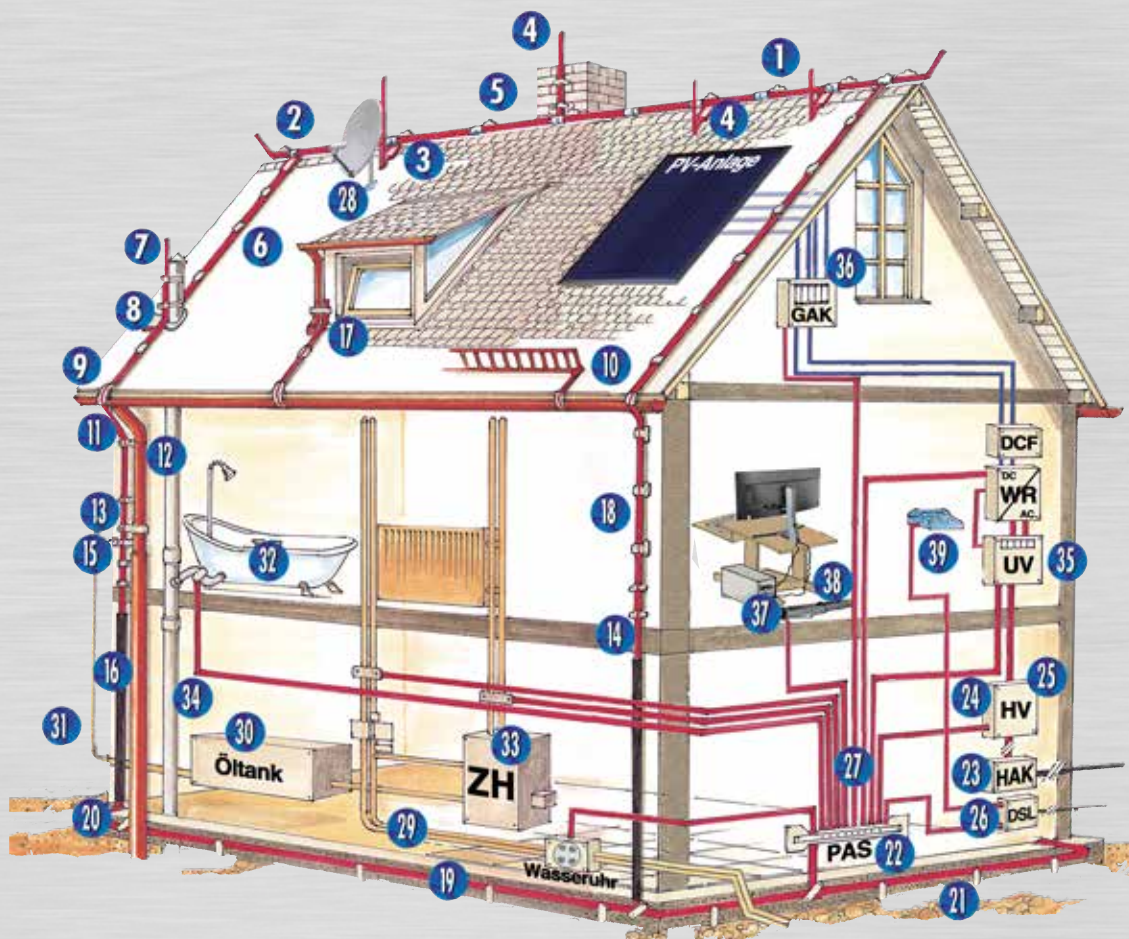


2025

Our

We are an independent family-owned company and leading manufacturer of innovative and future-proof lightning protection components in Europe.

Explanation: This vision is a compelling picture of a shared future in which every employee understands their important role and is productive and fulfilled every day.



External lightning protection system

- 1 Roof conductor holder for ridge tiles
- 2 Multi-clamp
- 3 Air-termination rod with insulated stand-off
- 4 Air-termination rod
- 5 Rod holder
- 6 Roof conductor holder
- 7 Pipe clamp
- 8 KS clamp
- 9 Gutter clamp
- 10 Snow guard clamp
- 11 Wall conductor holder
- 12 Downpipe conductor fastener
- 13 Isolating spark gap
- 14 Disconnecting clamp flat/round
- 15 Tape conductor holder
- 16 Insulation
- 17 Saddle clamp
- 18 Down conductor
- 19 Earth electrode
- 20 Diagonal-cross clamp
- 21 Spacer for conductor

Internal lightning protection system

- 22 Main earthing terminal
- 23 House connection box
- 24 Main distribution board
- 25 Combined lightning current and surge arrester
- 26 Surge arrester for telecommunication
- 27 Equipotential bonding conductor
- 28 Antenna grounding / coax protection
- 29 Water supply
- 30 Oil tank
- 31 Oil tank ventilation
- 32 Bathtub
- 33 Heating system
- 34 Wastewater pipe
- 35 Surge arrester
- 36 Surge arrester for photovoltaic systems
- 37 Surge arrester for data networks
- 38 Surge arrester type 3
- 39 Telephone system

For further information on lightning protection, please also refer to our special brochures:



Isolated lightning protection



HVC - High-voltage-resistant insulated conductor



Earthing kits with German railway approval

Table of contents - Main catalogue 2026

Wires, Tapes, Cables	Page 17-20	Round wires, tapes, cables
Air-termination systems	Page 21-44	Air-termination systems
Wall and roof conductor holders Niro-Clip · Conductor fastener · Pipe clamps · Roof conductor holder	Page 45-66	Wall and roof conductor holders
PRÖCOLOR & Colour Design in Lightning Protection Roof conductor holder in PRÖCOLOR · powder-coated components	Page 67-70	Colour design in lightning protection
Connection clamps, terminal clamps Gutter clamps · System Multi-clamp · Disconnecting clamps · Connectors · System Vario-clamp · Saddle clamps · System bimetal · bridging components · Pipe clamps	Page 71-94	Connection and terminal clamps
Earthing material Earth lead-in rods · Connection clamps · Earth rods · Tubular earth rods · Fixed earthing terminals	Page 95-122	Earthing material
Equipotential bonding systems Bonding bars · Earthing busbars	Page 123-126	Equipotential bonding
Insulated lightning protection Insulated lightning protection air-termination poles · Insulated stand-offs	Page 127-138	Insulated lightning protection
HVC - high voltage conductor HVC-50 conductor · HVC-85 conductor · Air-termination poles for HVC · Conductor fastener for HVC · Equipotential bonding · Accessories	Page 139-164	HVC-conductor
Accessories Straightening device for wires and tapes · Bolts and nuts · Earth tester	Page 165-170	Accessories
Surge protection Power supply · photovoltaic systems · measurement and control technology · information technology · accessories	Page 171-193	Surge protection

Lightning Protection is Preventive Fire Protection

Lightning protection is an essential part of modern safety and fire protection concepts. Lightning strikes and surge impulses can cause fires, damage building structures and impair or destroy electrical and safety-related systems. An effective lightning protection system reliably protects people, buildings and technical infrastructure against these hazards. The objective is not only to protect the building structure itself, but also to prevent dangerous sparking, ensure system availability and safeguard sensitive electrical and electronic equipment.

A complete system in accordance with EN IEC 62305 combines:

- Earthing system
- External lightning protection
- Internal lightning protection with surge protection measures

Technical Information & Compliance

Made in Germany – Engineered for Generations

For more than 45 years, J. Pröpster has developed high-quality components for professional lightning protection systems — designed for durability, corrosion resistance and reliable operation under demanding conditions.

Our product range includes components made from:

- Stainless steel
- Aluminium
- Copper
- Hot-dip galvanised steel

These components are used in industrial facilities, infrastructure projects, commercial buildings and sensitive structures.

All products are developed in accordance with relevant IEC, EN and VDE standards and supported by decades of practical experience and technical expertise.

Our specialists support planners and installers worldwide with application advice and customised system solutions.

Important note:

Information regarding the possible applications of our products is provided solely as product-related guidance. It is based on many years of experience and given to the best of our knowledge. However, operating and installation conditions may vary considerably and are beyond our control.

The suitability of the selected products for the respective application must be verified by the user. The use, installation and processing of the products are carried out beyond our control and therefore remain solely the responsibility of the user.

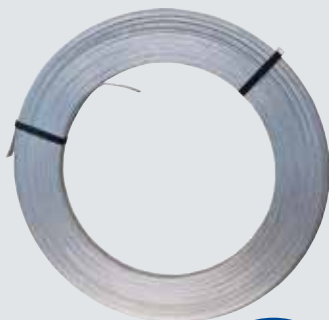
Round wires, tapes, cables



Conductors for lightning protection and earthing systems

- Different materials.
- Available in various dimensions

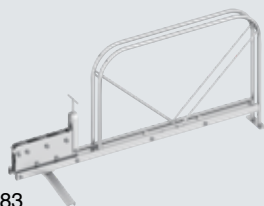
Tapes



Ord. no. 100 336



Straightening tool for tapes



Ord. no. 111 083

Cables



Ord. no. 100 038



Sign and protective cap



Ord. no. 102 220



Ord. no. 102 219

Tapes according to EN IEC 62561-2.

Specification		Size	Weight/m	PU	Ord. no.
Steel, hot galvanized	Z 500	30 x 3.5 mm	0.83 kg	50 kg	100 336
Steel, hot galvanized	Z 500	30 x 3.5 mm	0.83 kg	25 kg	100 336 k
Steel, hot galvanized	Z 500	30 x 4.0 mm	0.96 kg	50 kg	113 231
Steel, hot galvanized	Z 500	40 x 4.0 mm	1.28 kg	50 kg	100 440
Steel, hot galvanized	Z 500	40 x 5.0 mm	1.60 kg	50 kg	100 540
Steel, hot galvanized	Z 500	20 x 2.5 mm	0.40 kg	50 kg	100 225
Steel, hot galvanized	Z 500	50 x 4.0 mm	1.57 kg	50 kg	100 542
E-copper	medium	20 x 2.5 mm	0.45 kg	100 kg	100 118
Stainless steel V2A 1.4301		30 x 3.5 mm	0.83 kg	50 kg	100 114
Stainless steel V2A 1.4301		30 x 3.5 mm	0.83 kg	25 kg	100 114 k
Stainless steel V4A (e. g. 1.4571)		30 x 3.5 mm	0.83 kg	50 kg	100 112
Stainless steel V4A (e. g. 1.4571)		30 x 3.5 mm	0.83 kg	25 kg	100 112 k
Stainless steel V4A (e. g. 1.4571)		40 x 4.0 mm	1.26 kg	50 kg	100 115
Stainless steel V4A (e. g. 1.4571)		40 x 5.0 mm	1.60 kg	50 kg	100 116

Straightened and/or perforated tapes on request (customized perforation pattern).

Earthing components, like connection clamps, fixed earthing terminals, etc. on page 95.

Application example for upright installation of flat tape in foundation areas

Ord. no. 1319, 1321 or 1321 S on page 107.

Straightening tool for tapes with 5 levelling rolls, for tapes 30 x 3.5 mm

Technical data	Processing of	PU	Ord. no.
Weight: 23 kg	Earthing tape	1	111 083
Length: 1390 mm	Steel, hot galvanized		
Height: 670 mm	Earthing tape		
Width: 120 mm, (base can be swivelled in)	Stainless steel V2A		
Very easy handling, time saving due to clean, effortless and quick installation of earthing tapes.			

Cables according to EN IEC 62561-2.

Specification		Fit	Cross section	Weight/m	PU	Ord. no.
Aldrey cable		ø 9.1 mm	50 mm ²	0.135 kg	run.m.	100 058
E-copper	bare	ø 9 mm	50 mm ²	0.438 kg	run.m.	100 033
E-copper	bare	ø 10.5 mm	70 mm ²	0.597 kg	run.m.	100 034
E-copper	bare	ø 12.5 mm	95 mm ²	0.846 kg	run.m.	100 035
E-copper	bare	ø 14.6 mm	120 mm ²	1.061 kg	run.m.	100 036
E-copper	tinned	ø 9 mm	50 mm ²	0.438 kg	run.m.	100 037
E-copper	tinned	ø 10.5 mm	70 mm ²	0.597 kg	run.m.	100 038
E-copper	tinned	ø 12.5 mm	95 mm ²	0.846 kg	run.m.	100 039
E-copper	tinned	ø 14.6 mm	120 mm ²	1.061 kg	run.m.	100 040
NYY-I underground cable E-copper 1 kV			50 mm ²	0.615 kg	run.m.	100 043

Suitable connecting clamps on page 96.

Cables for equipotential bonding.

Specification	Outer diameter	Cross section	Weight/m	PU	Ord. no.
Steel, hot galvanized	ø 10 mm	38 mm ²	0.380 kg	run.m.	100 030
Stainless steel V4A 1.4401	ø 8 mm	32 mm ²	0.250 kg	run.m.	100 041
Stainless steel V4A 1.4401	ø 10 mm	42 mm ²	0.380 kg	run.m.	100 042

Conductor holder for cables on page 49.

Sign "ACHTUNG! Blitzschutz/Erdung" and Protective cap for terminal lugs.

Specification	Length	Fit	PU	Ord. no.
Signpost PVC (printed on both sides)	200 x 50 mm	up to ø 10 mm or up to flat 40 x 4 mm	10	102 220
On request, also with your company logo and translated text. Price on request.				
Protective cap plastic yellow		ø 10 mm or flat 30 x 3.5 mm	50	102 219

Round wires according to EN IEC 62561-2.

Specification		Size	Weight/m	PU	Ord. no.
Steel, hot galvanized	Z 350	ø 8 mm	0.40 kg	40 kg	100 008
Steel, hot galvanized	Z 350	ø 10 mm	0.62 kg	50 kg	100 010
Aluminium AlMgSi 0.5	medium F 15	ø 8 mm	0.135 kg	20 kg	100 018
Aluminium AlMgSi 0.5	soft F 9	ø 8 mm	0.135 kg	20 kg	100 019
Aluminium AlMgSi 0.5	soft F 9	ø 8 mm	0.135 kg	run.m.	100 019 S
- colour powder coated (*)					
Aluminium	soft F 6	ø 10 mm	0.212 kg	20 kg	100 020
E-copper	medium F 25	ø 8 mm	0.45 kg	50 kg	100 028
E-copper	soft F 22	ø 8 mm	0.45 kg	50 kg	100 029
E-copper	soft F 22	ø 8 mm	0.45 kg	25 kg	100 029 k
Stainless steel V2A 1.4301		ø 8 mm	0.40 kg	~ 40 kg	100 011
Stainless steel V2A 1.4301		ø 10 mm	0.62 kg	~ 50 kg	100 012
Stainless steel V4A		ø 8 mm	0.40 kg	~ 40 kg	100 014
Stainless steel V4A		ø 10 mm	0.62 kg	~ 50 kg	100 015
Steel with PVC coating		ø 10 / ø 13 mm	0.68 kg	50 kg	100 013
Steel with PVC coating		ø 8 / ø 11 mm	0.44 kg	50 kg	100 121

(*) Colour scale for **aluminium wire, powder-coated**, see page 69, or in colours specified by the customer

ISO - Fugal down conductor wire according to EN IEC 62561-2.

Specification	Size	Weight/m	PU	Ord. no.
Aluminium alloy AlMgSi 0.5 with halogen-free plastic coating	ø 8 / ø 11 mm	0.20 kg	run.m.	100 123

Round wire made of aluminium with copper coating

Specification		Size	Weight/m	PU	Ord. no.
Aluminium core with copper coating (Al/Cu)	soft	ø 8 mm	0.18 kg	run.m.	100 022

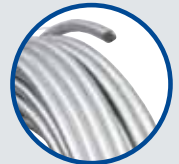
Universal straightening tool, (2-part) with vertical reel-off unit, to be used for round wire ø 8 - 10 mm and for earthing tapes 30 x 3.5 mm.

Specification	Processing of	PU	Ord. no.
Technical data:	round wire Aluminium	1	111 082
Weight: 47 kg	round wire Copper		
Straightening device (as described on page 166)	Earthing tape		
Vertical reel-off unit, adjustable to different ring diameters.	Steel, hot galvanized		
Uncoiling of earthing tapes also possible.	Earthing tape		
	Stainless steel V2A		

Round wire



Ord. no. 100 010



ISO - Fugal down conductor wire



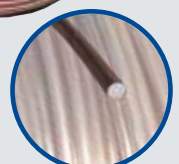
Ord. no. 100 123



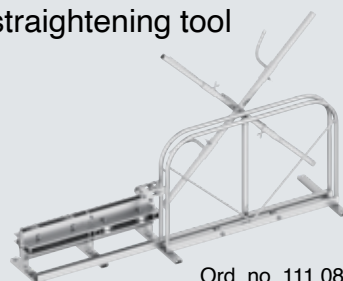
Round wire PröCu/Al



Ord. no. 100 022



Universal straightening tool



Ord. no. 111 082

Special components

Our long experience in the construction, development and manufacturing of lightning protection components, surge protection devices and earthing material has shown us that some lightning protection systems cannot be perfected using only the parts offered on the market.

That is why we find solutions, from development to the finished product, for lightning protection components that meet your requirements—in small and large series with state-of-the-art technology in



- Stainless steel V2A and V4A
- Copper
- Steel
- Aluminium



Special air-termination rods & holders in stainless steel and GRP



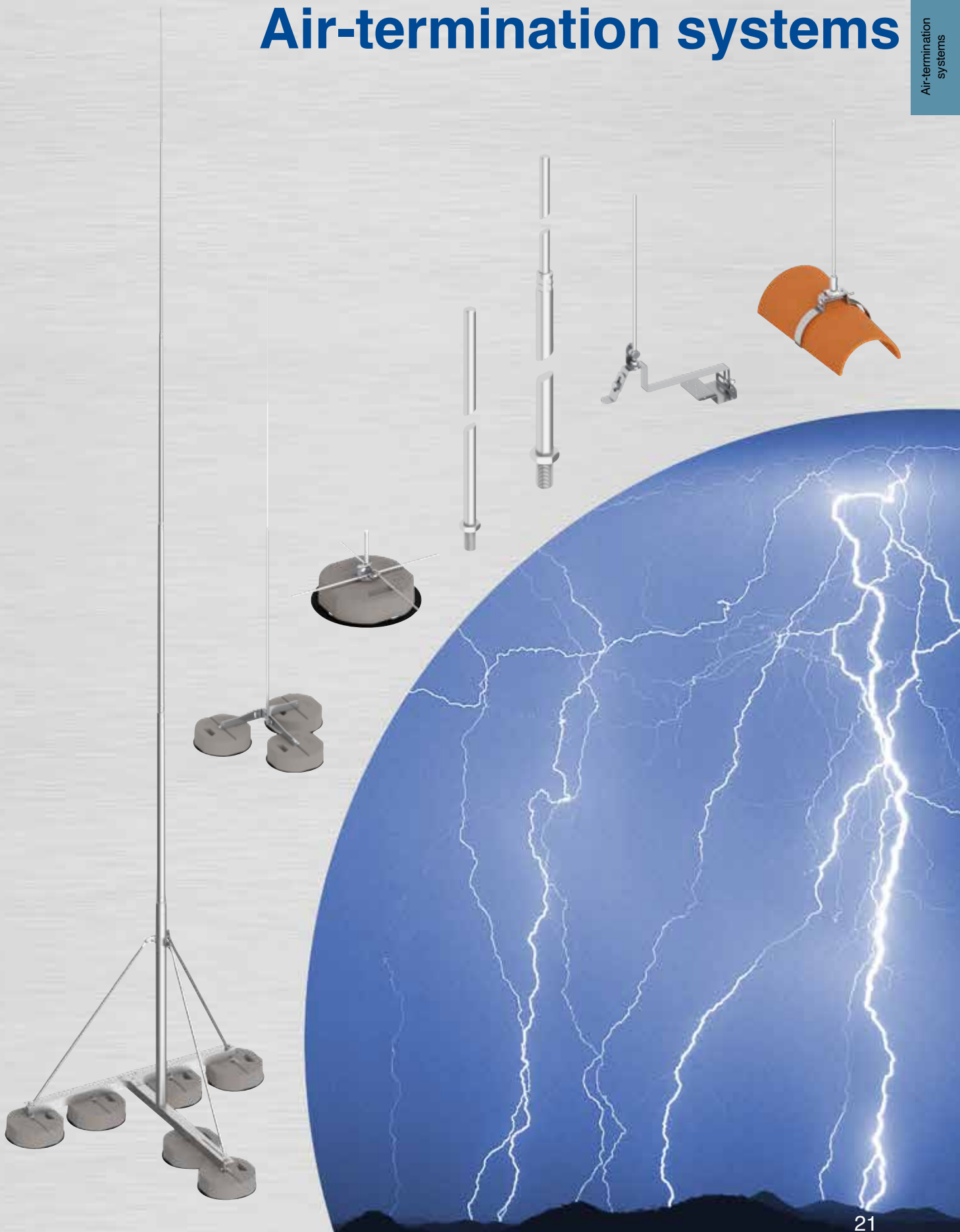
Special mounting system in stainless steel for air-termination rods

Catenary wire systems



Air-termination systems

Air-termination
systems



Selection guide for air-termination rods with a height of 1.5 - 3.5 m

	Height	Wind Zone (WZ)	Concrete base Ord. no.	Support plate Ord. no.	Air-termination rod Ord. no.	Max. wind speed		SET-No.
						Static safety factor 1.0	Static safety factor 1.5	
Air-termination systems	1.5 m	WZ 1	103 103 1x 12 kg (ø 335 mm)	103 102	103 111	175 km/h	143 km/h	912 075
		WZ 2	103 103 1x 12 kg (ø 335 mm)	103 102	103 111	175 km/h	143 km/h	
		WZ 2	103 192 1x 12 kg (wedge connection ø 335 mm)	103 102	103 180	174 km/h	142 km/h	912 085
		WZ 2	103 191 1x 16 kg (wedge connection ø 335 mm)	103 102	103 180	201 km/h	164 km/h	912 082
		WZ 3	103 101 1x 16 kg (ø 335 mm)	103 102	103 111	202 km/h	165 km/h	912 075 S
	2.0 m	WZ 1	103 101 1x 16 kg (ø 335 mm)	103 102	103 112	148 km/h	120 km/h	912 077
		WZ 2	103 101 1x 16 kg (ø 335 mm)	103 102	103 112	148 km/h	120 km/h	
		WZ 2	103 191 1x 16 kg (wedge connection ø 335 mm)	103 102	103 181	148 km/h	120 km/h	912 083
		WZ 3	103 110 1x 20 kg (ø 335 mm)	103 102	103 112	163 km/h	133 km/h	912 077 S
	2.5 m	WZ 1	103 118 1x 25 kg (ø 375 mm)	103 102	103 113	145 km/h	119 km/h	912 078
		WZ 2	2x 103 101 2x 16 kg (880x335 mm)	2x 103 102	912 500	165 km/h	135 km/h	912 079 S
		WZ 3	2x 103 110 2x 20 kg (880x335 mm)	2x 103 102	912 500	182 km/h	149 km/h	912 079
	3.0 m	WZ 1	2x 103 101 2x 16 kg (880x335 mm)	2x 103 102	912 501	129 km/h	105 km/h	912 080
		WZ 2	2x 103 110 2x 20 kg (880x335 mm)	2x 103 102	912 501	147 km/h	120 km/h	912 081
		WZ 3	2x 103 118 2x 25 kg (920x375 mm)	2x 103 102	912 501	172 km/h	141 km/h	912 069
	3.5 m	WZ 1	3x 103 110 3x 20 kg (880x765 mm)	3x 103 102	912 502	144 km/h	118 km/h	912 068 S
		WZ 2	3x 103 118 3x 25 kg (920x800 mm)	3x 103 102	912 502	172 km/h	141 km/h	912 068
		WZ 3	(look at system: Air-termination pole set free-standing, Ord. no. 912 700 / page 35)					

Air-termination rods for Zone 4 on request.

For the installation of air-termination rods in Zone 4, further requirements regarding material (near to coast, material selection etc.) must be respected!

For an overview of the Wind Zone map, see page 34.

J. Pröpster Optimal air-termination rods with air-termination tip

Benefits:

- Visually attractive - optimal static designed
- Ideal coordination of protective effects and material requirements.
- Minimum surface area exposed to the wind and maximum protection.
- Reduced load pressure on roof covering and insulation.

J. Pröpster - Optimal air-termination rods without thread

for concrete base 12 kg / 16 kg with J. Pröpster - wedge technology, according to EN IEC 62561-2.

Specification	Length	PU	Ord. no.
Tube air-termination rod , tube $\varnothing$ 16 x 3 mm	1500 mm	10	103 170
with air-termination tip $\varnothing$ 10 mm, 1 m long	2000 mm	10	103 171
Material: Aluminium AlMgSi 0.5	2500 mm*)	10	103 172
	3000 mm*)	10	103 173
	4000 mm*)	10	103 174
	5000 mm*)	10	103 174 S
	6000 mm*)	10	103 168

*) only with additional, insulated stand-off (see page 132-136)

J. Pröpster - Optimal air-termination rods without thread

for concrete base 12 kg / 16 kg with J. Pröpster - wedge technology, according to EN IEC 62561-2.

Specification	Length	PU	Ord. no.
Optimal air-termination rod $\varnothing$ 16 mm	1500 mm	10	103 180
with air-termination tip $\varnothing$ 10 mm, 1 m long	2000 mm	10	103 181
Material: Aluminium AlMgSi 0.5	2500 mm*)	10	103 182
	3000 mm*)	10	103 183

*) only with additional, insulated stand-off (see page 132-136)

Optimal air-termination rods with M16 thread

according to EN IEC 62561-2

Specification	Length	PU	Ord. no.
Aluminium AlMgSi 0.5 $\varnothing$ 16 mm with M16 thread	1500 mm	10	103 111
and air-termination tip $\varnothing$ 10 mm, 1 m long	2000 mm	10	103 112
with lock nut	2500 mm*)	10	103 113
	3000 mm*)	10	103 114
	4000 mm*)	10	103 117
	5000 mm*)	10	103 128
	6000 mm*)	10	103 143

*) only with additional, insulated stand-off (see page 132-136)

Also available in a 2-piece version from 5m.

Air-termination rods with M16 thread

for flat roofs and the protection of roof installations according to EN IEC 62561-2

Specification	Length	PU	Ord. no.
Air-termination rods $\varnothing$ 16 mm made of	1000 mm	10	103 100
Aluminium AlMgSi 0.5 with M16 thread	1500 mm	10	103 150
with lock nut	2000 mm	10	103 200
	2500 mm*)	10	103 250

Additional lengths on request!

*) only with additional, insulated stand-off (see page 132-136)

Optimal air-termination rod **without** thread



Ord. no. 103 180

Ord. no. 103 170

Optimal air-termination rod **with** M16 thread



Ord. no. 103 111

Air-termination rod **with** M16 thread



Ord. no. 103 100

Air-termination rods ø 16 mm



Ord. no. 101 000

Air-termination tips ø 10 mm



Ord. no. 103 147

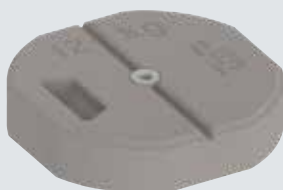


Ord. no. 103 159



Ord. no. 103 158

Concrete base with M16 female thread



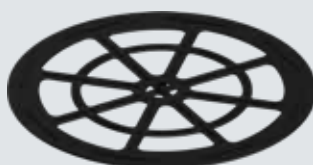
Ord. no. 103 103

Concrete base with M10 female thread



Ord. no. 103 104

Support plate



Ord. no. 103 102

Air-termination rods ø 16 mm, chamfered on both sides, according to EN IEC 62561-2.

Specification	Fit	Length	PU	Ord. no.
Steel, hot galvanized	ø 16 mm	1000 mm	10	101 000
Steel, hot galvanized	ø 16 mm	1500 mm	10	101 500
Steel, hot galvanized	ø 16 mm	2000 mm	10	101 002
E-Copper	ø 16 mm	1000 mm	10	101 005
E-Copper	ø 16 mm	1500 mm	10	101 505
Stainless steel V2A	ø 16 mm	1000 mm	10	102 005
Stainless steel V2A	ø 16 mm	1500 mm	10	102 505
Stainless steel V4A	ø 16 mm	1000 mm	10	103 137
Stainless steel V4A	ø 16 mm	1500 mm	10	910 347
Aluminium AlMgSi 0.5	ø 16 mm	1000 mm	10	102 000
Aluminium AlMgSi 0.5	ø 16 mm	1500 mm	10	102 550

Additional lengths on request. Connection clamps ø 8 - 10 mm / ø 16 mm see page 32.

Air-termination tips ø 10 mm

for flat roofs to protect roof installations, according to EN IEC 62561-2.

Specification	Length	Connection type	PU	Ord. no.
Aluminium AlMgSi 0.5	500 mm	External thread M10	10	103 147
Aluminium AlMgSi 0.5	750 mm	External thread M10	10	103 148
Aluminium AlMgSi 0.5	1000 mm	External thread M10	10	103 124
Stainless steel V2A	1000 mm	External thread M10	10	103 106

Aluminium AlMgSi 0.5	250 mm	Long nut M10	10	103 158
Aluminium AlMgSi 0.5	500 mm	Long nut M10	10	103 121
Aluminium AlMgSi 0.5	750 mm	Long nut M10	10	103 122

Aluminium AlMgSi 0.5	500 mm	ø 10 mm	10	103 154
Aluminium AlMgSi 0.5	1000 mm	ø 10 mm	10	103 159

Additional lengths on request.

Concrete base with female thread M16 for air-termination rods for flat roofs to protect roof installations.

Specification	Weight	Diameter	PU	Ord. no.
Concrete base	12 kg	ø 335 mm	1	103 103
with female thread M16 for attaching the air-termination rods	16 kg	ø 335 mm	1	103 101
	20 kg	ø 335 mm	1	103 110
	25 kg	ø 375 mm	1	103 118

The support plate for concrete base is necessary on synthetic roofing membranes.

Concrete base for air-termination tip with female thread M10 for flat roofs to protect roof installations.

Specification	Weight	Diameter	PU	Ord. no.
Concrete base with female thread M10 as socket for air-termination tips	12 kg	ø 335 mm	1	103 104
	16 kg	ø 335 mm	1	103 146

The support plate for concrete base is necessary on synthetic roofing membranes.

Support plate for round concrete bases.

Specification	Diameter	PU	Ord. no.
Support plate Plastic, black - without plasticizer Neutral to all synthetic roofing membranes	ø 390 mm	1	103 102

The support plate for concrete base is necessary on synthetic roofing membranes.

Concrete base with wedge technology

Benefits:

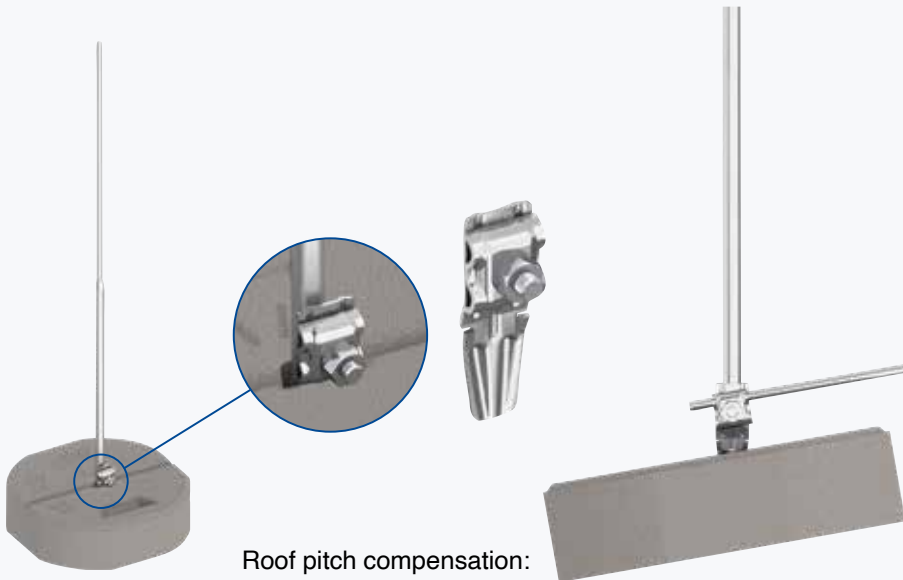
- Tilting of the air-termination rod adjustable to the roof.
- Curving the air-termination is not necessary.
- High quality: Wedge + clamp completely made of stainless steel V2A.
- Safety - class H (100 kA) tested.
- Specification: Compressed frost-proof concrete base 12 kg / 16 kg - with recessed grip.
- Installation and price benefits:
J. Pröpster - wedge technology including connection clamp for the roof conductor - all in one.

Concrete base with J. Pröpster - wedge technology,

for air-termination rods for flat roofs to protect roof installations.

Specification	Weight	Diameter	PU	Ord. no.
Concrete base with wedge connection clamp	12 kg	ø 335 mm	1	103 192
stainless steel V2A for connection ø 8 mm for air-termination rod ø 16 mm	16 kg	ø 335 mm	1	103 191

Support plate	ø 390 mm	1	103 102
Plastic, black - without plasticizer Neutral to all synthetic roofing membranes			
The support plate for concrete base is necessary on synthetic roofing membranes.			



Support tool for concrete base

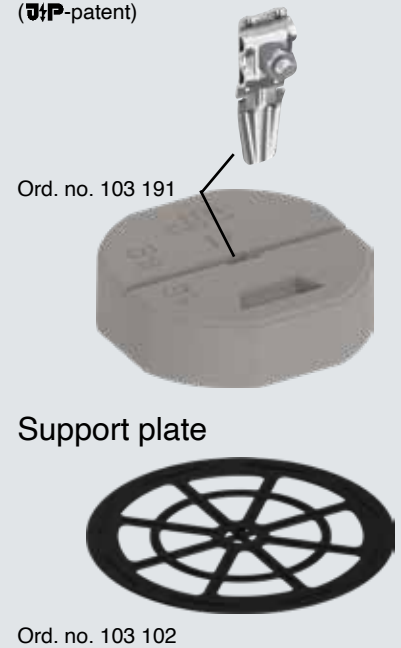
Specification	Size	PU	Ord. no.
Nylon tissue white	440 x 430 x 100 mm	1	103 189
Reinforced steel ø 12 mm (coated) with soft PVC handle ø 14 mm	for concrete base with wedge technology	1	110 240

Slide chart for easy determination of the protection areas of lightning protection air-termination systems, especially in the area of roof edges and attics. Slide chart available in German language only.

Specification	Protection class	PU	Ord. no.
Plastic, printed	I	1	103 001
Plastic, printed	II	1	103 002
Plastic, printed	III	1	103 003

Concrete base with wedge technology

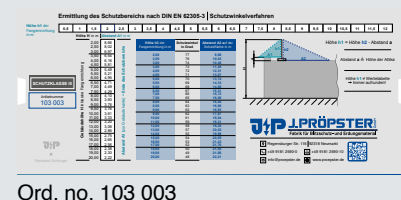
(J.P.-patent)



Support tool



Slide chart



k_C-clamp

special clamp for cross connection of conductors incl. additional air-termination rod

Benefits:

- All connection types (cross, T-, corner, parallel, end-to-end connection) and additional connection of one air-termination rod or tip with only one clamp.
- Connection of crossing points of conductor leading and one air-termination rod also without concrete base.
- Easy k_C value reduction by splitting up the current path.
- Also easy to be used in existing systems.
- Significant reduction in assembly time.

k_C-clamp (J.P.-patent)



Ord. no. 111 299

k_C-clamp with wedge technology (J.P.-patent)



Ord. no. 111 296

Concrete base for k_C-clamp with wedge technology

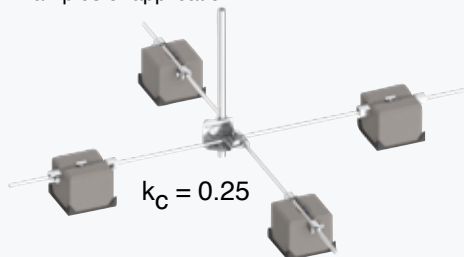
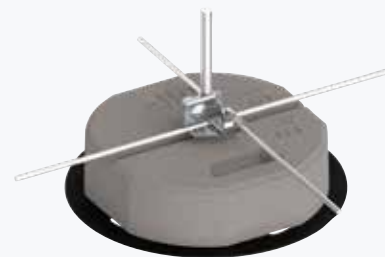


Ord. no. 103 185

k_C-clamp according to EN IEC 62561-1 class H (10/350μs)

Specification	Fit	Air-termination rod	PU	Ord. no.
Aluminium - steel, hot galvanized	ø 8 / ø 8 mm	ø 16 mm	25	111 298
Aluminium - stainless steel V2A 	ø 8 / ø 8 mm	ø 16 mm	25	111 299
Aluminium - stainless steel V2A 	ø 8 / ø 8 mm	ø 10 mm	25	111 297

Examples of application:

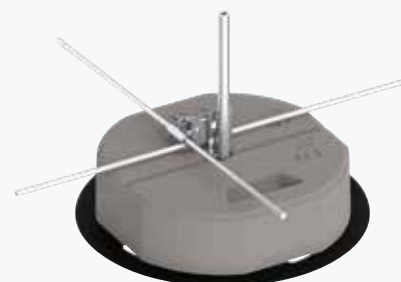


Wedge technology incl. k_C-clamp

according to EN IEC 62561-1 class H (10/350μs)

Specification	Fit	Air-termination rod	PU	Ord. no.
Aluminium - stainless steel V2A 	ø 8 / ø 8 mm	ø 16 mm	25	111 296

Detail drawing of wedge fixing:



Concrete base for k_C-clamp

Specification	Weight	Diameter	PU	Ord. no.
Concrete base round	12 kg	ø 335 mm	1	103 186
for k _C -clamp with wedge fixing	16 kg	ø 335 mm	1	103 185

Support plate;

Plastic, black - without plasticizer

Neutral to all synthetic roofing membranes

The support plate for concrete base is necessary on synthetic roofing membranes.

ø 390 mm

1

103 102

Air-termination rod holders for ridge tiles

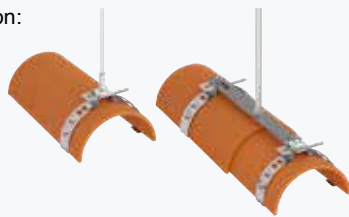
Benefits:

- Large range for ridge tiles with a width of 150 - 300 mm.
- Fast and simple tool-free rough adjustment of the required clamping area by means of two symmetric clamping bracket with self-retaining locking catches.
- Direct lightning-current capable connection of the ridge/down-conductor on the air-termination rod holder.

Air-termination rod system with a width of 150 - 300 mm, according to EN IEC 62561-2.

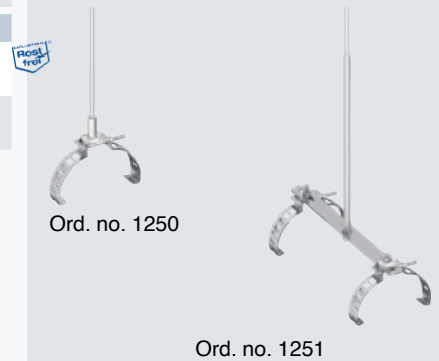
Specification	Length	PU	Ord. no.
1 holder, stainless steel V2A and air-termination rod, aluminium ø 10 mm	1050 mm	1	1250
2 holders with connection rail, stainless steel V2A and air-termination rod, aluminium ø 16/10 mm	1500 mm	1	1251

Example of application:



Note:
Pay attention that each ridge tile is screw-fastened to the roof!

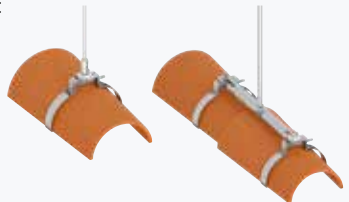
Air-termination rod (J.P.-patent)



Air-termination rod system for ridge tiles (size 200 - 220 mm) according to EN IEC 62561-2.

Specification	Length	PU	Ord. no.
1 holder, stainless steel V2A and air-termination rod, aluminium ø 10 mm	1050 mm	1	1255
2 holders, stainless steel V2A and air-termination rod, aluminium ø 16/10 mm	1350 mm	1	1255 S2

Additional lengths on request!
Example of application:



Note:
Pay attention that each ridge tile is screw-fastened to the roof!

Air-termination rod



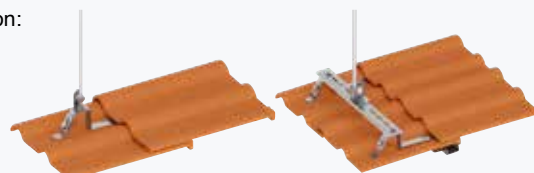
Air-termination rods for all common types of roof tiles

Infinitely adjustable to fit the tile, according to EN IEC 62561-2.

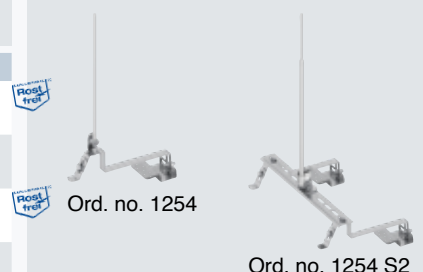
Specification	Length	PU	Ord. no.
1x holder, stainless steel V2A - with air-termination rod aluminium ø 10 mm	1000 mm	1	1254
2x holders with connection bar, stainless steel V2A - with air-termination rod aluminium ø 16/10 mm	1500 mm	1	1254 S2
1x holder, stainless steel V2A - without air-termination rod	-	1	1254 S1
2x holders with connection bar, stainless steel V2A - without air-termination rod	-	1	1254 S3

On request also available in desired RAL-colour.

Example of application:



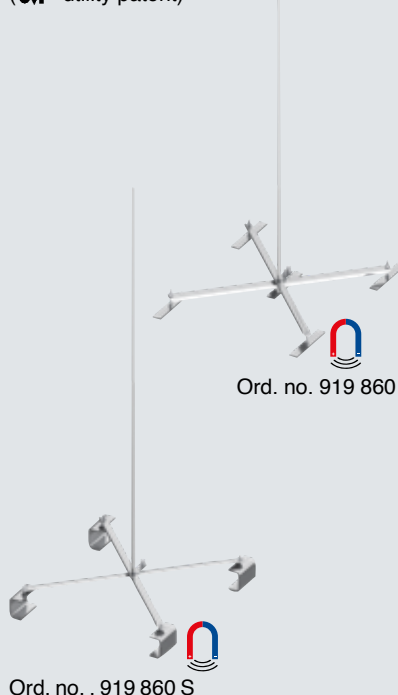
Air-termination rod



Air-termination rod system for metal / tin roofs

(also for roof inclinations up to 10°)

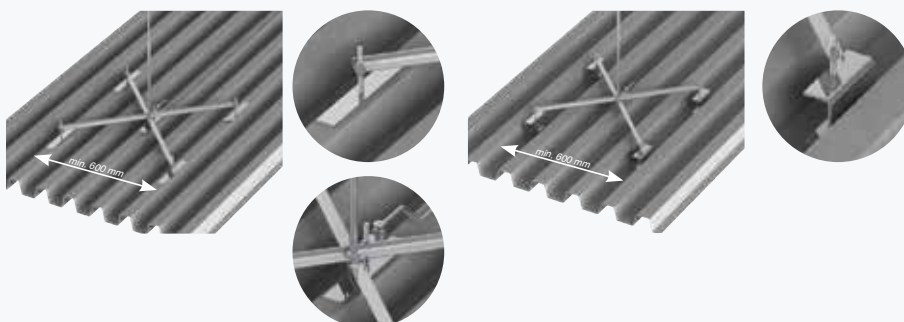
Air-termination rod system (J.P.-utility patent)



Air-termination rod system with mounting cross, bases
incl. **magnetic plates** and KS-connector, according to EN IEC 62561-1 and EN IEC 62561-2.

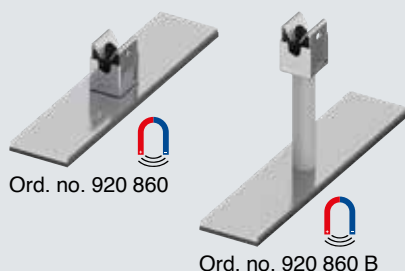
Specification	Length	PU	Ord. no.
Mounting cross stainless steel V2A with 5 bases stainless steel incl. magnetic plate, Air-termination rod aluminium ø 16/10 mm, 1.5 m length and connection with KS-connector	1500 mm	1	919 860
Mounting cross stainless steel V2A with 4x St-profile each ~ 1.5 kg, magnetic plate, Air-termination rod aluminium ø 16/10 mm 2.0 m length and connection with KS-connector	2000 mm	1	919 860 S
Mounting cross stainless steel V2A with 4x St-profile each ~ 2.0 kg, magnetic plate, Air-termination rod aluminium ø 16/10 mm, 2.5 m length and connection with KS-connector	2500 mm	1	919 860 S1

The slope compensation device (e. g., Ord. no. 920 181) must be ordered separately. For roof slopes greater than 10°, the mounting cross must be secured against slipping.



Conductor fastener for metal / tin roofs

Conductor fastener



Conductor fastener, **stainless steel V2A** with **magnetic plate** and Niro-Clip **V2A**;
for ø 8 mm loose conductor leading incl. plate **V2A** 180x40x3mm.

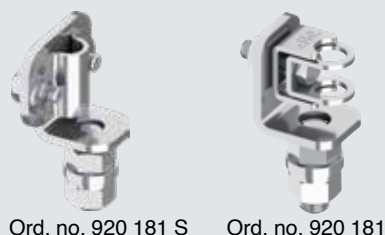
Specification	Height	Fit	Pu	Ord. no.
Stainless steel V2A with Niro Clip	16.5 mm	ø 8 mm / Type B	1	920 860

Conductor fastener, **stainless steel V2A** with **magnetic plate**, Niro-Clip **V2A** and spacer
to raise the conductor distance for ø 8 mm loose conductor leading incl. plate **V2A** 180x40x3 mm.

Specification	Height	Fit	PU	Ord. no.
Stainless steel V2A with Niro Clip	80 mm	ø 8 mm / Type B	1	920 860 B

*) **type A (fl)** = fixed conductor /leading; **type B (ll)** = loose conductor /leading

Roof pitch compensation



Roof pitch compensation infinitely adjustable up to 45°!
Also suitable for concrete base with thread M16

Specification	Fit	PU	Ord. no.
Roof pitch compensation stainless steel V2A for air-termination rods ø 16/10 mm max. 1.5 m length and fixing with CC-Clamp.	ø 16 mm	1	920 181
Roof pitch compensation stainless steel V2A for air-termination rods ø 16/10 mm over 1.5 m length and fixing with Vario-clamp.	ø 16 mm	1	920 181 S

Application example
Ord. no. 920 181 S in conjunction with air-termination rod system Ord. no. 919 860:



NEW Air-termination rod system for trapezoidal metal roofs

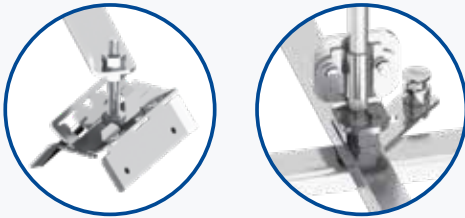
Benefits:

- Compatible with a wide range of common trapezoidal sheet metal shapes.
- Quick and easy installation.
- Also suitable for pitched roofs with a slope of up to 10°.
- No roof penetration - no drilling or riveting required (but possible).

Air-termination rod system for trapezoidal metal roofs consisting of mounting cross with fixings incl. **adhesive tape**, roof pitch compensation, connection with KS-connector.

Specification	Length	PU	Ord. no.
NEW Mounting cross stainless steel V2A with [4x] fixings stainless steel V2A incl. adhesive tape, Air-termination rod Aluminium ø 16 / ø 10 mm, 2.0 m length roof pitch compensation, connection with KS-connector	2000 mm	1	912 525
NEW Mounting cross stainless steel V2A with [4x] fixings stainless steel V2A incl. adhesive tape, without optimal air-termination rod roof pitch compensation, connection with KS-connector	---	1	912 526
NEW SET 4x fixings stainless steel V2A incl. adhesive tape for mounting cross	---	1	912 527

According to EN IEC 62561-1 and EN IEC 62561-2



Air-termination rod system for trapezoidal metal roofs
(J.P.-patent)



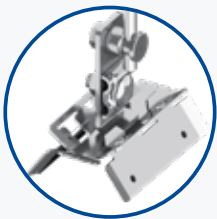
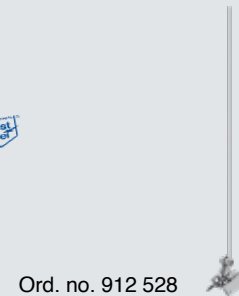
Ord. no. 912 525

Air-termination rod holder for trapezoidal metal roofs

fixing incl. **adhesive tape**, clamping jaw

Specification	Length	PU	Ord. no.
NEW Aluminium/stainless steel V2A Complete with air-termination tip Aluminium ø 10 mm	1000 mm	1	912 528

According to EN IEC 62561-1 and EN IEC 62561-2



Ord. no. 912 528

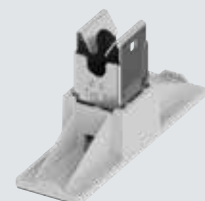
NEW Roof conductor fastener for trapezoidal metal roofs

Roof conductor fastener for trapezoidal metal roofs, with Niro-Clip **V2A**; for ø 8 mm loose conductor leading, incl. **plastic support** 100x30x3 mm with **adhesive tape**.

Specification	Height	Fit*)	PU	Ord. no.
NEW Stainless steel V2A with Niro Clip	35 mm	ø 8 mm / Type B	1	912 529

*) **Type A (fL)** = fixed conductor leading; **Type B (IL)** = loose conductor leading

Roof conductor fastener for trapezoidal metal roofs



Ord. no. 912 529

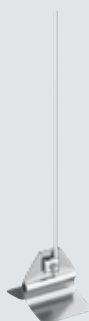
Air-termination rod system for metal roofs



Ord. no. 910 240



Ord. no. 910 247



Ord. no. 111 300

Mounting cross without air-termination rod and mounting clamps.

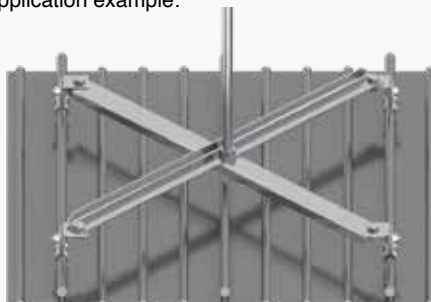
Specification	PU	Ord. no.
Stainless steel V2A	1	910 240 

Air-termination rod with mounting cross for Kalzip

according to EN IEC 62561-1 and EN IEC 62561-2.

Specification	Length	PU	Ord. no.
Stainless steel V2A complete with optimal air-termination rod (aluminium) and 4 Kalzip-mounting clamps (stainless steel V2A)	2000 mm	1	910 247 
Stainless steel V2A without optimal air-termination rod with 4 Kalzip-mounting clamps (stainless steel V2A)	---	1	910 248 
SET 4x Kalzip mounting clamp (stainless steel V2A) for mounting cross		1	910 242 

Application example:



Air-termination rod system light-weight type suitable for Kalzip 50

according to EN IEC 62561-1 and EN IEC 62561-2.

Specification	Length	PU	Ord. no.
Aluminium/stainless steel V2A complete with air-termination rod aluminium ø 10 mm	1000 mm	1	111 300
Aluminium/stainless steel V2A complete with optimal air-termination rod ø 16 / ø 10 mm	1500 mm	1	111 301

Application example:



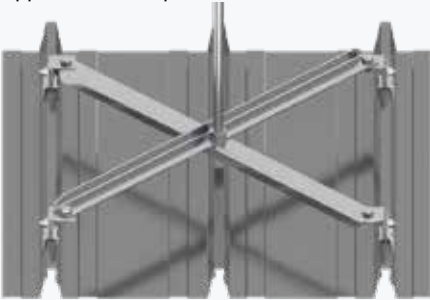
Air-termination rod with mounting cross for RIB-ROOF 500

according to EN IEC 62561-1 and EN IEC 62561-2.

Specification	Length	PU	Ord. no.
Stainless steel V2A complete with optimal air-termination rod (aluminium) and 4 RIB-ROOF-mounting clamps (stainless steel V2A)	2000 mm	1	910 257
Stainless steel V2A without optimal air-termination rod with 4 RIB-ROOF-mounting clamps (stainless steel V2A)	---	1	910 258
SET 4x RIB-ROOF mounting clamp (stainless steel V2A) for mounting cross		1	910 243

For RIB-ROOF 465 on request.

Application example:



Air-termination rod system for metal roofs



Ord. no. 910 257

Air-termination
systems

Air-termination rod with mounting cross for standing seam

according to EN IEC 62561-1 and EN IEC 62561-2.

Specification: clamping range up to 8 mm	Length	PU	Ord. no.
Stainless steel V2A complete with optimal air-termination rod (aluminium) and 4 standing seam mounting clamps System Multi-Plus (Stainless steel V2A)	2000 mm	1	912 515
Stainless steel V2A without optimal air-termination rod with 4 standing seam mounting clamps System Multi-Plus (stainless steel V2A)	---	1	912 516
SET 4x standing seam mounting clamps System Multi-Plus (stainless steel V2A) clamping range up to 8 mm for mounting cross		1	912 517



Ord. no. 912 515

Specification: clamping range 5-19 mm	Length	PU	Ord. no.
Stainless steel V2A complete with optimal air-termination rod (aluminium) and 4 standing seam mounting clamps (stainless steel V2A) System terminal clamp (heavy-duty type) (stainless steel V2A)	2000 mm	1	912 505
Stainless steel V2A without optimal air-termination rod with 4 standing seam mounting clamps (stainless steel V2A) System terminal clamp (heavy-duty type) (stainless steel V2A)	---	1	912 506
SET 4x standing seam mounting clamps System terminal clamp (heavy-duty type) (stainless steel V2A) Clamping range 5-19 mm for mounting cross		1	924 192

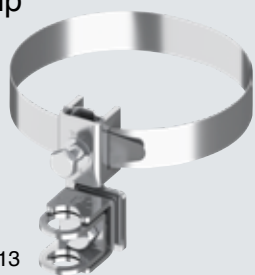


Ord. no. 912 505

Application example:



Pipe clamp



Ord. no. 111 613



Ord. no. 111 612

Air-termination stud



Ord. no. 2040

Ord. no. 2046

Air-termination tip



Ord. no. 1252

Pipe clamp for connecting and attaching air-termination rods / air-termination tips to pipes/profiles. Two pipe clamps are required per air-termination rod for attachment. H-tested.

Specification	Fit	pipe-ø	PU	Ord. no.
Stainless steel V2A	ø 16 mm	up to ø 300 mm	20	111 613
Stainless steel V2A	ø 16 mm	up to ø 300 mm	20	111 615
Stainless steel V2A	Connection ø 8 - 10 mm	up to ø 300 mm	20	111 617

Turnbuckle without tape for connecting and attaching air-termination rods/ air-termination tips to pipes/profiles. H-tested for use with 22 x 0.4 mm V2A clamping tape.

Specification	Fit	PU	Ord. no.
Stainless steel V2A	ø 16 mm	50	111 612
Stainless steel V2A	ø 16 mm	50	111 614
Stainless steel V2A	Connection ø 8 - 10 mm	50	111 616

Note: You can find suitable tensioning tapes on page 111.

Air-termination stud for walkable and passable flat roofs.

Specification		Installation depth	Fit	PU	Ord. no.
Aluminium/steel, hot galvanized -discontinued model-		min. 60 mm	ø 8 - 10 mm	10	2040
Specification	Installation depth	Height-adjustment range	Fit	PU	Ord. no.
Stainless steel V2A	min. 80 mm	30 mm	ø 8 - 10 mm	10	2046

Air-termination tip for screwing on conductor ends

Specification	Fit	PU	Ord. no.
Aluminium with V2A-bolt M6 x 8 mm	ø 8 mm	100	1252
Copper-alloy with V2A-bolt copper plated M6 x 8 mm	ø 8 mm	100	1253

Terminal and connection clamps for air-termination rods

U-Connector



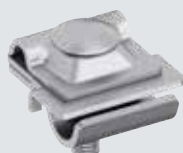
Ord. no. 111 410

U-Connector

with M10 hexagon bolt V2A for conductors ø 8-10 mm and air-termination rods ø 16 mm.

Specification	Fit	PU	Ord. no.
Steel, hot galvanized	ø 8 - 10 / ø 16 mm	100	111 410
Copper	ø 8 - 10 / ø 16 mm	100	111 411
Stainless steel V2A	ø 8 - 10 / ø 16 mm	100	111 412

Multi-Clamp ø 8 - 10 mm / ø 16 mm



Ord. no. 111 430

Multi-Clamp ø 8-10 mm / ø 16 mm

Benefits: The approved system Multi-Clamp for rod connections ø 16 mm.

Specification	Fit	PU	Ord. no.
Steel, hot galvanized	ø 8 - 10 / ø 16 mm	50	111 430
Copper	ø 8 / ø 16 mm	50	111 432
Stainless steel V2A	ø 8 - 10 / ø 16 mm	50	111 433

Connection clamp for air-termination rods ø 16 mm



Ord. no. 2108

Connection clamp for ø 16 mm

for the connection of 2 air-termination rods ø 16 mm.

Specification	Fit	PU	Ord. no.
Aluminium, mounted with four M8 hexagon bolt stainless steel V2A	ø 16 mm	25	2108

Air-termination tip with base for flat roofs, to protect small roof installations e. g. ventilation systems. For installation along the conductor routing, according to EN IEC 62561-2.

Specification	Fit	PU	Ord. no.
Concrete base 3 kg, ø 175 mm with support plate, wedge adapter and aluminium air-termination tip, 1.0 m long	ø 8 mm	1	103 125

Air-termination rods for ridge area in stainless steel V2A; infinitely adjustable, according to EN IEC 62561-2.

Specification	Concrete base	Length	PU	Ord. no.
Holder stainless steel V2A type A:				
with air-termination tip aluminium ø 10 mm	2x 12 kg	1000 mm	1	1257
with air-termination rod aluminium ø 16/10 mm	2x 12 kg	1500 mm	1	1257 S
Holder stainless steel V2A type B (adjustable to fit the roof inclination):				
with air-termination rod aluminium ø 16/10 mm	2x 16 kg	2000 mm	1	1259
with air-termination rod aluminium ø 16/10 mm	2x 16 kg	2500 mm	1	1259 S

Air-termination tip with base

Ord. no. 103 125

Air-termination rod

Type A
Ord. no. 1257 S

Type B
Ord. no. 1259

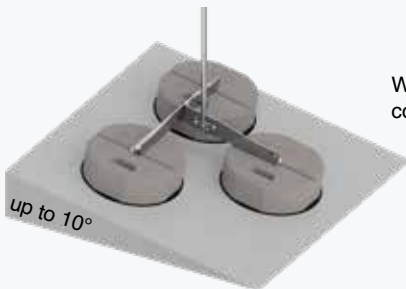
Air-termination rod-SET

Air-termination rod-SET - Stainless steel V2A with Aluminium-air-termination tip. Includes angle bracket V2A 80x50x5 mm with integrated roof inclination, concrete base and support plate.

Air-termination rod height	floor space (mm)	Wind speed static safety factor 1.5	Concrete base	Ord. no.
2.5 m	880 x 335	135 km/h	2x 16 kg	912 079 S
3.0 m	880 x 335	120 km/h	2x 20 kg	912 081
3.5 m	920 x 800	141 km/h	3x 25 kg	912 068

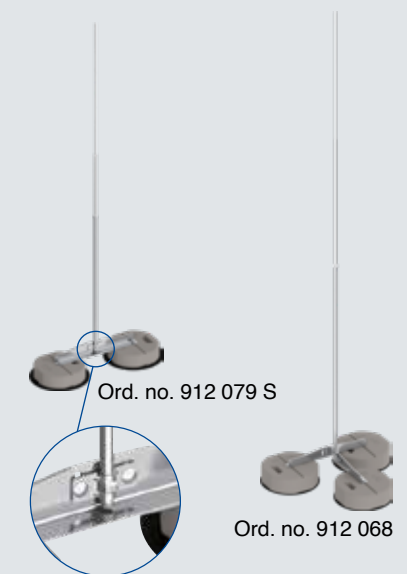
Note:

The selection guide for corresponding SET items for other wind speeds (Wind Zone) can be found on page 22.



With integrated roof inclination adjustment up to 10° and connection possibility (square 11 mm) in all corners.

Air-termination rod-SET



With integrated roof inclination adjustment up to 10°

Overview of gust wind speed according to (DIN) EN 1991-1-4 (part of Eurocode)

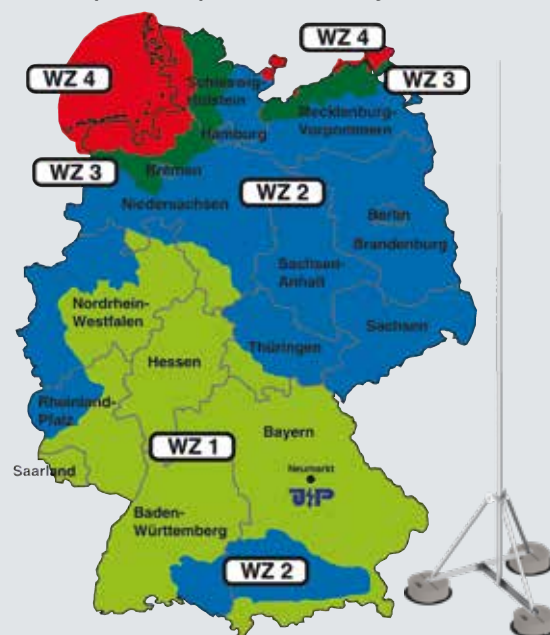
In Germany, wind loads are defined according to DIN EN 1991-1-4 / National Annex and divided into four Wind Zones based on regional wind exposure. Each zone is assigned a characteristic basic wind velocity and the corresponding basic velocity pressure ("Grundwindstaudruck").

Wind Zone	Typical Exposure	Basic Wind Velocity $v_{b,0}$	Basic Velocity Pressure q_b
WZ 1	Low wind exposure	~ 22.5 m/s	~ 0.32 kN/m ²
WZ 2	Moderate wind exposure	~ 25.0 m/s	~ 0.39 kN/m ²
WZ 3	Increased wind exposure	~ 27.5 m/s	~ 0.47 kN/m ²
WZ 4	High wind exposure (coastal regions)	~ 30.0 m/s	~ 0.56 kN/m ²

The basic wind velocity refers to the 10-minute mean wind speed at 10 m above ground level in open terrain with a 50-year return period. These values are used as the basis for structural wind load calculations.

The commonly referenced gust wind speeds (see the table below) are derived from the basic wind velocity by applying aerodynamic and site-specific factors such as terrain category, building height, topography and gust response coefficients according to Eurocode wind load calculations.

Example: Map of Germany



Terrain category (TC)	Description of terrain category (TC)
I	"Open sea; free lakes with at least 5 km surface wind direction; smooth, flat land without barriers."
I-II	Coastline territory, applicable in Zone 3 in most cases.
II	"Terrain with hedges, individual farmsteads, houses or trees, for example agricultural areas."
II-III	Inland, applicable in Zone 1 and Zone 2 in most cases (local land profile is often not clearly defined between TC II & III)

Height above ground in m	WZ 1		WZ 2		WZ 3	WZ 4
	TC II-III	TC II	TC II-III	TC II	TC I-II	TC I
0	100 km/h	106 km/h	111 km/h	118 km/h	133 km/h	151 km/h
5	100 km/h	109 km/h	111 km/h	120 km/h	137 km/h	160 km/h
10	106 km/h	118 km/h	118 km/h	131 km/h	150 km/h	171 km/h
15	115 km/h	124 km/h	127 km/h	137 km/h	158 km/h	178 km/h
20	121 km/h	129 km/h	134 km/h	142 km/h	165 km/h	182 km/h
25	126 km/h	132 km/h	139 km/h	146 km/h	170 km/h	186 km/h
30	130 km/h	135 km/h	144 km/h	149 km/h	174 km/h	190 km/h
40	138 km/h	140 km/h	152 km/h	154 km/h	181 km/h	195 km/h
50	143 km/h	143 km/h	158 km/h	158 km/h	186 km/h	199 km/h
60	147 km/h	147 km/h	162 km/h	162 km/h	189 km/h	202 km/h
70	150 km/h	150 km/h	165 km/h	165 km/h	192 km/h	205 km/h
100	156 km/h	156 km/h	172 km/h	172 km/h	198 km/h	212 km/h

Notifications regarding static safety:

A 1.5-fold stability safety applies to load-carrying constructions (houses, halls, bridges, radio towers) regarding the measured typical wind loads, i.e. load-carrying constructions must resist 1.5 times of the wind uplifting pressure.

This also applies to air-termination poles, the failure or tilting of which can cause major economic damage, subsequent damage or personal damage on exposed positions (above a main building entrance, above a railway track etc.)

The builder or the owner must consider whether the a/m criteria apply to the planned site. If the a/m criteria do not apply, he must assume a 1.0-fold stability safety regarding the characteristic wind loads acc. to standard, i.e. the lightning termination rod can withstand only the maximum characteristic load (=1.5-fold) before it fails or collapses.

For example, a 4m air-termination pole positioned at a distance of 10m from the edge of a flat roof with attic can protect an air conditioning against lightning strikes. In case of any doubt whether a 1.0-fold stability safety can be chosen, contact the insurance company. A 1.5-fold stability safety is always a safe approach.

Selection guide for free-standing air-termination poles with a height of 3.0 - 12.0 m

Air-termination pole sets including V2A air-termination pole base frame, concrete base and support plate

Height of air termination pole	Wind Zone (WZ)	Air-termination pole base frame Ord. no.	Concrete base Ord. no.	Max. wind speed		SET-no.
				Static safety factor 1.0	Static safety factor 1.5	
3.0 m (Ord. no. 912 000)	WZ 1	499 000	4x 499 100 (12 kg)	211 km/h	172 km/h	912 089
	WZ 2	499 000	4x 499 100 (12 kg)	211 km/h	172 km/h	
	WZ 3	499 000	4x 499 100 (12 kg)	211 km/h	172 km/h	
3.5 m (Ord. no. 912 001)	WZ 1	499 000	4x 499 100 (12 kg)	177 km/h	145 km/h	912 090
	WZ 2	499 000	4x 499 100 (12 kg)	177 km/h	145 km/h	
	WZ 3	499 000	4x 499 101 (16 kg)	200 km/h	163 km/h	912 700
4.0 m (Ord. no. 912 002)	WZ 1	499 000	4x 499 100 (12 kg)	150 km/h	122 km/h	912 705
	WZ 2	499 000	4x 499 101 (16 kg)	168 km/h	137 km/h	912 091
	WZ 3	499 000	8x 499 100 (12 kg)	200 km/h	163 km/h	912 710
4.5 m (Ord. no. 912 003)	WZ 1	499 005	3x 103 101 (16 kg)	148 km/h	120 km/h	912 715
	WZ 2	499 005	3x 103 110 (20 kg)	160 km/h	130 km/h	912 092
	WZ 3	499 005	3x 103 118 (25 kg)	178 km/h	145 km/h	912 720
5.0 m (Ord. no. 912 004)	WZ 1	499 005	3x 103 101 (16 kg)	144 km/h	117 km/h	912 725
	WZ 2	499 005	3x 103 110 (20 kg)	155 km/h	126 km/h	912 093
	WZ 3	499 005	3x 103 118 (25 kg)	173 km/h	141 km/h	912 730
5.5 m (Ord. no. 912 005) (Ord. no. 912 005 S)	WZ 1	499 005	3x 103 110 (20 kg)	137 km/h	112 km/h	912 735
	WZ 2	499 005	3x 103 118 (25 kg)	152 km/h	124 km/h	912 094
	WZ 3	499 006	6x 103 103 (12 kg)	187 km/h	153 km/h	912 740
6.0 m (Ord. no. 912 006)	WZ 1	499 006	6x 103 103 (12 kg)	165 km/h	135 km/h	912 095
	WZ 2	499 006	6x 103 103 (12 kg)	165 km/h	135 km/h	
	WZ 3	499 006	6x 103 103 (12 kg)	165 km/h	135 km/h	
7.0 m (Ord. no. 912 008)	WZ 1	499 006	6x 103 103 (12 kg)	135 km/h	110 km/h	912 750
	WZ 2	499 006	6x 103 101 (16 kg)	148 km/h	121 km/h	912 097
	WZ 3	499 006	6x 103 110 (20 kg)	159 km/h	130 km/h	912 755
8.0 m (Ord. no. 912 010)	WZ 1	499 006	6x 103 118 (25 kg)	147 km/h	120 km/h	912 099
	WZ 2	499 006	6x 103 118 (25 kg)	147 km/h	120 km/h	
	WZ 3	499 007 S	10x 103 118 (25 kg)	185 km/h	151 km/h	912 770
9.0 m (Ord. no. 912 011 F)	WZ 1	499 007	10x 103 118 (25 kg)	172 km/h	140 km/h	914 185
	WZ 2	499 007	10x 103 118 (25 kg)	172 km/h	140 km/h	
	WZ 3	499 007	10x 103 118 (25 kg)	172 km/h	140 km/h	
10.0 m (Ord. no. 912 013 F)	WZ 1	499 007	10x 103 118 (25 kg)	151 km/h	123 km/h	914 186
	WZ 2	499 007	10x 103 118 (25 kg)	151 km/h	123 km/h	
	WZ 3	on request				on request
11.0 m (Ord. no. 912 015 F)	WZ 1	499 009 / complete SET		181 km/h	148 km/h	912 061
	WZ 2	499 009 / complete SET		181 km/h	148 km/h	
	WZ 3	on request				on request
12.0 m (Ord. no. 912 019 F)	WZ 1	499 009 / complete SET		177 km/h	145 km/h	912 070
	WZ 2	499 009 / complete SET		177 km/h	145 km/h	
	WZ 3	on request				on request

Air-termination poles for Wind Zone 4 on request.

For the installation of air-termination poles in Zone 4, further requirements regarding material (near to coast, material selection etc.) must be respected!

Air-termination pole

base frame and wall mounting up to a max. height of 12.0 m

Air-termination systems

Air-termination pole up to 8.0 m - for base frame and wall mounting stainless steel V2A with aluminium air-termination tip. Multi-component, pluggable system with screw locking.

Type	Height of pole	Pole parts	PU	Ord. no.
JP-LPH 3.0 F+W	3.0 m	2-part, 1.5 m / 1.5 m	1	912 000
JP-LPH 3.5 F+W	3.5 m	2-part, 2.0 m / 1.5 m	1	912 001
JP-LPH 4.0 F+W	4.0 m	2-part, 2.5 m / 1.5 m	1	912 002
JP-LPH 4.5 F+W	4.5 m	2-part, 3.5 m / 1.0 m	1	912 003
JP-LPH 5.0 F+W	5.0 m	2-part, 3.5 m / 1.5 m	1	912 004
JP-LPH 5.5 F+W	5.5 m	2-part, 4.0 m / 1.5 m	1	912 005
JP-LPH 6.0 F+W	6.0 m	3-part, 2.0 m / 2.0 m / 2.0 m	1	912 006
JP-LPH 7.0 F+W	7.0 m	3-part, 3.0 m / 2.0 m / 2.0 m	1	912 008
JP-LPH 8.0 F+W	8.0 m	3-part, 4.0 m / 2.0 m / 2.0 m	1	912 010

NEW Only one pole for base frame and wall mounting.
Pipe clamp for attaching the pole is included in the base frame.

Air-termination pole up to 12.0 m for base frame - stainless steel V2A with aluminium air-termination tip. Multi-component, pluggable system with screw locking.

Type	Height of pole	Pole parts	PU	Ord. no.
JP-LPH 9.0 F	9.0 m	3-part, 4.0 m / 2.5 m / 2.5 m	1	912 011 F
JP-LPH 10.0 F	10.0 m	3-part, 5.0 m / 2.5 m / 2.5 m	1	912 013 F
JP-LPH 11.0 F	11.0 m	3-part, 5.0 m / 3.5 m / 2.5 m	1	912 015 F
JP-LPH 12.0 F	12.0 m	3-part, 6.0 m / 3.5 m / 2.5 m	1	912 019 F

Air-termination pole max. 12 m for wall mounting stainless steel V2A with aluminium air-termination tip. Multi-component, pluggable system with screw locking.

Height of pole	Necessary wall fastener	Pole parts	PU	Ord. no.
9.0 m	3x Type C	3-part, 4.0 m / 2.5 m / 2.5 m	1	912 011 W
10.0 m	3x Type C	3-part, 4.0 m / 3.5 m / 2.5 m	1	912 013 W
11.0 m	3x Type C	3-part, 5.0 m / 3.5 m / 2.5 m	1	912 015 W
12.0 m	3x Type C	3-part, 6.0 m / 3.5 m / 2.5 m	1	912 019 W

Additional air-termination pole heights on request!
Suitable wall mounts can be found on page 41, pedestal frames on page 39.

Telescopic air-termination pole aluminium for wall mounting unsupported up to 6.5 m air-termination pole height (mounting length 1.5 m)

Height of pole	Necessary wall fastener	Pole parts	PU	Ord. no.
up to 4.35 m	2x Type A	4-part	1	912 401
up to 5.35 m	2x Type B	4-part	1	912 400
up to 6.50 m	2x Type C	5-part	1	912 402
up to 8.00 m	2x Type C	6 part	1	912 403

Telescopic air-termination pole

Pole height at delivery max. 2 meters



Earthing pipe clamp



Ord. no. 111 890

Earthing pipe clamp for air-termination pole support pipe, with connecting clamp, for ø 8 - 10 mm.

Specification	Fit	Fit in inch	PU	Ord. no.
NEW Stainless steel V2A	ø 25 - 100 mm	3/4" - 3"	25	111 890

Telescopic-air-termination pole, free-standing (JIP -utility patent)

aluminium with base frame for **roof inclinations up to 10°**

Benefits:

- Less space required for storage and in transport vehicle (**transport / delivery length max. 2 m**).
- Adjustment of roof inclination up to max. 10°.
- Easy transport in lifts, staircases and through roof openings.
- Faster and easier assembly of the air-termination pole with self-locking set screws M8 or M10.
- Pole heights in the SET adjustable up to 4.35 m, 5.5 m, 6.5 m & 8.0 m.
- Statically calculated according to Eurocode (EC)

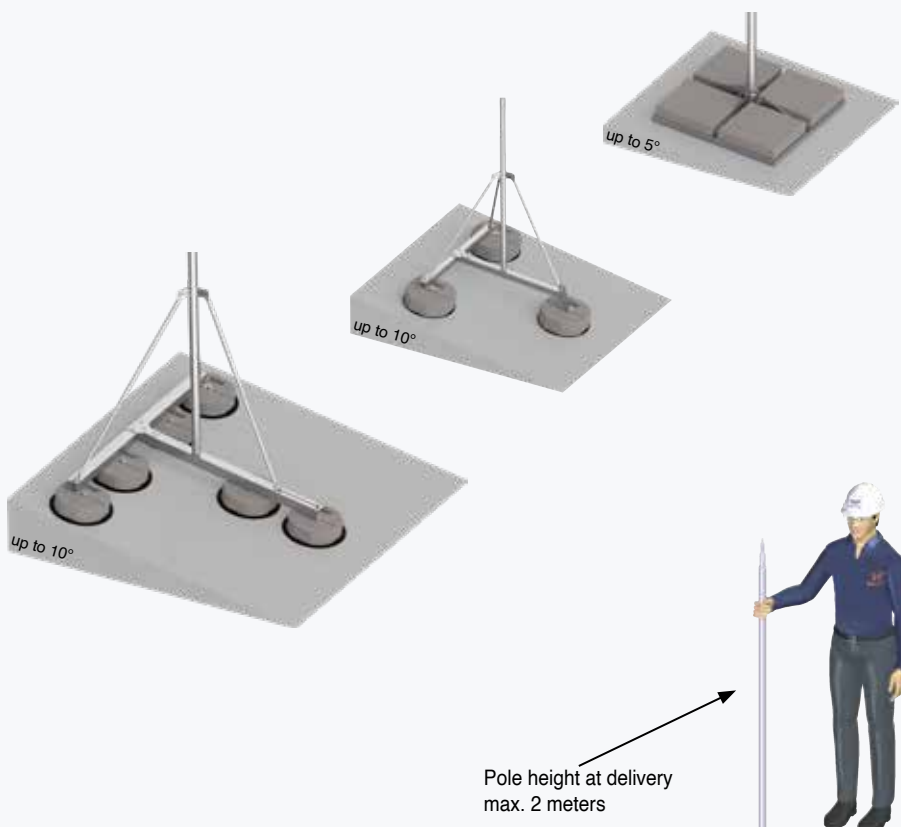
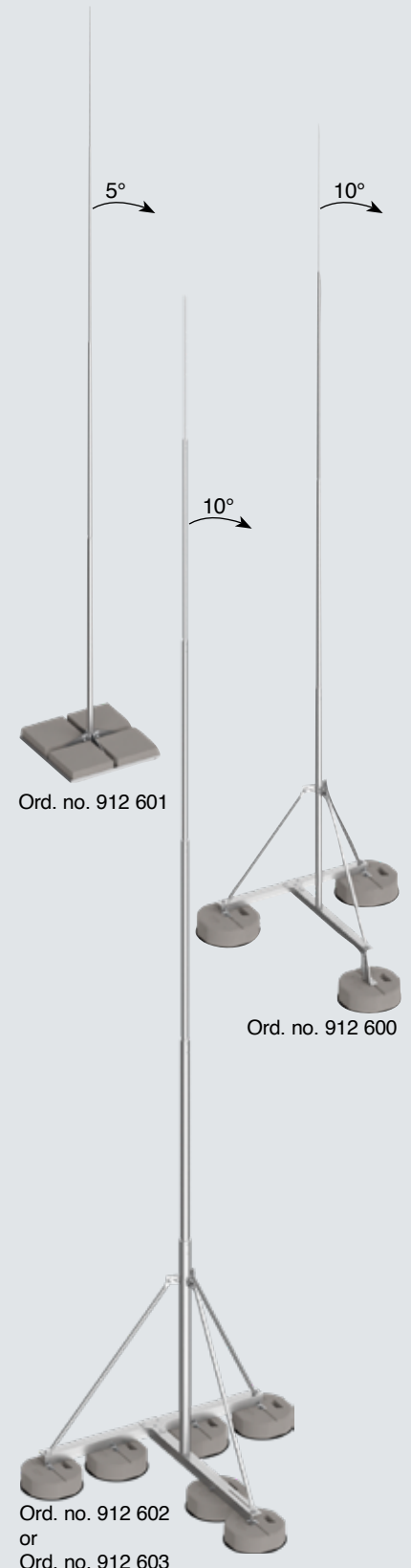
Telescopic-air-termination pole-SET in aluminium, free-standing incl. base frame with roof inclination adjustment, concrete bases and support plates.

Height of pole	Floor space	Base frame	Concrete base	Ord. no.
up to 4.35 m	0.65 x 0.65 m	499 000 (5°)	4x 16 kg	912 601
up to 5.50 m	1.33 x 1.24 m	912 300 (10°)	3x 25 kg	912 600
up to 6.50 m	1.83 x 1.53 m	912 310 (10°)	6x 16 kg	912 602
up to 8.00 m	1.87 x 1.57 m	912 311 (10°)	6x 25 kg	912 603

Note: The air-termination pole base frame must be secured against slipping from a roof inclination of 5°.
Roof inclination adjustment up to 10° (Ord. no. 499 700) for the base frame (Ord. no. 499 000) see on page 38.

Wind speed according to Eurocode:

Height of pole	SET Ord. no.	Wind speed	
		Static safety factor 1.0	Static safety factor 1.5
up to 4.35 m	912 601	146 km/h	119 km/h
up to 5.50 m	912 600	154 km/h	126 km/h
up to 6.50 m	912 602	147 km/h	120 km/h
up to 8.00 m	912 603	142 km/h	116 km/h

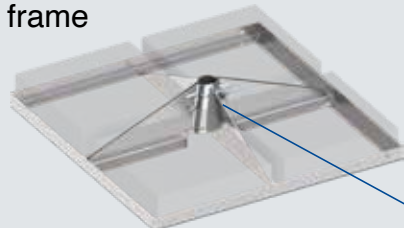


Air-termination pole base frame

for roof inclination adjustment up to 5°

Info: Air-termination pole selection guide on page 35.

Air-termination pole base frame



Ord. no. 499 000

Support plate



Ord. no. 499 010

Slope compensation bracket for roof inclination up to 10°

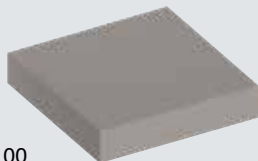


Ord. no. 499 700

Concrete base

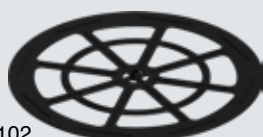


Ord. no. 103 103



Ord. no. 499 100

Support plate



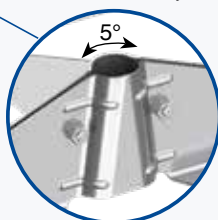
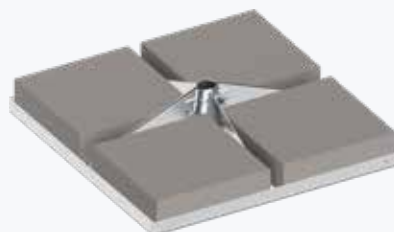
Ord. no. 103 102

Air-termination pole base frame with roof inclination adjustment up to 5°.

For concrete bases 300 x 300 mm to position air-termination poles ø 42 mm (max. 4.0 m pole height).

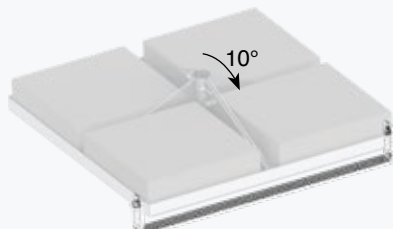
Specification	Footprint	PU	Ord. no.
Stainless steel V2A	~ 650 x 650 mm	1	499 000
Support plate (one side aluminium-laminated)	~ 650 x 650 mm	1	499 010
Roof inclination adjustment, inclination up to 10°		1	499 700

Roof inclination adjustment up to 5°



Air-termination pole base frame with optional concrete base Ord. no. 499 100.

Roof inclination adjustment up to 10°



Concrete base

Specification	Weight	Diameter	PU	Ord. no.
Concrete base round with female thread M16 for the base frame	12 kg	ø 335 mm	1	103 103
	16 kg	ø 335 mm	1	103 101
	20 kg	ø 335 mm	1	103 110
	25 kg	ø 375 mm	1	103 118
Specification	Weight	Dimension	PU	Ord. no.
Concrete base square	12 kg	300 x 300 x 60 mm	1	499 100
	16 kg	300 x 300 x 80 mm	1	499 101

Support plate for concrete base round.

Specification	Diameter	PU	Ord. no.
Support plate Plastic, black - without plasticizer Neutral to all conventional synthetic roofing membranes	ø 390 mm	1	103 102

The support plate for concrete base is necessary on synthetic roofing membranes.

Air-termination pole base frame

with a 2- or 3-part base frame for roof inclinations up to 3°

Air-termination pole base frame, with 2-part base frame and 3 safety braces for 3 round concrete bases for air-termination poles ø 42 mm (max. 5.5 m pole height).

Specification	Pole base frame	Footprint	PU	Ord. no.
Stainless steel V2A	2-part	~ 1325 x 1275 mm	1	499 005

NEW Now with 3-piece pole clamp!

Air-termination pole base frame, with 2-part base frame and 3 safety braces for 6 round concrete bases for air-termination poles ø 60 mm (max. 8.0 m pole height).

Specification	Pole base frame	Footprint	PU	Ord. no.
Stainless steel V2A	2-part	~ 1865 x 1660 mm	1	499 006

NEW Now with 3-piece pole clamp!

Air-termination pole base frame, with 3-part base frame and 3 safety braces for 10 round concrete bases for air-termination poles ø 60 mm (max. 10.0 m pole height).

Specification	Pole base frame	Footprint	PU	Ord. no.
Stainless steel V2A	3-part	~ 1865 x 1740 mm	1	499 007

Note:

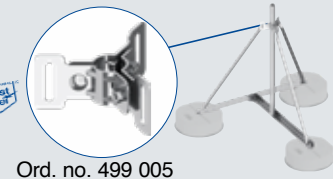
Concrete bases (round) and support plates (page 38) must be ordered separately.

Air-termination pole base frame - SET incl. 36 concrete bases with 4 safety braces and turnbuckle. For air-termination poles ø 60 mm (max. 12.0 m pole height).

Specification	Footprint	PU	Ord. no.
Stainless steel V2A	~ 3400 x 3400 mm	1	499 009

Info: Air-termination pole selection guide on page 35.

Base frame



Ord. no. 499 005



Ord. no. 499 006



Ord. no. 499 007



Ord. no. 499 009

Roof inclination adjustment for air-termination poles

for roof inclinations up to 10°

Roof inclination adjustment,

complete angle SET, stainless steel V2A with screw accessories. Incl. connection clamp.

Specification	for base frames with 3 round concrete bases	PU	Ord. no.
Stainless steel V2A	Ord. no. 499 005	1	499 500



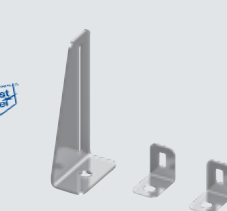
Roof inclination adjustment,

complete angle SET, stainless steel V2A with screw accessories. Incl. connection clamp.

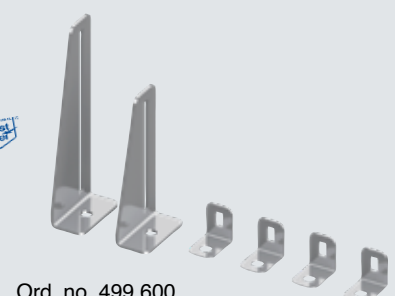
Specification	for base frames with 6 round concrete bases	PU	Ord. no.
Stainless steel V2A	Ord. no. 499 006	1	499 600



Roof inclination adjustment



Ord. no. 499 500



Ord. no. 499 600

Air-termination pole for wall mounting - Wind speeds according to Eurocode

Height of air termination pole	Ord.-no. (see page 36)	Wall mounting	UL 1	CL 1	CL 2	Max. wind speed	
						Static safety factor 1.0	Static safety factor 1.5
Air-termination pole for wall mounting in stainless steel V2A							
3.0 m	912 000	2x Type A	2.5 m	0.5 m	-	150 km/h	123 km/h
3.5 m	912 001	2x Type A	2.8 m	0.7 m	-	158 km/h	129 km/h
4.0 m	912 002	2x Type A	3.0 m	1.0 m	-	156 km/h	127 km/h
4.5 m	912 003	2x Type B	3.8 m	0.7 m	-	196 km/h	160 km/h
5.0 m	912 004	2x Type B	4.3 m	0.7 m	-	196 km/h	160 km/h
5.5 m	912 005	2x Type B	4.5 m	1.0 m	-	196 km/h	160 km/h
6.0 m	912 006	2x Type C	5.0 m	1.0 m	-	198 km/h	162 km/h
7.0 m	912 008	2x Type C	6.0 m	1.0 m	-	198 km/h	162 km/h
8.0 m	912 010	2x Type C	7.0 m	1.0 m	-	200 km/h	163 km/h
9.0 m	912 011 W	3x Type C	7.7 m	1.3 m	0.5 m	200 km/h	163 km/h
10.0 m	912 013 W	3x Type C	8.7 m	1.3 m	0.5 m	175 km/h	145 km/h
11.0 m	912 015 W	3x Type C	9.4 m	1.6 m	0.6 m	175 km/h	145 km/h
12.0 m	912 019 W	3x Type C	10.4 m	1.6 m	0.6 m	157 km/h	128 km/h
Telescopic air-termination pole in Aluminium for wall mounting							
up to 4.35 m	912 401	2x Type A	3.35 m	1.00 m	-	149 km/h	122 km/h
up to 5.35 m	912 400	2x Type B	4.65 m	0.70 m	-	196 km/h	160 km/h
up to 6.50 m	912 402	2x Type C	5.50 m	1.00 m	-	198 km/h	162 km/h
up to 8.00 m	912 403	2x Type C	7.00 m	1.00 m	-	200 km/h	163 km/h

Air-termination poles with air-termination tip aluminium are generally not designed for WZ4 (fatigue strength of the material, type of wind load).

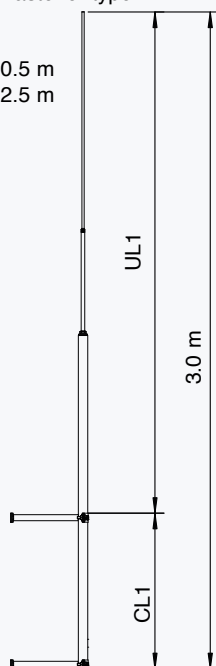
The specified wind speeds regarding the 1.0-fold stability safety are not linearly applicable for the use in WZ4 or for ground level > 1000m ASL.

Air-termination pole with wall mounting for the installation in WZ4 on request.

Explanation clamping lengths for the air-termination poles with wall fastener

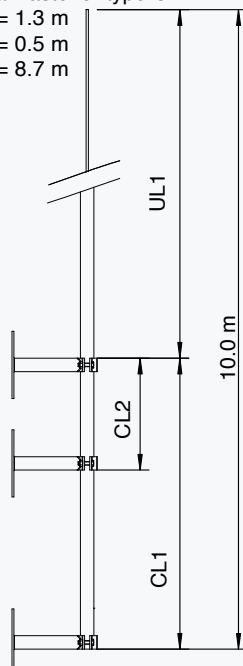
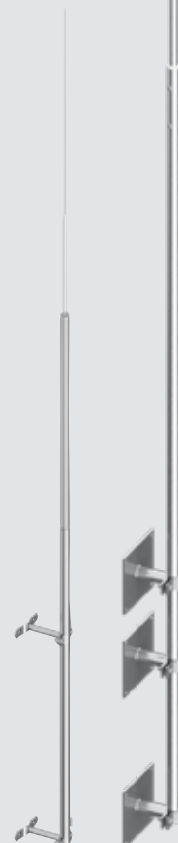
Example: 3.0 m air-termination pole 912 000 W + 2x wall fastener type A

CL1 = 0.5 m
UL1 = 2.5 m



Example: 10.0 m air-termination pole 912 013 W + 3x wall fastener type C

CL1 = 1.3 m
CL2 = 0.5 m
UL1 = 8.7 m



Wall fastener for poles with a max. height of 4.0 m and $\varnothing$ 42 mm.
Hole pattern for rivet and screw mounting and 2 x $\varnothing$ 10.5 mm.

Specification	Wall distance	PU	Ord. no.
Completely in stainless steel V2A for $\varnothing$ 42 mm	150 mm	1	490 550
pole clamp with 2 x screws M10	200 mm	1	490 551
spring lock washer and nut in V2A	250 mm	1	490 552
	300 mm	1	490 553

Wall fastener for poles with a max. height of 5.5 m and $\varnothing$ 42 mm.
Hole pattern 4 x $\varnothing$ 10.5 mm.

Specification	Wall distance	PU	Ord. no.
Completely in stainless steel V2A for $\varnothing$ 42 mm	150 mm	1	490 560
pole clamp with 2 x screws M10,	200 mm	1	490 561
spring lock washer and nut in V2A	250 mm	1	490 562
mounting plate V2A : 200 x 200 x 8 mm	300 mm	1	490 563
hole pattern mounting plate: $\square$ 170 x 170 mm			

Wall fastener for poles with a max. height of 12.0 m and $\varnothing$ 60 mm.
Hole pattern 4 x $\varnothing$ 12.5 mm.

Specification	Wall distance	PU	Ord. no.
Completely in stainless steel V2A for $\varnothing$ 60 mm	150 mm	1	490 570
pole clamp with 2 x screws M16,	200 mm	1	490 571
spring lock washer and nut in V2A	250 mm	1	490 572
mounting plate V2A : 300 x 300 x 8 mm	300 mm	1	490 573
hole pattern mounting plate: $\square$ 260 x 260 mm			

Fixing anchors, **stainless steel V4A** for wall fastener on concrete walls.

Specification	PU	Ord. no.
M10 for wall fastener Type A and Type B	1	490 548
M12 for wall fastener Type C	1	490 549

Air-termination pole fastener for steel constructions (e. g. side rails)
consisting of: Holder **V2A** on profile and pole holder **V2A** (cross clamp) for pole- $\varnothing$ 42 mm.

Specification	Profile	Fit in inch	Square profile	PU	Ord. no.
Round profile					
Stainless steel V2A	$\varnothing$ 26.9 mm	3/4"		1	490 490
Stainless steel V2A	$\varnothing$ 42.4 mm	1 1/4"		1	490 491
Stainless steel V2A	$\varnothing$ 48.3 mm	1 1/2"		1	490 492
Square profile					
Stainless steel V2A suitable for			20 x 20 mm to 50 x 50 mm	1	490 495

Additional diameters and dimensions on request.

Air-termination pole fastener for poles up to 5.5 m height and $\varnothing$ 42 mm.
Tape pipe clamp **V2A** for clamping range up to 800 mm.

Specification	Wall distance	PU	Ord. no.
Completely in stainless steel V2A for $\varnothing$ 42 mm	150 mm	1	490 540
pole clamp with 2 x screws M10,	200 mm	1	490 541
spring lock washer and nut in V2A	250 mm	1	490 542
Tape pipe clamp with 2 x screws M8 V2A	300 mm	1	490 543

Wall fastener

Type A:



Ord. no. 490 550

Type B:



Ord. no. 490 560

Type C:



Ord. no. 490 570

Fixing anchors



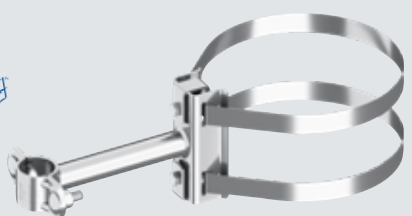
Ord. no. 490 548

Air-termination pole fastener



Ord. no. 490 491

Air-termination pole fastener



Ord. no. 490 540

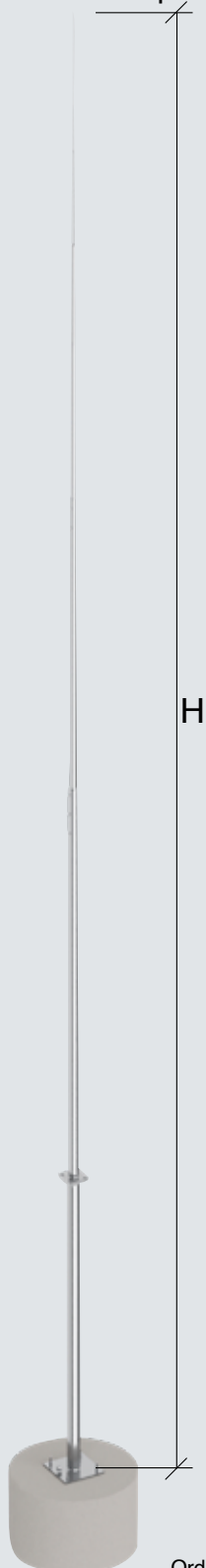
Lightning protection - air-termination pole – SET with prefabricated concrete foundation

Benefits:

- Air-termination pole completely in stainless steel
- Air-termination pole max. 4 m pole-part length.
- No wet construction required.
- No excavation work from a static point of view.
- Statically tested, taking into account ice accretion. Gust reaction factor and Static safety factor 1.5 - required due to building authorities
- Everything from one source.



Air-termination pole - SET



Air-termination pole - SET with flange plate, complete in stainless steel with aluminium tip and prefabricated foundation for max. Wind Zone 2.

Type	Height (H)	Foundation	Total weight	Ord. no.
JP-BFF 6.0	6.0 m	ø 0.96 m / FH 0.5 m	~ 924 kg	912 180
JP-BFF 7.0	7.0 m	ø 0.96 m / FH 0.5 m	~ 929 kg	912 182
JP-BFF 8.0	8.0 m	ø 0.96 m / FH 0.5 m	~ 932 kg	912 184
JP-BFF 9.0	9.0 m	ø 0.96 m / FH 0.5 m	~ 968 kg	912 186
JP-BFF 10.0	10.0 m	ø 0.96 m / FH 0.5 m	~ 976 kg	912 200
JP-BFF 11.0	11.0 m	ø 0.96 m / FH 0.5 m	~ 978 kg	912 201
JP-BFF 12.0	12.0 m	ø 0.96 m / FH 0.5 m	~ 986 kg	912 202
JP-BFF 13.0	13.0 m	ø 1.16 m / FH 0.5 m	~ 1,414 kg	912 203
JP-BFF 14.0	14.0 m	ø 1.16 m / FH 0.5 m	~ 1,423 kg	912 204
JP-BFF 15.0	15.0 m	ø 1.16 m / FH 0.75 m	~ 2,031 kg	912 205
JP-BFF 16.0	16.0 m	ø 1.16 m / FH 0.75 m	~ 2,083 kg	912 206
JP-BFF 17.0	17.0 m	ø 1.5 m / FH 1.0 m	~ 2,798 kg	912 207
JP-BFF 18.0	18.0 m	ø 1.5 m / FH 1.0 m	~ 2,806 kg	912 208

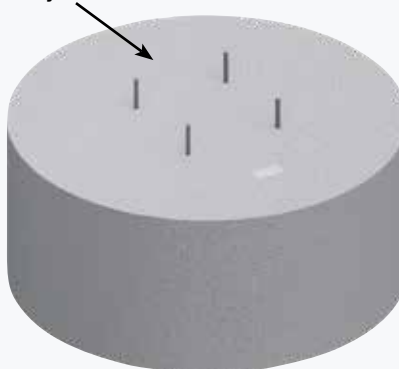
Transport aid, complete in stainless steel, for easy lifting the JP - prefabricated concrete foundation, e. g. with forklift truck.

Specification	Hole pattern	PU	Ord. no.
Stainless steel V2A	for 4x M12, 4x M16 and 4x M20	1	912 240

Transport aid Ord. no. 912 240



JP prefabricated concrete foundation with 4 load anchors made of stainless steel (M12, M16 or M20) for easy installation of the air-termination pole.



Delivery condition with already set load anchors.

Note:

All air-termination poles are suitable for Wind Zone 2 up to 150 km/h. Wind Zone 3/4 and other dimensions on request.

Ord. no. 912 205

Lightning protection - air-termination pole with flange plate

Benefits:

- Air-termination pole completely in stainless steel.
- Air-termination pole max. 4 m pole-part length.
- Statically tested, taking into account ice accretion. Gust reaction factor. Static safety factor 1.5 - required due to building authorities
- Everything from one source.

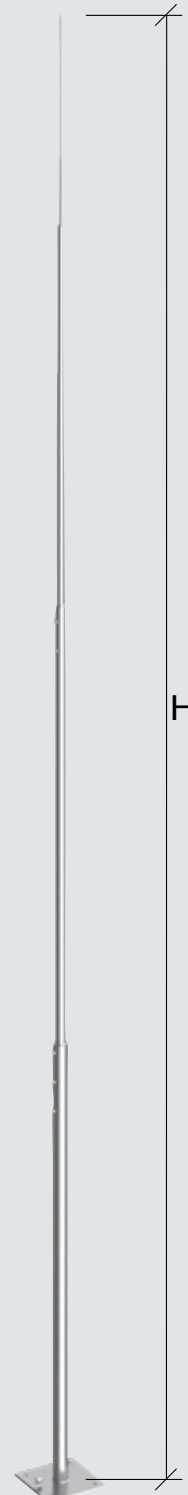


Air-termination pole with flange plate, complete in **stainless steel** with **aluminium** tip. For fastening to existing concrete surface on site; max. Wind Zone (WZ) 2.

Air-termination pole with flange plate

Type	Height (H)	Hole pattern flange plate	Heavy-duty anchor	Ord. no.
JP-FP 6.0	6.0 m	□ 250 x 250 mm	4x M12	912 181
JP-FP 7.0	7.0 m	□ 250 x 250 mm	4x M12	912 183
JP-FP 8.0	8.0 m	□ 250 x 250 mm	4x M12	912 185
JP-FP 9.0	9.0 m	□ 300 x 300 mm	4x M16	912 187
JP-FP 10.0	10.0 m	□ 300 x 300 mm	4x M16	912 210
JP-FP 11.0	11.0 m	□ 300 x 300 mm	4x M16	912 211
JP-FP 12.0	12.0 m	□ 300 x 300 mm	4x M16	912 212
JP-FP 13.0	13.0 m	□ 300 x 300 mm	4x M16	912 213
JP-FP 14.0	14.0 m	□ 300 x 300 mm	4x M16	912 214
JP-FP 15.0	15.0 m	□ 300 x 300 mm	4x M16	912 215
JP-FP 16.0	16.0 m	□ 300 x 300 mm	4x M16	912 216
JP-FP 17.0	17.0 m	□ 300 x 300 mm	4x M20	912 217
JP-FP 18.0	18.0 m	□ 300 x 300 mm	4x M20	912 218

Foot flange plate made of **stainless steel V2A** including ground connection for $\varnothing$ 8-10 mm



Ord. no. 912 210

Note:

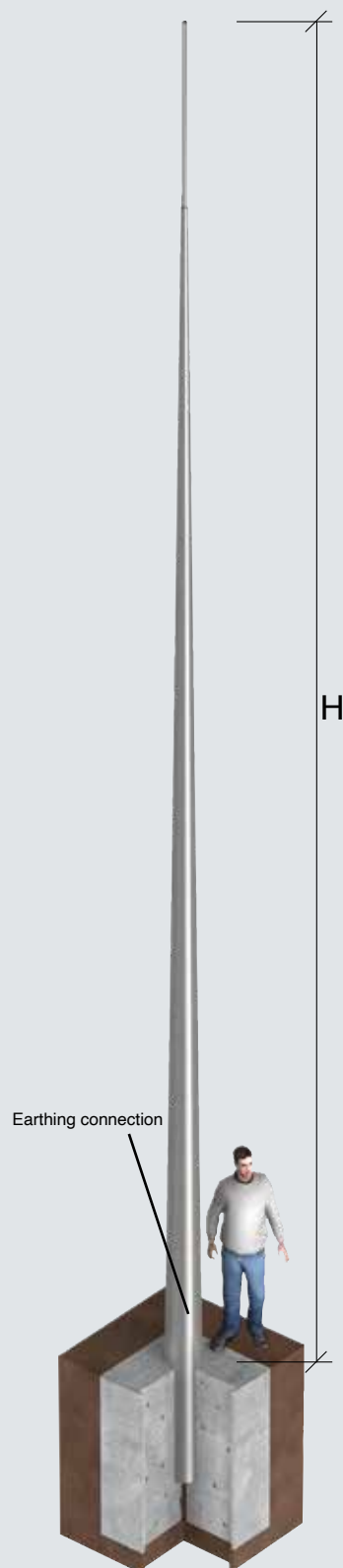
All air-termination poles are suitable for Wind Zone 2 up to 150 km/h.
Wind Zone 3/4 and other dimensions on request.

Lightning protection - air-termination pole for block foundations

This system was developed to protect objects and installations, such as areas with potentially explosive atmospheres, power distributors, transformer stations, biogas plants or other facilities with especially hazardous areas.

To ensure compliance with the valid standard EN IEC 62305 (part 1-4) we recommend the installation of an isolated lightning air-termination system using air-termination poles. With this method, it is also possible to completely encase larger objects within a protective zone and avoid bridging horizontally installed air-termination conductors.

The air-termination pole is embedded in a concrete block foundation that must be prefabricated on site according to our instructions. Please request our data sheet JP-LPH/BFM, with all the important information about the block foundation.



Lightning protection pole - Steel, hot galvanized (inside and outside). Multi-part, conic plug-in system with air-termination rod (0.3 m - 1.5 m) and earthing connection.

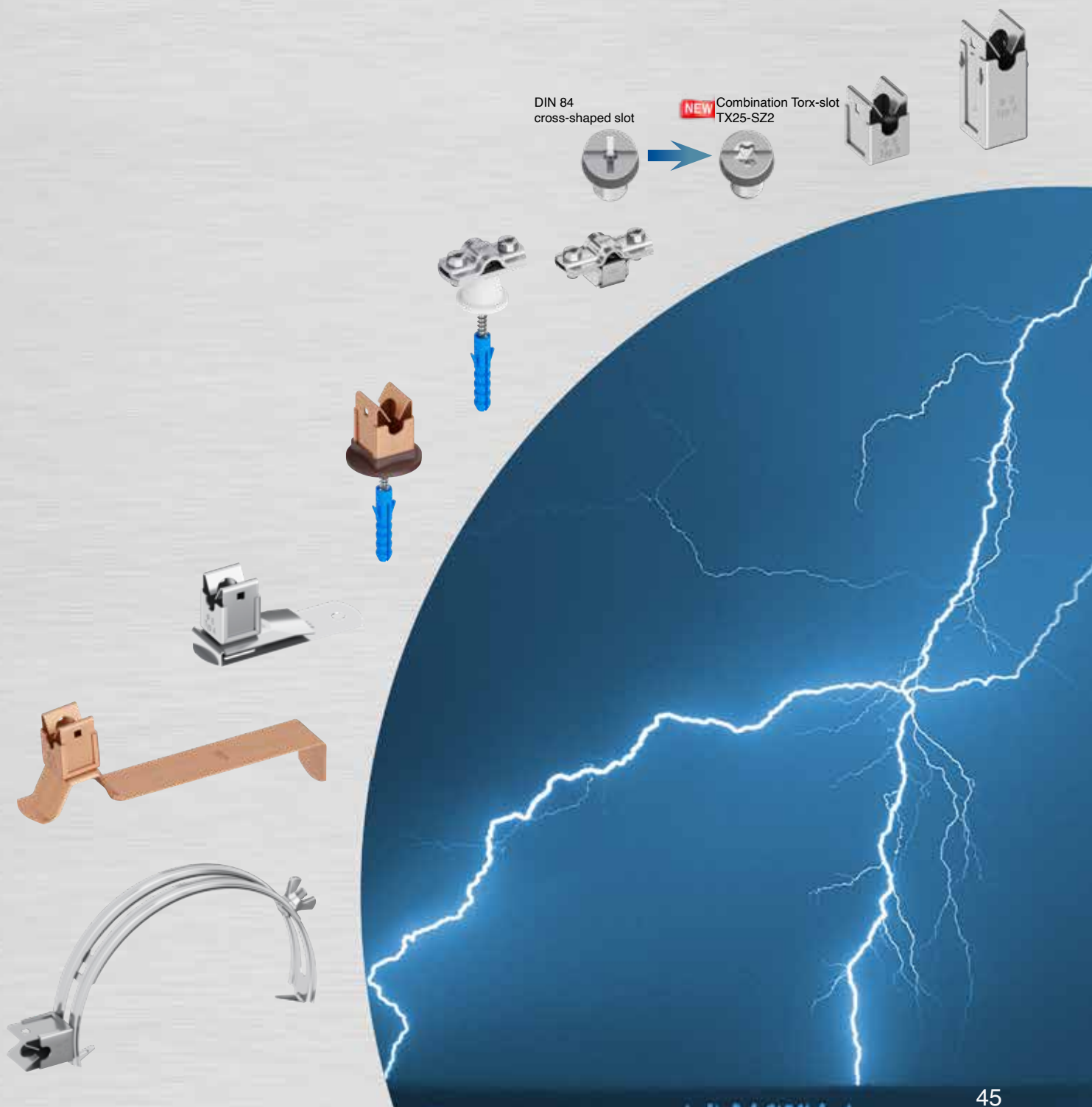
Type	Height (H)	Pole diameter		Weight (entire pole)	Parts	Ord. no.
		top	bottom			
JP-LPH 9.5	9.5 m	58 mm	153 mm	~ 100 kg	3-part	920 700
JP-LPH 10.5	10.5 m	58 mm	153 mm	~ 101 kg	3-part	920 701
JP-LPH 11.5	11.5 m	89 mm	189 mm	~ 158 kg	3-part	920 702
JP-LPH 14.0	14.0 m	58 mm	189 mm	~ 181 kg	4-part	920 703
JP-LPH 15.0	15.0 m	89 mm	224 mm	~ 256 kg	4-part	920 704
JP-LPH 16.0	16.0 m	89 mm	224 mm	~ 257 kg	4-part	920 705
JP-LPH 17.5	17.5 m	108 mm	264 mm	~ 361 kg	4-part	920 706
JP-LPH 18.5	18.5 m	108 mm	264 mm	~ 362 kg	4-part	920 707
JP-LPH 20.5	20.5 m	89 mm	264 mm	~ 385 kg	5-part	920 708
JP-LPH 22.0	22.0 m	139 mm	344 mm	~ 737 kg	3-part	920 709
JP-LPH 25.0	25.0 m	108 mm	344 mm	~ 790 kg	4-part	920 710
JP-LPH 28.0	28.0 m	89 mm	344 mm	~ 813 kg	5-part	920 711

Note:

All air-termination poles are suitable for Wind Zone 2 up to 150 km/h. Wind Zone 3/4 and other dimensions on request.

Wall and roof conductor holders

Wall and roof
conductor holders



Niro-Clip conductor fastener system

The **original-Niro-Clip**, the first stainless steel clip in lightning protection, is a multifunctional fastener system for all round conductor attachments to roofs and walls.

Since its invention by J. PRÖPSTER in 1984, the Niro-Clip has been extremely successful. The unique construction of the patented original Niro-Clip has many benefits.

Benefits:

- Maximum mechanical strength.
- Fully weather-resistant.
- Easy handling: simply push in the round conductor and it is secured as if it were screwed in place.

**Proven millions
of times
since 1984**

Examples of applications:



Special features:

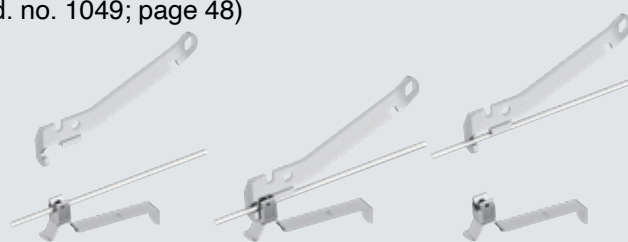
The Niro-Clip System is available in 2 different designs.

Niro-Clip Type A = **fixed conductor leading** - round conductor is clamped down as securely as if it were screwed (e. g. Ord. no. 111 001).

Niro-Clip Type B = **loose conductor leading** - round conductor can shift inside fastener e. g. when round conductor expands. (e. g. Ord. no. 110 090).

Note:

Round conductor can be removed with straightening tool (Ord. no. 1049; page 48) or Niro-Clip opener (Ord. no. 110 230; page 48)



Niro-Clip conductor fastener (J.P. patent)



Ord. no. 111 001



Ord. no. 110 090



Niro-Clip type B:
Rounded edges -
Improved loose conductor leading

Niro-Clip conductor fastener

for fixing round conductor to walls. Fastener and base made of **stainless steel** or **copper**.

Type A = fixed conductor leading				
Specification fastener / base	Bore / thread	Fit *)	PU	Ord. no.
Stainless steel V2A / stainless steel V2A	ø 6.5 mm	ø 8 mm / type A	200	111 001
Stainless steel V2A coppered / copper	ø 6.5 mm	ø 8 mm / type A	200	111 002
Stainless steel V2A / stainless steel V2A	M6	ø 8 mm / type A	200	111 005
Stainless steel V2A coppered / copper	M6	ø 8 mm / type A	200	111 006
Stainless steel V2A / stainless steel V2A	ø 7 mm	ø 10 mm / type A	200	110 090 S
Stainless steel V2A / stainless steel V2A	M6	ø 10 mm / type A	200	110 095 S

Conductor height Niro-Clip type A ø 8 mm: 14.5 mm

Conductor height Niro-Clip type A ø 10 mm: 13.5 mm

Type B = loose conductor leading				
Specification fastener / base	Bore / thread	Fit *)	PU	Ord. no.
Stainless steel V2A / stainless steel V2A	ø 6.5 mm	ø 8 mm / type B	200	110 090
Stainless steel V2A coppered / copper	ø 6.5 mm	ø 8 mm / type B	200	110 091
Stainless steel V2A / stainless steel V2A	M6	ø 8 mm / type B	200	110 095
Stainless steel V2A coppered / copper	M6	ø 8 mm / type B	200	110 096

Conductor height Niro-Clip type B: 13.5 mm

For washers and spacers see page 54.

*) **Type A (fl)** = fixed conductor leading; **Type B (ll)** = loose conductor leading

Niro-Clip conductor fastener -high version- (Height: up to 36 mm)
for fixing round conductors to walls. Fastener and base made of **stainless steel** or **copper**.

Type A = fixed conductor leading				
Specification fastener / base	Bore / thread	Fit *)	PU	Ord. no.
Stainless steel V2A / stainless steel V2A	ø 6.5 mm	ø 8 mm / type A	100	111 501
Stainless steel V2A / stainless steel V2A	M6	ø 8 mm / type A	100	111 503
Stainless steel V2A / stainless steel V2A	ø 7 mm	ø 10 mm / type A	100	111 509
Stainless steel V2A / stainless steel V2A	M6	ø 10 mm / type A	100	111 510

Conductor height Niro-Clip high version type A ø 8 mm: 36 mm
Conductor height Niro-Clip high version type A ø 10 mm: 35 mm

Type B = loose conductor leading				
Specification fastener / base	Bore / thread	Fit *)	PU	Ord. no.
Stainless steel V2A / stainless steel V2A	ø 7 mm	ø 8 mm / type B	100	111 505
Stainless steel V2A / stainless steel V2A	M6	ø 8 mm / type B	100	111 507

Conductor height Niro-Clip high version type B: 36 mm

Niro-Clip conductor fastener with washer, screw and ø 8 mm dowel.

Type A = fixed conductor leading				
Specification fastener / base	Height	Fit *)	PU	Ord. no.
Stainless steel V2A / stainless steel V2A	18 mm	ø 8 mm / type A	100	111 031
Stainless steel V2A coppered / copper	18 mm	ø 8 mm / type A	100	111 032
Stainless steel V2A / stainless steel V2A	39.5 mm	ø 8 mm / type A	50	110 500
Stainless steel V2A coppered / copper	39.5 mm	ø 8 mm / type A	50	110 502
Stainless steel V2A / stainless steel V2A	17 mm	ø 10 mm / type A	100	110 082

Type B = loose conductor leading				
Specification fastener / base	Height	Fit *)	PU	Ord. no.
Stainless steel V2A / stainless steel V2A	17 mm	ø 8 mm / type B	100	110 080
Stainless steel V2A coppered / copper	17 mm	ø 8 mm / type B	100	110 081
Stainless steel V2A / stainless steel V2A	39.5 mm	ø 8 mm / type B	50	110 501
Stainless steel V2A coppered / copper	39.5 mm	ø 8 mm / type B	50	110 503

Niro-Clip cover cap additional locking and edge protection.

Specification	PU	Ord. no.
Stainless steel V2A	100	111 000
Stainless steel V2A coppered	100	110 999

Niro-Clip cover cap made of polyethylene plastic (PE-HD).

Specification	PU	Ord. no.
NEW Plastic / PE-HD grey Suitable for all Niro-Clip conductor fasteners ø 8 mm.	100	110 998

Niro-Clip conductor fastener



Ord. no. 111 501

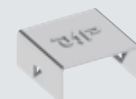
Niro-Clip conductor fastener



Ord. no. 111 031

Ord. no. 110 502

Niro-Clip cover cap



Ord. no. 111 000

Application example:



Niro-Clip cover cap



Ord. no. 110 998

Application example:



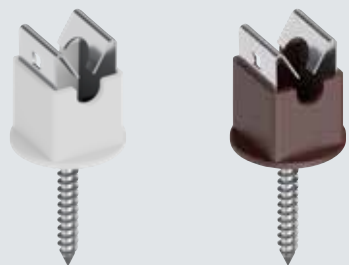
*) **Type A (fl)** = fixed conductor leading; **Type B (ll)** = loose conductor leading

Niro-Clip conductor fastener



Ord. no. 111 003 Ord. no. 111 004

Niro-Clip conductor fastener



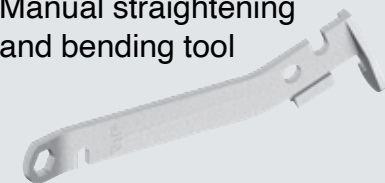
Ord. no. 111 029 Ord. no. 111 030

Niro-Clip opener



Ord. no. 110 230

Manual straightening and bending tool



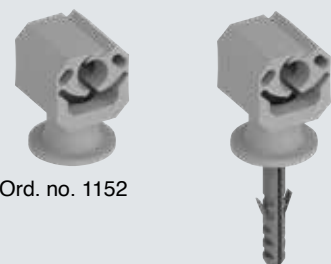
Ord. no. 1049

Screw cap conductor fastener SK



Ord. no. 1010

Plastic conductor fastener



Ord. no. 1152

Ord. no. 1154

Niro-Clip conductor fastener

for fixing round conductors to walls.
Fastener made of **stainless steel V2A**, base made of polyamide (PA 6).

Specification fastener / base	Bore / thread	Fit	PU	Ord. no.
Stainless steel V2A / PA 6-base grey	ø 7 mm	ø 8 mm	100	111 003
Stainless steel V2A / PA 6-base brown	ø 7 mm	ø 8 mm	100	111 004
Stainless steel V2A / PA 6-base grey	M6	ø 8 mm	100	111 007



Niro-Clip conductor fastener

with screw, fastener made of **stainless steel V2A** and base made of polyamide (PA 6).

Specification fastener / base	Height	Fit	PU	Ord. no.
Stainless steel V2A / PA 6 grey	18 mm	ø 8 mm	100	111 029
Stainless steel V2A / PA 6 brown	18 mm	ø 8 mm	100	111 030



Niro-Clip opener

- to open and loosen the wire from the Niro-Clip.
Bending and straightening function for soft materials (e. g. aluminium up to ø 8 mm).

Specification	Weight	Fit	PU	Ord. no.
Niro-Clip opener, polyamide with bi-hexagonal wrench width 13/17	54 g	ø 8 mm	1	110 230

Manual straightening and bending tool

- to unclip round wires from Niro-Clip.

Specification	Weight	Fit	PU	Ord. no.
Steel, hot galvanized	390 g	ø 8 mm	1	1049

Screw cap conductor fastener SK

with fastening element and cover rosette,
designed for round conductor ø 8 mm for quick and safe wire attachment to walls.

Specification	Height	Fit	PU	Ord. no.
Aluminium	16 mm	ø 8 mm	100	1010
Aluminium	26 mm	ø 8 mm	100	1011

Also available without screw and dowel.

Plastic conductor fastener

for fixing round conductors ø 8 mm to walls. Conductor fastener for low load, made of nylon.

Specification		Height	Fit	PU	Ord. no.
Grey	M6 thread	22 mm	ø 8 mm	100	1152
Grey	M8 thread	22 mm	ø 8 mm	100	1153
Copper-coloured	M6 thread	22 mm	ø 8 mm	100	1158
Grey	M6 thread	40 mm	ø 8 mm	100	1150
Copper-coloured	M6 thread	40 mm	ø 8 mm	100	1151
Grey	Dowel 6 x 50 mm	22 mm	ø 8 mm	100	1154

Conductor fastener for round conductor $\varnothing$ 8-10 mm, mounted with screws M6 V2A, washer or spacer, fastening screw and dowel $\varnothing$ 8 mm.

Specification	Fastener	Inner thread	Height	PU	Ord. no.
Zinc die-cast	Steel, hot galv.	M8	24 mm	100	110 171
Zinc die-cast	Stainless steel V2A	M8	24 mm	100	110 180
Red brass	Copper	M8	24 mm	100	110 172
Steel, hot galv. - plastic	Steel, hot galv.		20 mm	100	1034
Aluminium - plastic	Aluminium		20 mm	100	1033
Copper - plastic	Copper		20 mm	100	1032
Stainless steel V2A - plastic	Stainless steel V2A		20 mm	100	1031
Stainless steel V2A	Stainless steel V2A		15 mm	100	1132

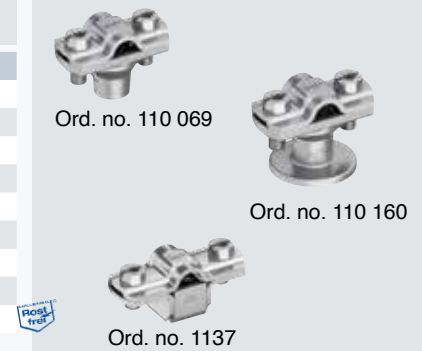
Conductor fastener



Conductor fastener for round conductor $\varnothing$ 8-10 mm, mounted with screws M6 V2A.

Specification	Fastener	Inner thread	Height	PU	Ord. no.
Zinc die-cast	Steel, hot galvanized	M6	20 mm	100	110 069
Zinc die-cast	Steel, hot galvanized	M8	20 mm	100	110 071
Zinc die-cast	Stainless steel V2A	M8	20 mm	100	110 189
Zinc die-cast with washer	Steel, hot galvanized	M6	23 mm	100	110 160
Zinc die-cast with washer	Stainless steel V2A	M6	23 mm	100	110 190
Zinc die-cast with washer	Steel, hot galvanized	M8	23 mm	100	110 161
Zinc die-cast with washer	Stainless steel V2A	M8	23 mm	100	110 191
Red brass	Copper	M8	20 mm	100	110 072
Stainless steel V2A	Stainless steel V2A	M8	15 mm	100	1137

Conductor fastener



Conductor fastener with loose pin for round conductor $\varnothing$ 8-10 mm, mounted with screws M6.

Specification with loose pin	Length	PU	Ord. no.
Aluminium with steel pin	70 mm	100	110 270
Aluminium with steel pin	100 mm	100	110 271
Aluminium with steel pin	150 mm	50	110 272
Steel, hot galvanized with steel pin	70 mm	100	110 050
Steel, hot galvanized with steel pin	100 mm	100	110 045
Steel, hot galvanized with steel pin	150 mm	50	110 047
Stainless steel V2A with stainless steel pin	100 mm	100	110 276
Stainless steel V2A with stainless steel pin	150 mm	50	110 277
Copper with stainless steel pin	100 mm	100	110 280
Copper with stainless steel pin	150 mm	50	110 281

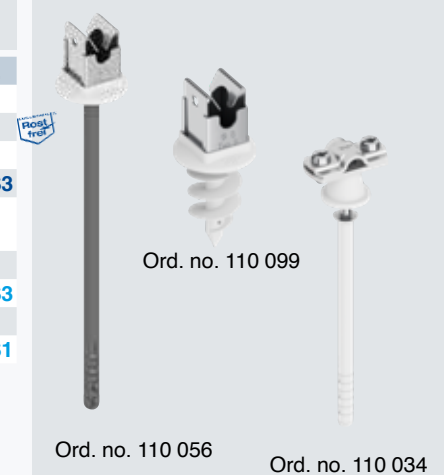
Conductor fastener with loose pin



Conductor fastener for insulated walls with insulation thickness of 40-170 mm.

Specification	Insulation thickness	Fit	PU	Ord. no.
Conductor fastener *)				
Niro-Clip stainless steel V2A	up to 60 mm	$\varnothing$ 8 mm /type A	50	110 030
Niro-Clip stainless steel V2A	up to 120 mm	$\varnothing$ 8 mm /type A	50	110 056
Niro-Clip stainless steel V2A	up to 170 mm	$\varnothing$ 8 mm /type B	50	110 056 S3
Niro-Clip stainless steel V2A with dowel	min. 50 mm	$\varnothing$ 8 mm /type B	50	110 099
Fastener aluminium	up to 60 mm	$\varnothing$ 8 mm	50	110 034
Fastener aluminium	up to 170 mm	$\varnothing$ 8 mm	50	110 034 S3
Rod holder				
Fastener aluminium	up to 170 mm	$\varnothing$ 16 mm	50	110 038 S1

Conductor fastener



Fastener for additional insulation thicknesses available on request!

*) **Type A (fl)** = fixed conductor leading; **Type B (ll)** = loose conductor leading

Downpipe conductor fastener with beading

with M6 nut



Ord. no. 111 265

with M6 through-hole thread



Ord. no. 111 225 G

with snap-mounting



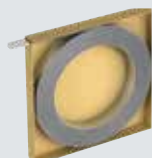
Ord. no. 110 256

Universal downpipe conductor fastener



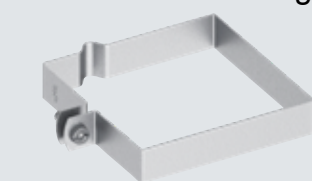
Ord. no. 110 250

Ord. no. 110 249



Ord. no. 110 248

Downpipe conductor fastener with beading



Ord. no. 911 280

Downpipe conductor fastener with beading for ø 8 mm, to install conductors behind downpipes. **Benefit:** No additional wall fastener required! Fast, clean installation without drilling.

Specification	Diameter of pipe	PU	Ord. no.
With bolt and nut M6			
Steel, hot galvanized	ø 80 mm	25	111 222
Steel, hot galvanized	ø 100 mm	25	111 225
Steel, hot galvanized	ø 120 mm	25	111 227
NEW Steel, hot galvanized	ø 150 mm	25	111 228
Aluminium	ø 100 mm	25	111 265
Aluminium	ø 110 mm	25	111 266
Aluminium	ø 120 mm	25	111 267
Aluminium	ø 150 mm	25	111 268
Copper	ø 80 mm	25	111 232
Copper	ø 100 mm	25	111 235
Copper	ø 120 mm	25	111 237
NEW Copper	ø 150 mm	25	111 238

With bolt M6 and through-hole thread (without nut)

Steel, hot galvanized	ø 80 mm	25	111 222 G
Steel, hot galvanized	ø 100 mm	25	111 225 G
Steel, hot galvanized	ø 120 mm	25	111 227 G
Aluminium	ø 100 mm	25	111 265 G
Aluminium	ø 110 mm	25	111 266 G
Aluminium	ø 120 mm	25	111 267 G
Copper	ø 80 mm	25	111 232 G
Copper	ø 100 mm	25	111 235 G
Copper	ø 120 mm	25	111 237 G

Additional diameters on request!

With snap-mounting

Steel, hot galvanized	ø 80/85/90/95/100/110/120 mm	25	110 255
Aluminium	ø 80/85/90/95/100/110/120 mm	25	110 256
Copper	ø 80/85/90/95/100/110/120 mm	25	110 257
Stainless steel V2A	ø 80/85/90/95/100/110/120 mm	25	110 258



Universal downpipe conductor fastener to install conductors behind downpipes. **Benefit:** No additional wall fastener required! Fast, clean installation without drilling.

Specification	pipe bracket / tensioning tape	Diameter of pipe	PU	Ord. no.
Stainless steel V2A / stainless steel V2A		ø 60 - 120 mm	50	110 250
Stainless steel V2A / stainless steel V2A		ø 60 - 150 mm	50	110 251
Stainless steel V2A / without tape		--	200	110 249
Stainless steel V2A/coppered / Copper-tin-alloy		ø 60 - 120 mm	50	110 252
Stainless steel V2A/coppered / Copper-tin-alloy		ø 60 - 150 mm	50	110 253



Stainless steel - tensioning tape in practical cut-to length packaging.

Specification	Length	Fit	PU	Ord. no.
Tape stainless steel V2A	25 m	15 x 0.4 mm	1	110 248



Downpipe conductor fastener with beading for ø 8-10 mm, to install conductors behind downpipes. **Benefit:** No additional wall fastener required! Fast, clean installation without drilling.

Specification	Strip width	Dimensions of pipe	PU	Ord. no.
Steel, hot galvanized	20 mm	80 x 80 mm	25	911 654
Steel, hot galvanized	20 mm	100 x 100 mm	25	911 280
Aluminium	20 mm	80 x 80 mm	25	911 654 S
Aluminium	20 mm	100 x 100 mm	25	911 280 S
Copper	20 mm	80 x 80 mm	25	913 610
Copper	20 mm	100 x 100 mm	25	913 611

Pipe clamps

Universal downpipe clamp (cutting to length as needed) - with holes ø 10.5 mm, hexagonal screw M8 and nut. **Benefit:** Only two types, for all common diameters of downpipes.

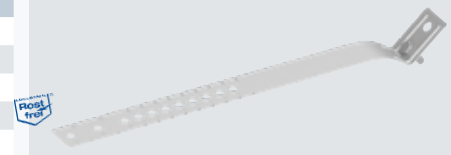
Specification	Fit	PU	Ord. no.
Steel, hot galvanized	ø 60/65/70/75/80/85/90/95/100/110/120 mm	25	111 214
Aluminium	ø 60/65/70/75/80/85/90/95/100/110/120 mm	25	111 212
Copper	ø 60/65/70/75/80/85/90/95/100/110/120 mm	25	111 210
Stainless steel V2A	ø 60/65/70/75/80/85/90/95/100/110/120 mm	25	111 216
Steel, hot galvanized	ø 90/95/100/110/120/125/130/140/150 mm	25	111 215
Aluminium	ø 90/95/100/110/120/125/130/140/150 mm	25	111 213
Copper	ø 90/95/100/110/120/125/130/140/150 mm	25	111 211
Stainless steel V2A	ø 90/95/100/110/120/125/130/140/150 mm	25	111 217

Additional diameters on request.

Example of application:



Universal-downpipe clamp



Ord. no. 111 212



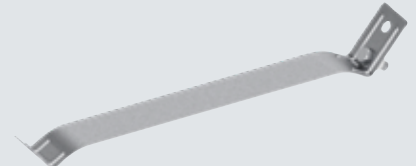
Wall and roof
conductor holders

Downpipe clamp, hexagonal screw M8 and nut, according to EN IEC 62561-1.

Specification	Fit	PU	Ord. no.
Steel, hot galvanized	ø 100 mm	25	111 100
Steel, hot galvanized	ø 120 mm	25	111 120
Copper	ø 100 mm	25	111 205
Copper	ø 120 mm	25	111 207

Additional dimensions with fixed measurements on request!

Downpipe clamp



Ord. no. 111 100

Conductor fastener for insulated mounting of earth lead-in rods and terminal lugs to the downpipes.

Specification	Fit of holder	PU	Ord. no.
Stainless steel V2A / PVC	ø 16 mm	50	111 396
Benefits: universally mountable to the downpipe conductor fasteners with hexagonal screw M8 (e. g. Ord. no. 111 213, 111 120 or 111 391).	ø 8 - 10 mm	50	111 397
	fl. 30 mm	50	111 398
	ø 13 mm	50	111 399

Example of application:



Conductor fastener



Ord. no. 111 396

Ord. no. 111 398



NEW

Square downpipe clamp - with connection ø 10.5 mm, hexagonal screw M8 and nut.

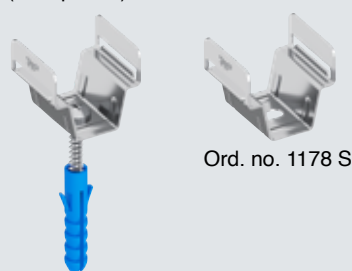
Specification	Strip width	pipe dimensions	PU	Ord. no.
Steel, hot galvanized	40 mm	80 x 80 mm	25	111 215 S2
Steel, hot galvanized	40 mm	100 x 100 mm	25	111 215 S1
Steel, hot galvanized	40 mm	120 x 120 mm	25	111 215 S

Square downpipe clamp



Ord. no. 111 215 S2

Tape conductor holder (JP-patent)



Ord. no. 1178 S

Ord. no. 1178

Tape conductor holder



Ord. no. 1181

Tape conductor holder



Ord. no. 110 178

Ord. no. 1183

Ord. no. 1121

Tape conductor holder



Ord. no. 110 077

Ord. no. 110 162

Ord. no. 1128

Tape conductor holder



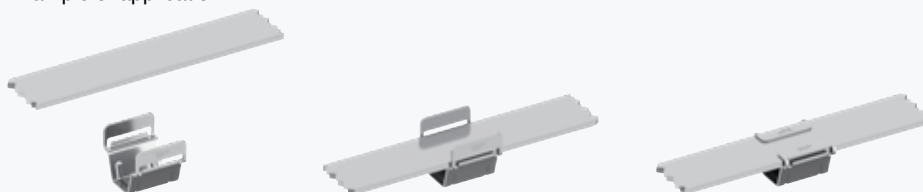
Ord. no. 911 314

Tape conductor holder for 30 mm wide flat tapes.

Benefit: time-saving installation - insert the tape, bend over the tabs - done.

Specification	Fit	PU	Ord. no.
Stainless steel V2A with screw and dowel ø 8 mm	fl. 30 mm	100	1178
Stainless steel V2A	fl. 30 mm	100	1178 S

Example of application:



Tape conductor holder with button head screw V2A and dowel ø 8 mm.

Specification	Height	Fit	PU	Ord. no.
Steel, hot galvanized	15 mm	fl. 30 mm	100	1180
Steel, hot galvanized	15 mm	fl. 40 mm	100	2037
Copper	15 mm	fl. 40 mm	100	2039
Stainless steel V2A	15 mm	fl. 30 mm	100	1181

Tape conductor holder with screws M6 V2A, washer or base, fixing screw and dowel ø 8 mm.

Specification	Fastener	Fem. thread	Height	PU	Ord. no.
for 30 mm wide flat tapes					
Zinc die-cast	Steel, hot galvanized	M8	24 mm	100	110 178
Zinc die-cast	Stainless steel V2A	M8	24 mm	100	110 181
Steel, hot galvanized - plastic	Steel, hot galvanized		20 mm	100	1183
Aluminium - plastic	Aluminium		20 mm	100	1185
Stainless steel V2A - plastic	Stainless steel V2A		20 mm	100	1184
Stainless steel V2A	Stainless steel V2A		15 mm	100	1121
for 40 mm wide flat tapes					
Stainless steel V2A	Stainless steel V2A		15 mm	100	2038

Tape conductor holder with screws M6 V2A.

Specification	Fastener	Fem. thread	Height	PU	Ord. no.
for 30 mm wide flat tapes					
Zinc die-cast	Steel, hot galvanized	M6	20 mm	100	110 077
Zinc die-cast	Steel, hot galvanized	M8	20 mm	100	110 078
Zinc die-cast with base	Steel, hot galvanized	M6	23 mm	100	110 162
Zinc die-cast with base	Stainless steel V2A	M6	23 mm	100	110 194
Zinc die-cast with base	Steel, hot galvanized	M8	23 mm	100	110 163
Zinc die-cast with base	Stainless steel V2A	M8	23 mm	100	110 195
Stainless steel V2A	Stainless steel V2A	M8	15 mm	100	1128
for 40 mm wide flat tapes					
Stainless steel V2A	Stainless steel V2A		15 mm	100	2038 S

Tape conductor holder for wall mounting, with screw M8 and clamping bracket.

Specification	Slot width	Distance to wall	PU	Ord. no.
Steel, hot galvanized	10 mm	18 mm	50	911 314
Copper	10 mm	18 mm	50	911 576
Stainless steel V2A	10 mm	18 mm	50	911 575

Rod holder for fixing air-termination rods and earth lead-in rods, with screws M6 V2A, washer or spacer, fixing screw and dowel ø 8 mm.

Specification	Fastener	Fem. thread	Fit	Height	PU	Ord. no.
Zinc die-cast	Steel, hot galvanized	M8	ø 16 mm	24 mm	50	110 175
Zinc die-cast	Stainless steel V2A	M8	ø 16 mm	24 mm	50	110 182
Red brass	Copper	M8	ø 16 mm	15 mm	50	110 176
Zinc die-cast	Steel, hot galvanized	M8	ø 13 mm	24 mm	50	110 187
Steel, hot galv. -plastic	Steel, hot galvanized		ø 16 mm	20 mm	100	1190
Aluminium - plastic	Aluminium		ø 16 mm	20 mm	100	1187
Copper - plastic	Copper		ø 16 mm	20 mm	100	1188
-discontinued model-						
Stainless steel V2A -plastic	Stainless steel V2A		ø 16 mm	20 mm	100	1189
Steel, hot galv. -plastic	Steel, hot galvanized		ø 13 mm	20 mm	100	1194
Stainless steel V2A	Stainless steel V2A		ø 16 mm	15 mm	100	1142

Rod holder



Wall and roof
conductor holders

Rod holder for fixing air-termination rods and earth lead-in rods, with screws M6 V2A.

Specification	Fastener	Fem. thread	Fit	Height	PU	Ord. no.
Zinc die-cast	Steel, hot galvanized	M6	ø 16 mm	20 mm	100	110 073
Zinc die-cast	Stainless steel V2A	M6	ø 16 mm	20 mm	100	110 196
-discontinued model-						
Zinc die-cast	Steel, hot galvanized	M8	ø 16 mm	20 mm	100	110 075
Zinc die-cast	Stainless steel V2A	M8	ø 16 mm	20 mm	100	110 197
Zinc die-cast with washer	Steel, hot galvanized	M6	ø 16 mm	23 mm	100	110 164
Zinc die-cast with washer	Stainless steel V2A	M6	ø 16 mm	23 mm	100	110 198
Zinc die-cast with washer	Steel, hot galvanized	M8	ø 16 mm	23 mm	100	110 165
Zinc die-cast with washer	Stainless steel V2A	M8	ø 16 mm	23 mm	100	110 199
Red brass	Copper	M8	ø 16 mm	15 mm	100	110 076
Zinc die-cast	Steel, hot galvanized	M8	ø 13 mm	20 mm	100	110 087
Stainless steel V2A	Stainless steel V2A	M8	ø 16 mm	15 mm	100	1147

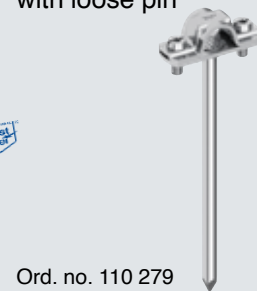
Rod holder



Rod holder with loose pin, for fixing air-termination rods and earth lead-in rods, mounted with screws M6 V2A.

Specification with loose pin	Fit	Length	PU	Ord. no.
Steel, hot galvanized with steel pin	ø 16 mm	100 mm	100	110 046
Steel, hot galvanized with steel pin	ø 16 mm	150 mm	50	110 048
Stainless steel V2A with stainless steel pin	ø 16 mm	100 mm	100	110 278
Stainless steel V2A with stainless steel pin	ø 16 mm	150 mm	50	110 279
Copper with stainless steel pin	ø 16 mm	100 mm	100	110 282
Copper with stainless steel pin	ø 16 mm	150 mm	50	110 283

Rod holder with loose pin



Conductor fastener for fixing cables ø 10.5 - 14 mm, with button head screw V2A and ø 8 mm dowel.

Specification	Fit	PU	Ord. no.
Stainless steel V2A	ø 10.5 - 14 mm	100	110 265

Conductor fastener



Fastener



Ord. no. 110 002



Ord. no. 110 003



Ord. no. 110 008



Ord. no. 110 015



Ord. no. 110 009



Ord. no. 110 014

Accessories



Ord. no. 1042



Ord. no. 1046



Ord. no. 1047



Ord. no. 1048



Ord. no. 111 049



Ord. no. 111 047



Ord. no. 111 048



Ord. no. 110 098

Fastener

Specification	Hole spacing	Fit	Material	PU	Ord. no.
with two bore holes	28 mm	ø 8 - 10 mm	Aluminium	100	110 001
elongated hole ø 6.5 x 8.5 mm	38 mm	ø 8 - 10 mm	Aluminium	100	110 002
	38 mm	ø 16 mm	Aluminium	100	110 003
	28 mm	ø 8 - 10 mm	Copper	100	110 004
	28 mm	ø 8 - 10 mm	Stainless steel V2A	100	110 006
	38 mm	ø 16 mm	Stainless steel V2A	100	110 007
	38 mm	fl. 30 mm	Aluminium	100	110 008

Fastener for tape (flat 30 mm), for fixing directly to walls | Stainless steel V2A | 100 | 110 015

Specification	Material	PU	Ord. no.
with one bore hole ø 6.5 mm for flush-mounted installation of conductors ø 8 - 11 mm	Stainless steel V2A	100	110 009
	Copper	100	110 010
with plastic dowel (ø 6 mm) for flush-mounted installation of conductors ø 8 - 11 mm	Stainless steel V2A	100	110 014

Washers and spacers

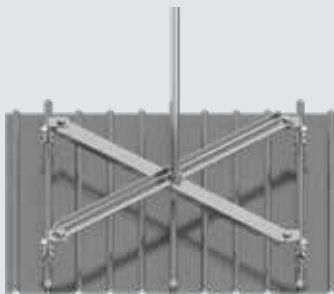
Specification	Length	Material	PU	Ord. no.
Washer		Plastic grey	100	1042
Washer		Plastic brown	100	1046
Washer for Niro-Clip		Plastic grey	100	1047
Washer for Niro-Clip		Plastic brown	100	1048
Washer		Stainless steel V2A	100	111 049
Spacer		Plastic grey	100	111 047
Spacer		Plastic brown	100	111 048
Dowel for external thermal insulation composite systems	90 mm	Plastic white	25	110 097
	50 mm	Plastic white	50	110 098

Screws on page 168.

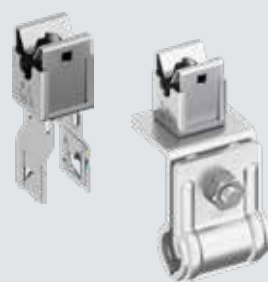
Selection guide for roof cable holders and air-termination systems

Type of roof or surface	Roof conductor holder	Air-termination system
	Page	Page
Aluminium roof shingles (e. g., Prefa)	56	-
Bitumen roofs	64	-
Corrugated sheet roof	60	-
Ergolsbacher interlocking tiles	59	-
Flat roof	64 / 65	33
Flat roof - penetration	65	-
Interlocking roof tile	59 / 60	-
Membrane roof	64 / 65	33
Metal roof	28 / 29 / 64 / 65	28
Metal roof Kalzip	61	30
Metal roof RIB-ROOF 465	61	-
Metal roof RIB-ROOF 500	61	31
Pantiled roofs	58 / 59	-
Preolit shingle roof	56 / 60 / 64	-
Ridge area	56 / 57 / 62 / 63	27 / 33
Slate roof	56 / 57 / 60	-
Smooth surfaces (e. g., metal, glass, powder coating, painted)	64 / 65	-
Standing seam roof	57	31
Thatched roofs	66	-
Tile / panel roof	56 / 57 / 58	27
Trapezoidal sheet roof	29 / 64	29

Metal roof Kalzip

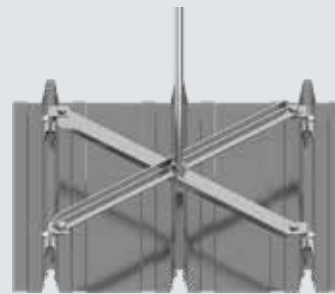


e. g. Ord. no. 910 247

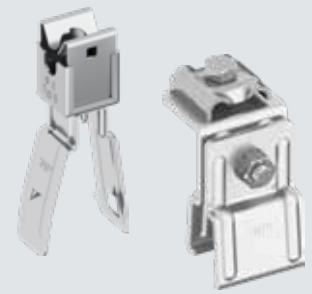


e. g. Ord. no. 1309

Metal roof RIB-ROOF 500



e. g. Ord. no. 910 257



e. g. Ord. no. 111 760

Standing seam roof

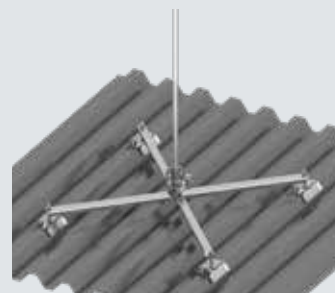


e. g. Ord. no. 912 515

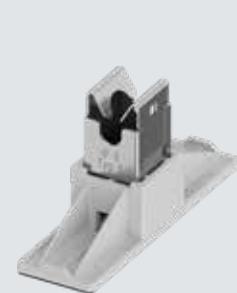


e. g. Ord. no. 1262

Trapezoidal sheet roof



e. g. Ord. no. 912 525



e. g. Ord. no. 912 529

Tiles



e. g. Ord. no. 1254



e. g. Ord. no. 111 191

Corrugated sheet roof



e. g. Ord. no. 111 027



Roof conductor holder system Niro-Clip

Roof conductor holder with clamping bracket & Niro-Clip



Ord. no. 111 010



Ord. no. 111 525

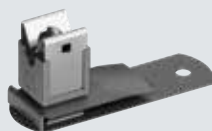
Roof conductor holder with Niro-Clip for thin aluminium roof shingles



Ord. no. 111 010 S

PRÖ COLOR

Roof conductor holder with clamping bracket & Niro-Clip



Ord. no. 111 010 az



Ord. no. 111 525 ro

Roof conductor holder



Ord. no. 1028



Ord. no. 110 517

Roof conductor holder with clamping bracket, for bitumen shingles and slate roofs or for tiles with large clamping range.

Specification	Fixed conductor leading	Clamp. range	Fit	PU	Ord. no.
Base	Niro-Clip type A				
Stainless steel V2A	Stainless steel V2A	up to 5 mm	ø 8 mm	100	111 010
Stainless steel V2A	Stainless steel V2A	up to 18 mm	ø 8 mm	100	111 525
Copper	Stainless steel V2A /coppered	up to 5 mm	ø 8 mm	100	111 012
Copper	Stainless steel V2A /coppered	up to 18 mm	ø 8 mm	100	111 526

Specification	Loose conductor leading	Clamp. range	Fit	PU	Ord. no.
Base	Niro-Clip type B				
Stainless steel V2A	Stainless steel V2A	up to 5 mm	ø 8 mm	100	111 011
Stainless steel V2A	Stainless steel V2A	up to 18 mm	ø 8 mm	100	111 527
Copper	Stainless steel V2A /coppered	up to 5 mm	ø 8 mm	100	111 013
Copper	Stainless steel V2A /coppered	up to 18 mm	ø 8 mm	100	111 528

Roof conductor holder with cranked clamping piece and undercut for secure attachment to thin aluminium roof shingles.

Specification	Fixed conductor leading	Fit	PU	Ord. no.
Base	Niro-Clip type A			
Stainless steel V2A	Stainless steel V2A	ø 8 mm	100	111 010 S

Specification	Loose conductor leading	Fit	PU	Ord. no.
Base	Niro-Clip type B			
Stainless steel V2A	Stainless steel V2A	ø 8 mm	100	111 010 S1

PRÖ-COLOR Roof conductor holder

for bitumen shingles and slate roofs or for tiles with large clamping range.

Specification	Fixed conductor leading	Clamp. range	Fit	PU	Ord. no.
Base	Niro-Clip type A				
Steel, hot galv. /coated	Stainless steel V2A	up to 5 mm	ø 8 mm	100	111 010 az
Steel, hot galv. /coated	Stainless steel V2A	up to 18 mm	ø 8 mm	100	111 525 ro
Steel, hot galv. /coated	Stainless steel V2A	up to 18 mm	ø 8 mm	100	111 525 az

Specification	Loose conductor leading	Clamp. range	Fit	PU	Ord. no.
Base	Niro-Clip type B				
Steel, hot galv. /coated	Stainless steel V2A	up to 5 mm	ø 8 mm	100	111 011 az
Steel, hot galv. /coated	Stainless steel V2A	up to 18 mm	ø 8 mm	100	111 527 ro
Steel, hot galv. /coated	Stainless steel V2A	up to 18 mm	ø 8 mm	100	111 527 az

Specifications: ● ro - colour of the conductor holder: red brown (RAL 8012)
● az - colour of the conductor holder: anthracite (RAL 7016)

Roof conductor holder suitable for all tile shapes; for ø 8 mm round conductor; to be used on the ridge and the roof surface, bore hole ø 12 mm.

Specification	Fastener *)	Height.	Fit	PU	Ord. no.
Bottom part					
Grommet (TPE-soft)	Niro-Clip stainless steel/ type A	19 mm	ø 8 mm	100	1028
Grommet (TPE-soft)	Niro-Clip stainless steel/ type B	18 mm	ø 8 mm	100	1027
Grommet (TPE-soft)	Niro-Clip stainless steel/ type A	40.5 mm	ø 8 mm	50	110 517

*) **Type A (fl)** = fixed conductor leading; **Type B (ll)** = loose conductor leading

Roof conductor holder with clamping bracket

(clamping range up to 5 mm) for slate roofs; especially well-suited for later installation!

Specification	Fixed conductor leading	Length	Fit	PU	Ord. no.
Base	Niro-Clip type A				
Stainless steel V2A with teeth	Stainless steel V2A	180 mm	ø 8 mm	200	111 033
Stainless steel V2A without teeth	Stainless steel V2A	180 mm	ø 8 mm	200	111 512
Copper with teeth	Stainless st. V2A / coppered	180 mm	ø 8 mm	200	111 035

Specification	Loose conductor leading	Length	Fit	PU	Ord. no.
Base	Niro-Clip type B				
Stainless steel V2A with teeth	Stainless steel V2A	180 mm	ø 8 mm	200	111 511
Stainless steel V2A without teeth	Stainless steel V2A	180 mm	ø 8 mm	200	111 513
Copper with teeth	Stainless st. V2A / coppered	180 mm	ø 8 mm	200	111 516

PRÖ-COLOR Roof conductor holder (clamping range up to 5 mm)

for slate roofs; especially well-suited for later installation!

Specification		Length	Fit	PU	Ord. no.
Base	Niro-Clip V2A				
Steel, hot galvanized/coated with teeth	Type A - fixed conductor leading	180 mm	ø 8 mm	200	111 033 az
Steel, hot galvanized/coated with teeth	Type B - loose conductor leading	180 mm	ø 8 mm	200	111 511 az

Specifications: ● az - colour of the conductor holder: anthracite (RAL 7016)

Roof conductor holder, for direct clamping

to flat roof tiles, sheets and ridge tiles. **Clamping range 9 - 15 mm**, clamped by twisting the holder.

Specification	Fixed conductor leading	Height	Fit	PU	Ord. no.
Base	Niro-Clip type A				
Stainless steel V2A	Stainless steel V2A	32 mm	ø 8 mm	50	111 550
Copper	Stainless steel V2A / coppered	32 mm	ø 8 mm	50	111 552

Specification	Loose conductor leading	Height	Fit	PU	Ord. no.
Base	Niro-Clip type B				
Stainless steel V2A	Stainless steel V2A	31 mm	ø 8 mm	50	111 551
Copper	Stainless steel V2A / coppered	31 mm	ø 8 mm	50	111 553

Roof conductor holder, for direct clamping

to flat roof tiles, sheets and ridge tiles. **Clamping range 15 - 25 mm**, clamped by twisting the holder.

Specification	Fixed conductor leading	Height	Fit	PU	Ord. no.
Base	Niro-Clip type A				
Stainless steel V2A	Stainless steel V2A	32 mm	ø 8 mm	50	111 520
Copper	Stainless steel V2A / coppered	32 mm	ø 8 mm	50	111 522

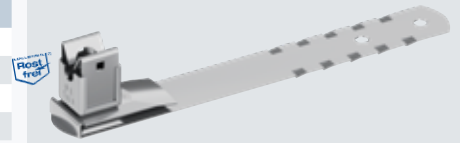
Specification	Loose conductor leading	Height	Fit	PU	Ord. no.
Base	Niro-Clip type B				
Stainless steel V2A	Stainless steel V2A	31 mm	ø 8 mm	50	111 521
Copper	Stainless steel V2A / coppered	31 mm	ø 8 mm	50	111 523

Conductor fastener

for universal use, with standing seam clamp, **clamping range 1 - 8 mm**.

Specification	Loose conductor leading	Height	Fit	PU	Ord. no.
Base	Niro-Clip type B				
Steel, hot galvanized	Stainless steel V2A	21.5 mm	ø 8 mm	50	913 732
Aluminium	Stainless steel V2A	21.5 mm	ø 8 mm	50	913 420
Copper	Stainless steel V2A / coppered	20.5 mm	ø 8 mm	50	913 733
Stainless steel V2A	Stainless steel V2A	20.5 mm	ø 8 mm	50	913 734

Roof conductor holder with clamping bracket & Niro-Clip



Ord. no. 111 033

PRÖ-COLOR

Roof conductor holder with clamping bracket & Niro-Clip



Ord. no. 111 033 az

Roof conductor holder with Niro-Clip



Ord. no. 111 550



Ord. no. 111 521

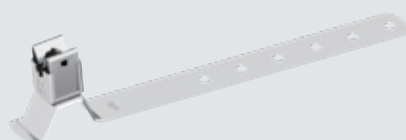
Conductor fastener with Niro-Clip



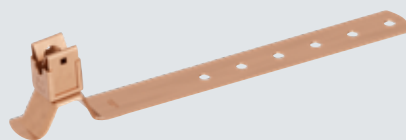
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*) **Type A (fl)** = fixed conductor leading; **Type B (ll)** = loose conductor leading

Roof conductor holder with Niro-Clip



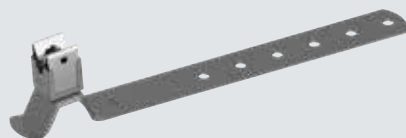
Ord. no. 111 019



Ord. no. 111 020

PRÖ COLOR

Roof conductor holder with Niro-Clip



Ord. no. 111 019 az



Ord. no. 111 019 ro

Roof conductor holder (J&P-patent)



Ord. no. 111 051



Ord. no. 111 052

Roof conductor holder with screw fastening



Ord. no. 1062

Roof conductor holder for universal use.

Specification	Type A Fixed conductor leading	Length	Fit	PU	Ord. no.
Bottom part	Niro-Clip				
Stainless steel V2A	Stainless steel V2A	210 mm	ø 8 mm	100	111 019
Stainless steel V2A	Stainless steel V2A	280 mm	ø 8 mm	100	111 015
Stainless steel V2A	Stainless steel V2A	410 mm	ø 8 mm	50	111 535
Copper	Stainless steel V2A/coppered	210 mm	ø 8 mm	100	111 020
Copper	Stainless steel V2A/coppered	280 mm	ø 8 mm	100	111 016
Copper	Stainless steel V2A/coppered	410 mm	ø 8 mm	50	111 537
Specification	Type B Loose conductor leading	Length	Fit	PU	Ord. no.
Bottom part	Niro-Clip				
Stainless steel V2A	Stainless steel V2A	210 mm	ø 8 mm	100	111 540
Stainless steel V2A	Stainless steel V2A	280 mm	ø 8 mm	100	111 541
Stainless steel V2A	Stainless steel V2A	410 mm	ø 8 mm	50	111 536
Copper	Stainless steel V2A/coppered	210 mm	ø 8 mm	100	111 545
Copper	Stainless steel V2A/coppered	280 mm	ø 8 mm	100	111 546

PRÖ-COLOR Roof conductor holder for universal use.

Specification	Type A Fixed conductor leading	Length	Fit	PU	Ord. no.
Bottom part	Niro-Clip				
Steel, hot galvanized/coated	Stainless steel V2A	210 mm	ø 8 mm	100	111 019 az
Steel, hot galvanized/coated	Stainless steel V2A	280 mm	ø 8 mm	100	111 015 az
Steel, hot galvanized/coated	Stainless steel V2A	210 mm	ø 8 mm	100	111 019 ro
Steel, hot galvanized/coated	Stainless steel V2A	280 mm	ø 8 mm	100	111 015 ro
Specification	Type B Loose conductor leading	Length	Fit	PU	Ord. no.
Bottom part	Niro-Clip				
Steel, hot galvanized/coated	Stainless steel V2A	210 mm	ø 8 mm	100	111 540 az
Steel, hot galvanized/coated	Stainless steel V2A	280 mm	ø 8 mm	100	111 541 az
Steel, hot galvanized/coated	Stainless steel V2A	210 mm	ø 8 mm	100	111 540 ro
Steel, hot galvanized/coated	Stainless steel V2A	280 mm	ø 8 mm	100	111 541 ro

Specifications: ● ro - colour of the conductor holder: red brown (RAL 8012)
● az - colour of the conductor holder: anthracite (RAL 7016)

Roof conductor holder for universal use. Benefits: one piece, no screws or plastic parts! Quick and easy installation! Made of corrosion resistant stainless steel!

Specification	Length	Fit	PU	Ord. no.
Stainless steel V2A	210 mm	ø 8 mm	200	111 050
Stainless steel V2A	280 mm	ø 8 mm	200	111 051
Stainless steel V2A	110 mm angled	ø 8 mm	200	111 052

Roof conductor holder for universal use. Support riveted to holder.

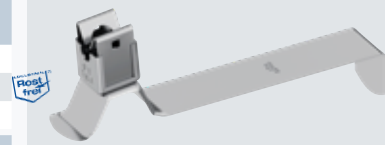
Specification	Length	Fit	PU	Ord. no.
Stainless steel V2A	210 mm	ø 8 mm	100	1062
with screw fastening in aluminium	280 mm	ø 8 mm	100	1063
	410 mm	ø 8 mm	50	1064
Copper with screw fastening	210 mm	ø 8 mm	100	1065
	280 mm	ø 8 mm	100	1066
	410 mm	ø 8 mm	50	1067

*) Type A (fl) = fixed conductor leading; Type B (ll) = loose conductor leading

Roof conductor holder for pantiled roofs.

Specification	Type A Fixed conductor leading	Length	Fit	PU	Ord. no.
Bottom part	Niro-Clip				
Stainless steel V2A	Stainless steel V2A	120 mm	ø 8 mm	150	111 023
Copper	Stainless steel V2A/coppered	120 mm	ø 8 mm	150	111 024
Specification	Type B Loose conductor leading	Length	Fit	PU	Ord. no.
Bottom part	Niro-Clip				
Stainless steel V2A	Stainless steel V2A	120 mm	ø 8 mm	150	111 530
Copper	Stainless steel V2A/coppered	120 mm	ø 8 mm	150	111 532

Roof conductor holder with Niro-Clip



Ord. no. 111 023

PRÖ-COLOR Roof conductor holder for pantiled roofs.

Specification	Type A Fixed conductor leading	Length	Fit	PU	Ord. no.
Bottom part	Niro-Clip				
Steel, hot galvanized/coated	Stainless steel V2A	120 mm	ø 8 mm	150	111 023 az
Steel, hot galvanized/coated	Stainless steel V2A	120 mm	ø 8 mm	150	111 023 ro
Specification	Type B Loose conductor leading	Length	Fit	PU	Ord. no.
Bottom part	Niro-Clip				
Steel, hot galvanized/coated	Stainless steel V2A	120 mm	ø 8 mm	150	111 530 az
Steel, hot galvanized/coated	Stainless steel V2A	120 mm	ø 8 mm	150	111 530 ro

PRÖ-COLOR

Roof conductor holder with Niro-Clip



Ord. no. 111 023 az



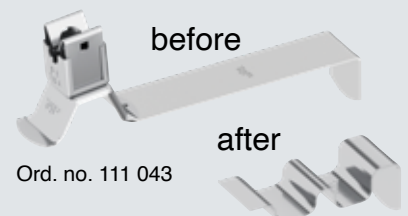
Ord. no. 111 023 ro

Specifications: ● ro - colour of the conductor holder: red brown (RAL 8012)
● az - colour of the conductor holder: anthracite (RAL 7016)

Roof conductor holder for easy fitting; simply insert in seam, exert pressure and the support moulds itself to the seam. Aluminium type with stainless steel reinforced trapezoidal section.

Specification	Type A Fixed conductor leading	Length	Fit	PU	Ord. no.
Bottom part	Niro-Clip				
Aluminium	Stainless steel V2A	120 mm	ø 8 mm	150	111 043
Copper	Stainless steel V2A/coppered	120 mm	ø 8 mm	150	111 044
Aluminium	Stainless steel V2A	170 mm	ø 8 mm	100	111 057
Copper	Stainless steel V2A/coppered	170 mm	ø 8 mm	100	111 058
Specification	Type B Loose conductor leading	Length	Fit	PU	Ord. no.
Bottom part	Niro-Clip				
Aluminium	Stainless steel V2A	120 mm	ø 8 mm	150	111 043 S
Copper	Stainless steel V2A/coppered	120 mm	ø 8 mm	150	111 044 S
Aluminium	Stainless steel V2A	170 mm	ø 8 mm	100	111 057 S
Copper	Stainless steel V2A/coppered	170 mm	ø 8 mm	100	111 058 S

Roof conductor holder for interlocking tiles, with Niro-Clip

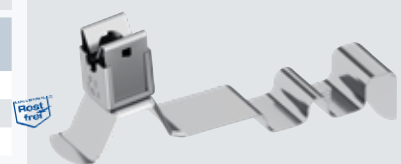


Ord. no. 111 043

Roof conductor holder for fitting into "ergolsbacher" interlocking tiles.

Specification	Type A Fixed conductor leading	Fit	PU	Ord. no.
Bottom part	Niro-Clip			
Stainless steel V2A	Stainless steel V2A	ø 8 mm	150	111 157
Copper	Stainless steel V2A/coppered	ø 8 mm	150	111 158

Roof conductor holder for interlocking tiles, with Niro-Clip



Ord. no. 111 157

*) **Type A (fl)** = fixed conductor leading; **Type B (ll)** = loose conductor leading

Roof conductor holder with Niro-Clip



Ord. no. 111 027

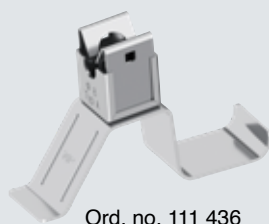


Ord. no. 111 037

Roof conductor holder with Niro-Clip



Ord. no. 111 451



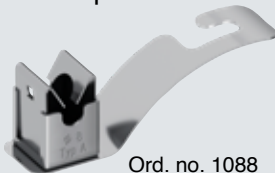
Ord. no. 111 436

Roof conductor holder with Niro-Clip



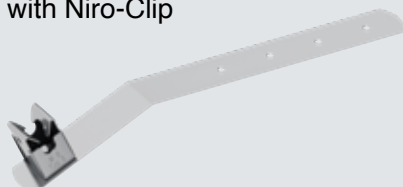
Ord. no. 1095

Roof conductor holder with Niro-Clip



Ord. no. 1088

Roof conductor holder with Niro-Clip



Ord. no. 111 153

Roof conductor holder for corrugated sheet roofs, for installing round conductors, lengthwise and crosswise conductor leading.

Specification		Height	Fit	PU	Ord. no.
Bottom part	Niro-Clip stainless steel V2A				
Stainless steel V2A	Type A fixed conductor leading	19.5 mm	ø 8 mm	100	111 027
Stainless steel V2A	Type B loose conductor leading	18.5 mm	ø 8 mm	100	111 045

With high version of Niro-Clip on request.

Roof conductor holder for corrugated sheet roofs, for installing round conductors, lengthwise and crosswise conductor leading with fixing bore ø 6.5 mm.

Specification		Height	Fit	PU	Ord. no.
Bottom part	Niro-Clip stainless steel V2A				
Stainless steel V2A	Type A fixed conductor leading	19.5 mm	ø 8 mm	100	111 037
Stainless steel V2A	Type B loose conductor leading	18.5 mm	ø 8 mm	100	111 039

Roof conductor holder for hooking into interlocking tiles.

Specification	Specification	Height	Fit	PU	Ord. no.
Bottom part	Niro-Clip type A				
	Fixed conductor leading				
Stainless steel V2A	Stainless steel V2A	46.5 mm	ø 8 mm	100	111 451
Copper	Stainless steel V2A/coppered	46.5 mm	ø 8 mm	100	111 452
	Niro-Clip type B				
	Loose conductor leading				
Stainless steel V2A	Stainless steel V2A	45.5 mm	ø 8 mm	100	111 453
Copper	Stainless steel V2A/coppered	45.5 mm	ø 8 mm	100	111 454

Specification	Specification	Height	Fit	PU	Ord. no.
Bottom part	Niro-Clip type A				
	Fixed conductor leading				
Stainless steel V2A	Stainless steel V2A	46.5 mm	ø 8 mm	100	111 436
Copper	Stainless steel V2A/coppered	46.5 mm	ø 8 mm	100	111 434
	Niro-Clip type B				
	Loose conductor leading				
Stainless steel V2A	Stainless steel V2A	45.5 mm	ø 8 mm	100	111 437
Copper	Stainless steel V2A/coppered	45.5 mm	ø 8 mm	100	111 431

Roof conductor holder as intermediate support for installing round conductors to corrugated sheet roofs.

Specification		Fit	PU	Ord. no.
Bottom part	Niro-Clip stainless steel V2A			
Stainless steel V2A	Type A fixed conductor leading	ø 8 mm	100	1095

With high version of Niro-Clip on request.

Roof conductor holder for corrugated sheet roofs; for installing in the valley of corrugated sheet roofs.

Specification		Fit	PU	Ord. no.
Bottom part	Niro-Clip stainless steel V2A			
Stainless steel V2A	Type A fixed conductor leading	ø 8 mm	100	1088

Roof conductor holder for slate and bitumen roofs

Specification		Fit	PU	Ord. no.
Bottom part	Niro-Clip stainless steel V2A			
Stainless steel V2A	Type B loose conductor leading	ø 8 mm	100	111 153

*) **Type A (fl)** = fixed conductor leading; **Type B (ll)** = loose conductor leading

Roof conductor holder for Kalzip, for installing round conductors to Kalzip roof systems (conductor leading lengthwise and crosswise).

Specification		Fit	PU	Ord. no.
Bottom part	Niro-Clip *)			
Stainless steel V2A	Stainless steel type B; crosswise to bead	ø 8 mm	100	111 750
Stainless steel V2A	Stainless steel type B; lengthwise to bead	ø 8 mm	100	111 750 S



Ord. no. 111 750



Ord. no. 111 750 S

Roof conductor holder for Kalzip, for installing round conductors to Kalzip roof systems (conductor leading lengthwise and crosswise).

Specification		Fit	PU	Ord. no.
Bottom part	Fastener *)			
Aluminium	Niro-Clip stainless steel V2A/ type A	ø 8 mm	25	1309
Aluminium	Niro-Clip stainless steel V2A/ type B	ø 8 mm	25	913 615
Stainless steel V2A	Niro-Clip stainless steel V2A/ type A	ø 8 mm	25	913 616
Stainless steel V2A	Niro-Clip stainless steel V2A/ type B	ø 8 mm	25	913 617
Aluminium	Double terminal clamp V2A	ø 6 - 8 mm	25	1309 S
Stainless steel V2A	Double terminal clamp V2A	ø 6 - 8 mm	25	1308 S



Ord. no. 1309 S



Ord. no. 1309

Roof conductor holder for RIB-ROOF 500, for installing round conductors to Rib-Roof 500 roof systems (conductor leading lengthwise and crosswise).

Specification		Fit	PU	Ord. no.
Bottom part	Niro-Clip *)			
Stainless steel V2A	Stainless steel type B; crosswise to bead	ø 8 mm	100	111 760
Stainless steel V2A	Stainless steel type B; lengthwise to bead	ø 8 mm	100	111 761



Ord. no. 111 760



Ord. no. 111 761

Roof conductor holder for RIB-ROOF 465 and 500 for fixing air-termination and down conductors, conductor leading lengthwise and crosswise.

Specification		Fit	PU	Ord. no.
RIB-ROOF 465				
Bottom part	Fastener *)			
Aluminium	Niro-Clip stainless steel V2A/ type A	ø 8 mm	25	111 164
Aluminium	Niro-Clip stainless steel V2A/ type B	ø 8 mm	25	111 166
Stainless steel V2A	Niro-Clip stainless steel V2A/ type A	ø 8 mm	25	111 165
Stainless steel V2A	Niro-Clip stainless steel V2A/ type B	ø 8 mm	25	111 167
Aluminium	Double terminal clamp V2A	ø 6 - 8 mm	25	111 168
Stainless steel V2A	Double terminal clamp V2A	ø 6 - 8 mm	25	111 169
RIB-ROOF 500				
Bottom part	Fastener *)			
Aluminium	Niro-Clip stainless steel V2A/ type A	ø 8 mm	25	111 764
Aluminium	Niro-Clip stainless steel V2A/ type B	ø 8 mm	25	111 766
Stainless steel V2A	Niro-Clip stainless steel V2A / type A	ø 8 mm	25	111 765
Stainless steel V2A	Niro-Clip stainless steel V2A / type B	ø 8 mm	25	111 767
Aluminium	Double terminal clamp V2A	ø 6 - 8 mm	25	111 768
Stainless steel V2A	Double terminal clamp V2A	ø 6 - 8 mm	25	111 769



Ord. no. 111 768



Ord. no. 111 764

Roof conductor holder for Kalzip, with Niro-Clip (JIP-patent)



Ord. no. 111 750



Ord. no. 111 750 S

Roof conductor holder for Kalzip



Ord. no. 1309



Ord. no. 1309 S

Roof conductor holder for RIB-ROOF 500, with Niro-Clip (JIP-patent)



Ord. no. 111 760



Ord. no. 111 761

Roof conductor holder for RIB-ROOF, with Niro-Clip



Ord. no. 111 164



Ord. no. 111 168



Ord. no. 111 764



Ord. no. 111 768

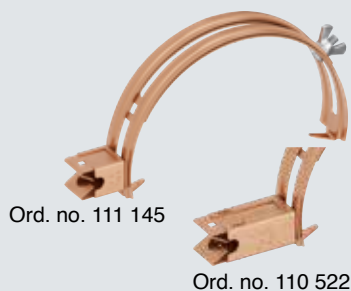
*) **Type A (fl)** = fixed conductor leading; **Type B (ll)** = loose conductor leading

Roof conductor holder with Niro-Clip



Ord. no. 111 144

Ord. no. 110 520



Ord. no. 111 145

Ord. no. 110 522

PRÖ COLOR

Roof conductor holder with Niro-Clip

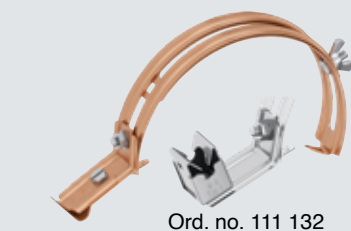


Ord. no. 111 144 az



Ord. no. 111 144 ro

Roof conductor holder



Ord. no. 111 132

Ord. no. 111 141

Roof conductor holder

suitable for ridge tiles of all sizes
- universally adjustable installing round conductors. **Benefit:** one type fits all!

Specification	Type A Fixed conductor leading	Height	Fit	PU	Ord. no.
Bottom part	Niro-Clip				
Stainless steel V2A	Stainless steel V2A	19.5 mm	ø 8 mm	100	111 144
Copper	Stainless steel V2A/coppered	19.5 mm	ø 8 mm	100	111 145
Stainless steel V2A	Stainless steel V2A	41 mm	ø 8 mm	50	110 520
Copper	Stainless steel V2A/coppered	41 mm	ø 8 mm	50	110 522

Specification	Type B Loose conductor leading	Height	Fit	PU	Ord. no.
Bottom part	Niro-Clip				
Stainless steel V2A	Stainless steel V2A	18.5 mm	ø 8 mm	100	111 136
Copper	Stainless steel V2A/coppered	18.5 mm	ø 8 mm	100	111 137
Stainless steel V2A	Stainless steel V2A	41 mm	ø 8 mm	50	110 521
Copper	Stainless steel V2A/coppered	41 mm	ø 8 mm	50	110 523

PRÖ-COLOR Roof conductor holder

suitable for ridge tiles of all sizes
- universally adjustable installing round conductors. **Benefit:** one type fits all!

Specification	Type A Fixed conductor leading	Height	Fit	PU	Ord. no.
Bottom part	Niro-Clip				
Steel, hot galvanized/coated	Stainless steel V2A	19.5 mm	ø 8 mm	100	111 144 az
Steel, hot galvanized/coated	Stainless steel V2A	19.5 mm	ø 8 mm	100	111 144 ro
Specification	Type B Loose conductor leading	Height	Fit	PU	Ord. no.
Bottom part	Niro-Clip				
Steel, hot galvanized/coated	Stainless steel V2A	18.5 mm	ø 8 mm	100	111 136 az
Steel, hot galvanized/coated	Stainless steel V2A	18.5 mm	ø 8 mm	100	111 136 ro

Specifications: ● ro - colour of the conductor holder: red brown (RAL 8012)
● az - colour of the conductor holder: anthracite (RAL 7016)

Roof conductor holder

suitable for ridge tiles of all sizes
- universally adjustable installing round conductors. **Benefit:** one type fits all!

Specification	Fit	PU	Ord. no.
Stainless steel V2A	ø 8 - 10 mm	100	111 140
Copper -discontinued model-	ø 8 mm	100	111 141
bracket	Niro-Clip Type A fixed conductor leading		
Stainless steel V2A	Stainless steel V2A	ø 8 mm	100
Copper	Stainless steel V2A/coppered	ø 8 mm	100
	Niro-Clip Type B loose conductor leading		
Stainless steel V2A	Stainless steel V2A	ø 8 mm	100
Copper	Stainless steel V2A/coppered	ø 8 mm	100

*) **Type A (fl)** = fixed conductor leading; **Type B (ll)** = loose conductor leading

Roof conductor holder with springs

Universal use for the roof ridge.

Roof conductor holder with 2 tension springs made of [stainless steel](#) and [wire hook](#) for permanent and fast installation on the roof ridge - with lateral conductor leading. Suitable for ridge tiles of all sizes.

Specification	Type A fixed cond. leading	Height	Fit	PU	Ord. no.
Bottom part	Niro-Clip lateral				
Stainless steel V2A	Stainless steel V2A	34.5 mm	ø 8 mm	25	111 191
Stainless st. V2A / coppered	Stainless st. V2A / coppered	34.5 mm	ø 8 mm	25	111 196
Stainless steel V2A	Stainless steel V2A	56 mm	ø 8 mm	25	110 524

Specification	Type B loose cond. leading	Height	Fit	PU	Ord. no.
Bottom part	Niro-Clip lateral				
Stainless steel V2A	Stainless steel V2A	33.5 mm	ø 8 mm	25	111 175
Stainless st. V2A / coppered	Stainless st. V2A / coppered	33.5 mm	ø 8 mm	25	111 176
Stainless steel V2A	Stainless steel V2A	56 mm	ø 8 mm	25	110 525
Stainless st. V2A / coppered	Stainless st. V2A / coppered	56 mm	ø 8 mm	25	110 527

Roof conductor holder with 2 tension springs made of [stainless steel](#) and [second flat hook](#) for permanent and fast installation on the roof ridge - with lateral conductor leading. Suitable for ridge tiles of all sizes.

Specification	Type A fixed cond. leading	Height	Fit	PU	Ord. no.
Bottom part	Niro-Clip lateral				
Stainless steel V2A	Stainless steel V2A	34.5 mm	ø 8 mm	25	110 538
Stainless st. V2A / coppered	Stainless st. V2A / coppered	34.5 mm	ø 8 mm	25	110 542
Stainless steel V2A	Stainless steel V2A	56 mm	ø 8 mm	25	110 539

Specification	Type B loose cond. leading	Height	Fit	PU	Ord. no.
Bottom part	Niro-Clip lateral				
Stainless steel V2A	Stainless steel V2A	33.5 mm	ø 8 mm	25	110 540
Stainless st. V2A / coppered	Stainless st. V2A / coppered	33.5 mm	ø 8 mm	25	110 544
Stainless steel V2A	Stainless steel V2A	56 mm	ø 8 mm	25	110 541
Stainless st. V2A / coppered	Stainless st. V2A / coppered	56 mm	ø 8 mm	25	110 545

Roof conductor holder with 2 tension springs made of [stainless steel](#) and [wire hook](#) for permanent and fast installation on the roof ridge - with central conductor leading. Suitable for ridge tiles of all sizes.

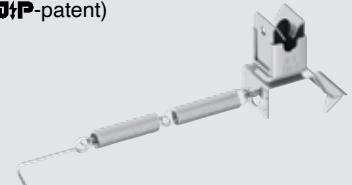
Specification	Type A fixed cond. leading	Height	Fit	PU	Ord. no.
Bottom part	Niro-Clip central				
Stainless steel V2A	Stainless steel V2A	40 mm	ø 8 mm	25	111 192
Stainless st. V2A / coppered	Stainless st. V2A / coppered	40 mm	ø 8 mm	25	111 197
Stainless steel V2A	Stainless steel V2A	61.5 mm	ø 8 mm	25	110 528
Stainless st. V2A / coppered	Stainless st. V2A / coppered	61.5 mm	ø 8 mm	25	110 530

Specification	Type B loose cond. leading	Height	Fit	PU	Ord. no.
Bottom part	Niro-Clip central				
Stainless steel V2A	Stainless steel V2A	39 mm	ø 8 mm	25	111 177
Stainless st. V2A / coppered	Stainless st. V2A / coppered	39 mm	ø 8 mm	25	111 178
Stainless steel V2A	Stainless steel V2A	61.5 mm	ø 8 mm	25	110 529
Stainless st. V2A / coppered	Stainless st. V2A / coppered	61.5 mm	ø 8 mm	25	110 531

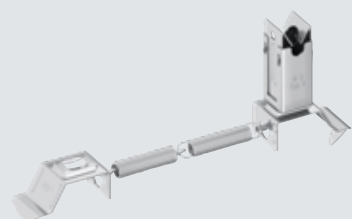
Roof conductor holder with 2 tension springs made of [stainless steel](#) and [second flat hook](#) for permanent and fast installation on the roof ridge - with central conductor leading. Suitable for ridge tiles of all sizes.

Specification	Type B loose cond. leading	Height	Fit	PU	Ord. no.
Bottom part	Niro-Clip central				
Stainless steel V2A	Stainless steel V2A	39 mm	ø 8 mm	25	110 546

Roof conductor holder with Niro-Clip (with lateral conductor leading) (J.P.-patent)

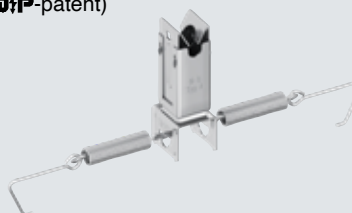


Ord. no. 111 191

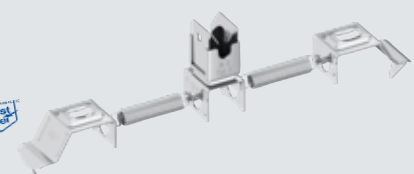


Ord. no. 110 539

Roof conductor holder with Niro-Clip (with central conductor leading) (J.P.-patent)



Ord. no. 110 528



Ord. no. 110 546

*) **Type A (fl)** = fixed conductor leading; **Type B (ll)** = loose conductor leading

Roof conductor holder, for synthetic roofing membranes with Niro-Clip



Ord. no. 111 604



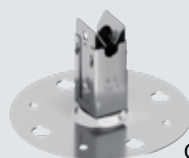
Ord. no. 110 532

Ord. no. 111 635

Roof conductor holder with Niro-Clip



Ord. no. 1167



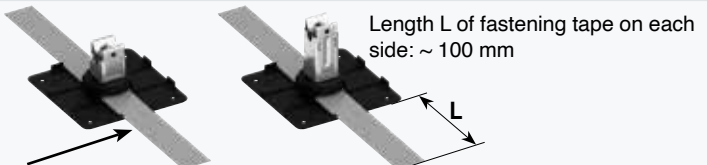
Ord. no. 1175
Ord. no. 110 533

Roof conductor holder for synthetic roofing membranes and bitumen roofs. To be fixed onto synthetic roofing membranes with weldable fastening tapes; glued directly onto bitumen roofs.

Specification		Height	Fit	PU	Ord. no.
Bottom part	Niro-Clip *)				
Plastic PE-HD	Stainless steel V2A / type B	28.5 mm	ø 8 mm	100	111 604
Plastic PE-HD	Stainless steel V2A / type B	51 mm	ø 8 mm	50	110 532
Plastic PE-HD round for bitumen roofs	Stainless steel V2A with PE-HD base grey	40.5 mm	ø 8 mm	100	111 635

Additional types on request.

Example of application:



Fastening tape crosswise to conductor leading.

Roof conductor holder for bitumen sheet roofs, flat roofs and walls. Holder with a height of 100 mm (No. 1175) for fixing the conductor onto flammable material.

Specification		Height	Fit	PU	Ord. no.
Plate	Niro-Clip *)				
Stainless steel V2A	Stainless steel V2A / type A	21 mm	ø 8 mm	100	1167
Stainless steel V2A	Stainless steel V2A / type A	42.5 mm	ø 8 mm	50	110 533
Stainless steel V2A	Stainless steel V2A / type A	121 mm	ø 8 mm	50	1175

Additional types on request.

Roof conductor holder for metal roofs and smooth surface

Surfaces suitable for installation:

- Metal surfaces (e. g. Stainless steel, steel, aluminium)
- Coated smooth surfaces
- Glass
- Ceramics
- Many plastics (e. g. hard PVC, ABS, PC, PE, PP)
- Powder coats

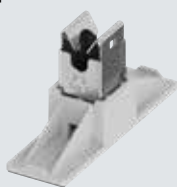
In case of any doubt with respect to the processed surface, please contact us!

Note:

The smooth surface to which the support should be attached must be thoroughly cleaned e. g. with isopropyl alcohol! Optimal processing temperature +15 to +25°C. For additional important information please refer to the installation instructions.

Not suitable for foil and bitumen roofs.

Roof conductor fastener for trapeze roofs



Ord. no. 912 529

Roof conductor holder with Niro-Clip



Ord. no. 111 661



Ord. no. 111 631

Roof conductor fastener for trapeze roofs, with Niro-Clip V2A; for ø 8 mm loose conductor leading, including plastic support 100x30x3 mm with adhesive tape.

Specification	Height	Fit*)	PU	Ord. no.
NEW Stainless steel V2A with Niro Clip	35 mm	ø 8 mm / type B	1	912 529

Roof conductor holder with Niro-Clip V2A; for ø 8 mm loose conductor leading, for metal roofs and surfaces with adhesive pad: simply remove protective film and stick on.

Specification		Height	Fit	PU	Ord. no.
Support with	Niro-Clip *)				
Adhesive pad aluminium	Stainless steel type B	20.5 mm	ø 8 mm	100	111 661
Adhesive pad grey	Stainless steel type B	22.5 mm	ø 8 mm	100	111 662
Adhesive pad aluminium	Stainless steel type B	43 mm	ø 8 mm	50	111 631
Adhesive pad grey	Stainless steel type B	45 mm	ø 8 mm	50	111 632

*) **Type A (fl)** = fixed conductor leading; **Type B (ll)** = loose conductor leading

PR-ÖKO 3 Roof conductor holder

Benefits PR-ÖKO 3:

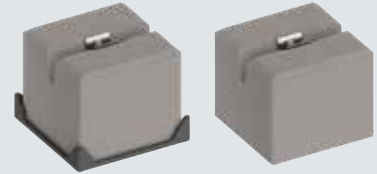
- High quality: Stainless steel clip with loose conductor leading.
- Specification: Compressed concrete block (weight: 1.2 kg) - 100% recyclable.
- No frost-sensitive cavities and recesses - totally frost-resistant.
- Weather-resistant plastic base plate made of PE-HD material.
- Application also without plastic base plate possible (e. g. on gravel roofs).



Roof conductor holder for flat roofs with stainless steel conductor holders ø 8 mm.

Specification	Fit	PU	Ord. no.
with plastic base plate	ø 8 mm	8	111 730
without plastic base plate for gravel roofs	ø 8 mm	8	111 731

PR-ÖKO 3 (J.P.-patent)
Roof conductor holder



Ord. no. 111 730

Ord. no. 111 731

Wall and roof
conductor holders

PR-ÖKO 2 Roof conductor holder

Benefits PR-ÖKO 2:

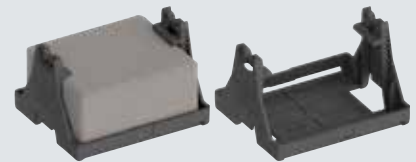
- Weather-resistant plastic component made of PE-HD material, can be installed at cold temperatures of up to -10°C.
- Specification: Compressed concrete block (weight: 1 kg) - 100% recyclable.
- No frost-sensitive cavities and recesses - totally frost-resistant.

Roof conductor holder for flat roofs with conductor holder ø 8 mm or ø 10 mm.

Specification	Fit	PU	Ord. no.
Plastic part with concrete stone	ø 8 mm	10	111 630
	ø 10 mm	10	111 633

Specification	Fit	PU	Ord. no.
Plastic part for tape fastening	ø 8 mm	50	111 660
	ø 10 mm	50	111 663

PR-ÖKO 2 (J.P.-patent)
Roof conductor holder



Ord. no. 111 630

Ord. no. 111 660

Clamping bracket & fixing clip, to prevent flat roof holders (e. g. Ord. no. 111 630) from slipping on pitched synthetic roofing membranes.

Specification	Fit	PU	Ord. no.
Clamping bracket made of stainless steel V2A with M6 cylinder head screw V2A	ø 8 - 10 mm	100	910 097
Fixing clip made of stainless steel V2A	ø 8 mm	200	1163



Clamping bracket & fixing clip



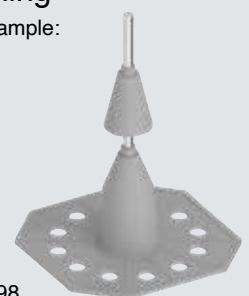
Ord. no. 910 097

Ord. no. 1163

Roof bushing for flat roofs, e. g. for internal down-conductors.

Specification	Fit	PU	Ord. no.
Nylon with PVC-sealing grommet (150 x 150 mm)	ø 8/10/16 mm	1	111 598

Roof bushing
Application example:



Ord. no. 111 598

*) **Type A (fl)** = fixed conductor leading; **Type B (ll)** = loose conductor leading

Roof conductor holder for thatched roofs

Spacer for eaves



Ord. no. 111 483

Covering and clamping cap



Ord. no. 111 485

Roof conductor holder and mounting plate



Ord. no. 111 486



Ord. no. 111 488



Ord. no. 111 487

Spacer for eaves

Specification	Height (adjustable)	PU	Ord. no.
Spacer for eaves complete			
Stainless steel V2A	1400 - 1510 mm	1	111 483



Covering and clamping cap suitable for wooden stakes 90 x 90 mm.

Specification	PU	Ord. no.
Steel, hot galvanized	1	111 484
Stainless steel V2A	1	111 485



Roof conductor holder and mounting plate

Specification	PU	Ord. no.
Roof conductor holder made of oak wood	1	111 486
Mounting plate 100 x 100 mm made of stainless steel V2A	1	111 487
Mounting plate 120 x 30 mm made of stainless steel V2A	1	111 488



PRÖ COLOR

Colour design in lightning protection



Colour design in
lightning protection

The benefits are obvious:

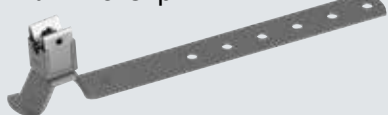
- Components made of hot galvanized steel and **PRÖ COLOR** coating.
- Decorative look and long-lasting.
- More cost-effective than stainless steel V2A.
- Totally maintenance-free.
- Higher quality than hot galvanized components.

Roof conductor holder with Niro-Clip



Ord. no. 111 144 az Ord. no. 111 144 ro

Roof conductor holder with Niro-Clip



Ord. no. 111 019 az



Ord. no. 111 019 ro

Roof conductor holder with Niro-Clip



Ord. no. 111 023 az

Ord. no. 111 023 ro

Roof conductor holder w. clamping bracket & Niro-Clip



Ord. no. 111 033 az

Roof conductor holder w. clamping bracket & Niro-Clip



Ord. no. 111 010 az

Ord. no. 111 525 ro

Specifications: ● ro - colour of the conductor holder: red brown (RAL 8012)
● az - colour of the conductor holder: anthracite (RAL 7016)

Roof conductor holder suitable for ridge tiles of all sizes
- universally adjustable installing round conductors. **Benefits:** one type fits all!

Specification		Height	Fit	PU	Ord. no.
Bottom part	Niro-Clip *)				
Steel, hot galvanized/coated	Stainless steel V2A/ type A	19.5 mm	ø 8 mm	100	111 144 az
Steel, hot galvanized/coated	Stainless steel V2A/ type B	18.5 mm	ø 8 mm	100	111 136 az
Steel, hot galvanized/coated	Stainless steel V2A/ type A	19.5 mm	ø 8 mm	100	111 144 ro
Steel, hot galvanized/coated	Stainless steel V2A/ type B	18.5 mm	ø 8 mm	100	111 136 ro

Roof conductor holder for universal use.

Specification		Length	Fit	PU	Ord. no.
Bottom part	Niro-Clip *)				
Steel, hot galvanized/coated	Stainless steel V2A/ type A	210 mm	ø 8 mm	100	111 019 az
Steel, hot galvanized/coated	Stainless steel V2A/ type B	210 mm	ø 8 mm	100	111 540 az
Steel, hot galvanized/coated	Stainless steel V2A/ type A	280 mm	ø 8 mm	100	111 015 az
Steel, hot galvanized/coated	Stainless steel V2A/ type B	280 mm	ø 8 mm	100	111 541 az
Steel, hot galvanized/coated	Stainless steel V2A/ type A	210 mm	ø 8 mm	100	111 019 ro
Steel, hot galvanized/coated	Stainless steel V2A/ type B	210 mm	ø 8 mm	100	111 540 ro
Steel, hot galvanized/coated	Stainless steel V2A/ type A	280 mm	ø 8 mm	100	111 015 ro
Steel, hot galvanized/coated	Stainless steel V2A/ type B	280 mm	ø 8 mm	100	111 541 ro

Roof conductor holder for pantiled roofs.

Specification		Length	Fit	PU	Ord. no.
Bottom part	Niro-Clip *)				
Steel, hot galvanized/coated	Stainless steel V2A/ type A	120 mm	ø 8 mm	150	111 023 az
Steel, hot galvanized/coated	Stainless steel V2A/ type B	120 mm	ø 8 mm	150	111 530 az
Steel, hot galvanized/coated	Stainless steel V2A/ type A	120 mm	ø 8 mm	150	111 023 ro
Steel, hot galvanized/coated	Stainless steel V2A/ type B	120 mm	ø 8 mm	150	111 530 ro

Roof conductor holder with clamping bracket
(clamping range max 5 mm) for slate roofs; especially well suited for later installation!

Specification		Length	Fit	PU	Ord. no.
Bottom part	Niro-Clip *)				
Steel, hot galvanized/ with teeth	Stainless st. V2A/ type A	180 mm	ø 8 mm	200	111 033 az
Steel, hot galvanized/ with teeth	Stainless st. V2A/ type B	180 mm	ø 8 mm	200	111 511 az

Roof conductor holder with clamping bracket
for bitumen shingles and slate roofs or for tiles with large clamping range.

Specification		Clamping range	Fit	PU	Ord. no.
Bottom part	Niro-Clip *)				
Steel, hot galvanized/coated	Stainless st. V2A/ type A	up to 5 mm	ø 8 mm	100	111 010 az
Steel, hot galvanized/coated	Stainless st. V2A/ type B	up to 5 mm	ø 8 mm	100	111 011 az
Steel, hot galvanized/coated	Stainless st. V2A/ type A	up to 18 mm	ø 8 mm	100	111 525 ro
Steel, hot galvanized/coated	Stainless st. V2A/ type A	up to 18 mm	ø 8 mm	100	111 525 az
Steel, hot galvanized/coated	Stainless st. V2A/ type B	up to 18 mm	ø 8 mm	100	111 527 ro
Steel, hot galvanized/coated	Stainless st. V2A/ type B	up to 18 mm	ø 8 mm	100	111 527 az

*) **Type A (fl)** = fixed conductor leading; **Type B (ll)** = loose conductor leading

COLOUR DESIGN in lightning protection

Innovation in colour!

This requirement is fulfilled by our COLOUR DESIGN in lightning protection, whose powder-coated components are coloured to match the roof, gutters and rainwater downpipes.

The appearance of an on-roof lightning protection system can be improved by making it unobtrusive to blend in.

Components, preferably made of hot galvanized steel, but also stainless steel and aluminium including aluminium wires are powder-coated using the sintering technique.

A selection of colours (Additional RAL-colours available!)



The illustrated colour examples may differ from the RAL-colour.

RAL colours not listed here are available. These will incur an additional one-time charge (colour change fee).

Components:

All lightning protection components are pre-treated and powder-coated in the RAL-colour of your choice.

Powder coating:

The coating powder consists basically of polyester resins, as well as the appropriate weather-, light- and heat-resistant pigments.

The electrostatic charge makes the powder adhere to the component, the ensuing burn-in process binds the powder to the metal permanently. The thickness of the coating is about 60 to 90 μm . To ensure optimal conductivity, the clamping area (e. g. inner surface of the Multi-clamp) remains uncoated.

Wire:

Soft aluminium wire, $\varnothing$ 8 mm (Ord. no. 100 019 S), powder-coated, in 10 kg coils.

Important! The following installation instructions must be adhered to:

When installing the wire, the coating must be removed in the area of the clamping connection without changing the cross section to guarantee a reliable conductive connection capable of carrying lightning current.

The coating in the clamping area of the aluminium wire is scraped off with a "stripping knife".

Test laboratory with 200 kA (10/350 μ s) impulse current generator

In our test laboratory, all lightning protection components and surge protective devices are tested according to the latest national and international standards.



Colour design in
lightning protection

Equipment for environmental testing



Quality assurance



Multisensor measuring machine for component measurement



XRF handheld analyzer for the immediate identification of materials and their chemical composition.



Connection clamps, terminal clamps, bridgings, pipe clamps



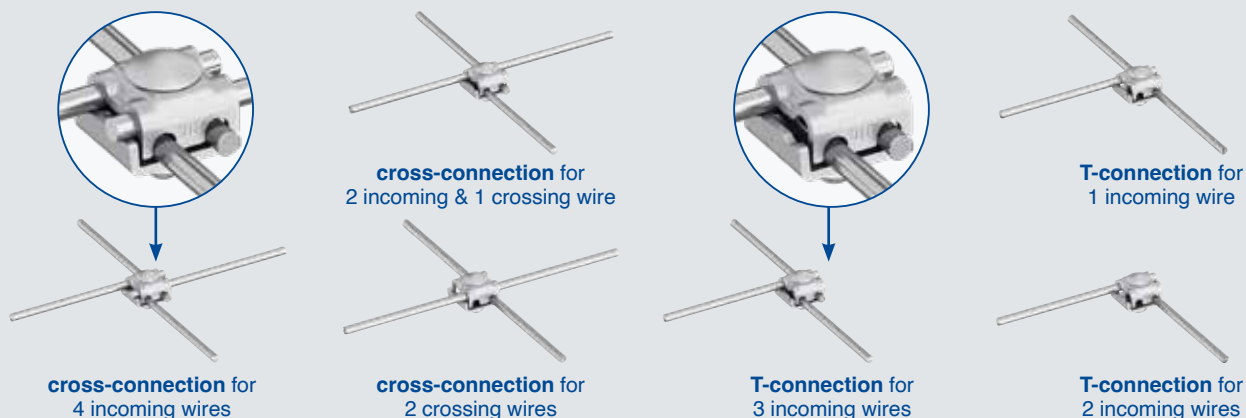
Connection and
terminal clamps

Multi-Quattro - terminal and connecting clamp

The J. Pröpster **Multi-Quattro Clamp** not only offers the well-known advantages of the Multi Clamp system, but also provides an added value through its further numerous application possibilities which we would like to pass on to our customers.

Benefits:

- **Safe connection** for up to **4 incoming wires** $\varnothing$ 8 or $\varnothing$ 10 mm.
- Only one clamp for all wire connections.
- Shortened and simplified installation – only one M10 screw.



Multi-Quattro (J.P.-patent)



Ord. no. 111 314

Multi-Quattro terminal and connecting clamp

for the connection of 2 - 4 wires $\varnothing$ 8 mm

Specification	Fit	PU	Ord. no.
Steel, hot galvanized	$\varnothing$ 8 mm	100	111 314
Aluminium	$\varnothing$ 8 mm	100	111 315
Stainless steel V2A	$\varnothing$ 8 mm	100	111 317

Multi-Quattro terminal and connecting clamp

for connection of 2 - 4 wires $\varnothing$ 10 mm.

Specification	Fit	PU	Ord. no.
Steel, hot galvanized	$\varnothing$ 10 mm	50	111 308
Stainless steel V2A	$\varnothing$ 10 mm	50	111 309
Stainless steel V4A	$\varnothing$ 10 mm	50	111 310

System Multi-clamp

Multi-Plus (J.P.-patent) terminal clamp



Ord. no. 111 270

Multi-Plus metal sheet terminal and connection clamp. Same connection configurations as the original Multi-clamp with guaranteed 10 cm² contact surface, **clamping range up to 8 mm**.

Specification	Carriage bolt with nut	Fit	PU	Ord. no.
Steel, hot galvanized	Steel, hot galvanized	$\varnothing$ 8 - 10 mm	50	111 270
Steel, hot galvanized	Stainless steel V2A	$\varnothing$ 8 - 10 mm	50	111 270 S
Aluminium 4 mm	Steel, hot galvanized	$\varnothing$ 8 mm	50	111 271
Aluminium 4 mm	Stainless steel V2A	$\varnothing$ 8 mm	50	111 271 S
Copper	Coppered	$\varnothing$ 8 mm	50	111 272
Stainless steel V2A	Stainless steel V2A	$\varnothing$ 8 - 10 mm	50	111 273
Bimetal aluminium/copper	Stainless steel V2A	$\varnothing$ 8 mm	50	111 274

All specifications also available with $\varnothing$ 4-6 mm clamping range

Connecting- and terminal clamp



Ord. no. 111 313



Ord. no. 111 319

Connecting and terminal clamp

completely made of **stainless steel V4A**, for wire mesh mats for potential control.

Specification	Fit	PU	Ord. no.
Connection clamp: Multi-Mini	$\varnothing$ 4 - 6 / $\varnothing$ 4 - 6 mm	100	111 313
Terminal Clamp: Multi-Mini	$\varnothing$ 10 / $\varnothing$ 4 - 6 mm	50	111 319

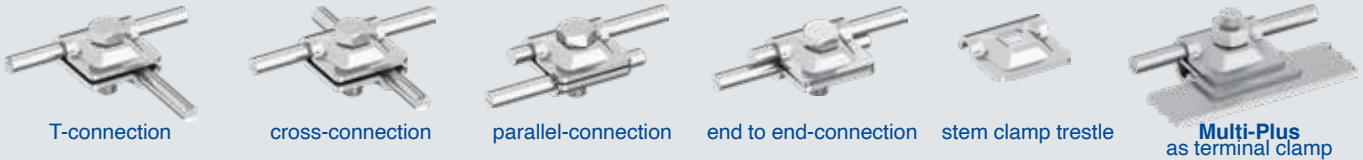
Note: For wire mesh panels, see page 108.

Original Multi-clamp

The **original Multi-clamp** was invented by J. Pröpster in 1981 and has proven itself millions of times worldwide. It is the most varied lightning protection component and the centerpiece of the multifunctional system of J. Pröpster. The Multi-Clamp offers unmatched versatility as a T, cross, parallel and end to end-connection clamp.

Benefits:

- Only one clamp for all wire connections.
- Maximum contact due to consistent contact pressure.
- Extremely shortened installation time - only one screw M10.
- Optimal handling at planning, acquisition and storage.



Multi-clamp, for the universal use as T-, cross-, parallel- and end to end-connection.

Specification	Carriage bolt with nut	Fit	PU	Ord. no.
Steel, hot galvanized	Steel, hot galvanized Length 35 mm	ø 8 - 10 mm	100	1270
Steel, hot galvanized	Steel, hot galvanized Length 40 mm	ø 8 - 10 mm	100	1270 S
Aluminium 4 mm	Steel, hot galvanized	ø 8 mm	100	1271
Steel, hot galvanized 4 mm -discontinued model-	Steel, hot galvanized	ø 8 - 10 mm	100	1277
Steel, hot galvanized for reinforcements	Steel, hot galvanized	ø 4 - 6 mm	100	111 279
Steel, bare	Steel, hot galvanized	ø 8 - 10 mm	100	911 224
Copper	Stainless steel V2A	ø 8 mm	100	910 101
Stainless steel V2A	Stainless steel V2A	ø 8 - 10 mm	100	910 107
NEW Stainless steel V4A	Stainless steel V4A	ø 8 - 10 mm	100	1273 S2

Specification	Hexagonal screw	Fit	PU	Ord. no.
Copper	V2A/Coppered	ø 8 mm	100	1272
Stainless steel V2A	Stainless steel V2A	ø 8 - 10 mm	100	1273
NEW Stainless steel V4A	Stainless steel V4A Length 40 mm	ø 8 - 10 mm	100	1269
NEW Stainless steel V4A	Stainless steel V4A Length 35 mm	ø 8 - 10 mm	100	1269 S
Bimetal aluminium/copper	Stainless steel V2A	ø 8 mm	100	1274
Steel, hot galvanized	Stainless steel V2A	ø 8 - 10 mm	100	1275
Aluminium 4 mm	Stainless steel V2A	ø 8 mm	100	1276

Multi-clamp ø 10 mm, heavy-duty type
for the universal use as T-, cross-, parallel- and end to end-connection.

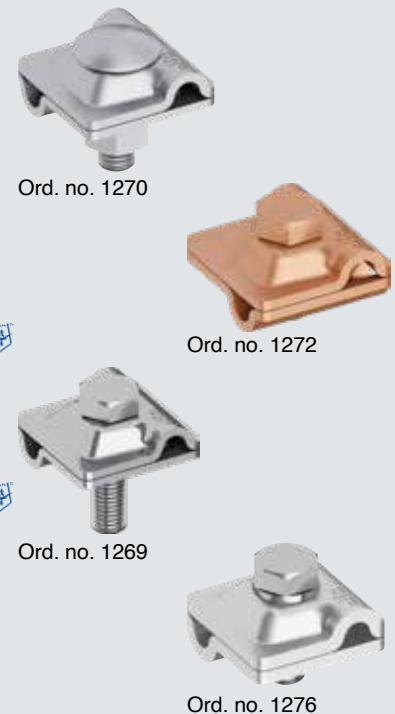
Specification	Carriage bolt with nut	Fit	PU	Ord. no.
Steel, hot galvanized	Steel, hot galvanized	ø 10 mm	75	1278
Stainless steel V2A	Stainless steel V2A	ø 10 mm	75	1279
Stainless steel V4A	Stainless steel V4A	ø 10 mm	75	1279 S
Copper	V2A/Coppered	ø 10 mm	75	111 280

Multi-clamp ø 8-10 mm / ø 16 mm

Benefits: The reliable Multi-clamp system for ø 16 mm rod connections.

Specification	Carriage bolt with nut	Fit	PU	Ord. no.
Steel, hot galvanized	Steel, hot galvanized	ø 8 - 10 / ø 16 mm	50	111 430
Copper	V2A/Coppered	ø 8 / ø 16 mm	50	111 432
Stainless steel V2A	Stainless steel V2A	ø 8 - 10 / ø 16 mm	50	111 433
NEW Stainless steel V4A	Stainless steel V4A	ø 10 / ø 16 mm	50	111 429

Original-Multi-clamp by J. Pröpster



Connection and terminal clamps

Multi-clamp ø 10 mm



Multi-clamp ø 8 - 10 mm / ø 16 mm



J. Pröpster CC-Clamping system

for connections $\varnothing$ 8-10 / $\varnothing$ 16 mm to clamps, pipe clamps or steel constructions.

Benefits:

- Clamping system for round conductors $\varnothing$ 8-10 / $\varnothing$ 16 mm.
- Variable fixing lengths by easy swap of the hexagonal bolt M10.
- In hazardous areas (Zone 2/22), the terminal (German Supplement 7 to DIN EN IEC 62305-3) is secured against self-loosening.

Type A: Connection of air-termination rods or earth lead-in rods $\varnothing$ 16 mm to clamps, pipe clamps or metal constructions.

Type B: Connection of rods $\varnothing$ 16 mm and conductors $\varnothing$ 8-10 mm to clamps, pipe clamps or metal constructions.

Type C: Connection and disconnection clamp $\varnothing$ 8-10 / $\varnothing$ 16 mm - also suitable for cable connections.

Type A



$\varnothing$ 16 mm
Terminal clamp

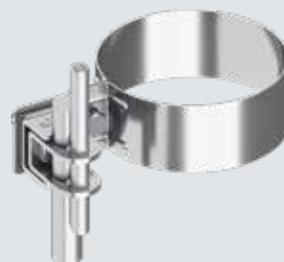


$\varnothing$ 16 mm
Terminal clamp on earth pipe clamp

Type B



$\varnothing$ 8 - 10 / $\varnothing$ 16 mm
Connection clamp



$\varnothing$ 8 - 10 / $\varnothing$ 16 mm
Connection clamp on pipe clamp

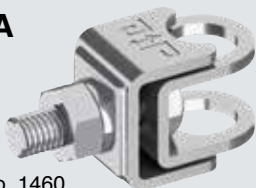
Type C



$\varnothing$ 8 - 10 / $\varnothing$ 16 mm
Connection and
disconnection clamp

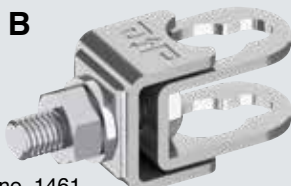
J. Pröpster CC-Clamp

Type A



Ord. no. 1460

Type B



Ord. no. 1461

U-Connector



Ord. no. 111 410

J. Pröpster CC-Disconnecting Clamp

Type C



Ord. no. 1458

J. Pröpster CC-Clamp

for the connection of round conductors $\varnothing$ 8-10 mm and air-termination rods $\varnothing$ 16 mm.

Specification	Type	Fit	PU	Ord. no.
Steel, hot galvanized	A	$\varnothing$ 16 mm	50	1455
Stainless steel V2A	A	$\varnothing$ 16 mm	50	1460
Steel, hot galvanized	B	$\varnothing$ 8 - 10 / $\varnothing$ 16 mm	50	1456
Stainless steel V2A	B	$\varnothing$ 8 - 10 / $\varnothing$ 16 mm	50	1461

U-Connector

with hexagonal screw M10 V2A for round conductors $\varnothing$ 8-10 mm and air-termination rods $\varnothing$ 16 mm.

Specification	Fit	PU	Ord. no.
Steel, hot galvanized	$\varnothing$ 8 - 10 / $\varnothing$ 16 mm	100	111 410
Copper	$\varnothing$ 8 - 10 / $\varnothing$ 16 mm	100	111 411
Stainless steel V2A	$\varnothing$ 8 - 10 / $\varnothing$ 16 mm	100	111 412

J. Pröpster CC-Clamping system

for the connection of round conductors $\varnothing$ 8-10 mm and air-termination rods $\varnothing$ 16 mm.

Specification	Type	Fit	PU	Ord. no.
Steel, hot galvanized	C	$\varnothing$ 8 - 10 / $\varnothing$ 16 mm	50	1457
Stainless steel V2A	C	$\varnothing$ 8 - 10 / $\varnothing$ 16 mm	50	1458
Copper	C	$\varnothing$ 8 - 10 / $\varnothing$ 16 mm	50	1459

Also suitable for cable connection.

Multi-Quattro

for the connection
of up to 4 incoming wires $\varnothing$ 8 mm on clamps

Multi-Quattro clamping jaw

for the connection of 2 - 4 wires $\varnothing$ 8 mm

Specification	Fit	PU	Ord. no.
Steel, hot galvanized	$\varnothing$ 8 mm	100	111 304
Aluminium	$\varnothing$ 8 mm	100	111 305
Copper	$\varnothing$ 8 mm	100	111 306
Stainless steel V2A	$\varnothing$ 8 mm	100	111 307

Application example:



Multi-Quattro (J.P.-patent)



Ord. no. 111 304

Connectors

Clamping jaw

suitable for one or two round conductors with $\square$ 11 mm square hole, light-weight type with $\varnothing$ 8.5 mm.

Specification	Bore hole	Fit	PU	Ord. no.
Steel, hot galvanized	$\square$ 11 mm	$\varnothing$ 8 - 10 mm	100	1284
Aluminium		$\varnothing$ 8 mm	100	1285
Copper		$\varnothing$ 8 mm	100	1286
Stainless steel V2A		$\varnothing$ 8 - 10 mm	100	1287
Steel, hot galvanized	light-weight type	$\varnothing$ 6 - 8 mm	100	111 284
Aluminium	light-weight type	$\varnothing$ 6 - 8 mm	100	111 285
Copper	light-weight type	$\varnothing$ 6 - 8 mm	100	111 286
Stainless steel V2A	light-weight type	$\varnothing$ 6 - 8 mm	100	111 287

Clamping jaw



Ord. no. 1284

Ord. no. 111 285

Dual-cross terminal and connection clamps

suitable for 1 or 2 round conductors, with M10 screw and nut, with base plate.

Specification	Fit	PU	Ord. no.
Steel, hot galvanized	$\varnothing$ 8 - 10 mm	100	1280
Aluminium	$\varnothing$ 8 mm	100	1281
Copper	$\varnothing$ 8 mm	100	1282
Stainless steel V2A	$\varnothing$ 8 - 10 mm	100	1283

Dual-cross terminal and connection clamp



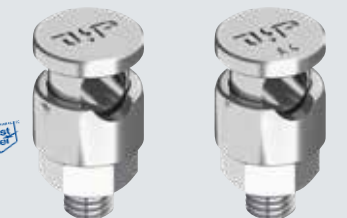
Ord. no. 1280

KS-connector

Clamping screw with hexagonal nut M10 suitable for round conductor $\varnothing$ 6-10 mm.

Specification	Fit	PU	Ord. no.
Steel, hot galvanized / aluminium clamping ring	$\varnothing$ 6 - 10 mm	100	1360
Stainless steel V2A coppered	$\varnothing$ 6 - 10 mm	100	1361
Stainless steel V2A	$\varnothing$ 6 - 10 mm	100	1362
Stainless steel V4A	$\varnothing$ 6 - 10 mm	100	1464
Steel, hot galvanized	$\varnothing$ 8 - 10 mm	100	1359

KS-connector



Ord. no. 1362

Ord. no. 1464

KS-connector, double

Clamping screw with hexagonal nut M10 suitable for round conductor $\varnothing$ 6-10 mm.

Specification	Fit	PU	Ord. no.
Steel, hot galvanized / aluminium clamping ring	$\varnothing$ 6 - 10 mm	50	111 370
Stainless steel V2A coppered	$\varnothing$ 6 - 10 mm	50	111 371
Stainless steel V2A	$\varnothing$ 6 - 10 mm	50	2000

KS-connector, double



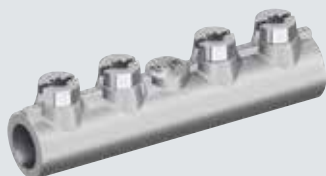
Ord. no. 2000

ES-connector



Ord. no. 2105

Connection Clamp



Ord. no. 2100

Terminal angle



Ord. no. 1363

Ord. no. 1381

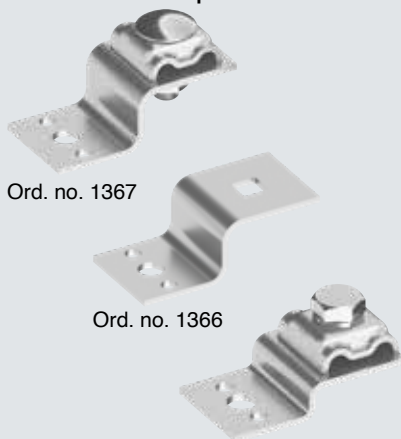
Terminal angle



Ord. no. 1383

Ord. no. 1384

Terminal angle with terminal clamp



Ord. no. 1367

Ord. no. 1366

Ord. no. 910 183

ES-connector with screw and nut M10 for the connection of round conductors.

Specification	Fit	PU	Ord. no.
Zinc die-cast with hot galvanized steel-screw	ø 8 mm	100	2105
Zinc die-cast with V2A-screw and nut	ø 8 mm	100	2106

Connection clamp for the connection of two round conductors.

Specification	Fit	PU	Ord. no.
Zinc die-cast	ø 8 - 10 mm	100	2100
Aluminium	ø 8 mm	100	2101
Aluminium continuous casting	ø 8 - 10 mm	100	2104
Copper	ø 8 mm	100	2102
Stainless steel V2A	ø 8 mm	100	2103
Stainless steel V2A	ø 10 mm	100	2107
Aluminium, mounted with four M8 hexagonal screws stainless steel V2A	ø 16 mm	25	2108

Terminal angle for the connection to metal constructions.

With or without clamping jaw.

Specification	Fit	PU	Ord. no.
Aluminium with connector	ø 8 mm	50	1363
Aluminium without connector	---	100	1381
Copper with connector	ø 8 mm	50	1364
Copper without connector	---	100	1382
Stainless steel V2A with connector	ø 8 - 10 mm	50	1390 S
Stainless steel V2A without connector	---	100	1390

Terminal angle to screw or weld on metal constructions.

Bore hole: 2x ø 11 mm; 1x □ 11 mm

Specification	Fit	PU	Ord. no.
Steel, hot galvanized with KS-connector	ø 6 - 10 mm	50	1383
Steel, hot galvanized without KS-connector	---	100	1384
Stainless steel V2A without KS-connector	---	100	1385

Terminal angle for the connection of metal structural cladding.

With or without clamping jaw.

Specification	Fit	PU	Ord. no.
Aluminium with connector, screw and nut	ø 8 mm	50	1367
Copper with connector, screw and nut	ø 8 mm	50	1368
Aluminium without connector	---	50	1366

Also available with KS-connector

Specification	Fit	PU	Ord. no.
Aluminium with connector, hexagonal screw and thread	ø 8 mm	50	910 183

Gutter clamps

Benefits gutter clamp - ideal:

- Perfect, large clamping area below the bead.
- Slim conductor holder design - only 32 mm wide, safety tested.
- Clamping screws always made of stainless steel V2A.
- Installation: Clamp and down conductor wire can be mounted separately.

Gutter clamp - ideal,

for secure connection on gutters with up to ø 20 mm bead thicknesses.

Specification	Fit	PU	Ord. no.
Steel, hot galvanized/zinc-plated	ø 6 - 8 mm	25	111 670
Aluminium, Wire clamp stainless steel V2A	ø 6 - 8 mm	25	111 671
Copper	ø 6 - 8 mm	25	111 672
Stainless steel V2A	ø 6 - 8 mm	25	111 673
Bimetal Wire clamp - stainless steel V2A	ø 6 - 8 mm	25	111 674
Bimetal Bead clamp - copper	ø 6 - 8 mm	25	

Gutter clamp - ideal



Ord. no. 111 670

Gutter terminal clamp

to fix air-termination conductors and down conductors to the gutter. Fits for bead thicknesses ø 15 - 20 mm.

Specification	Fit	PU	Ord. no.
Steel, hot galvanized	ø 8 - 10 mm	25	1306
Aluminium	ø 8 mm	25	1305
Copper	ø 8 mm	25	1307
Stainless steel V2A	ø 8 - 10 mm	25	1308
Aluminium with Stainless steel V2A - screw	ø 8 mm	25	1305 S
Bimetal Wire clamp - aluminium	ø 8 mm	25	1307 Z
Bimetal Bead clamp - copper	ø 8 mm	25	

Additional versions on request

Gutter terminal clamp (J.P.-patent)



Ord. no. 1306

Gutter clamp - slim

to fix air-termination conductors and down conductors to the gutter. Fits for bead thicknesses with up to ø 20 mm.

Specification	Fit	PU	Ord. no.
Steel, hot galvanized	ø 6 - 8 mm	50	111 675
Aluminium, Wire clamp stainless steel V2A	ø 6 - 8 mm	50	111 676
Copper	ø 6 - 8 mm	50	111 677
Stainless steel V2A	ø 6 - 8 mm	50	111 678
Bimetal Wire clamp - stainless steel V2A	ø 6 - 8 mm	50	111 679
Bimetal Bead clamp - copper	ø 6 - 8 mm	50	

Gutter clamp - slim



Ord. no. 111 675

Gutter clamp

fits for bead thicknesses ø 10 - 20 mm.

Specification	Fit	PU	Ord. no.
Steel, hot galvanized	ø 8 - 10 mm	50	1302
Aluminium	ø 8 - 10 mm	50	1301
Copper	ø 8 - 10 mm	50	1300
Stainless steel V2A	ø 8 - 10 mm	50	2001
Bimetal Wire clamp - aluminium	ø 8 - 10 mm	50	1300 Z
Bimetal Bead clamp - copper	ø 8 - 10 mm	50	

Specification with hexagonal screw available.

Gutter clamp



Ord. no. 1302

Conductor collar

for down conductors to protect frontages and walls from running rainwater.

Specification	Fit	PU	Ord. no.
Plastic grey	ø 8 mm	100	1042 S
Plastic copper - coloured	ø 8 mm	100	1046 S

Conductor collar



Ord. no. 1042 S

System Vario-clamp

with screws M10, width of clamp 40 mm

The **original system Vario-clamp** is a practical solution for connecting differently shaped conductors. All parts are manufactured using punching technology and are interchangeable.



ø 8 - 10 / ø 8 - 10 mm



ø 8 - 10 / ø 16 mm



ø 8 - 10 / fl. 30x3.5 mm
ø 8 - 10 / fl. 40x4.0 mm



fl. 30x3.5 / fl. 30x3.5 mm
fl. 40x4 / fl. 40x4.0 mm

Vario-Disconnecting clamp



Ord. no. 1340



Ord. no. 111 339

Vario-Disconnecting clamp, for test joints round/flat, flat/flat and round/round; mounted with two hexagonal screws M10 **stainless steel V2A**.

Specification			Fit	PU	Ord. no.
Steel, hot galvanized	two-part	round/flat	ø 8 - 10 / fl. 30 mm	50	1340
Steel, hot galvanized	two-part	round/flat	ø 8 - 10 / fl. 40 mm	50	1346
Steel, hot galvanized	two-part	flat/flat	fl. 30 / fl. 30 mm	50	1343
Steel, hot galvanized	two-part	flat/flat	fl. 40 / fl. 40 mm	50	2044
Steel, hot galvanized	two-part	round/round	ø 8 - 10 / ø 8 - 10 mm	50	1339
Stainless steel V2A	two-part	round/flat	ø 8 - 10 / fl. 30 mm	50	2012
Stainless steel V2A	two-part	flat/flat	fl. 30 / fl. 30 mm	50	2014
Stainless steel V2A	two-part	round/round	ø 8 - 10 / ø 8 - 10 mm	50	2016
Copper	two-part	round/round	ø 8 - 10 / ø 8 - 10 mm	50	1337
Steel, hot galvanized	three-part	round/round	ø 8 - 10 / ø 8 - 10 mm	50	111 339
Copper	three-part	round/round	ø 8 - 10 / ø 8 - 10 mm	50	111 337
Copper/Steel, hot gal.	three-part	round/flat	ø 8 - 10 / fl. 30 mm	50	1342 Z
Stainless steel V2A	three-part	round/round	ø 8 - 10 / ø 8 - 10 mm	50	910 579

Vario-Disconnecting clamp



Ord. no. 1341



Ord. no. 1345

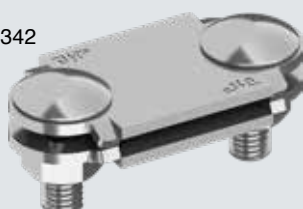
Vario-Disconnecting clamp, for test joints round/round; mounted with two hexagonal screws M10 **stainless steel V2A**.

Specification			Fit	PU	Ord. no.
Steel, hot galvanized	two-part	round/round	ø 8 - 10 / ø 16 mm	50	1341
Aluminium	two-part	round/round	ø 8 - 10 / ø 16 mm	50	1344
Copper	two-part	round/round	ø 8 - 10 / ø 16 mm	50	111 341
Stainless steel V2A	two-part	round/round	ø 8 - 10 / ø 16 mm	50	2006
Copper-Steel, hot gal.	three-part	round/round	ø 8 - 10 / ø 16 mm	50	1348 Z
Steel, hot galvanized	three-part	round/round	ø 8 - 10 / ø 16 mm	50	1345
Aluminium	three-part	round/round	ø 8 - 10 / ø 16 mm	50	111 344
Copper	three-part	round/round	ø 8 - 10 / ø 16 mm	50	111 345
Stainless steel V2A	three-part	round/round	ø 8 - 10 / ø 16 mm	50	2007
Steel, hot gal./ Copper	three-part	round/round	ø 8 - 10 / fl. 30 / ø 16 mm	50	1349 Z
Copper/Steel, hot gal.	three-part	round/round	ø 8 - 10 / ø 8 - 10 mm	50	1343 Z

Vario-Connecting clamp, two-part



Ord. no. 1342



Ord. no. 111 646

Vario-Connecting clamp,

for flat/round and flat/flat connections; mounted with two screws M10 steel, hot galvanized.

Specification			Fit	PU	Ord. no.
Steel, hot galvanized	two-part	round/flat	ø 8 - 10 / fl. 30 mm	50	1342
Steel, hot galvanized	two-part	round/flat	ø 8 - 10 / fl. 40 mm	50	2043
Steel, hot galvanized	two-part	flat/flat	fl. 30 / fl. 30 mm	50	1347
Stainless steel V4A	two-part	flat/flat	fl. 40 / fl. 40 mm	50	111 646
Stainless steel V4A	two-part	round/flat	ø 8 - 10 / fl. 40 mm	50	111 646 S

More information about the bimetal Vario-clamp can be found on pages 88 and 89.

System Vario-clamp M8-Plus

with screws M8, width of clamp 30 mm

The **original system Vario-clamp M8-Plus**, is a cost-effective, practical solution for connecting differently shaped conductors. All parts are manufactured using punching technology and are interchangeable.

Benefits: The patented cylindrical attachment on the upper part significantly improves installation.



ø 8 - 10 / ø 8 - 10 mm



ø 8 - 10 / ø 16 mm



ø 8 - 10 / fl. 30x3.5 mm



fl. 30x3.5 / fl. 30x3.5 mm



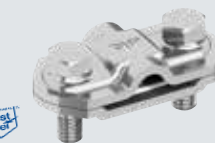
System Bimetal
ø 8 - 10 / fl. 30x3.5 mm

Vario-Disconnecting clamp M8-Plus,

for test joints round/flat, flat/flat and round/round; mounted with two hexagonal screws M8 V2A.

Specification			Fit	PU	Ord. no.
Steel, hot galvanized	two-part	round/flat	ø 8 - 10 / fl. 30 mm	50	111 716
Steel, hot galvanized	two-part	flat/flat	fl. 30 / fl. 30 mm	50	111 718
Steel, hot galvanized	two-part	round/round	ø 8 - 10 / ø 8 - 10 mm	50	111 710
Stainless steel V2A	two-part	round/flat	ø 8 - 10 / fl. 30 mm	50	111 717
Stainless steel V2A	two-part	flat/flat	fl. 30 / fl. 30 mm	50	111 719
Stainless steel V2A	two-part	round/round	ø 8 - 10 / ø 8 - 10 mm	50	111 711
Copper	two-part	round/round	ø 8 - 10 / ø 8 - 10 mm	50	111 712
Steel, hot galvanized	three-part	round/round	ø 8 - 10 / ø 8 - 10 mm	50	111 713
Copper	three-part	round/round	ø 8 - 10 / ø 8 - 10 mm	50	111 715
Copper/steel, hot gal.	three-part	round/flat	ø 8 - 10 / fl. 30 mm	50	111 727
Stainless steel V2A	three-part	round/round	ø 8 - 10 / ø 8 - 10 mm	50	111 714

Vario-Disconnecting clamp M8-Plus (JIP-patent)



Ord. no. 111 717



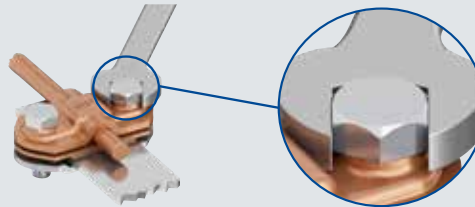
Ord. no. 111 727



Ord. no. 111 714

Connection and
terminal clamps

Reliable torque transmission thanks to a better form fit. (open-ended spanner rests securely on the screw head).



Screw head sits higher due to collar

Vario-Disconnecting clamp M8-Plus,

for test joints round/round; mounted with two hexagonal screws M8 stainless steel V2A.

Specification			Fit	PU	Ord. no.
Steel, hot galvanized	two-part	round/round	ø 8 - 10 / ø 16 mm	50	111 720
Copper	two-part	round/round	ø 8 - 10 / ø 16 mm	50	111 722
Stainless steel V2A	two-part	round/round	ø 8 - 10 / ø 16 mm	50	111 721
Steel, hot galvanized	three-part	round/round	ø 8 - 10 / ø 16 mm	50	111 723
Copper	three-part	round/round	ø 8 - 10 / ø 16 mm	50	111 725
Stainless steel V2A	three-part	round/round	ø 8 - 10 / ø 16 mm	50	111 724
Copper/Steel, hot gal.	three-part	round/round	ø 8 - 10 / ø 16 mm	50	111 728
Steel, hot gal./Copper	three-part	round/round	ø 8 - 10 / fl. 30 / ø 16 mm	50	111 729
Copper/Steel, hot gal.	three-part	round/round	ø 8 - 10 / ø 8 - 10 mm	50	111 726

Test plates used for Vario-Disconnecting clamp and Vario-Disconnecting clamp M8-Plus on page 92.



Vario-Disconnecting clamp M8-Plus (JIP-patent)



Ord. no. 111 721



Ord. no. 111 724



Ord. no. 111 700

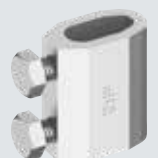
Disconnection
clamp with
terminal angle
(Ord. no. 111 700)
on page 81.

Disconnecting clamp

Disconnecting clamp



Ord. no. 1330



Ord. no. 1332



Ord. no. 111 405

J. Pröpster CC-Disconnecting Clamp

Type C



Ord. no. 1458

Disconnecting clamp



Ord. no. 1333

Disconnecting clamp



Ord. no. 111 375

Disconnecting clamp according to EN IEC 62561-1 fits for round conductors $\varnothing$ 8-10 / $\varnothing$ 16 mm or $\varnothing$ 8 / $\varnothing$ 10 mm, mounted with two hexagonal screws M8 [stainless steel V2A](#).

Specification	Fit	PU	Ord. no.
Aluminium	$\varnothing$ 8 - 10 / $\varnothing$ 16 mm	50	1330

Specification	Fit	PU	Ord. no.
Aluminium	$\varnothing$ 8 - 10 / $\varnothing$ 10 mm	50	1332

Specification	Fit	PU	Ord. no.
Zinc die-cast, closed type	$\varnothing$ 8 - 10 / $\varnothing$ 16 mm	50	111 405
Copper-alloy	$\varnothing$ 8 - 10 / $\varnothing$ 16 mm	50	1331

See also Vario-Disconnecting clamp on pages 88 and 89.

J. Pröpster CC-Clamping system

for the connection of round conductors $\varnothing$ 8-10 mm and air-termination rods $\varnothing$ 16 mm.

Specification	Type	Fit	PU	Ord. no.
Steel, hot galvanized	C	$\varnothing$ 8 - 10 / $\varnothing$ 16 mm	50	1457
Stainless steel V2A	C	$\varnothing$ 8 - 10 / $\varnothing$ 16 mm	50	1458
Copper	C	$\varnothing$ 8 - 10 / $\varnothing$ 16 mm	50	1459

Also suitable for cable connection. Additional CC-Clamps on page 74.

Disconnecting clamp fits for round conductors $\varnothing$ 8 mm to $\varnothing$ 10 mm, with one screw M10 and nut.

Specification	Fit	PU	Ord. no.
Stainless steel V2A	$\varnothing$ 8 / $\varnothing$ 10 mm	50	1333

Disconnecting clamp according to EN IEC 62561-1, with two KS-connectors steel, hot galvanized M10; 1x carriage bolt M10 acc. to DIN 603 with nut and spring washer [V2A](#).

Specification	Fit	PU	Ord. no.
Steel, hot galvanized / aluminium	$\varnothing$ 6 - 10 / $\varnothing$ 6 - 10 mm	25	111 375

Clamp in [stainless steel V2A](#) on request.

Disconnecting clamp with connecting bracket

Benefits:

- Improved flush fit with open-end wrench by patented cylindrical design of the Vario-clamp upper part.
- Universal utilization, e. g. installation with a terminal clamp on a T-beam or direct installation on a fixed earthing terminal.
- Economical solution: Connecting bracket and disconnection within one component.

Disconnecting clamp with terminal angle,

for test joints $\varnothing$ 8-10 mm or flat 30 mm; mounted with 2 hexagonal screws M8.

Specification	Bore	Conductor height	Fit	PU	Ord. no.
Steel, hot galvanized	$\varnothing$ 12.5 mm	14 mm	$\varnothing$ 8 - 10 mm	50	111 700
Stainless steel V2A	$\varnothing$ 12.5 mm	14 mm	$\varnothing$ 8 - 10 mm	50	111 701
Stainless steel V4A	$\varnothing$ 12.5 mm	14 mm	$\varnothing$ 8 - 10 mm	50	111 704
Steel, hot galvanized	$\varnothing$ 12.5 mm	14 mm	fl. 30 mm	50	111 702
Stainless steel V2A	$\varnothing$ 12.5 mm	14 mm	fl. 30 mm	50	111 703
Stainless steel V4A	$\varnothing$ 12.5 mm	14 mm	fl. 30 mm	50	111 705

Connection bracket with rivet design upon request.

Disconnecting clamp with terminal angle



Ord. no. 111 700

Ord. no. 111 702

Disconnecting clamp with terminal angle -high version-,

for test joints $\varnothing$ 8-10 mm or flat 30 mm; mounted with 2 hexagonal screws M8.

Suitable for measurements with clamp-on ground resistance tester (Ord. no. 2081 or 2084).

Specification	Bore	Conductor height	Fit	PU	Ord. no.
Steel, hot galvanized	$\varnothing$ 12.5 mm	30 mm	$\varnothing$ 8 - 10 mm	50	111 740
Stainless steel V2A	$\varnothing$ 12.5 mm	30 mm	$\varnothing$ 8 - 10 mm	50	111 741
Stainless steel V4A	$\varnothing$ 12.5 mm	30 mm	$\varnothing$ 8 - 10 mm	50	111 744
Steel, hot galvanized	$\varnothing$ 12.5 mm	30 mm	fl. 30 mm	50	111 742
Stainless steel V2A	$\varnothing$ 12.5 mm	30 mm	fl. 30 mm	50	111 743
Stainless steel V4A	$\varnothing$ 12.5 mm	30 mm	fl. 30 mm	50	111 745

Connection bracket with rivet design on request.



Ord. no. 111 740

Ord. no. 111 742

Connection and terminal clamps

Application examples:



with terminal clamp, heavy-duty type



with fixed earthing terminal

Test joint with insulating piece

Test joint

for quick and easy opening of the connection between down conductor and earth lead-in rod with fixed conductor ends.

Specification	Fit	PU	Ord. no.
Stainless steel V2A / plastic	$\varnothing$ 8 - 10 / fl. 30 mm	20	111 377

Test joint with insulating piece



Ord. no. 111 377

Saddle clamps

Multi-Plus terminal clamp (J&P-patent)



Ord. no. 111 270

Multi-Plus metal sheet terminal and connection clamp, with guaranteed 10 cm² contact surface. **Clamping range up to 8 mm.**

Specification	Carriage bolt with nut	Fit	PU	Ord. no.
Steel, hot galvanized	Steel, hot galvanized	ø 8 - 10 mm	50	111 270
Steel, hot galvanized	Stainless steel V2A	ø 8 - 10 mm	50	111 270 S
Aluminium 4 mm	Steel, hot galvanized	ø 8 mm	50	111 271
Aluminium 4 mm	Stainless steel V2A	ø 8 mm	50	111 271 S
Copper	Coppered	ø 8 mm	50	111 272
Stainless steel V2A	Stainless steel V2A	ø 8 - 10 mm	50	111 273
Bimetal aluminium/copper	Stainless steel V2A	ø 8 mm	50	111 274

All specifications also available with ø 4-6 mm clamping range.

Saddle clamp (J&P-utility patent)



Ord. no. 1334

Saddle clamp with guaranteed 10 cm² contact surface for metal sheet connections. **Clamping range up to 5 mm.**

Specification	Fit	PU	Ord. no.
Steel, hot galvanized	ø 8 - 10 mm	50	1334
Copper	ø 8 - 10 mm	50	1336
Aluminium/stainless steel V2A	ø 8 - 10 mm	50	1335

Saddle clamp (J&P-utility patent)



Ord. no. 111 680

Saddle clamp for secure contact connection to metal sheets and steel constructions. **Clamping range up to 6 mm.**

Specification	Fit	PU	Ord. no.
Steel, hot galvanized	ø 8 - 10 mm	50	111 680
Copper	ø 8 - 10 mm	50	111 681
Aluminium/Stainless steel V2A	ø 8 - 10 mm	50	111 682
Stainless steel V2A	ø 8 - 10 mm	50	111 683
Bimetal copper/aluminium	ø 8 - 10 mm	50	111 684

Saddle clamp



Ord. no. 1292

Saddle clamp for the connection to saddles, lengthwise and crosswise conductor connection. **Clamping range up to 5 mm.**

Specification	Fit	PU	Ord. no.
Steel, hot galvanized	ø 8 - 10 mm	50	1292
Copper	ø 8 - 10 mm	50	1293
Stainless steel V2A	ø 8 - 10 mm	50	910 105
Aluminium	ø 8 - 10 mm	50	1263

With clamping jaw on request.

Multi-Mini-saddle clamp - slim specification

For connection of conductors with sheets and folds

Benefits:

- For connection of cables with sheets and profiles up to 8 mm.
- For conductors from 6 mm² to 50 mm² (ø 2.8 - ø 8 mm).
- Suitable for lengthwise and crosswise conductor installation.
- Also suitable for potential equalization applications.

Multi-Mini-saddle clamp for equipotential bonding.

Suitable for lengthwise and crosswise installation. **Clamping range up to ø 8 mm.**

Specification	Fit	PU	Ord. no.
Stainless steel V2A	6 mm ² (ø 2.8 mm) - 50 mm ² (ø 8 mm)	100	111 780
Stainless steel V2A/coppered	6 mm ² (ø 2.8 mm) - 50 mm ² (ø 8 mm)	100	111 781
Steel, hot galvanized	6 mm ² (ø 2.8 mm) - 50 mm ² (ø 8 mm)	100	111 782

Application example:



Multi-Mini-saddle clamp



Ord. no. 111 780

Attic - saddle clamp

for connection of the down conductor with the attic sheet without damaging the drip edge

Benefits:

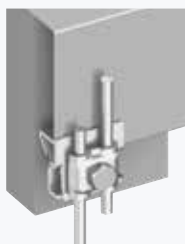
- Connection clamp for secure mounting of an attic sheet.
- Simple installation.
- No damaging or flattening of the drip edge.
- Particularly advantageous if the clamp needs to be repositioned.

Attic - saddle clamp

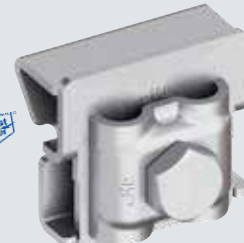
for connection of the down conductor with the attic sheet without damaging the drip edge

Specification	Fit	PU	Ord. no.
Steel, hot galvanized	ø 8 - 10 mm	50	111 666
Aluminium	ø 8 mm	50	111 667
Stainless steel V2A	ø 8 - 10 mm	50	111 669

Application example:



Attic-saddle clamp (Property rights registered)



Ord. no. 111 666

Multi-Plus-saddle clamp

Benefits:

- Lengthwise or crosswise conductor leading possible on top of the standing seam.
- 10 cm² contact surface on the standing seam or sheet.

Multi-Plus-saddle clamp with bracket and double terminal clamp. For connecting saddles and sheets lengthwise and crosswise conductor leading. **Clamping range up to 8 mm**

Specification	Fit	PU	Ord. no.
Steel, hot galvanized	ø 8 - 10 mm	25	111 880
Aluminium	ø 8 mm	25	111 881
Copper	ø 8 mm	25	111 882
Stainless steel V2A	ø 8 - 10 mm	25	111 883

Multi-Plus saddle clamp



Ord. no. 111 882

Saddle clamp "Flex"



Ord. no. 1262



Ord. no. 1266

Cross-saddle clamp



Ord. no. 1297



Ord. no. 1296

Saddle clamp "Flex" with one screw M8 and connection clamp for 6 mm² (ø 2.8 mm) - 50 mm² (ø 8 mm) for clamping on the sheet metal seam

Connection clamp at top	Fit	PU	Ord. no.
Steel, hot galvanized / Stainless steel V2A	6 mm ² (ø 2.8 mm) - 50 mm ² (ø 8 mm)	50	1261
Stainless steel V2A	6 mm ² (ø 2.8 mm) - 50 mm ² (ø 8 mm)	50	1262
Connection clamp lateral	Fit	PU	Ord. no.
Steel, hot galvanized / Stainless steel V2A	6 mm ² (ø 2.8 mm) - 50 mm ² (ø 8 mm)	50	1265
Stainless steel V2A	6 mm ² (ø 2.8 mm) - 50 mm ² (ø 8 mm)	50	1266

Cross-saddle clamp mounted with four cylinder head screws M6 V2A. Upper part securely riveted, for lengthwise and crosswise conductor connection. **Clamping range up to 8 mm.**

Specification	Fit	PU	Ord. no.
Steel, hot galvanized	ø 8 mm	50	1297
Copper	ø 8 mm	50	1298
Stainless steel V2A	ø 8 mm	50	1299
Aluminium	ø 8 mm	50	1264
Zinc die-cast clamping range max. 5 mm	ø 8 - 10 mm	50	1296

PV-connector for equipotential bonding

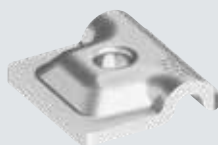
PV-connector



Ord. no. 111 813



Ord. no. 111 812



Ord. no. 111 811

PV-connector "Flex" for equipotential bonding; for round conductors of different cross sections and materials; with hammer head bolt and locking nut M8.

Specification	Clamping range	Fit	PU	Ord. no.
Stainless steel V2A	Profile 28/15	6 mm ² (ø 2.8 mm) - 50 mm ² (ø 8 mm)	100	111 813

PV-connector for equipotential bonding; for round conductors ø 8 mm; with hammer head bolt M8 for profile 28/15 and locking nut.

Specification	Clamping range	Fit	PU	Ord. no.
Aluminium/Stainless steel V2A	Profile 28/15	ø 8 mm	100	111 812

PV-connector for equipotential bonding; for round conductors ø 8 mm; for customized installation versions.

Specification	Bore hole	Fit	PU	Ord. no.
Aluminium	ø 9 mm	ø 8 mm	100	111 811
Aluminium	□ 11 mm	ø 8 mm	100	111 821

NEW Cable tray clamp

Benefits:

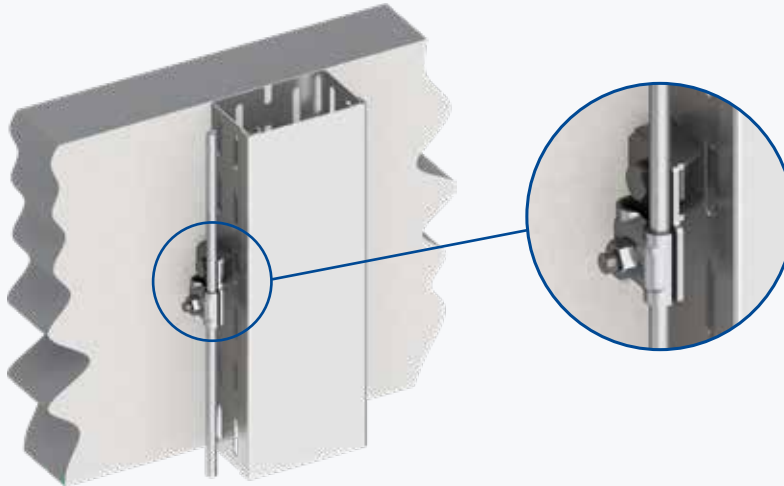
- Flexible use with a wide variety of cable tray types.
- Quick retrofitting possible on cable trays that have already been closed.
- Flat design - does not protrude above the top/bottom edge of the cable tray.

Cable tray clamp according to EN IEC 62561-1 for fixing cable trays.

Connection with clamping jaw or Multi-Mini-connection.

Specification	Clamping range	Length	PU	Ord. no.
Clamping jaw				
NEW Steel, hot galvanized	up to 5 mm	ø 6 - 8 mm	50	111 860
NEW Stainless steel V2A	up to 5 mm	ø 6 - 8 mm	50	111 861

Application example:



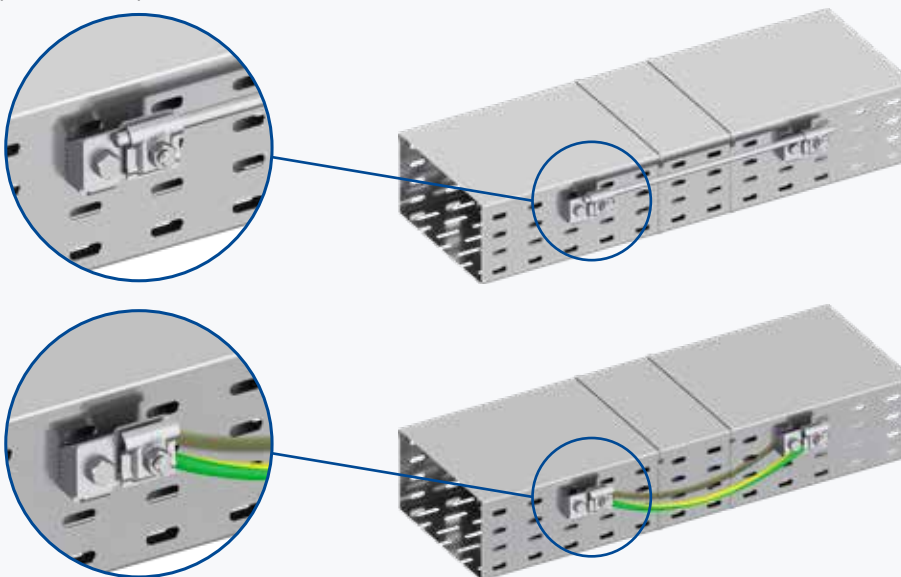
Cable tray clamp



Ord. no. 111 860

Specification	Clamping range	Length	PU	Ord. no.
Multi-Mini-Connection				
NEW Steel, hot galvanized	up to 5 mm	6 mm² (ø 2.8 mm) - 50 mm² (ø 8 mm)	50	111 862
NEW Stainless steel V2A	up to 5 mm	6 mm² (ø 2.8 mm) - 50 mm² (ø 8 mm)	50	111 863

Application example:



Ord. no. 111 863

Terminal clamp

Terminal clamp



Ord. no. 111 685

Terminal clamp for the secure contact connection to metal sheets and steel constructions.

Specification	Clamping range	Fit	PU	Ord. no.
Steel, hot galvanized	1 - 5 mm	ø 6 - 8 mm	50	111 685
Copper	1 - 5 mm	ø 6 - 8 mm	50	111 686
Aluminium/stainless steel V2A	1 - 5 mm	ø 6 - 8 mm	50	111 687
Stainless steel V2A	1 - 5 mm	ø 6 - 8 mm	50	111 688
Bimetal copper/stainless steel V2A	1 - 5 mm	ø 6 - 8 mm	50	111 689



Terminal clamp



Ord. no. 111 381

Terminal clamp for steel constructions. Lengthwise and crosswise connections possible.

Specification	Clamping range	Fit	PU	Ord. no.
Steel, hot galvanized	5 - 18 mm	ø 8 - 10 mm	25	111 381
Stainless steel V2A	5 - 18 mm	ø 8 - 10 mm	25	111 382



Terminal clamp



Ord. no. 1379



Ord. no. 1479

Terminal clamp for steel constructions. Lengthwise and crosswise connections possible.

Specification	Clamping range	Fit	PU	Ord. no.
Terminal clamp with KS-connector				
Steel, hot galvanized	5 - 18 mm	ø 6 - 10 mm	25	1379
Steel, hot galvanized	18 - 35 mm	ø 6 - 10 mm	25	111 379
Stainless steel V2A	5 - 18 mm	ø 6 - 10 mm	25	2002
Stainless steel V2A	18 - 35 mm	ø 6 - 10 mm	25	111 380
Terminal clamp with clamping jaw				
Steel, hot galvanized	5 - 18 mm	ø 8 - 10 mm	25	1479
Steel, hot galvanized	18 - 35 mm	ø 8 - 10 mm	25	111 779



Terminal clamp



Ord. no. 111 376

Terminal clamp for steel constructions. Lengthwise and crosswise connections possible.

Specification	Clamping range	Fit	PU	Ord. no.
Steel, hot galvanized	up to 12 mm	ø 8 - 10 mm	50	111 376
Red brass	up to 12 mm	ø 8 - 10 mm	50	1377

Parallel - saddle clamp



Ord. no. 1295

Parallel - saddle clamp, special clamp for snowload-safe installation of the down conductor along the saddle. **Clamping range up to 4 mm.**

Specification	Clamping range	Fit	PU	Ord. no.
Aluminium	up to 4 mm	ø 8 mm	50	1295

Terminal clamp, heavy-duty type

Benefits:

- Secure contact connections to steel constructions with up to 52 mm clamping range.
- Variable connections through rotating terminal lugs (360°).
- Connection with KS-connector, Vario-clamp or with perforated tape possible.

Specification	Clamping range	Fit	PU	Ord. no.
Terminal clamp (heavy-duty type) with terminal lug (bore hole ø 11 mm)				
Steel, hot galvanized	5 - 19 mm	---	25	111 384
Steel, hot galvanized	19 - 36 mm	---	25	111 385
Steel, hot galvanized	36 - 52 mm	---	20	111 386
Stainless steel V2A	5 - 19 mm	---	25	111 387
Stainless steel V2A	19 - 36 mm	---	25	111 388
Stainless steel V2A	36 - 52 mm	---	20	111 389

Ex area (Zone 2/22), the terminal is secured against self-loosening (EN IEC 62305-3 Supplement 7).

Terminal clamp (heavy-duty type) with double terminal clamp

Specification	Clamping range	Fit	PU	Ord. no.
Steel, hot galvanized	5 - 19 mm	ø 8 - 10 mm	25	111 884
Steel, hot galvanized	19 - 36 mm	ø 8 - 10 mm	25	111 885
Steel, hot galvanized	36 - 52 mm	ø 8 - 10 mm	25	111 886
Stainless steel V2A	5 - 19 mm	ø 8 - 10 mm	25	111 887
Stainless steel V2A	19 - 36 mm	ø 8 - 10 mm	25	111 888
Stainless steel V2A	36 - 52 mm	ø 8 - 10 mm	25	111 889

Terminal clamp, heavy-duty type (JIP-patent)



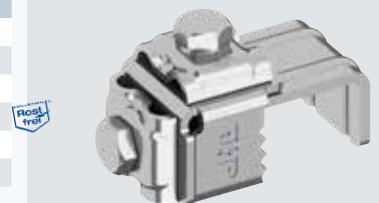
Ord. no. 111 388

Ord. no. 111 887

Terminal clamp "Perfect" heavy-duty type, with 2 clamping jaws connections possible horizontally and vertically in any direction.

Specification	Clamping range	Fit	PU	Ord. no.
Steel, hot galvanized	5 - 19 mm	ø 8 - 10 mm	25	111 854
Steel, hot galvanized	19 - 36 mm	ø 8 - 10 mm	25	111 855
Steel, hot galvanized	36 - 52 mm	ø 8 - 10 mm	20	111 856
Stainless steel V2A	5 - 19 mm	ø 8 - 10 mm	25	111 857
Stainless steel V2A	19 - 36 mm	ø 8 - 10 mm	25	111 858
Stainless steel V2A	36 - 52 mm	ø 8 - 10 mm	20	111 859

Terminal clamp "Perfect" heavy-duty type (JIP-patent)



Ord. no. 111 859

Connection and terminal clamps

Terminal disconnecting clamp, heavy-duty type

Benefits:

- Optimized tight fit with the open-end wrench due to the patented cylindrical part of the Vario-clamp top part.
- For safe contact connection of round conductors or sheets to steel constructions with a material thickness up to 52 mm.
- Economical solution – connecting bracket and disconnecter in one component.

Terminal disconnecting clamp, heavy-duty type

for test joints of ø 8-10 mm or flat 30 mm

Specification	Clamping range	Fit	PU	Ord. no.
Steel, hot galvanized	5 - 19 mm	fl. 30 mm	25	111 734
Steel, hot galvanized	19 - 36 mm	fl. 30 mm	25	111 735
Steel, hot galvanized	36 - 52 mm	fl. 30 mm	20	111 736
Stainless steel V2A	5 - 19 mm	fl. 30 mm	25	111 737
Stainless steel V2A	19 - 36 mm	fl. 30 mm	25	111 738
Stainless steel V2A	36 - 52 mm	fl. 30 mm	20	111 739

Steel, hot galvanized	5 - 19 mm	ø 8 - 10 mm	25	111 784
Steel, hot galvanized	19 - 36 mm	ø 8 - 10 mm	25	111 785
Steel, hot galvanized	36 - 52 mm	ø 8 - 10 mm	20	111 786
Stainless steel V2A	5 - 19 mm	ø 8 - 10 mm	25	111 787
Stainless steel V2A	19 - 36 mm	ø 8 - 10 mm	25	111 788
Stainless steel V2A	36 - 52 mm	ø 8 - 10 mm	20	111 789

Terminal disconnecting clamp, heavy duty type (JIP-patent)



Ord. no. 111 737

Ord. no. 111 788

System Bimetal (J.P-patent)

The "right" connection between different materials. J. Pröpster offers a conform to standards clamping system, which is tested and practice-oriented. It provides a practical and economical way of joining and connecting different materials: copper, hot galvanized steel, aluminium, etc.

Benefits:

- Simple handling – no complex work with self-made bimetal strips.
- Corrosion-free connections between copper wires and wires made of other materials (e. g. steel, aluminium).
- Corrosion-free connections between copper wires and components made of other materials
 - earth lead-in rods
 - test joints
 - skylights
 - metal constructions

Bimetal Multi-clamp three-part



Ord. no. 1274

Bimetal connection Vario-clamp



Ord. no. 1342 Z

Bimetal Vario-clamp M8-Plus



Ord. no. 111 727

Bimetallic sleeve and bimetallic tape



Ord. no. 1051

Ord. no. 1052

Ord. no. 1053

Bimetallic terminal clamp



Ord. no. 111 689

Bimetal Multi-clamp, three-part, upper piece: aluminium. intermediate plate: bimetal aluminium/copper. bottom piece: copper.

Specification	Fit	PU	Ord. no.
Multi-connection clamp aluminium/copper	ø 8 mm	100	1274
Multi-Plus-connection aluminium/copper with guaranteed 10 cm ² contact surface.	ø 8 mm	50	111 274

Bimetal Vario-clamp

with screws M10, terminal width 40 mm.

Specification	Fit	PU	Ord. no.
Round copper on flat steel, hot galvanized	ø 8 - 10 / fl. 30 mm	50	1342 Z
Round copper on round (ø 16) steel, hot galvanized	ø 8 - 10 / ø 16 mm	50	1348 Z
Round copper on round/flat steel, hot galvanized	ø 16 / fl. 30 / ø 8 - 10 mm	50	1349 Z
Round copper on round steel, hot galvanized	ø 8 - 10 / ø 8 - 10 mm	50	1343 Z

Bimetal Vario-clamp M8-Plus

with screws M8, terminal width 30 mm.

Specification	Fit	PU	Ord. no.
Round copper on flat steel, hot galvanized	ø 8 - 10 / fl. 30 mm	50	111 727
Round copper on round steel, hot galvanized	ø 8 - 10 / ø 16 mm	50	111 728
Round copper on round/flat steel, hot galvanized	ø 16 / fl. 30 / ø 8 - 10 mm	50	111 729
Round copper on round steel, hot galvanized	ø 8 - 10 / ø 8 - 10 mm	50	111 726

Bimetallic sleeve and bimetallic tape

for corrosion resistant connections between steel/aluminium and copper.

Specification	Length	Fit	PU	Ord. no.
Aluminium outside/ copper inside	40 mm	ø 8 mm	100	1051
Aluminium inside/ copper outside	40 mm	ø 8 mm	100	1052
Bimetallic tape, 40 mm wide; 0.5 mm thick	500 mm	---	1	1053

Bimetallic terminal clamp

for the secure contact connection to metal sheets and steel constructions.

Specification	Clamping range	Fit	PU	Ord. no.
Wire clamp stainless steel V2A	1 - 5 mm	ø 6 - 8 mm	50	111 689
Terminal clamp copper				

Bimetal gutter clamp for secure contact connections between different materials on gutters. Maximum safety due to perfect clamping; no bead damage.

Specification	Fit	PU	Ord. no.
Wire clamp stainless steel V2A	ø 6 - 8 mm	25	111 674
Bead clamp copper	Bead max. ø 20 mm		

Bimetal gutter clamp for secure contact connections between different materials on gutters. Maximum safety due to perfect clamping; no bead damage.

Specification	Fit	PU	Ord. no.
Wire clamp stainless steel V2A	ø 6 - 8 mm	50	111 679
Bead clamp copper	Bead max. ø 20 mm		

Bimetal gutter connection clamp DUO

to connect air-termination conductors and down conductors with gutters.

Specification	Fit	PU	Ord. no.
Wire clamp aluminium	ø 8 mm	25	1307 Z
Bead clamp copper	Bead ø 15 - 20 mm		

Bimetal gutter clamp upper piece: **Aluminium**, intermediate plate: Bimetal **aluminium/copper**, bottom piece: both components **copper**.

Specification	Fit	PU	Ord. no.
Wire clamp aluminium	ø 8 - 10 mm	50	1300 Z
Bead clamp copper	Bead ø 10 - 20 mm		

Bimetal saddle clamp, for the connection between different materials.

Specification	Fit	PU	Ord. no.
for wire connections ø 8-10 mm aluminium	ø 8 - 10 mm	50	1290 Z
on saddles up to 8 mm copper			
for wire connections ø 8-10 mm copper	ø 8 - 10 mm	50	1297 Z
on saddles up to 8 mm steel, hot galvanized or aluminium			

Bimetal Saddle clamp for secure contact connection to metal sheets and steel constructions.

Specification	Clamping range	Fit	PU	Ord. no.
Wire clamp aluminium	up to 6 mm	ø 8 - 10 mm	50	111 684
Saddle clamp copper				

Bimetal gutter clamp -ideal



Ord. no. 111 674

Bimetal gutter clamp - slim



Ord. no. 111 679

Bimetal gutter connection clamp DUO



Ord. no. 1307 Z

Bimetal gutter clamp



Ord. no. 1300 Z

Bimetal saddle clamp



Ord. no. 1290 Z

Bimetal saddle clamp
(J.P.-utility patent)



Ord. no. 111 684

Rod clamp



Ord. no. 1312

Snow guard clamp

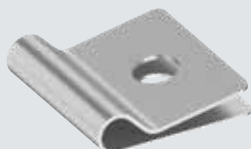


Ord. no. 1311

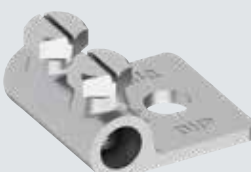
Clamping shoe



Ord. no. 111 365

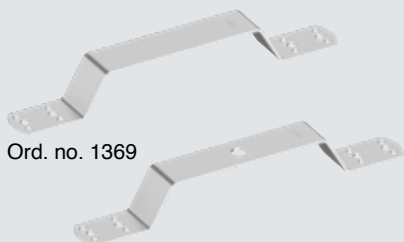


Ord. no. 1397



Ord. no. 111 364

Bridging bracket



Ord. no. 1369

Ord. no. 111 404

Bridging braid



Ord. no. 1375

Ord. no. 911 688

Expansion piece



Ord. no. 1380

Rod clamp

for connection of round conductors $\varnothing$ 8-10 mm on rods $\varnothing$ 16 or 20 mm.

Specification	Fit	PU	Ord. no.
Steel, hot galvanized	$\varnothing$ 8 - 10 / $\varnothing$ 16 mm	50	1312
Steel, hot galvanized	$\varnothing$ 8 - 10 / $\varnothing$ 20 mm	50	1313
Stainless steel V2A	$\varnothing$ 8 - 10 / $\varnothing$ 16 mm	50	1314
Stainless steel V2A	$\varnothing$ 8 - 10 / $\varnothing$ 20 mm	50	1315



Snow guard clamp, mounted with cylinder head screws M6 V2A.

Specification	Fit	PU	Ord. no.
Aluminium/stainless steel V2A	$\varnothing$ 8 - 10 mm	50	1311
Copper	$\varnothing$ 8 - 10 mm	50	1310

Clamping shoe, according to EN IEC 62561-1.

Specification	Fit	PU	Ord. no.
with one elongated hole $\varnothing$ 9 x 12 mm for screwing on and four holes $\varnothing$ 5.2 mm for riveting!			
Steel, hot galvanized	$\varnothing$ 8 mm	100	1365
Copper	$\varnothing$ 8 mm	100	111 366
Aluminium	$\varnothing$ 8 mm	100	111 365
Stainless steel V2A	$\varnothing$ 8 mm	100	111 362



with a 10.5 mm diameter hole for screwing.			
Steel, hot galvanized	$\varnothing$ 8 mm	100	1395
Aluminium	$\varnothing$ 8 mm	100	1397
Stainless steel V2A	$\varnothing$ 8 mm	100	111 363



with a hole $\varnothing$ 11 mm for screwing on with hexagon screws M8 V2A according to Austrian standard.

Specification	Fit	PU	Ord. no.
Cast/hot galvanized	$\varnothing$ 8 - 10 mm	100	111 364

Bridging bracket for the connection of metal structural claddings.

(Hole pattern: 4x $\varnothing$ 6.5 mm; 8x $\varnothing$ 5.2 mm)

Specification	Length	PU	Ord. no.
Aluminium	250 mm	100	1369
Aluminium	350 mm	100	111 403
Copper	250 mm	100	1370
Aluminium with centre hole $\varnothing$ 10.5 mm	250 mm	100	111 404
Aluminium with centre hole $\varnothing$ 10.5 mm	350 mm	100	111 402

Bridging braid, highly flexible, for the connection of metal structural claddings or as expansion piece (50 mm²). (Hole pattern: 4x $\varnothing$ 6.5 mm; 8x $\varnothing$ 5.1 mm; 2x $\varnothing$ 10.5 mm).

Specification	Length	PU	Ord. no.
Copper	180 mm	100	1375
Aluminium	180 mm	100	1376
Aluminium with central hole $\varnothing$ 10 mm	300 mm	100	911 688

Additional lengths and hole patterns on request.

Expansion piece, for the compensation of the temperature-dependent change in length of air-termination conductors, e. g. connection with two multi clamps.

Specification	Length	Fit	PU	Ord. no.
Aluminium AlMgSi 0.5	600 mm	$\varnothing$ 8 mm	10	1380
Copper	600 mm	$\varnothing$ 8 mm	10	911 178

Bridging cable, highly flexible, for the connection of metal structural claddings or as expansion piece 16 mm². Copper with aluminium cable lug; pressed airtight.

Specification	Length	PU	Ord. no.
For screws M8 Copper/Aluminium	400 mm	50	1371
	300 mm	100	1372
For screws M10 Copper/Aluminium	400 mm	50	1373
	300 mm	100	1374

Additional cable types, lengths, cross sections and hole patterns on request.

Bridging cable set, highly flexible bridging cable set 16 mm² for the connection of metal structural claddings, with Multi-Plus clamping jaws (ø 8 mm / flat).

Specification	Length	PU	Ord. no.
Cable copper/aluminium with two stainless steel V2A - clamps	400 mm	25	910 096
	300 mm	25	910 096 S

Additional cable types, lengths, cross sections and hole patterns on request.

Bridging cable



Ord. no. 1371

Bridging cable set



Ord. no. 910 096

Connection set for safety rope systems

Connection set for safety rope systems to connect existing safety rope systems on roofs to the existing air-termination system of the lightning protection system.

Rope glider attached to the safety rope, ready for use – radially enclosed at approximately 270° (e. g., **ABS Safety rope glider**)

Specification	Rope length	Fit		PU	Ord. no.
		Rope	Lightning protection		
Stainless steel V2A	0.5 m	ø 6 mm	ø 8 - 10 mm	50	111 346
Stainless steel V2A	1.0 m	ø 6 mm	ø 8 - 10 mm	50	111 347
Stainless steel V2A	0.5 m	ø 8 mm	ø 8 - 10 mm	50	111 348
Stainless steel V2A	1.0 m	ø 8 mm	ø 8 - 10 mm	50	111 349
Stainless steel V2A	0.5 m	ø 10 mm	ø 8 - 10 mm	50	111 340
Stainless steel V2A	1.0 m	ø 10 mm	ø 8 - 10 mm	50	111 350

Rope safeguarding clamp

with carriage bolts and nuts **without** rope and clamping jaw.

Rope glider attached to safety rope, ready for use - radially enclosed approximately 270° (e. g., **ABS Safety rope glider**)

Specification	Fit	PU	Ord. no.
Stainless steel V2A	ø 6 mm	10	111 336
Stainless steel V2A	ø 8 mm	10	111 338
Stainless steel V2A	ø 10 mm	10	111 335

Rope safeguarding clamp

with carriage bolts and nuts **without** rope and clamping jaw.

Rope glider attached to safety rope, ready for use - radially enclosed 360° (e. g., **MSA Safety-Latchways rope glider**)

Specification	Fit	PU	Ord. no.
Stainless steel V2A	ø 8 mm	10	111 328

Connection cable,

with clamping jaw ø 8 - 10 mm **without** rope safeguarding clamp .

Specification	Rope length	Cross section	PU	Ord. no.
Rope / clamping jaw / clamping shoe				
Copper / stainless steel V2A / aluminium	0.5 m	16 mm ²	10	111 342
Copper / stainless steel V2A / aluminium	1.0 m	16 mm ²	10	111 343

Note:

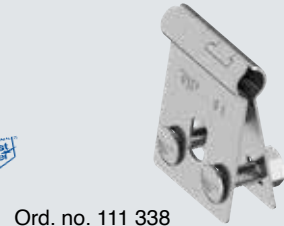
Screws and blind rivets for bridging brackets and tapes are shown on page 168.

Connection set for safety rope systems



Ord. no. 111 348

Rope safeguarding clamp



Ord. no. 111 338

Rope safeguarding clamp (J&P-utility model)



Ord. no. 111 328

Connection cable



Ord. no. 111 343

Number plate

Number plate

Type A



Ord. no. 111 624



Ord. no. 1056

Type B



Ord. no. 111 640

Type C



Ord. no. 111 620

Type D



Ord. no. 111 639



Ord. no. 111 629

Number plate

marking of test joints at conductors. Indicate the desired numbers on your order.

Specification	Fit	PU	Ord. no.
Type A: Number plate, without numbers , for flexible use with hand punches.			
Aluminium	ø 8 - 10 mm	100	111 624
Aluminium	ø 16 mm	200	111 625
Aluminium	fl. 30 mm	100	111 626
Copper	ø 8 - 10 mm	100	111 627
Copper	ø 16 mm	100	111 628
Hand punches 0-9, size 10 mm		1	1059
Type A: Number plate, including stamped in numbers, customised.			
Aluminium	ø 8 - 10 mm	1	1056
Copper	ø 8 - 10 mm	1	1060

Specification	PU	Ord. no.
Type B: Test plate, with hole spacing of 28 - 38 mm, suitable for number plates.		
Aluminium	100	111 640

Specification	PU	Ord. no.
Type C: Test plate, suitable for Vario-Disconnecting clamp. ø 8 / ø 10 / ø 16 / fl. 30 mm.		
Aluminium	100	111 620
Copper	100	111 623

Specification	PU	Ord. no.
Type D: Test plate, for test badge up to ø 50 mm (e. g. VDB-test badge) with hole spacing of 28 - 40 mm, suitable for Vario-Disconnection clamp M8-Plus.		
Stainless steel V2A	100	111 639

Specification	PU	Ord. no.
Test badge ø 30 mm suitable for Type B, C and D	20	111 629

Application example:

Type A and Type B



Type C



Type D



Inspection doors

Inspection doors to be used for flush-mounted test joints.

Specification	Mounting dimensions	PU	Ord. no.
Steel, hot galvanized, stamped	155 x 205 mm	1	1044
Stainless steel V2A, stamped	155 x 205 mm	1	1040
Steel, hot galvanized, stamped -Discontinued model-	140 x 250 mm	1	1041
Stainless steel V2A, stamped	140 x 250 mm	1	1045
Steel, hot galvanized for square spanner -Discontinued model-	150 x 200 mm	1	1054

Inspection doors

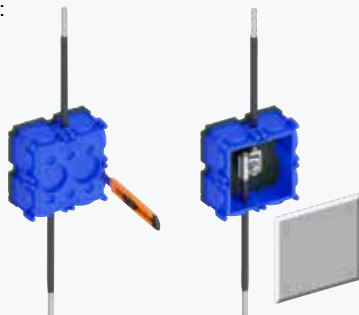


Test joint box

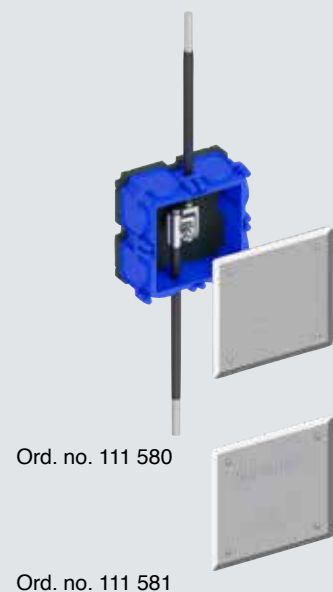
Test joint box to be used for flush-mounted fitting and installation in concrete with integrated test joint and flexible connection cable for round conductor $\varnothing$ 8-10 mm or flat tapes.

Specification	PU	Ord. no.
Test joint box made of impact resistant plastic 142 x 142 x 70 mm with built-in test joint and flexible insulated connection rope. Cover made of stainless steel V2A	1	111 580
Cover (single unit) stainless steel V2A incl. mounting screws Suitable for junction box part no. 111 580	1	111 581

Application example:



Test joint box



Connection and terminal clamps

Earth electrode inspection housing

for underfloor installation. Heavy-duty type - passable.

Specification	Mounting dimensions	PU	Ord. no.
Grey cast iron black varnished; opening: oval without test joint	230 x 150 x 120 mm	1	1055
with built-in test joint	230 x 150 x 120 mm	1	1043
Stainless steel V2A; opening: rectangular; V2A-cover; material thickness: 6 mm			
without test joint	260 x 210 x 120 mm	1	1055 S1
with built-in test joint	260 x 210 x 120 mm	1	1043 S1

Earth electrode inspection housing



Test joint box



Ord. no. 111 585



Ord. no. 111 587



Ord. no. 111 589

Note: Test joint box with built-in equipotential bonding bar to be found on page 124.

Test joint box for flush-mounted installation on facades with external thermal insulation composite systems with the option of adjustment the installation depth.

Specification	Installation depth	PU	Ord. no.
Test joint box plastic (196 x 156 mm) low version, without test joint. Conductor insert/perforations: round conductor: ø 8 - 13 mm and tapes: flat up to max. 30 x 5.0 mm Incl. V2A cover (220 x 180 mm) with neopren sealing, plaster cover and installation set.	90 - 140 mm	1	111 585
Test joint box plastic (196 x 156 mm) high version with removable spacer, insulation material, without test joint Conductor insert/perforations and specification acc. to Ord. no. 111 585	130 - 320 mm	1	111 588
Test joint box plastic (196 x 156 mm) high version with removable spacer, insulation material and built-in test joint. Suitable for the connection of: round conductor: ø 8 - 10 mm and tapes: flat 30 mm Incl. V2A cover (220 x 180 mm) with neopren sealing, plaster cover and installation set.	130 - 320 mm	1	111 587
Insulated spacers including mounting accessories suitable for item Ord. no. 111 585	130 - 320 mm	1	111 589

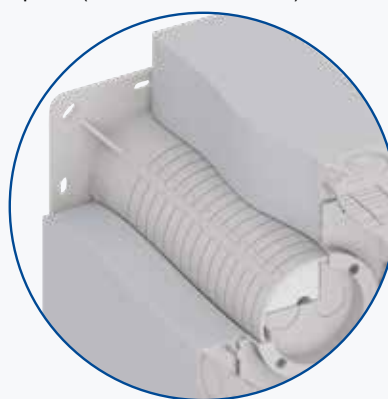
The plastic is self-extinguishing and halogen-free. The **V2A** cover complies with protection class IP65.

Cover with company logo on request.

Example of application:



Spacer (from Ord. no. 111 588)



Earthing material



Earthing
material

Connection clamp

Diagonal cross clamp



Ord. no. 111 353

Diagonal cross clamp, heavy-duty type

with two screws M10 for T-, cross- and parallel- connections, flat and round.

Specification		Fit	PU	Ord. no.
Steel, hot galvanized	two-part	flat/round	fl. 30 / ø 8 - 10 mm	50 1354
Steel, hot galvanized		flat/flat	fl. 30 / fl. 30 mm	50 111 352
Steel, hot galvanized		round/round	ø 8 - 10 / ø 8 - 10 mm	50 111 353
Steel, hot galvanized		flat/round	fl. 40 / ø 8 - 10 mm	25 111 354
NEW Steel, hot galvanized		flat/flat	fl. 50 / fl. 50 mm	25 111 351 S
NEW Steel, hot galvanized		flat/round	fl. 50 / ø 8 - 10 mm	25 111 354 S
Stainless steel V2A	two-part	flat/round	fl. 30 / ø 8 - 10 mm	50 2008 
Stainless steel V2A		flat/flat	fl. 30 / fl. 30 mm	50 2015
Stainless steel V2A		round/round	ø 8 - 10 / ø 8 - 10 mm	50 2008 S
Stainless steel V4A	two-part	flat/flat	fl. 30 / fl. 30 mm	50 2015 S 
Stainless steel V4A		round/flat	fl. 30 mm / ø 8 - 10	50 2008 S1
Stainless steel V4A		round/round	ø 8 - 10 / ø 8 - 10 mm	50 2008 S2
NEW Stainless steel V4A		flat/flat	fl. 40 / fl. 40 mm	50 111 361
NEW Stainless steel V4A		flat/round	fl. 40 mm / ø 8 - 10	50 111 361 S1



flat/flat
parallel connector



flat/flat
cross connector



flat/flat/round
parallel cross connector



round/round (ø10mm)
cross connector



flat/flat/round
parallel connector

Multi-clamp ø 10 mm



Ord. no. 1278

Multi-clamp ø 10 mm, heavy-duty type

for universal use as T-, cross- and parallel- connection for conductors ø 10 mm.

Specification	Carriage bolt with nut	Fit	PU	Ord. no.
Steel, hot galvanized	Steel, hot galvanized	ø 10 mm	75	1278
Stainless steel V2A	Stainless steel V2A	ø 10 mm	75	1279 
Stainless steel V4A	Stainless steel V4A	ø 10 mm	75	1279 S 
Copper	V2A/coppered	ø 10 mm	75	111 280

USV-clamp

Benefits:

- considerably shorter and easier installation process
- universal use

USV-clamp



Ord. no. 111 425

USV - clamp

Easy-to-assemble connection system e. g. for earthing conductors in concrete.

Specification	Fit	PU	Ord. no.
Steel, hot galvanized	flat/round/flat	fl. 30 / ø 8 - 10 / fl. 30 mm	50 111 425
Stainless steel V2A	flat/round/flat	fl. 30 / ø 8 - 10 / fl. 30 mm	50 111 426 



flat/flat
connection



flat/flat
T-connection



flat/round ø 8-10
parallel connection



flat/flat connection
and round T-connection



flat/flat/round
cross connection

Cable connector



Ord. no. 111 283



Ord. no. 111 815

Cable connector for connecting Cu cables 50 - 120 mm².

Specification	Carriage bolt with nut	Fit	Fit	PU	Ord. no.
Copper	Stainless steel V4A	ø 9 mm	50 mm²	100	910 106
Copper	Stainless steel V4A	ø 10.5 mm	70 mm²	75	111 283
Copper	Stainless steel V4A	ø 12.5 - 14.5 mm	95 - 120 mm²	50	111 814
Copper, tin-plated	Stainless steel V4A	ø 9 mm	50 mm²	100	910 104
Copper, tin-plated	Stainless steel V4A	ø 10.5 mm	70 mm²	75	111 282
Copper, tin-plated	Stainless steel V4A	ø 12.5 - 14.5 mm	95 - 120 mm²	50	111 815

Diagonal swivel cross clamp

Benefits:

- No clamp disassembly necessary.
- Easier installation because of swivelling opening.
- Low construction height after installation.
- Two hexagonal screws M10 (wrench width 17) .
- T-, cross-, parallel- and diagonal- connections are possible.

Diagonal swivel cross clamp

for a fast and simple connection of round and flat material.

Specification	Fit	PU	Ord. no.
Steel, hot galvanized	fl. 30 / ø 8 - 10 mm	25	111 790
Steel, hot galvanized	ø 8 - 10 / ø 8 - 10 mm	25	111 791
Stainless steel V2A	fl. 30 / ø 8 - 10 mm	25	111 792
Stainless steel V2A	ø 8 - 10 / ø 8 - 10 mm	25	111 793
Stainless steel V4A	fl. 30 / ø 8 - 10 mm	25	111 794
Stainless steel V4A	ø 8 - 10 / ø 8 - 10 mm	25	111 795

Application example:



round/round (ø10mm)
cross connector



flat/round
parallel connector

Diagonal swivel cross clamp



Ord. no. 111 790



Ord. no. 111 791

Connecting clamp for reinforcement

Benefits:

- Easier installation because of swivelling opening.
- No clamp disassembly necessary.
- Large clamping area flat/round (fl. 40 / ø 10 mm) is possible with the reinforcement (up to Ø 40 mm).
- T-, cross-, parallel- and diagonal- connections are possible.

Connecting clamp for reinforcement

for the fast and easy connection of round or flat conductors with the reinforcement.

Specification	Fit		PU	Ord. no.
	Reinforcement	Conductor		
Steel, bare	ø 10 - 20 mm	fl. 30 / fl. 40 mm	25	111 690
Steel, bare	ø 20 - 40 mm	fl. 30 / fl. 40 mm	25	111 691
Steel, bare	ø 10 - 20 mm	ø 10 mm and/or fl. 30 / fl. 40 mm	25	111 692
Steel, bare	ø 20 - 40 mm	ø 10 mm and/or fl. 30 / fl. 40 mm	25	111 693
Steel, hot galvanized	ø 10 - 20 mm	fl. 30 / fl. 40 mm	25	111 694
Steel, hot galvanized	ø 20 - 40 mm	fl. 30 / fl. 40 mm	25	111 695
Steel, hot galvanized	ø 10 - 20 mm	ø 10 mm and/or fl. 30 / fl. 40 mm	25	111 696
Steel, hot galvanized	ø 20 - 40 mm	ø 10 mm and/or fl. 30 / fl. 40 mm	25	111 697

Connecting clamp for reinforcement



Ord. no. 111 690



Ord. no. 111 696

Parallel-terminal-clamp



Ord. no. 111 372

Parallel-terminal-clamp

for connecting reinforced steel.

Specification	Carriage bolt with nut	Fit	PU	Ord. no.
NEW Steel, bare	Steel, hot galvanized	ø 6 - 22 mm	50	111 372
NEW Steel, hot galvanized	Steel, hot galvanized	ø 6 - 22 mm	50	111 373

Reinforcement terminal clamps (J.P.-patent)

Benefits:

- No loose components during installation.
- Low construction height after installation.
- All existing connection types such as T-, cross-, parallel- and diagonal- connections are possible.
- Various diameters are possible e. g. flat 30 x 3.5 mm and $\varnothing$ 5 - 25 mm.
- Only one screw M10 = central contact pressure.
- Optimal economic use for planning, storage, calculation and accounting.

Multi-flat+round terminal clamp



Ord. no. 111 796



Ord. no. 111 798

Multi-flat+round terminal clamp (fl. 30 x 3.5 / $\varnothing$ 5 - 25 mm) for a fast and easy connection of flat conductor with reinforcement.

Specification with hexagon screw	Fit		PU	Ord. no.
	Reinforcement	Conductor		
Steel, bare	$\varnothing$ 5 - 25 mm	fl. 30 x 3.5 mm	25	111 796
Steel, hot galvanized	$\varnothing$ 5 - 25 mm	fl. 30 x 3.5 mm	25	111 797
Steel, bare with double terminal clamp $\varnothing$ 8-10 mm	$\varnothing$ 5 - 25 mm	fl. 30 x 3.5 mm $\varnothing$ 10 mm	25	111 798
Steel, hot galvanized with double terminal clamp $\varnothing$ 8-10 mm	$\varnothing$ 5 - 25 mm	fl. 30 x 3.5 mm $\varnothing$ 10 mm	25	111 799

Specification in **stainless steel** on request.



Cross connection



Diagonal connection



Parallel and end to end connection



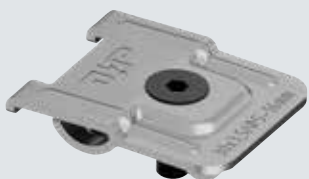
Parallel connection with ground conductor $\varnothing$ 10 mm

Multi-flat+round terminal clamp – now also available with countersunk screw and carriage bolt.
For a quick and easy connection of flat conductor with the reinforcement.

Benefits:

- **countersunk screw with hexagon socket:** Extremely low construction height for low concrete coverage.
- **carriage bolt:** Faster component installation.
- **turned carriage bolt:** Installation of flat conductor underneath reinforcement is possible.

Multi-flat+round terminal clamp



Ord. no. 111 800



Ord. no. 111 802



Ord. no. 111 804

Multi-flat+round terminal clamp (fl. 30 x 3.5 / $\varnothing$ 5 - 16 mm) for a quick and easy connection of flat conductor with reinforcement.

Specification countersunk screw with internal hexagon	Fit		PU	Ord. no.
	Reinforcement	Conductor		
Steel, bare	$\varnothing$ 5 - 16 mm	fl. 30 x 3.5 mm	25	111 800

Multi-flat+round terminal clamp (fl. 30 x 3.5 / $\varnothing$ 5 - 16 mm) For a quick and easy connection of flat conductor with reinforcement.

Specification with carriage bolt	Fit		PU	Ord. no.
	Reinforcement	Conductor		
Steel, bare (hexagonal nut on the side of the flat conductor)	$\varnothing$ 5 - 16 mm	fl. 30 x 3.5 mm	25	111 802
Steel, bare (hexagonal nut on the reinforcement side)	$\varnothing$ 5 - 16 mm	fl. 30 x 3.5 mm	25	111 804

Multi-Max reinforcement clamp 50x50 mm

Benefits:

- No loose components during installation.
- Only one screw M10 = central contact pressure.
- All existing connection types such as T-, cross- and parallel- connection are possible.
- Suitable for conductors flat 30 x 3.5 mm or Ø 10 mm.
- Low construction height.

Multi-Max reinforcement clamp 50x50 mm

Specification with hexagon bolt	Fit		PU	Ord. no.
	Reinforcement	Conductor		
Steel, bare	ø 4 - 16 mm	fl. 30 x 3.5 mm or ø 10 mm	50	111 806
Steel, hot galvanized	ø 4 - 16 mm	fl. 30 x 3.5 mm or ø 10 mm	50	111 816

Multi-Max reinforcement clamp 50 x 50 mm



Ord. no. 111 806

Benefit of a carriage bolt:

- Faster component installation.

Benefit of a turned carriage bolt:

- Installation of conductor underneath reinforcement is possible.

Specification with carriage bolt				
Steel, bare (hexagonal nut on the side of the ground conductor)	ø 4 - 16 mm	fl. 30 x 3.5 mm or ø 10 mm	50	111 807
Steel, hot galvanized (hexagonal nut on the side of the ground conductor)	ø 4 - 16 mm	fl. 30 x 3.5 mm or ø 10 mm	50	111 817
Steel, bare (hexagonal nut on the reinforcement side)	ø 4 - 16 mm	fl. 30 x 3.5 mm or ø 10 mm	50	111 809
Steel, hot galvanized (hexagonal nut on the reinforcement side)	ø 4 - 16 mm	fl. 30 x 3.5 mm or ø 10 mm	50	111 819



Ord. no. 111 807



Ord. no. 111 809

Benefit of a carriage bolt:

- Assembly possible in two steps:
 1. Connect the foundation earth electrode (round) to the reinforcement
 2. Connect and fix the earthing terminal to the reinforcement

Specification with threaded bolt				
Steel, bare with threaded bolt M10 x 60	ø 4 - 16 mm	fl. 30 x 3.5 mm or ø 10 mm	25	111 808
Steel, hot galvanized with threaded bolt M10 x 60	ø 4 - 16 mm	fl. 30 x 3.5 mm or ø 10 mm	25	111 818

Example of application:

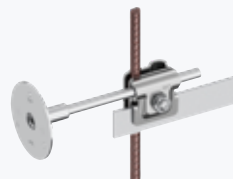
1. terminal side:

Connect the foundation earth electrode (round) to the reinforcement



2. terminal side:

Connect and fix the earthing terminal to the reinforcement



Ord. no. 111 808

Multi-Max reinforcement clamp 75x75 mm

Benefits:

- No loose components during installation.
- Only one screw M12 = central contact pressure.
- All existing connection types such as T-, cross- and parallel- connection are possible.
- Various diameters from ø 8 mm to ø 32 mm are possible.

Multi-Max reinforcement clamp 75x75 mm

Specification	Fit		PU	Ord. no.
	Upper part	Bottom part		
Steel, bare with hexagon bolt	ø 8 - 16 mm / ø 15 - 32 mm	ø 8 - 16 mm / ø 15 - 27 mm	10	111 810
Steel, hot galvanized with hexagon bolt	ø 8 - 16 mm / ø 15 - 32 mm	ø 8 - 16 mm / ø 15 - 27 mm	10	111 820



Ord. no. 111 810

Smart connector



Ord. no. 111 417



Ord. no. 111 408

Smart connector, to connect reinforcement and round conductors with clamping screw M10.

Specification	Fit		PU	Ord. no.
	Reinforcement	Conductor		
Steel, bare	ø 6 - 16 mm	ø 10 mm	50	111 416
Steel, hot galvanized	ø 6 - 16 mm	ø 10 mm	50	111 417
Specification	Fit		PU	Ord. no.
	Reinforcement	Conductor		
Steel, bare	ø 6 - 10 mm	ø 10 mm	100	111 406
Steel, hot galvanized	ø 6 - 10 mm	ø 10 mm	100	111 407
Stainless steel V2A	ø 6 - 10 mm	ø 10 mm	100	111 408
Stainless steel V4A	ø 6 - 10 mm	ø 10 mm	100	111 409



Cross clamp
ø 10 / ø 16 mm



Cross clamp
ø 6 - 10 / ø 10 mm



Parallel clamp
ø 10 / ø 10 mm



End to end connector
ø 10 / ø 10 mm

Only possible with Ord. no. 111 406 - 111 409

Benefits:

- Cost-efficient solution for connections of flat conductor with small reinforcement steel.
- Compact design.
- Only one screw M10.

Connecting clamp small type



Ord. no. 111 414

Connecting clamp small type for different combinations, with clamp screw M10.

Specification	Fit (flat / flat or flat / round)		PU	Ord. no.
	fl. 30 mm	fl. 30 mm or ø 6 - 12 mm		
Steel, bare	fl. 30 mm	fl. 30 mm or ø 6 - 12 mm	50	111 413
Steel, hot galvanized	fl. 30 mm	fl. 30 mm or ø 6 - 12 mm	50	111 414

Application example:



Connecting clamp fl. 40 mm



Ord. no. 111 841



Ord. no. 111 843

Connecting clamp fl. 40 mm for different combinations.

Specification	Fit (flat / flat or flat / round)		PU	Ord. no.
with clamping bracket and spring				
Steel, bare	fl. 40 mm	fl. 40 mm or ø 6 - 16 mm	20	111 842
Steel, hot galvanized	fl. 40 mm	fl. 40 mm or ø 6 - 16 mm	20	111 843
without clamping bracket				
Steel, bare	fl. 40 mm	fl. 40 mm or ø 6 - 16 mm	25	111 840
Steel, hot galvanized	fl. 40 mm	fl. 40 mm or ø 6 - 16 mm	25	111 841

Application example:

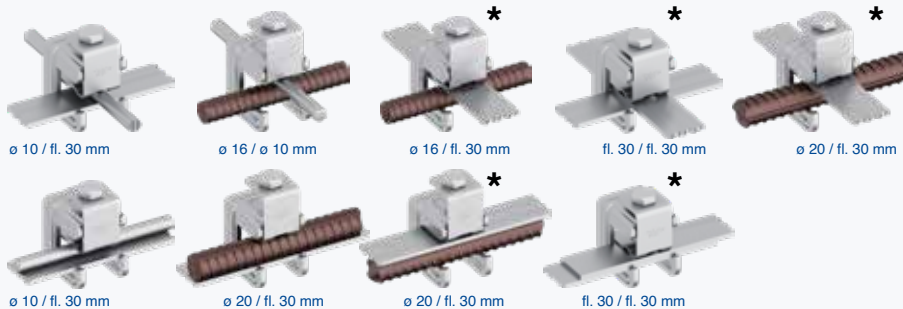


Magnetic
mounting aid
(Ord. no. 110 241)
on page 169.

Connecting clamp

Connecting clamp for different combinations, with clamping screw M10.

Specification	Reinforcement	Fit Conductor (round or flat)	PU	Ord. no.
with clamping bracket				
Steel, hot galvanized	ø 6-20 mm	ø 10 mm or fl. 30 mm	25	111 424
Steel, bare	ø 6-20 mm	ø 10 mm or fl. 30 mm	25	111 423
Stainless steel V2A	ø 6-20 mm	ø 10 mm or fl. 30 mm	25	111 424 S1
*without clamping bracket				
Steel, hot galvanized	ø 6-20 mm	fl. 30 mm	25	111 424 S
Steel, bare	ø 6-20 mm	fl. 30 mm	25	111 423 S
Stainless steel V2A	ø 6-20 mm	fl. 30 mm	25	111 424 S2
Specification	Reinforcement	Fit Conductor	PU	Ord. no.
with clamping bracket				
Steel, hot galvanized	ø 6-29 mm	ø 10 mm or fl. 30 / fl. 40 mm	25	111 421 S2
Steel, bare	ø 6-29 mm	ø 10 mm or fl. 30 / fl. 40 mm	25	111 420 S2
*without clamping bracket				
Steel, hot galvanized	ø 10-29 mm	fl. 30 / fl. 40 mm	25	111 421
Steel, bare	ø 10-29 mm	fl. 30 / fl. 40 mm	25	111 420



* Connection without clamping bracket also possible

Connecting clamp with bracket and spring

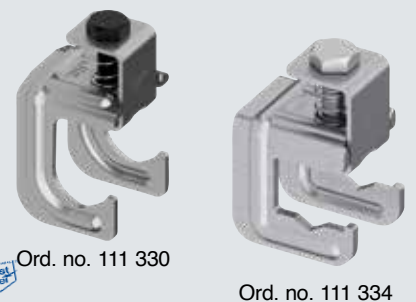
for different combinations; with one clamping screw M10.

Specification	Reinforcement	Fit Conductor	PU	Ord. no.
Steel, bare	ø 6-29 mm	ø 10 mm or fl. 30 / fl. 40 mm	25	111 330
Steel, hot galvanized	ø 6-29 mm	ø 10 mm or fl. 30 / fl. 40 mm	25	111 331
Specification	Reinforcement	Fit Conductor	PU	Ord. no.
Steel, bare	ø 6-20 mm	ø 10 mm or fl. 30 mm	25	111 333
Steel, hot galvanized	ø 6-20 mm	ø 10 mm or fl. 30 mm	25	111 334
Stainless steel V2A	ø 6-20 mm	ø 10 mm or fl. 30 mm	25	111 332

Connecting clamp (J.P.-utility model)



Connecting clamp with bracket and spring

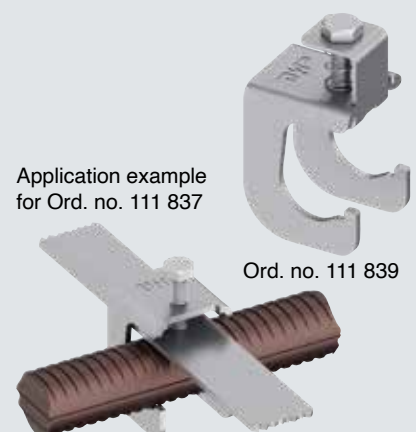


Connecting clamp max

Connecting clamp max for different combinations,
with one clamping screw M10.

Specification	Reinforcement	Fit Conductor (round or flat)	PU	Ord. no.
with clamping bracket and spring				
Steel, hot galvanized	ø 25-38 mm	ø 10 mm or fl. 30 mm / fl. 40 mm	25	111 839
Steel, bare	ø 25-38 mm	ø 10 mm or fl. 30 mm / fl. 40 mm	25	111 838
without clamping bracket				
Steel, hot galvanized	ø 25-38 mm	fl. 30 mm or fl. 40 mm	25	111 837
Steel, bare	ø 25-38 mm	fl. 30 mm or fl. 40 mm	25	111 836

Connecting clamp max



Cross connector two-part and three-part



Ord. no. 1322



Ord. no. 1329

Cross connector, two-part and three-part.

Specification			Fit	PU	Ord. no.
Steel, hot galvanized	two-part	flat/round	fl. 30 / ø 8 - 10 mm	25	1322
Steel, hot galvanized		round/round	ø 8 - 10 / ø 8 - 10 mm	25	1329
Steel, hot galvanized		flat/flat	fl. 30 / fl. 30 mm	25	1323
Steel, hot galvanized		flat/flat	fl. 30 - 40 / fl. 30 - 40 mm	25	900 047
Steel, hot galvanized		flat/round	fl. 30 - 40 / ø 8 - 10 mm	25	910 007
Steel, hot galvanized		round/round	ø 16 / ø 8 - 10 mm	25	1324
Steel, hot galvanized	three-part	flat/round	fl. 30 / ø 8 - 10 mm	25	1325
Steel, hot galvanized		flat/flat	fl. 30 / fl. 30 mm	25	1326
Steel, hot galvanized		round/round	ø 8 - 10 / ø 8 - 10 mm	25	1327 S
Steel, hot galvanized		round/round	ø 16 / ø 8 - 10 mm	25	1327
Stainless steel V2A	two-part	flat/flat	fl. 30 / fl. 30 mm	25	2004
Stainless steel V2A		flat/round	fl. 30 / ø 8 - 10 mm	25	2003
Stainless steel V2A		round/round	ø 8 - 10 / ø 8 - 10 mm	25	2005 S
Stainless steel V2A		round/round	ø 16 / ø 8 - 10 mm	25	2005
Stainless steel V4A	two-part	flat/flat	fl. 30 / fl. 30 mm	25	910 494
Stainless steel V4A		flat/flat	fl. 30 - 40 / fl. 30 - 40 mm	25	900 048
Stainless steel V4A		flat/round	fl. 30 / ø 8 - 10 mm	25	910 259
Stainless steel V4A		flat/round	fl. 30 - 40 / ø 8 - 10 mm	25	900 047 S2
Stainless steel V4A		round/round	ø 8 - 10 / ø 8 - 10 mm	25	910 260
NEW Stainless steel V4A	three-part	round/round	ø 8 - 10 / ø 8 - 10 mm	25	910 260 S

Copper cross connectors available on request!

Wedge connector



Ord. no. 1320 S

Wedge connector with safety catch, for T-, cross- and parallel- connections. Installation: Wedge has to be installed crosswise to the conductor!

Specification	Fit	PU	Ord. no.
Steel, electro-galvanized with hexagonal screw	ø 10 / fl. 30 mm or fl. 30 / fl. 30 mm	40	1320 S

Example of applications:



fl. 30 mm / fl. 30 mm
Cross clamp



fl. 30 mm / fl. 30 mm
Parallel clamp



ø 10 mm / fl. 30 mm
Cross clamp

ES-clamp (J.P.-patent)



Ord. no. 111 699

ES-reinforcement clamp, for connection of flat and round conductors to reinforcement steel.

Specification	Reinforcement	Fit	PU	Ord. no.
	Conductor			
Steel, bare	ø 10 - 40 mm	ø 10 / fl. 30 - 40 mm	25	111 698
Steel, hot galvanized	ø 10 - 40 mm	ø 10 / fl. 30 - 40 mm	25	111 699

Example of application:



fl. 30 x 3.5 / ø 12 mm



ø 10 / ø 28 mm

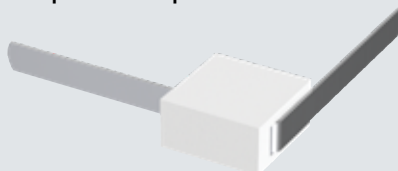


ø 10 / ø 28 mm



fl. 30 x 3.5 / ø 28 mm

Expansion piece



Ord. no. 111 445

Expansion piece as bridging component for expansion joints of foundation earth electrode, for embedding in concrete in large slab sections and expansion joints.

Specification		Fit	PU	Ord. no.
Tape	Block			
Stainless steel V2A	polystyrene	30 x 3.5 mm	1	111 445
Stainless steel V4A	polystyrene	40 x 4.0 mm	1	111 445 S

Earth lead-in rods

Earth lead-in rods, according to EN IEC 62561-2, ø 16 mm, with chamfered edges.

Specification	Length	Fit	PU	Ord. no.
Steel, hot galvanized	1000 mm	ø 16 mm	10	101 000
Steel, hot galvanized	1500 mm	ø 16 mm	10	101 500
Steel, hot galvanized	2000 mm	ø 16 mm	10	101 002
E-Copper	1000 mm	ø 16 mm	10	101 005
E-Copper	1500 mm	ø 16 mm	10	101 505
Stainless steel V2A	1000 mm	ø 16 mm	10	102 005
Stainless steel V2A	1500 mm	ø 16 mm	10	102 505
Stainless steel V4A	1000 mm	ø 16 mm	10	103 137
Stainless steel V4A	1500 mm	ø 16 mm	10	910 347

Connection clamps for earth lead-in rods see page 104.

Earth lead-in rods



Earth lead-in rods with connection lug for easy installation between down conductor and earthing conductor, corrosion-protected version.

Specification	Length	PU	Ord. no.
Steel/galvanized, earthing cable ø 16 mm with connection lug ø 10 mm, always 1 m long, earth transition point insulated with heat shrink tubing.	1750 mm	10	102 075
	2000 mm	10	102 100
	2500 mm	10	102 150
Stainless steel V4A fl. 30 x 3.5 mm	2000 mm	10	102 206 S1

Note: Insulated down conductor (protection against touch voltage) see page 138.

Earth lead-in rods



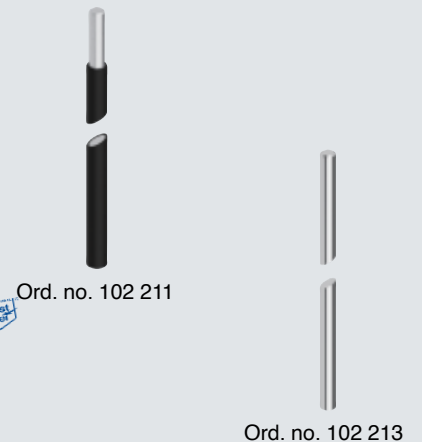
Terminal lug, straightened, with PVC cover, 60 mm is stripped on one side.

Specification	Fit	Length	PU	Ord. no.
Steel, hot galvanized	ø 10 mm	1500 mm	10	102 211
Steel, hot galvanized	ø 10 mm	3000 mm	10	102 212

Terminal lug straightened, stainless steel V4A.

Specification	Fit	Length	PU	Ord. no.
Stainless steel V4A	ø 10 mm	1500 mm	10	102 213
Stainless steel V4A	ø 10 mm	2000 mm	10	102 215
Stainless steel V4A	ø 10 mm	3000 mm	10	102 214
Stainless steel V4A	fl. 30 x 3.5 mm	1500 mm	10	102 233
Stainless steel V4A	fl. 30 x 3.5 mm	3000 mm	10	102 234

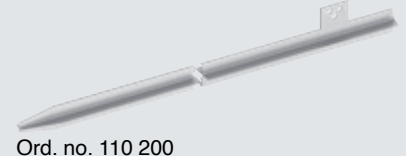
Terminal lug



Cross profiled earth rod, 50x50x3 mm.

Specification	Length	PU	Ord. no.
Steel, hot galvanized	1000 mm	5	110 100
Steel, hot galvanized	1500 mm	5	110 150
Steel, hot galvanized	2000 mm	5	110 200
Steel, hot galvanized	2500 mm	5	110 205
Steel, hot galvanized	3000 mm	5	110 300

Cross profiled earth rod



Earth plate according to EN IEC 62305-3 table 8.

Specification	Length	PU	Ord. no.
Steel, hot galvanized, with terminal lug (ø 10 mm, insulated, Length 1.5 m)	500x500x3 mm	1	110 140
	1000x500x3 mm	1	110 145
Copper, with cable connection (50 mm²; Length 1.5 m)	500x500x2 mm	1	110 130
	1000x500x2 mm	1	110 135
Stainless steel V4A, with terminal lug (ø 10 mm, Length 3.0 m)	1000x500x3 mm	1	110 115

Earth plate



NEW

Connection clamp for earth rod and earth lead-in rod

Connection clamp for earth rod and earth lead-in rod



Ord. no. 111 356

Ord. no. 2010

Connection clamp with 2 screws M10 suitable for parallel- and cross- connections

Specification		Fit	PU	Ord. no.
Steel, hot galvanized	three-part	ø 8 - 10 and fl. 30 - 40 / ø 16 mm	25	111 355
Steel, hot galvanized		ø 8 - 10 and fl. 30 - 40 / ø 20 mm	25	111 356
Steel, hot galvanized		ø 8 - 10 and fl. 30 - 40 / ø 25 mm	25	111 357
Stainless steel V2A	two-part	ø 10 and fl. 30 - 40 / ø 16 mm	25	2009
Stainless steel V2A		ø 10 and fl. 30 - 40 / ø 20 mm	25	2010
Stainless steel V2A		ø 10 and fl. 30 - 40 / ø 25 mm	25	2011
Stainless steel V4A	two-part	ø 10 and fl. 30 - 40 / ø 16 mm	25	2013
Stainless steel V4A		ø 10 and fl. 30 - 40 / ø 20 mm	25	2017
Stainless steel V4A		ø 10 and fl. 30 - 40 / ø 25 mm	25	2031

Connection clamp for earth rod



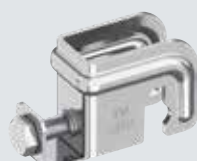
Ord. no. 2020

Ord. no. 2025

Connection clamp suitable for earth rod and ø 10 mm round conductors.

Specification	Fit	PU	Ord. no.
Steel, hot galvanized	ø 8 - 10 and ER ø 20 mm	50	2020
Stainless steel V4A	ø 8 - 10 and ER ø 20 mm	50	2018
Steel, hot galvanized	fl. 30x3.5 mm; ø 10 and ER ø 25 mm	25	2021
Stainless steel V4A	fl. 30x3.5 mm; ø 10 and ER ø 25 mm	25	2025

Smart connector for earth rod



Ord. no. 111 824

Smart connector for earth rod, with one screw M10 for cross connection. Installation-friendly mount function - no threading necessary.

Specification	Conductor	Fit Earth rod	PU	Ord. no.
Stainless steel V2A	ø 10 mm or fl. 30 mm	ø 20 mm or ø 25 mm	25	111 822
Stainless steel V4A	ø 10 mm or fl. 30 mm	ø 20 mm or ø 25 mm	25	111 824

Earth rod connection clamp



Ord. no. 111 658

Earth rod connection clamp

with Multi-Mini connection terminal 6 - 50 mm².



Specification	Fit ER	Fit Multi-Mini	PU	Ord. no.
		single/multi-wire	solid	
NEW Stainless steel V4A	ø 20 mm	6 mm² (ø 2.8 mm) -	ø 6 - 8 mm	25 111 658
NEW Stainless steel V4A	ø 25 mm	50 mm² (ø 8 mm)		25 111 659

Earth rod connection clamp



Ord. no. 111 619

Earth rod connection clamp

with clamping jaw ø 6 - 8 mm.



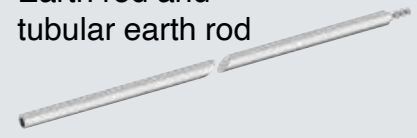
Specification	Fit ER	Fit Clamping jaw	PU	Ord. no.
NEW Stainless steel V4A	ø 20 mm	ø 6 - 8 mm	25	111 618
NEW Stainless steel V4A	ø 25 mm		25	111 619

Earth rods

Earth rod pluggable according to EN IEC 62561-2.

Specification	Corresponding impact pins	Fit	PU	Ord. no.
Earth rod:				
Type A, steel, hot galvanized with triple knurling	SP 01	ø 20/1500 mm	6	110 020
Black bundle marking tape	SP 01	ø 20/1000 mm	6	110 029
	SP 02	ø 25/1500 mm	5	110 027
	SP 02	ø 25/1000 mm	5	110 019
Type A, stainless steel V2A	SP 01	ø 20/1500 mm	6	110 120
Red bundle marking tape	SP 01	ø 20/1000 mm	6	910 095
Type A, stainless steel V4A	SP 01	ø 20/1500 mm	6	110 121
Blue bundle marking tape	SP 01	ø 20/1000 mm	6	110 122
	SP 01	ø 20/1000 mm	6	110 122
Tubular earth rod:				
Type C, steel, hot galvanized	SP 01	ø 25/1500 mm	10	110 021
Type C, stainless steel V2A	SP 02	ø 25/1500 mm	10	110 026
Type C, stainless steel V4A	SP 02	ø 25/1500 mm	10	110 018

Earth rod and tubular earth rod



Ord. no. 110 020

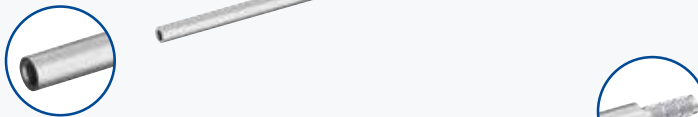
Earth rod



Ord. no. 110 018

Type A

Steel, hot galvanized
e. g. Ord. no. 110 020



Stainless steel V2A

e. g. Ord. no. 110 120



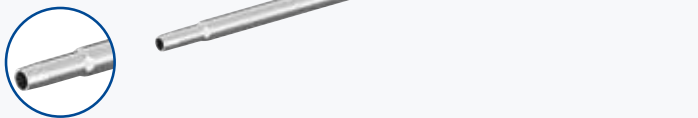
Stainless steel V4A

e. g. Ord. no. 110 121



Type C

Stainless steel V4A
e. g. Ord. no. 110 018



Impact pin, suitable for earth rods.

Variant	Specification	PU	Ord. no.
SP 01	Impact pin for ER: ø 20 mm Type A ø 25 mm Type C St/hot galvanized (Ord. no. 110 021)	1	2058
SP 02	Impact pin for ER: ø 25 mm Type A ø 25 mm Type C stainless steel (Ord. no. 110 018; 110 026)	1	2059

Example of application Type C:



Impact pin



Ord. no. 2058

Earth rod driver



Ord. no. 111 460 Ord. no. 111 461

Impact heads



Ord. no. 2056

Hammer inserts



Ord. no. 111 466



Ord. no. 111 468

Earth rod driver

Specification		PU	Ord. no.
Brand:	Hikoki	1	111 460
Type:	H 90 SG electric motor		
Power:	2000 Watt		
Single stroke energy:	70 Joule		
Weight:	32 kg		
Brand:	WACKER	1	111 461
Type:	BH 55 petrol engine		
Single stroke energy:	55 Joule		
Weight:	24 kg		

Impact heads

suitable for earth rods and tubular earth rods.

Specification		Fit	PU	Ord. no.
Impact head for	ER Type A (ø 20 mm)	ø 20 mm	1	2056
Impact head for	ER Type A (ø 25 mm)	ø 25 mm	1	2057
Impact head for	ER Type C (tubular earth rod)	ø 25 mm	1	111 458

Hammer inserts

for earth rod driver, suitable for earth rods and tubular earth rods.

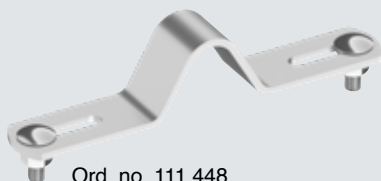
Manu- facturer	Type	Mounting system	Earth rod Type A ø 20 mm Ord. no.	Earth rod Type A ø 25 mm Ord. no.	Tubular earth rod Type C ø 25 mm Ord. no.
Hikoki	H90SC	Hexagon SW 28 mm x 152 mm	111 463 S	111 464 S	111 465 S
Suitable for driving tool with Ord. no. 111 460					
Wacker Neuson	BH55 (Nr. 5100004026)	Round ø 27 mm x 80 mm	111 466	111 467	111 468
Suitable for driving tool with Ord. no. 111 461					
For all SDS-Max compatible devices		SDS - Max	111 576	111 577	111 578

Important note:

Suitable hammer adapters for other manufacturers/mounting systems are available upon request. When requesting adapters for other manufacturers/mounting systems, we require the following information:

- Exact machine type and designation
- Year of manufacture of the machine
- Manufacturer's number of the machine
- Grounding rods/pipe grounding rods to be driven in
- Ideally, additional informative photos of the machine (e. g., the machine's clearly legible nameplate).

Expansion tape



Ord. no. 111 448

Expansion tape, -discontinued model-

for a connection of the foundation earth electrode outside the concrete.

Specification	Length	Fit	PU	Ord. no.
Aluminium	250 mm	40 x 5.0 mm	1	111 448

Clamping piece suitable for round conductors as a distance holder for installing foundation earth electrodes. **Benefits:** Infinitely adjustable height for different foundations (soil, blinding layer).

Specification	Fit	PU	Ord. no.
Steel, bare	ø 10 mm / fl. 30 x 3.5 mm	50	1321
Steel, hot galvanized	ø 10 mm / fl. 30 x 3.5 mm	50	1321 S

Example of application:



Distance pin:
reinforcement iron ø 10 mm
or wire ø 10 mm

Blinding layer
of concrete

Clamping piece



Ord. no. 1321 S

Spacer, for foundation earth electrodes.

Suitable for ø 10 mm round conductors or 30 x 3.5 mm tape.

Specification	Length	PU	Ord. no.
Steel, hot galvanized	280 mm	50	1319

Spacer



Ord. no. 1319

Sign "ACHTUNG! Blitzschutz/Erdung" and Protective cap for terminal lugs.

Specification	Length	Fit	PU	Ord. no.
Sign PVC (printed on both sides)	200 x 50 mm	up to ø 10 mm or up to flat 40 x 4 mm	10	102 220

With company logo imprint upon request.

Protective cap plastic yellow	ø 10 mm or fl. 30 x 3.5 mm	50	102 219
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Application with ground tape:



Application with ground wire:



Sign and protective cap



Ord. no. 102 220



Ord. no. 102 219

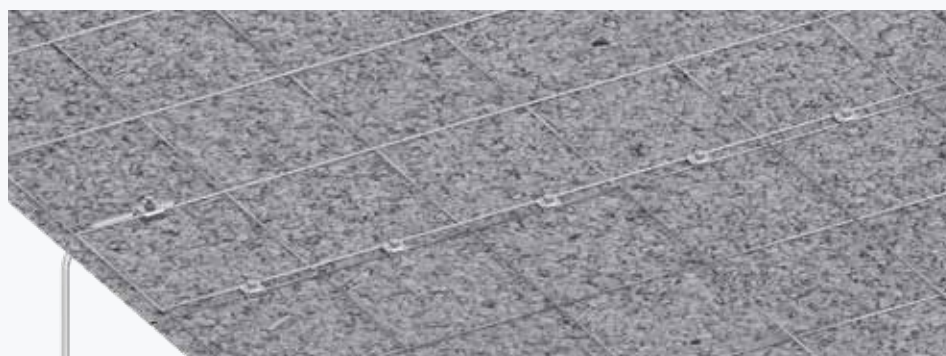
Measures for protection against step voltage

Steel grid mats are used to protect people from dangerous step voltage.

Potential grading effectively reduces the occurrence of dangerous voltage differences on the ground surface.

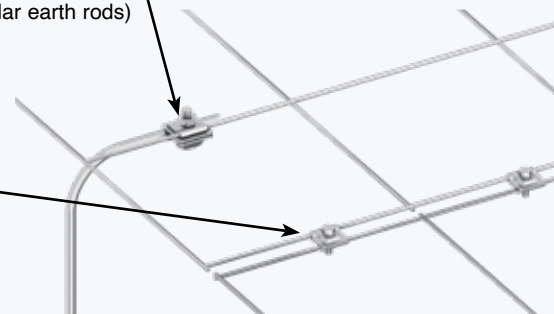
This protective measure is primarily used in areas where people may frequently be present during thunderstorms, such as covered entrance areas (e. g., at hospitals, schools, kindergartens, etc.), shelters and along escape and emergency routes.

For reliable protection, the steel grid mats must be laid at least 1.0 m beyond the defined protection area and connected to the local earthing system.

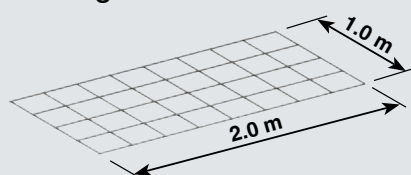


Connection earth lead-in rod with Multi-Mini $\varnothing 10 / \varnothing 4 - 6$ mm (Ord. no. 111 319)
(e. g. to ring earth electrode or/and tubular earth rods)

Interconnection of the steel grid panels
with Multi-Mini $\varnothing 4 - 6 / \varnothing 4 - 6$ mm
(Ord. no. 111 313)



Steel grid mat



Ord. no. 912 125

Steel grid mat as protection against step voltage.

Bars $\varnothing 4$ mm, Mesh size 250 x 250 mm.

Specification	Abmessung (L x B)	PU	Ord. no.
Stainless steel V4A ($\varnothing 4$ mm)	2.0 m x 1.0 m	1	912 125

Note: Please follow the installation instructions for installation.

Connecting- and terminal clamp



Ord. no. 111 313



Ord. no. 111 319

Connecting and terminal clamp

completely made of stainless steel V4A, for equipotential mesh mats.

Specification	Fit	PU	Ord. no.
Connection clamp: Multi-Mini	$\varnothing 4 - 6 / \varnothing 4 - 6$ mm	100	111 313
Terminal clamp: Multi-Mini	$\varnothing 10 / \varnothing 4 - 6$ mm	50	111 319

Corrosion prevention tape



Ord. no. 1024

Corrosion prevention tape

for corrosion protection of conductor connections in the soil.

Specification	Fit	PU	Ord. no.
Corrosion prevention tape as 10 m long rolls	50 mm Width	1	1024
	100 mm Width	1	1025

See also corrosion protection box

(Significantly faster installation than with the corrosion prevention tape).

NEW Corrosion protection box

According to EN IEC 62305-3, clamped and screwed connections underground must be reliably protected against dirt and moisture—usually by using a corrosion prevention tape.

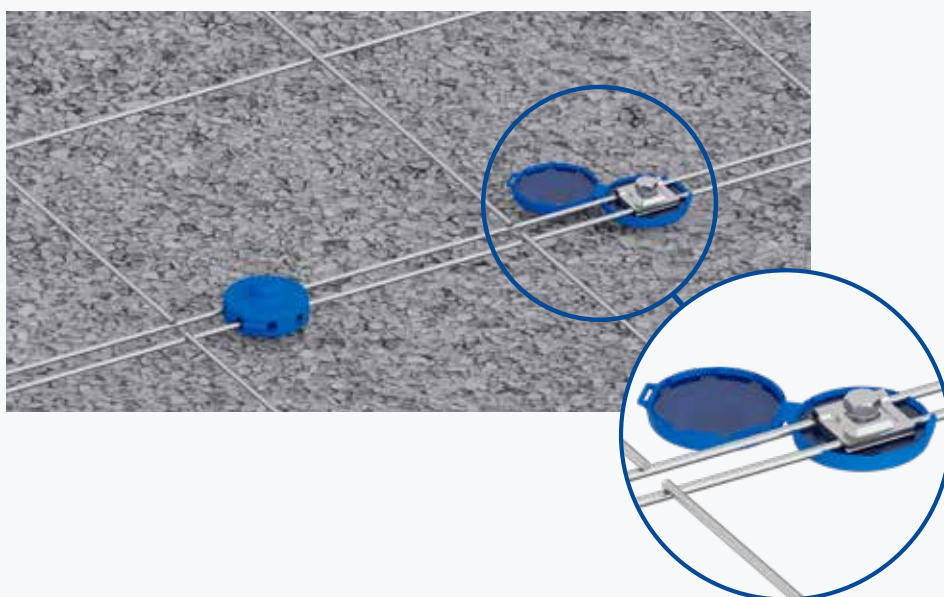
With our new corrosion protection box, we now offer an innovative and significantly more convenient alternative to conventional protective tape. The integrated protective gel completely encloses the connection and ensures permanent, reliable corrosion protection in the ground.

The corrosion protection box provides a clean, fast and sustainable solution—ideal for anyone who wants to combine maximum safety with ease of use.

Benefits:

- Clean and significantly shorter installation time.
- Tool-free assembly and disassembly.

**Significantly faster installation
than with any conventional
corrosion prevention tape.**



Earthing
material

NEW Corrosion protection box (ø 55 mm), designed for the connection points of steel grid mats to protect against step voltage.

Specification	Suitable for	PU	Ord. no.
PE-HD blue, foldable with integrated protective gel	Multi-Mini Ord. no. 111 313	50	112 125

Application example:



Corrosion protection box for Multi-Mini (Property rights registered)

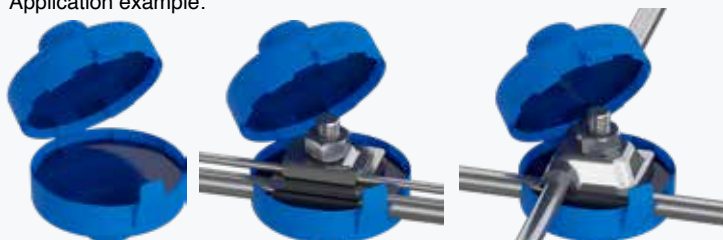


Ord. no. 112 125

NEW Corrosion protection box (ø 67 mm), specially designed for the terminal connections of steel grid mats and earthing conductors ø 10 mm.

Specification	Suitable for	PU	Ord. no.
PE-HD blue, foldable with integrated protective gel	Multi-Mini Ord. no. 111 319 Multi-clamp Ord. no. 1279 S	50	112 126

Application example:



Corrosion protection box for Multi-clamp (Property rights registered)



Ord. no. 112 126

Earthing pipe clamp

Earthing pipe clamp



Ord. no. 111 650

Earthing pipe clamp



Ord. no. 111 261

Earthing pipe clamp



Ord. no. 1244

Earthing pipe clamp for earthing connections with cross section of **6 - 50 mm²**, lengthwise and crosswise, for equipotential bonding.

Specification	Fit	Fit in inch	PU	Ord. no.
Steel, hot galvanized	ø 13.5 - 17.2 mm	1/4" - 3/8"	100	111 650
Steel, hot galvanized	ø 21.3 - 26.9 mm	1/2" - 3/4"	50	111 651
Steel, hot galvanized	ø 33.7 mm	1"	50	111 652
Steel, hot galvanized	ø 42.4 - 48.3 mm	1 1/4" - 1 1/2"	50	111 653

Earthing pipe clamp for connecting conductors with cross section of **35 - 50 mm²**.

Specification	Fit	Fit in inch	PU	Ord. no.
Copper/galvanized Sn	ø 21.3 - 26.9 mm	1/2" - 3/4"	75	111 261
Copper/galvanized Sn	ø 25 - 36 mm	~ 3/4" - 1"	50	298 900

Earthing pipe clamp for pipes, made of **Stainless steel V2A** or steel, according to EN IEC 62561-1.

Specification	Fit	Fit in inch	PU	Ord. no.
Steel, hot galvanized	ø 17.2 mm	3/8"	25	1240
Steel, hot galvanized	ø 21.3 mm	1/2"	25	1241
Steel, hot galvanized	ø 26.9 mm	3/4"	25	1242
Steel, hot galvanized	ø 33.7 mm	1"	25	1243
Steel, hot galvanized	ø 42.4 mm	1 1/4"	25	1244
Steel, hot galvanized	ø 48.3 mm	1 1/2"	25	1245
Steel, hot galvanized	ø 54.5 mm	1 3/4"	25	1249
Steel, hot galvanized	ø 60.3 mm	2"	25	1246
Steel, hot galvanized	ø 76.1 mm	2 1/2"	25	1247
Steel, hot galvanized	ø 88.9 mm	3"	25	1248
Steel, hot galvanized	ø 114.3 mm	4"	25	910 286
Stainless steel V2A	ø 17.2 mm	3/8"	25	111 240
Stainless steel V2A	ø 21.3 mm	1/2"	25	111 241
Stainless steel V2A	ø 26.9 mm	3/4"	25	111 242
Stainless steel V2A	ø 33.7 mm	1"	25	111 243
Stainless steel V2A	ø 42.4 mm	1 1/4"	25	111 244
Stainless steel V2A	ø 48.3 mm	1 1/2"	25	111 245
Stainless steel V2A	ø 54.5 mm	1 3/4"	25	111 249
Stainless steel V2A	ø 60.3 mm	2"	25	111 246
Stainless steel V2A	ø 76.1 mm	2 1/2"	25	111 247
Stainless steel V2A	ø 88.9 mm	3"	25	111 248
Stainless steel V2A	ø 114.3 mm	4"	25	910 572

Earthing pipe clamp also available in **copper**.

KS-connector



Ord. no. 1362

KS-connector

Clamping screw with hexagonal nut M10 suitable for round conductor ø 6 - 10 mm.

Specification	Fit	PU	Ord. no.
Steel, hot galvanized / aluminium clamping ring	ø 6 - 10 mm	100	1360
Stainless steel V2A coppered	ø 6 - 10 mm	100	1361
Stainless steel V2A	ø 6 - 10 mm	100	1362
Stainless steel V4A	ø 6 - 10 mm	100	1464
Steel, hot galvanized with square clamping bracket	ø 8 - 10 mm	100	1359

Multi-clamping jaw



Ord. no. 1270 S3

Multi-clamping jaw,

suitable for round conductor up to ø 10 mm, with carriage bolt M10 and nut.

Specification	Fit	PU	Ord. no.
Steel, hot galvanized	ø 8 - 10 mm	100	1270 S3
Aluminium	ø 8 mm	100	1271 S
Stainless steel V2A	ø 8 - 10 mm	100	1273 S1

Earthing pipe clamp

Earthing pipe clamp for antenna standpipes.

For cross-section of connecting conductor from 10 mm² (ø 4 mm) to up to 50 mm² (ø 8 mm).

Specification	Fit	Fit in inch	PU	Ord. no.
Stainless steel V2A	ø 25 - 100 mm	3/4" - 3"	25	111 390
	ø 25 - 170 mm	3/4" - 6"	25	111 391
Steel, hot galvanized	ø 25 - 100 mm	3/4" - 3"	25	111 393
	ø 25 - 170 mm	3/4" - 6"	25	111 394

Earthing pipe clamp for air-termination pole pipe with clamping jaw for ø 8 - 10 mm.

Specification	Fit	Fit in inch	PU	Ord. no.
NEW Stainless steel V2A	ø 25 - 100 mm	3/4" - 3"	25	111 890

Earthing pipe clamp

cross section of connecting conductors from 4 mm² (ø 2.3 mm) up to 50 mm² (ø 8 mm).

Specification	Fit	Fit in inch	PU	Ord. no.
Stainless steel V2A	ø 17 - 50 mm	3/8" - 1 1/2"	25	111 441
Stainless steel V2A	ø 17 - 100 mm	3/8" - 3"	25	111 442

Turnbuckle without tape for various conductor cross-sections. Approved according to class H when used with stainless steel V2A tensioning tape 22 x 0.4 mm.

Specification	Fit	PU	Ord. no.
Stainless steel V2A	10 mm ² (ø 4 mm) - 50 mm ² (ø 8 mm)	50	111 392
Steel, hot galvanized	10 mm ² (ø 4 mm) - 50 mm ² (ø 8 mm)	50	111 395
Stainless steel V2A	ø 8 - 10 mm	50	111 899

Insulated rod holder with turnbuckle without tape.

Specification	Fit	PU	Ord. no.
Stainless steel V2A / PVC	ø 16 mm	50	111 896
Stainless steel V2A / PVC	ø 8 - 10 mm	50	111 897
Stainless steel V2A / PVC	fl. 30 mm	50	111 898

Turnbuckle without tape

for cross section of connecting conductors from 4 mm² (ø 2.3 mm) up to 50 mm² (ø 8 mm).

Specification	PU	Ord. no.
Stainless steel V2A	100	111 449

Stainless steel - tensioning tape 22 x 0.4 mm suitable for mentioned turnbuckles. In a practical box for individual cutting to lengths or pre-assembled;

Specification	Length	PU	Ord. no.
Tape stainless steel V2A	25 m	1	913 825
Tape stainless steel V2A	50 m	1	913 831

Specification	Fit	Fit in inch	PU	Ord. no.
pre-assembled				
Tape stainless steel V2A	up to ø 100 mm	up to 3"	50	111 893
Tape stainless steel V2A	up to ø 170 mm	up to 6"	50	111 894

Earthing pipe clamp for protective conductor connecting from 2.5 mm² up to 16 mm².

Specification	Fit	Fit in inch	PU	Ord. no.
Turnbuckle steel, hot galvanized,	ø 9.7 - 48.3 mm	1/8" - 1 1/2"	25	111 260
Tape bronze/nickel-plated	ø 9.7 - 114.3 mm	1/8" - 4"	25	111 440

Earthing pipe clamp



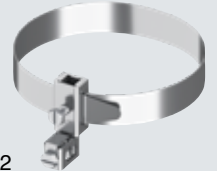
Ord. no. 111 390

Earthing pipe clamp



Ord. no. 111 890

Earthing pipe clamp



Ord. no. 111 442

Turnbuckle



Ord. no. 111 392



Ord. no. 111 897



Ord. no. 111 449

Tensioning tape



Ord. no. 913 825



Ord. no. 111 893

Earthing pipe clamp



Ord. no. 111 260

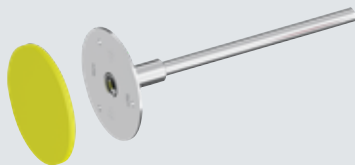
Fixed earthing terminals and connection sets

A complete range for connecting equipotential bonding conductors to the foundation earth electrode, to the reinforcement and to the lightning protection system.

Benefits:

- Easy assembly due to flexible connections.
- Corrosion-resistant, reliable connections due to stainless steel contacts.
- Also suitable as test joint.

Fixed earthing terminal with terminal stud



Ord. no. 112 000

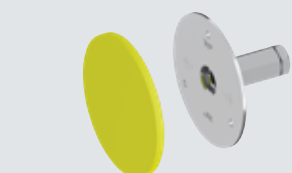


Ord. no. 112 200



Ord. no. 112 153

Fixed earthing terminal for flexible connection



Ord. no. 112 007



Ord. no. 112 207

Fixed earthing terminal, with terminal stud.

For the connection of earth termination systems, reinforcement and down conductors.



Completely made of stainless steel	Screw sets (page 118) optional connection thread	Set-no.	Ord. no.
Contact plate ø 80 mm stainless steel V4A with 3 mounting holes ø 4 mm; with plastic cover with terminal stud ø 10 mm; total length 190 mm	M12	SET 03	112 000
Equal to Ord. no. 112 000, but with foam cover	M10	SET 02	112 200
Equal to Ord. no. 112 000, but with foam cover	M12	SET 03	112 200
Equal to Ord. no. 112 000, but with foam cover	M10	SET 02	112 200
Made of stainless steel / steel			
Contact plate ø 80 mm stainless steel V4A with 3 mounting holes ø 4 mm; threaded sleeve ø 16 mm; with terminal stud ø 10 mm steel , total length 190 mm; with foam cover	M12	SET 03	112 150
Equal to Ord. no. 112 150, but with threaded sleeve ø 20 mm	M10	SET 02	112 151
and terminal stud ø 12 mm steel	M12	SET 03	112 151
Equal to Ord. no. 112 150, but with threaded sleeve ø 20 mm	M10	SET 02	112 152
and terminal stud ø 10 mm steel	M12	SET 03	112 152
Equal to Ord. no. 112 150, but with threaded sleeve ø 20 mm	M10	SET 02	112 152
Contact plate ø 80 mm stainless steel V4A with 3 mounting holes ø 4 mm; threaded sleeve ø 25 mm; with terminal stud ø 12 mm steel , total length 190 mm; with foam cover	M16	SET 06	112 153

Fixed earthing terminal, for flexible connection

for the connection of earth termination systems, reinforcement and down conductors.



Specification	Screw sets (page 118) optional connection thread	Set-no.	Ord. no.
Contact plate ø 80 mm stainless steel V4A with 3 mounting holes ø 4 mm with plastic cover	M10	SET 01	112 007
Equal to Ord. no. 112 007	M12	SET 03	112 004
Equal to Ord. no. 112 007, but with foam cover	M10	SET 01	112 207
Equal to Ord. no. 112 004, but with foam cover	M12	SET 03	112 204

Connection cable with cable lug on request!



Note on 50 Hz current carrying capacity:

Values for I_k = short circuit current (50Hz)(1s; $\leq 300^\circ\text{C}$) can be found in the index section starting on page 195 or are available on request in our special leaflet "50 Hz Strombelastbarkeit" (German language only).

Fixed earthing terminal, with welded cross clamp
for the connection of earth termination systems, reinforcement and down conductors.



Fixed earthing terminal with welded cross clamp

Specification	Screw sets (page 118) optional connection thread	Set-no.	Ord. no.
Contact plate ø 80 mm stainless steel V4A with 3 mounting holes ø 4 mm; with terminal stud and cross clamp for flat 30 mm/ø 8-10 mm with plastic cover	M10	SET 01	112 008
Equal to Ord. no. 112 008,	M12	SET 03	112 002
Equal to Ord. no. 112 008, but with foam cover	M10	SET 01	112 208
Equal to Ord. no. 112 002, but with foam cover	M12	SET 03	112 202
Contact plate ø 80 mm stainless steel V4A with 3 mounting holes ø 4 mm; with terminal stud and adjustable cross clamp for flat 40 / ø 8 - 10 mm	M16	SET 06	112 154
	M12	SET 04	



Fixed earthing terminal M16 for flexible connection 70 mm²,
for the connection of earth termination systems, reinforcement and down conductors.



Fixed earthing terminal for flexible connection

Specification	Screw sets (page 118) optional connection thread	Set-no.	Ord. no.
Contact plate ø 80 mm stainless steel V4A with 3 mounting holes ø 4 mm. and connection part 70 mm² Cu/Sn 400 mm long	M16	SET 05	112 155

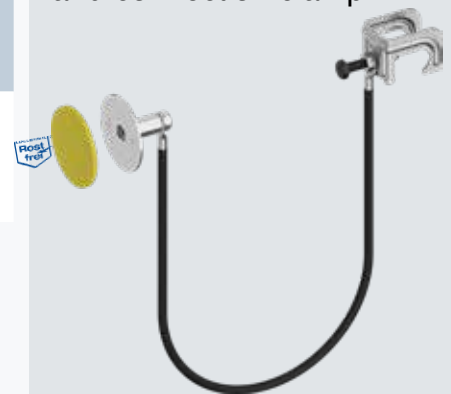


Fixed earthing terminal M10 with flexible connection cable 16 mm²
and connection terminal. Earthing kit for connecting reinforcements.

NEW

Specification	Screw sets (page 118) optional Connection thread	Set-no.	Ord. no.
Contact plate ø 80 mm stainless steel V4A with 3 mounting holes ø 4 mm; connecting cable 16 mm² copper , 600 mm long and connecting clamp, Steel, bare fl. 30 - 40 / ø 10 - 29 mm	M10	SET 01	112 250

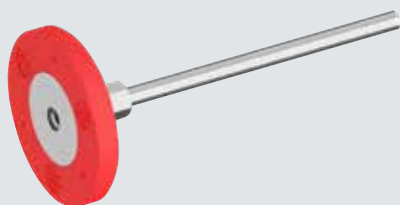
Fixed earthing terminal with connection cable and connection clamp



Note on 50 Hz current carrying capacity:

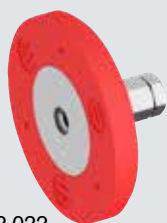
Values for I_k = short circuit current (50Hz)(1s; $\leq 300^\circ\text{C}$) can be found in the index section starting on **page 195** or are available on request in our special leaflet "50 Hz Strombelastbarkeit" (German language only).

Fixed earthing terminal with terminal stud



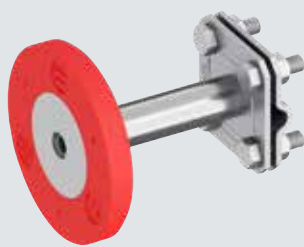
Ord. no. 112 020

Fixed earthing terminal for flexible connection



Ord. no. 112 022

Fixed earthing terminal with welded cross clamp



Ord. no. 112 024

Fixed earthing terminal, with terminal stud

for the connection of earth termination systems, reinforcement and down conductors.

50 Hz

Specification	Screw sets (page 118) optional		Ord. no.
	connection thread	Set-no.	
<ul style="list-style-type: none"> Contact plate ø 50 mm stainless steel V4A Red plastic ring, ø 95 mm with 3 mounting holes ø 3.4 mm; With terminal stud ø 10 mm, total length 200 mm With plastic cover 	M10	SET 01	112 020
Equal to Ord. no. 112 020	M12	SET 03	112 021

Connection with diagonal cross clamp possible, see page 96!

Fixed earthing terminal, for flexible connection

for the connection of earth termination systems, reinforcement and down conductors.

50 Hz

Specification	Screw sets (page 118) optional		Ord. no.
	connection thread	Set-no.	
<ul style="list-style-type: none"> Contact plate ø 50 mm stainless steel V4A Red plastic ring, ø 95 mm with 3 mounting holes ø 3.4 mm; For connection with cable lug or steel tape 	M10	SET 01	112 022
Equal to Ord. no. 112 022	M12	SET 03	112 023

Connection cable with cable lug on request!

Fixed earthing terminal, with welded cross clamp

for the connection of earth termination systems, reinforcement and down conductors.

50 Hz

Specification	Screw sets (page 118) optional		Ord. no.
	connection thread	Set-no.	
<ul style="list-style-type: none"> Contact plate ø 50 mm stainless steel V4A Red plastic ring, ø 95 mm with 3 mounting holes ø 3.4 mm; With connection stud and cross clamp For fl. 30 mm / ø 8-10 mm 	M10	SET 01	112 024
Equal to Ord. no. 112 024	M12	SET 03	112 025



Note on 50 Hz current carrying capacity:

Values for I_k = short circuit current (50Hz) (1s; $\leq 300^\circ\text{C}$) can be found in the index section starting on page 195 or are available on request in our special leaflet "50 Hz Strombelastbarkeit" (German language only).

Wall bushings

Fixed earthing terminal/wall bushing

for the connection of earth termination systems to reinforcement and down conductors.



Specification	threaded rod	Screw sets (page 118) optional connection thread	Set-no.	Ord. no.
Interior and exterior connection possible Contact plate ø 80 mm stainless steel V4A with 3 mounting holes ø 4 mm on each plate; up to max. 400 mm (additional lengths on request) with plastic cover	M10	M10	SET 01	112 009
Equal to Ord. no. 112 009,	M12	M12	SET 03	112 003
Equal to Ord. no. 112 009, but with foam cover	M10	M10	SET 01	112 209
Equal to Ord. no. 112 003, but with foam cover	M12	M12	SET 03	112 203

Lengths or wall thickness must be specified when ordering.

Wall bushing (adjustable) for subsequent

water pressure-tight connection of earthing and equipotential bonding conductors.



Specification	Wall thickness	PU	Ord. no.
Stainless steel V4A ; Thread: M12	100 - 200 mm	1	112 010
O-Ring-seal on both sides	180 - 300 mm	1	112 011
Water pressure-tight & corrosion-proof	300 - 400 mm	1	112 012
Diameter of flange: ø 80 mm	400 - 600 mm	1	112 013
	600 - 850 mm	1	112 014

Connection with, e. g. connection angle Ord. no. 112 018 (page 118) or Ord. no. 111 700 (page 81).

Specification	Wall thickness	PU	Ord. no.
Stainless steel V4A ; thread: M16	100 - 200 mm	1	112 156
O-Ring-seal on both sides	180 - 300 mm	1	112 157
Water pressure-tight & corrosion-proof	300 - 400 mm	1	112 158
Diameter of flange: ø 80 mm	400 - 600 mm	1	112 159

Connection with, e. g. connection angle Ord. no. 112 046 (page 118).

Fixed earthing terminal/wall bushing

with flexible connection cable 50 mm² and Multi-clamp ø 4 - 6 mm. For connecting earthing systems, reinforcements and down conductors.

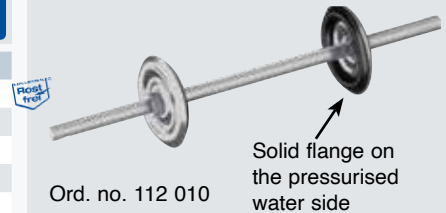
Specification	PU	Ord. no.
NEW Can be connected internally and externally. Contact plate ø 80 mm Stainless steel V4A with 3 nail holes, each 4 mm in diameter, with plastic cover.	1	910 322 S3

For wall thicknesses from 120 mm length or wall thickness specified when ordering.

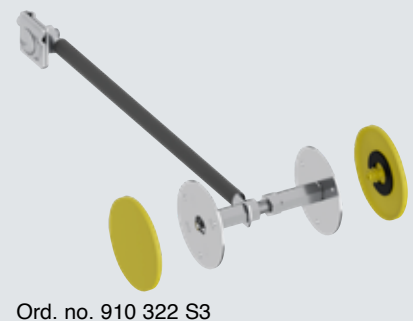
Fixed earthing terminal/wall bushing



Wall bushing



Fixed earthing terminal/wall bushing



Earthing material

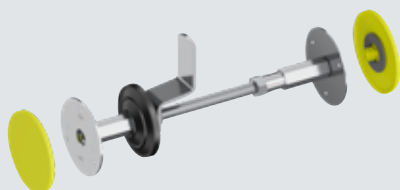


Note on 50 Hz current carrying capacity:

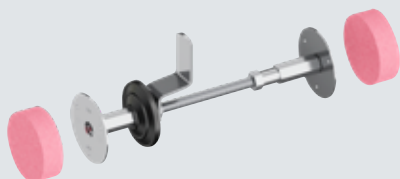
Values for I_k = short circuit current (50Hz)(1s; ≤ 300°C) can be found in the index section starting on page 195 or are available on request in our special leaflet "50 Hz Strombelastbarkeit" (German language only).

Wall bushing with water barrier

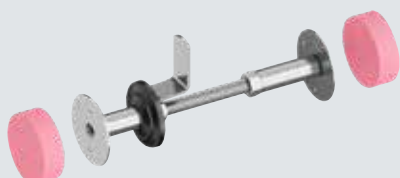
Wall bushing with water barrier



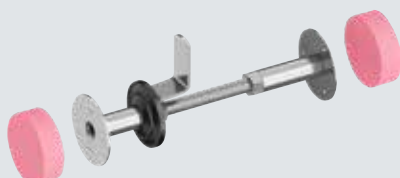
Ord. no. 112 113



Ord. no. 112 313



Ord. no. 112 160



Ord. no. 112 170

Wall bushing with fixed length



Ord. no. 112 181

Wall bushing (adjustable) with water barrier,

for water pressure-tight connection of earthing and equipotential bonding conductors for concrete with a high water penetration resistance (e. g. waterproof concrete).



Specification	Setting range	PU	Ord. no.
Connection inside and outside possible.	240 - 290 mm	1	112 113
Contact plate ø 80 mm stainless steel V4A	290 - 340 mm	1	112 114
with 3 mounting holes ø 4 mm.	340 - 390 mm	1	112 115
M12 connection thread, M12 threaded rod (use optional screw set 03) with plastic cover			
Cut to individual lengths	200 - 620 mm	1	112 130

Additional wall thicknesses on request.

Specification	Setting range	PU	Ord. no.
Equal to Ord. no. 112 113, but with foam cover	240 - 290 mm	1	112 313
(use optional screw set 03).	290 - 340 mm	1	112 314
	340 - 390 mm	1	112 315
Cut to individual lengths	200 - 620 mm	1	112 330

Additional wall thicknesses on request.

Specification	Setting range	PU	Ord. no.
Equal to Ord. no. 112 113, but with foam cover,	240 - 290 mm	1	112 160
M12 connection thread, M16 threaded rod (use optional screw set 03).	290 - 340 mm	1	112 161
	340 - 390 mm	1	112 162
Cut to individual lengths	200 - 620 mm	1	112 167

Additional wall thicknesses on request.

Specification	Setting range	PU	Ord. no.
Equal to Ord. no. 112 113, but with foam cover,	240 - 290 mm	1	112 170
M16 connection thread, M16 threaded rod (use optional screw set 06).	290 - 340 mm	1	112 171
	340 - 390 mm	1	112 172
Cut to individual lengths	200 - 620 mm	1	112 177

Additional wall thicknesses on request.

Wall bushing with fixed length and water barrier,

for the water pressure-tight connection of earthing and equipotential bonding conductors.



Specification	Wall thickness	PU	Ord. no.
Contact plate ø 80 mm stainless steel V4A	101 - 150 mm	1	112 181
with 3 mounting holes ø 4 mm			
Connecting thread M12			
(use optional screw set 03)			
Connecting bolts ø 25 mm			
Lengths or wall thickness must be specified when ordering.			

Additional wall thicknesses on request.

Note: Screw sets are located on page 118.



Note on 50 Hz current carrying capacity:

Values for I_k = short circuit current (50Hz) (1s; $\leq 300^\circ\text{C}$) can be found in the index section starting on page 195 or are available on request in our special leaflet "50 Hz Strombelastbarkeit" (German language only).

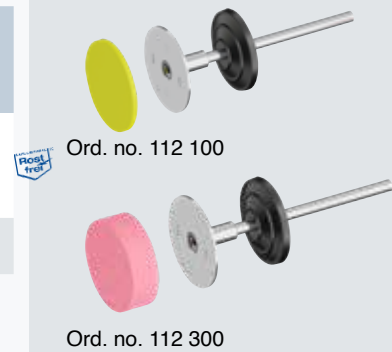
Fixed earthing terminal with water barrier,

for concrete with a high water penetration resistance (e. g. waterproof concrete).
for the connection of earth termination systems, lightning protection and bonding bars.



Fixed earthing terminal with water barrier

Specification	Screw sets (page 118) optional connection thread	Set-no.	Ord. no.
Contact plate ø 80 mm stainless steel V4A with 3 mounting holes ø 4 mm with terminal stud ø 10 mm, total length 190 mm with plastic cover	M12	SET 03	112 100
	M10	SET 02	
Equal to Ord. no. 112 100, but with foam cover	M12	SET 03	112 300
	M10	SET 02	



Water barrier for bushings, for concrete floor slabs or walls with waterproof concrete. Design for sliding onto the conductor, including two stainless steel tensioning tapes.

Specification	Fit	PU	Ord. no.
Rubber (TPE-free)	ø 8 mm	1	112 040
Rubber (TPE-free)	ø 10 mm	1	112 041
Rubber (TPE-free)	fl. 30 x 3.5 mm	1	112 042

Water barrier, for bushings



Wall bushing for metal facade elements

Benefits:

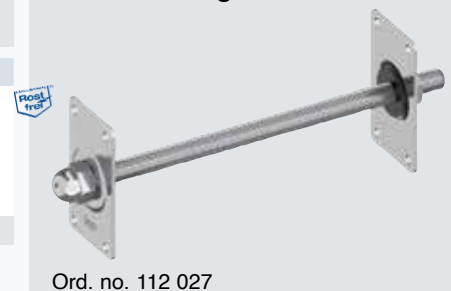
- Lightning current carrying capability tested according to EN IEC 62561-1 class H 100 kA (10/350 μ s).
- Double-sided sealing of drill hole with integrated neoprene sealing rings.
- Economical and practical solution.

Wall bushing

for lightning current carrying connection of metal facade elements.

Specification	Element thickness	PU	Ord. no.
Stainless steel V2A Threaded bar M10 Two contact plates 70 x 40 mm with 4 rivet bores ø 5.1 mm and attached neoprene sealing ring. Other element thicknesses on request.	up to 160 mm	1	112 027

Wall bushing



Note on 50 Hz current carrying capacity:

Values for I_k = short circuit current (50Hz)(1s; $\leq 300^\circ\text{C}$) can be found in the index section starting on page 195 or are available on request in our special leaflet "50 Hz Strombelastbarkeit" (German language only).

Accessories for fixed earthing terminals and wall bushings

Cross clamp



Ord. no. 112 039

Cross clamp, with welded threaded bolt and 4 screws M8 x 25 mm.

Specification Cross clamp	Fit	threaded bolt	PU	Ord. no.
steel, hot galvanized (60 x 60 mm)	fl. 30 / ø 8 - 10 mm	M12 x 40 mm	1	112 005
Stainless steel V4A (60 x 60 mm)	fl. 30 / ø 8 - 10 mm	M12 x 40 mm	1	112 039
Stainless steel V4A (70 x 70 mm)	fl. 40 / ø 8 - 10 mm	M16 x 40 mm	1	112 045
NEW Stainless steel V4A (80 x 80 mm)	fl. 40 - 50 mm	M16 x 45 mm	1	112 065

Additional specifications on request

View with threaded bolt:



Vario-clamp



Ord. no. 112 069

Vario-clamp with welded threaded bolt.

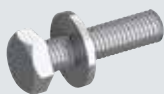


Specification Vario-clamp	Fit	threaded bolt	PU	Ord. no.
NEW Stainless steel V4A	fl. 30 / ø 8 - 10 mm	M12 x 50 mm	1	112 069
NEW Stainless steel V4A	fl. 40 / ø 8 - 10 mm	M16 x 45 mm	1	112 075

Application example:



Screw set



Ord. no. 112 049

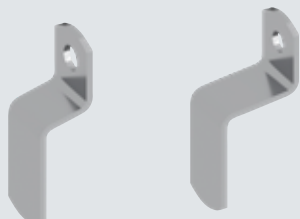
Screw set, consisting of a hexagonal screw DIN 933 and a tension washer DIN 6796. Completely made of **stainless steel V4A**.



SET	Specification	PU	Ord. no.
01	Hexagonal screw M10 x 25	1	112 047
02	Hexagonal screw M10 x 40	1	112 049
03	Hexagonal screw M12 x 25	1	112 048
04	Hexagonal screw M12 x 60	1	112 050
05	Hexagonal screw M16 x 25	1	112 051
06	Hexagonal screw M16 x 30	1	112 052

Note: See details for the fixed earthing terminals / wall bushings.

Connection angle



Ord. no. 112 018

Ord. no. 112 053

Connection angle, for fixed earthing terminals. Completely made of **stainless steel V4A**.



Specification	Bore hole	Height	PU	Ord. no.
Stainless steel V4A 30 x 3.5 mm	10.5 mm	28 mm	1	112 017
Stainless steel V4A 30 x 3.5 mm	10.5 mm	43 mm	1	112 053
Stainless steel V4A 30 x 3.5 mm	12.5 mm	28 mm	1	112 018
Stainless steel V4A 30 x 3.5 mm	12.5 mm	43 mm	1	112 054
Stainless steel V4A 40 x 5.0 mm	16.5 mm	40 mm	1	112 046

Extension piece for fixed earthing terminals



Ord. no. 112 043

Ord. no. 112 145

Extension piece for fixed earthing terminals on walls with insulation coating. Incl. tension washer completely made of **stainless steel V4A**.



Specification	Insulation thickness	PU	Ord. no.
Extension piece M12 / M12, (optional use of screw set 03)	up to 100 mm	1	112 043
Connection bushing M12 / ø 10 mm	up to 150 mm	1	112 044
	up to 200 mm	1	112 145

Other disconnection clamps with terminal angle to be found on page 81.

Accessories for fixed earthing terminals and wall bushings

Benefits:

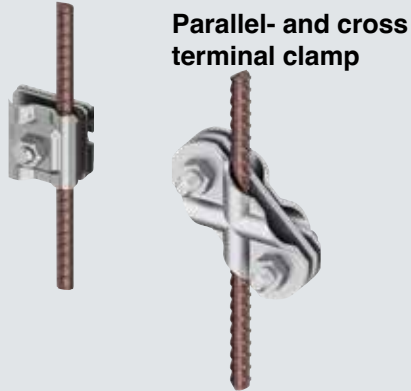
- Installation in 2 separate assembly steps using fixed threaded bolts in the intermediate plate

Installation example:

1. Terminal side:

Connection/fixing to the reinforcement with the threaded bolt

Multi-Max reinforcement clamp

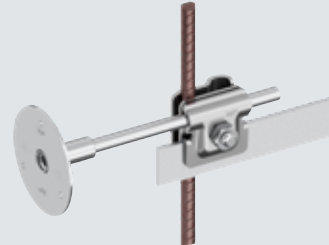


Parallel- and cross terminal clamp

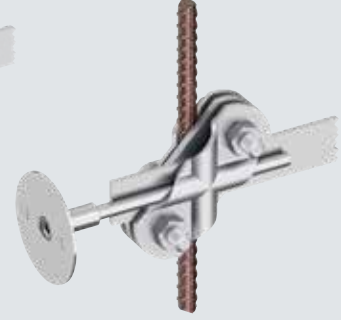
2. Terminal side:

Connection/fixing of the fixed earthing terminal and foundation grounding electrode to the reinforcement.

Multi-Max reinforcement clamp



Parallel- and cross terminal clamp



Parallel and cross terminal clamp for connecting fixed earthing terminals.

Specification	Fit		PU	Ord. no.
	reinforcement	grounding		
Steel, hot galvanized with 2 threaded bolts M10 x 60	ø 10 - 25 mm	ø 8 - 10 mm and fl. 30 mm	25	111 400

Parallel and cross terminal clamp



Ord. no. 111 400

Earthing material

Multi-Max reinforcement clamp 50 x 50 mm for connecting fixed earthing terminals.

Specification	Fit		PU	Ord. no.
	reinforcement	grounding		
Steel, bare with threaded bolt M10 x 60	ø 4 - 16 mm	fl. 30 x 3.5 mm or ø 10 mm	25	111 808
Steel, hot galvanized with threaded bolt M10 x 60	ø 4 - 16 mm	fl. 30 x 3.5 mm or ø 10 mm	25	111 818

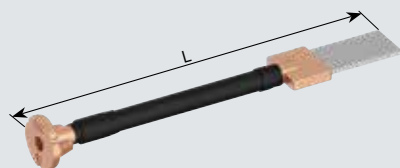
Multi-Max reinforcement clamp



Ord. no. 111 808

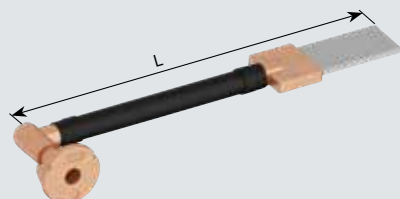
Earthing kit, DB (German railways) approved

JP-EG - Version I



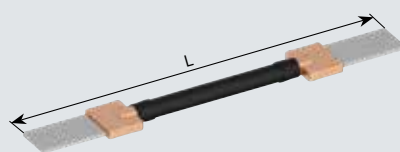
Ord. no. 113 085

JP-EG - Version II



Ord. no. 113 260

JP-EGL - Version I



Ord. no. 113 123

JP-EGLVP



Ord. no. 114 400

JP-EGVP



Ord. no. 114 700

Earthing kit, with fixed earthing terminal and terminal brackets for connecting reinforcements.
Approval: Eisenbahn Bundesamt (German railways); number of drawing 3 Ebs 15.03.19 Bl. 13

Specification	Cross section	PU	Ord. no.
Version I for short circuit currents ≤ 25 kA Cu-conductor NYY-O with fixed earthing terminal $\varnothing 50$ mm made of Cu-alloy with inner thread M16 including terminal bracket bare steel 40 x 5.0 mm	70 mm ²	1	113 085
Version II for short circuit currents > 25 kA Cu-conductor NYY-O with fixed earthing terminal $\varnothing 50$ mm made of Cu-alloy with inner thread M16 including terminal bracket bare steel 40 x 5.0 mm	95 mm ²	1	113 105

Specify length „L“ with order.

Earthing kit, angled fixed earthing terminal, for connecting reinforcements.

Approval: Eisenbahn Bundesamt (German railways); number of drawing 3 Ebs 15.03.19 Bl. 13

Specification	Cross section	PU	Ord. no.
Version I for short circuit currents ≤ 25 kA Cu-conductor NYY-O with fixed earthing terminal $\varnothing 50$ mm made of Cu-alloy with inner thread M16 including terminal bracket bare steel 40 x 5.0 mm	70 mm ²	1	113 260
Version II for short circuit currents > 25 kA Cu-conductor NYY-O with fixed earthing terminal $\varnothing 50$ mm made of Cu-alloy with inner thread M16 including terminal bracket bare steel 40 x 5.0 mm	95 mm ²	1	113 290

Specify length „L“ with order.

Earthing kit, with 2 terminal brackets for connecting reinforcements.

Approval: Eisenbahn Bundesamt (German railways); number of drawing 3 Ebs 15.03.19 Bl. 13

Specification	Cross section	PU	Ord. no.
Version I for short circuit currents ≤ 25 kA Cu-conductor NYY-O 2 terminal brackets steel, bare 40 x 5.0 mm	70 mm ²	1	113 123
Version II for short circuit currents > 25 kA Cu-conductor NYY-O 2 terminal brackets steel, bare 40 x 5.0 mm	95 mm ²	1	113 133

Specify length „L“ with order.

Earthing kit, crimped with 2 terminal brackets

Approval: Eisenbahn Bundesamt (German railways); number of drawing 3 Ebs 15.03.19 Bl. 22

Specification	Cross section	PU	Ord. no.
Version I for short circuit currents ≤ 25 kA Cu-conductor NYY-O with 2 terminal brackets steel (coppered)	70 mm ²	1	114 400
Version II for short circuit currents > 25 kA Cu-conductor NYY-O with 2 terminal brackets steel (coppered)	95 mm ²	1	114 550

Specify length „L“ with order.

Earthing kit, crimped with fixed earthing terminal and terminal brackets

Approval: Eisenbahn Bundesamt (German railways); number of drawing 3 Ebs 15.03.19 Bl. 22

Specification	Cross section	PU	Ord. no.
Version I for short circuit currents ≤ 25 kA Cu-conductor NYY-O with fixed earthing terminal $\varnothing 50$ mm made of Cu-alloy with inner thread M16 Cu - alloy ; with inner thread M16	70 mm ²	1	114 700
Version II for short circuit currents > 25 kA Cu-conductor NYY-O with fixed earthing terminal $\varnothing 50$ mm made of Cu-alloy with inner thread M16 incl. terminal brackets steel (coppered)	95 mm ²	1	114 850

Specify length „L“ with order.

Earthing terminal, with terminal brackets (straight) for connecting to the reinforcement.
Approval: Eisenbahn Bundesamt (German railways); number of drawing 3 Ebs 15.03.19 Bl. 13

Specification	PU	Ord. no.
for short circuit currents > 25 kA fixed earthing terminal $\varnothing$ 50 mm made of Cu-alloy ; with inner thread M16, welded with terminal bracket steel, bare 40 x 5.0 mm	1	113 216

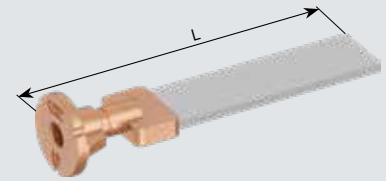
Specify length „L“ with order.

Earthing connector, for the bridging connection of earthing terminals or earthing kits.
Approval: Eisenbahn Bundesamt; number of drawing 3 Ebs 15.03.01 and 4 Ebs 15.03.17

Specification	Cross section	PU	Ord. no.
Version I for short circuit currents $\leq$ 25 kA 2 cable lugs Cu/Sn according to DIN 46235 with $\varnothing$ 17 mm hole and heat shrink tubing (on both sides) copper cable with plastic coating (NYY-0)	50 mm ²	1	113 029
Version II for short circuit currents > 25 kA 2 cable lugs Cu/Sn according to DIN 46235 with $\varnothing$ 17 mm hole and heat shrink tubing (on both sides) copper cable with plastic coating (NYY-0)	70 mm ²	1	113 030

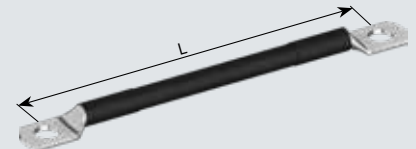
Specify length „L“ with order.

Earthing terminal JP-EAG (straight)



Ord. no. 113 216

Earthing connector JP-EV



Ord. no. 113 029

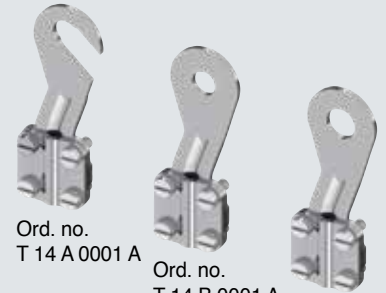
Earthing material and earthing conductor

(Operative range, e. g. German armed forces / technical containers)

Earthing cable lug brass/gal Sn for earthing conductors,
frost-resistant up to -40°C.

Specification	Cross section	PU	Ord. no.
Cable lug open	6 - 16 mm ²	100	T 14 A 0001 A
Cable lug closed; $\varnothing$ 8.5 mm	6 - 16 mm ²	100	T 14 B 0001 A
Cable lug closed; $\varnothing$ 10.5 mm	6 - 16 mm ²	100	T 14 B 0002 A

Earthing cable lug open or closed



Ord. no.
T 14 A 0001 A

Ord. no.
T 14 B 0001 A

Ord. no.
T 14 B 0002 A

Earthing conductor made of highly flexible copper, frost-resistant up to -40°C.

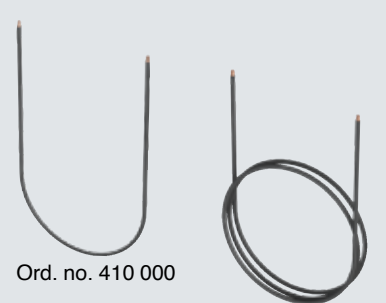
Specification	Cross section	PU	Ord. no.
Copper	10 mm ²	lfm	410 000
Copper	16 mm ²	lfm	416 000

Possible combinations.



Marker sleeves for the conductors on request.

Earthing conductor



Ord. no. 410 000

Ord. no. 416 000



Equipotential bonding

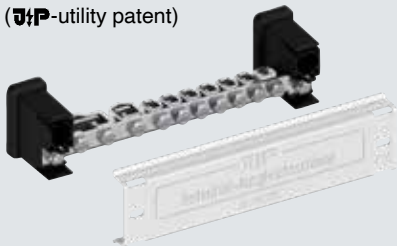


Equipotential bonding bars

Benefits equipotential bonding bar with metal cover:

- Terminal screws with spring lock washer against self-loosening.
- Connection possible from top or bottom.
- Terminals are captive and individually removable.
- Unbreakable aluminium cover, lead-sealable.
- Low profile installation.
- Bus bar numbering of the individual clamping points.
- Simple installation – only two screws needed for mounting.

Equipotential bonding bar with metal cover (JIP-utility patent)



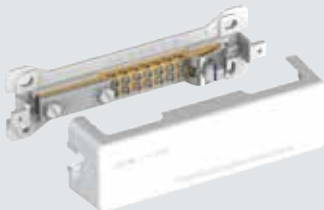
Ord. no. 111 075

Connection piece



Ord. no. 111 076

Equipotential bonding bar



Ord. no. 111 070

Equipotential bonding bar for flush mounting



Ord. no. 111 590

Equipotential bonding bar with aluminium cover, for equipotential bonding according to EN IEC 62305-3 and IEC 60364-4-41/60364-5-54.

Specification	PU	Ord. no.
Suitable for the connection of: 1 x flat conductor up to 30 x 5.0 mm or ø 8-10 mm 1 x round conductor 25 - 95 mm ² (ø 4-12 mm) single-core/stranded 7 x conductor 2.5 - 25 mm ² (ø 1-7.5 mm) single-core/stranded finely stranded (with ferrule)	1	111 075

Connection piece to extend the equipotential bonding bar (111 075).

Specification	PU	Ord. no.
Copper, gal Sn	1	111 076

Connection piece
Ord. no. 111 076

Equipotential bonding bar, with plastic cover for equipotential bonding according to IEC 60364-4-41/60364-5-54.

Specification	PU	Ord. no.
Suitable for the connection of: 1 x flat conductor up to 30 x 5 mm or ø 8-10 mm 1 x round conductor ø 8-12 mm 7 x conductor up to 25 mm ² single-core/stranded or 16 mm ² finely stranded	1	111 070

Equipotential bonding bar, on facades with external thermal insulation composite systems with adjustable installation depth.

Specification	Installation depth	PU	Ord. no.
Dimensions of box: (196 x 158 mm) Bonding bar with terminals for 1 x conductor fl. up to 30 x 5 mm or Ø 8-10 mm 1 x conductor Ø 8-12 mm 7 x conductor up to 25 mm ² (single-core/stranded) or 16 mm ² (finely stranded) including V2A cover (220 x 180 mm) with neoprene gasket, plaster cover and mounting kit. The plastic material is self-extinguishing and halogen-free. The V2A cover complies with IP65 protection rating	90 - 140 mm	1	111 590

Cover with company logo on request.

Bonding bar, for equipotential bonding according to IEC 60364-4-41/60364-5-54 and for lightning equipotential bonding according to EN IEC 62305, complete with screws M10x25 mm, nuts, spring lock washers and insulators. Delivery incl. fastening screws.

Specification	Screws specification	Number of terminals	Dimensions Length / width x thickness	PU	Ord. no.
Copper	V2A	5	220 / 40 x 5 mm	1	910 009
Copper	V2A	6	250 / 40 x 5 mm	1	2072
Copper	V2A	8	310 / 40 x 5 mm	1	910 375
Copper	V2A	10	370 / 40 x 5 mm	1	910 139
Copper	V2A	12	430 / 40 x 5 mm	1	910 193
Copper	V2A	14	490 / 40 x 5 mm	1	910 010
Copper	V2A	15	520 / 40 x 5 mm	1	910 359
Copper	V2A	16	550 / 40 x 5 mm	1	910 527
Copper	V2A	18	640 / 40 x 5 mm	1	910 540
Copper	V2A	20	700 / 40 x 5 mm	1	910 382
Stainless steel V2A	V2A	5	220 / 40 x 5 mm	1	910 011
Stainless steel V2A	V2A	6	250 / 40 x 5 mm	1	112 082
Stainless steel V2A	V2A	8	310 / 40 x 5 mm	1	910 385
Stainless steel V2A	V2A	10	370 / 40 x 5 mm	1	910 302
Stainless steel V2A	V2A	12	430 / 40 x 5 mm	1	910 012
Stainless steel V2A	V2A	14	490 / 40 x 5 mm	1	910 013
Stainless steel V2A	V2A	15	520 / 40 x 5 mm	1	910 018
Stainless steel V2A	V2A	16	550 / 40 x 5 mm	1	910 019
Stainless steel V2A	V2A	18	640 / 40 x 5 mm	1	910 020
Stainless steel V2A	V2A	20	700 / 40 x 5 mm	1	910 022

Note: For Ex areas (Zone 2/22), the clamping screws are secured against self-loosening according to German Supplement 7 to DIN EN IEC 62305-3.
Now secured against rotation with a DIN 603 carriage bolt!

Cover with fastening screws stainless steel V2A.

Specification	Number of terminals	Length	PU	Ord. no.
Stainless steel V2A	5	220 mm	1	9105
Stainless steel V2A	6	250 mm	1	9106
Stainless steel V2A	8	310 mm	1	9108
Stainless steel V2A	10	370 mm	1	9110

Additional specifications (e. g. **Aluminium**) or sizes on request.

Additional dimensions, hole spacings, hole diameters or types of connection (e. g. KS-connector or Vario-clamp for flat tapes) available on request.

Multi-Mini saddle clamp for equipotential bonding.

Conductor connection lengthwise or crosswise. **Clamping range up to 8 mm.**

Specification	Fit	PU	Ord. no.
Stainless steel V2A	6 mm ² (ø 2.8 mm) - 50 mm ² (ø 8 mm)	100	111 780
Stainless steel V2A/coppered	6 mm ² (ø 2.8 mm) - 50 mm ² (ø 8 mm)	100	111 781
Steel, hot galvanized	6 mm ² (ø 2.8 mm) - 50 mm ² (ø 8 mm)	100	111 782

Example of application:



Cable tray clamp according to EN IEC 62561-1 for connection to cable trays.

Version with clamping jaw or Multi-Mini connection.

Specification	Clamping range	Length	PU	Ord. no.
Clamping jaw				
Steel, hot galvanized	up to 5 mm	ø 6 - 8 mm	50	111 860
Stainless steel V2A	up to 5 mm	ø 6 - 8 mm	50	111 861
Multi-Mini-connection				
Steel, hot galvanized	up to 5 mm	6 mm ² (ø 2.8 mm) - 50 mm ² (ø 8 mm)	50	111 862
Stainless steel V2A	up to 5 mm	6 mm ² (ø 2.8 mm) - 50 mm ² (ø 8 mm)	50	111 863

Bonding bar flat



Ord. no. 2072



Ord. no. 112 082

Cover fastening scheme:



Cover



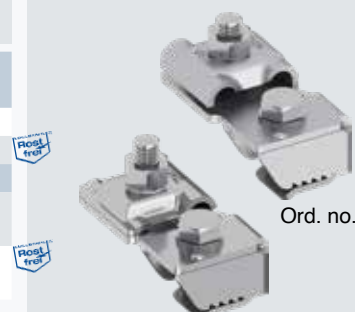
Ord. no. 9106

Multi-Mini saddle clamp



Ord. no. 111 780

Cable tray clamp

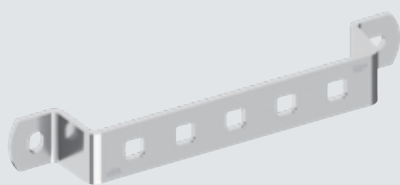


Ord. no. 111 860

Ord. no. 111 863

Earthing busbar (angled)

Single row



Ord. no. 913 653

Earthing busbar, single row,

wall distance (height ~ 35 mm); all connections for M10.

Specification	Number of terminals	Dimensions	PU	Ord. no.
		Length / width x thickness		
Stainless steel V2A	2	140 / 30 x 4 mm	1	913 650
Stainless steel V2A	3	170 / 30 x 4 mm	1	913 651
Stainless steel V2A	4	200 / 30 x 4 mm	1	913 652
Stainless steel V2A	5	230 / 30 x 4 mm	1	913 653
Stainless steel V2A	6	260 / 30 x 4 mm	1	913 654
Stainless steel V2A	7	290 / 30 x 4 mm	1	913 655
Stainless steel V2A	8	320 / 30 x 4 mm	1	913 656
Stainless steel V2A	9	350 / 30 x 4 mm	1	913 657
Stainless steel V2A	10	380 / 30 x 4 mm	1	913 658

Single row with connection screws



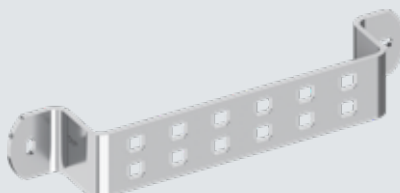
Ord. no. 910 306

Earthing busbar, single row with connection screws,

wall distance (height ~ 35 mm), including screws M10 x 25 mm, nuts and spring lock washers.

Specification	Specification screw	Number of terminals	Dimensions	PU	Ord. no.
			Length / width x thickness		
Stainless steel V2A	V2A	2	140 / 30 x 4 mm	1	910 330
Stainless steel V2A	V2A	3	170 / 30 x 4 mm	1	910 331
Stainless steel V2A	V2A	4	200 / 30 x 4 mm	1	910 305
Stainless steel V2A	V2A	5	230 / 30 x 4 mm	1	910 306
Stainless steel V2A	V2A	6	260 / 30 x 4 mm	1	910 307
Stainless steel V2A	V2A	7	290 / 30 x 4 mm	1	910 332
Stainless steel V2A	V2A	8	320 / 30 x 4 mm	1	910 308
Stainless steel V2A	V2A	9	350 / 30 x 4 mm	1	910 333
Stainless steel V2A	V2A	10	380 / 30 x 4 mm	1	910 309

Double row



Ord. no. 913 662

Earthing busbar, double row,

wall distance (height ~ 65 mm); all connections for M10.

Specification		Number of terminals	Dimensions	PU	Ord. no.
			Length / width x thickness		
Steel, hot galvanized		2 x 2	225 / 60 x 5 mm	1	913 666
Steel, hot galvanized		2 x 4	305 / 60 x 5 mm	1	913 667
Steel, hot galvanized		2 x 6	385 / 60 x 5 mm	1	913 668
Stainless steel V2A		2 x 2	225 / 60 x 5 mm	1	913 660
Stainless steel V2A		2 x 4	305 / 60 x 5 mm	1	913 661
Stainless steel V2A		2 x 6	385 / 60 x 5 mm	1	913 662

Double row with connection screws



Ord. no. 910 380

Earthing busbar, double row, with connection screws,

wall distance (height ~ 65 mm), including screws M10 x 25 mm, nuts and spring lock washers.

Specification	Specification screw	Number of terminals	Dimensions	PU	Ord. no.
			Length / width x thickness		
Steel, hot galvanized	V2A	2 x 2	225 / 60 x 5 mm	1	910 223
Steel, hot galvanized	V2A	2 x 4	305 / 60 x 5 mm	1	910 023
Steel, hot galvanized	V2A	2 x 6	385 / 60 x 5 mm	1	910 301
Stainless steel V2A	V2A	2 x 2	225 / 60 x 5 mm	1	910 544
Stainless steel V2A	V2A	2 x 4	305 / 60 x 5 mm	1	910 545
Stainless steel V2A	V2A	2 x 6	385 / 60 x 5 mm	1	910 380

Additional dimensions, hole spacings, hole diameters or types of connection (e. g. KS-connector or Vario-clamp for flat tapes) available on request.

Interesting facts about insulated lightning protection systems

Generally, we differentiate between insulated and partially insulated lightning protection systems. Partially insulated systems are most common. To design such a system, the well-known mesh method is used to install an air termination system. The area with roof installations is then additionally equipped with insulated air-termination rods. A decisive advantage of insulated or partially insulated lightning protection systems consists in the fact that no partial lightning currents can penetrate into the building.

J. Pröpster GmbH offers an installation-friendly and proven lightning protection system that provides optimum cost-effective protection for equipment and installations.

Air-termination pole for insulated air-termination systems

without lateral stand-off - to support long conductors.

Specification according to EN IEC 62561-2 / IEC TS 62561-8:

Air-termination tip: Aluminium 0.75 m above air-termination conductor

Insulated support: GRP 1.5 m

Stand pipe length: Stainless steel V2A variable (ø 42 mm)

Conductor height	Total height	Stand-offs	Mounting clamps	PU	Ord. no.
3.0 m	3.75 m	without	2	1	111 496
3.5 m	4.25 m	without	2	1	111 497

Additional lengths or combinations on request.

3.0 m	3.75 m	without	without	1	112 496
3.5 m	4.25 m	without	without	1	112 497

Additional lengths or combinations on request.

Ord. no. 111 496

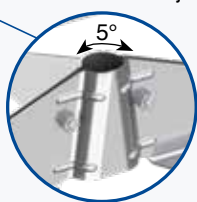
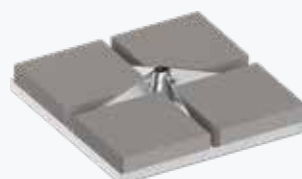
Air-termination pole base frame

Air-termination pole base frame with roof inclination adjustment up to 5°.

For concrete bases 300 x 300 mm to position air-termination poles ø 42 mm (up to 4.0 m pole height).

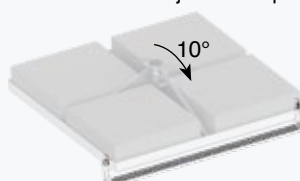
Specification	Footprint	PU	Ord. no.
Stainless steel V2A	~ 650 x 650 mm	1	499 000
Support plate (one side aluminium-laminated)	~ 650 x 650 mm	1	499 010
Roof inclination adjustment, inclination up to 10°		1	499 700

Roof inclination adjustment up to 5°



Air-termination pole base frame with optional concrete bases Ord. no. 499 100.

Roof inclination adjustment up to 10° Ord. no. 499 700.

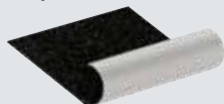


Concrete base

Specification	Weight	Dimension	PU	Ord. no.
Concrete base square	12 kg	300 x 300 x 60 mm	1	499 100
	16 kg	300 x 300 x 80 mm	1	499 101

Ord. no. 499 000

Support plate



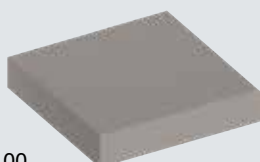
Ord. no. 499 010

Roof inclination adjustment up to 10°



Ord. no. 499 700

Concrete base



Ord. no. 499 100

Insulated air-termination pole

Air-termination pole for insulated air-termination systems

with lateral stand-off and mounting clamps, to protect roof installations from direct lightning strikes.

Specification according to EN IEC 62561-2 / IEC TS 62561-8:

Air-termination tip: Aluminium 0.75 m above air-termination conductor

Insulated support: GRP 1.5 m

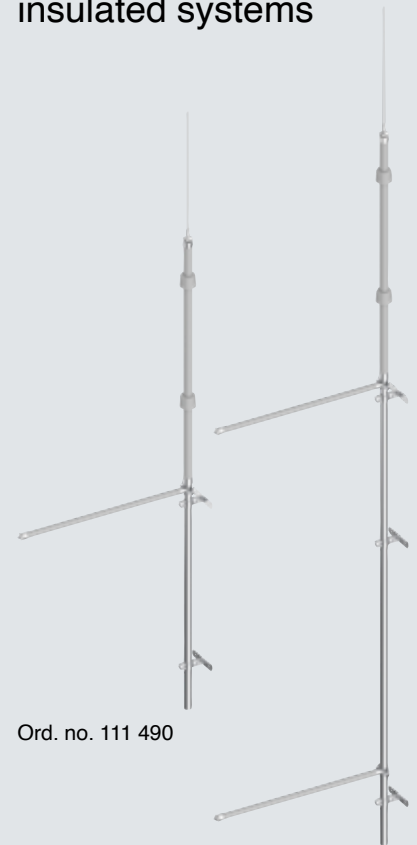
Stand-off length: GRP 1.0 m

Stand pipe length: Stainless steel V2A variable (ø 42 mm)

Conductor height	Total height	Stand-offs	Mounting clamps	PU	Ord. no.
3.0 m	3.75 m	1	2	1	111 490
3.5 m	4.25 m	1	2	1	111 491
4.0 m	4.75 m	1	2	1	111 492
4.5 m	5.25 m	2	3	1	111 493
5.0 m, 2-parts	5.75 m	2	3	1	111 494
5.5 m, 2-parts	6.25 m	2	3	1	111 495



Air-termination pole for insulated systems



Ord. no. 111 490

Ord. no. 111 493

Insulated stand-off, with pipe clamp, height-adjustable on the stand pipe V2A ø 42 mm (air-termination pole) with clamping component for aluminium conductor ø 6-8 mm (50 mm²).

Specification	PU	Ord. no.
0.5 m	1	490 405 V
0.8 m	1	490 408 V
1.0 m	1	490 410 V

Additional lengths on request!

Insulated stand-off with pipe clamp



Ord. no. 490 405 V

Insulated lightning protection

Air-termination conductor, for free spanning across structures to be protected.

Specification	Fit	Weight/m	PU	Ord. no.
Aldrey cable	50 mm²	0.135 kg	run.m.	100 058

Aldrey cable



Ord. no. 100 058

Air-termination pole fastener



Ord. no. 490 491

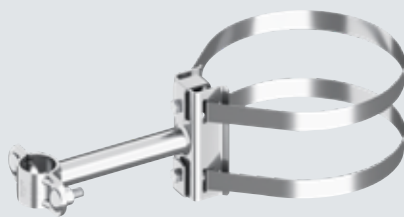
Air-termination pole fastener

for steel constructions (e. g. railings)
consisting of: Holder **V2A** on profile and pole holder **V2A** (cross clamp) for pole- $\varnothing$ 42 mm.

Specification	Profile	Fit in inch	Square profile	PU	Ord. no.
Round profile					
Stainless steel V2A	$\varnothing$ 26.9 mm	3/4"		1	490 490
Stainless steel V2A	$\varnothing$ 42.4 mm	1 1/4"		1	490 491
Stainless steel V2A	$\varnothing$ 48.3 mm	1 1/2"		1	490 492
Square profile					
Stainless steel V2A		suitable for	20 x 20 mm to 50 x 50 mm	1	490 495

Additional diameters and dimensions on request.

Air-termination pole fastener



Ord. no. 490 540

Air-termination pole fastener

for poles up to 5.5 m height and $\varnothing$ 42 mm.
Tape pipe clamp **V2A** for clamping range up to 800 mm.

Specification	Wall distance	PU	Ord. no.
Completely in stainless steel V2A for $\varnothing$ 42 mm pole clamp with 2 x screws M10, spring lock washer and nut in V2A	150 mm	1	490 540
	200 mm	1	490 541
	250 mm	1	490 542
Tape pipe clamp with 2 x screws M8 V2A	300 mm	1	490 543

Rafter fastener



Ord. no. 1230

Rafter fastener

for mounting poles up to 4.0 m height on tiled roofs.
incl. fixing screw-SET made of **V2A** (also suitable for HVC poles).

Specification	Rafter distance	Roof pitch	Dimensions	PU	Ord. no.
St/tZn	550 - 900 mm	up to 80° infinitely adjustable	$\varnothing$ 48 mm Height 800 mm	1	1230

Roof bushing-SET



Ord. no. 1236

Roof bushing-SET

suitable for rafter fastener (Ord. no. 1230)
with rubber grommet and sealing tape (self-welding).

Specification	Rafter distance	Roof pitch	Colour	PU	Ord. no.
Aluminium with plastic coating (UV-stabilized)	500 x 450 mm	up to 56°	anthracite	1	1235
			red	1	1236

Air-termination pole fastener



Ord. no. 1237

Air-termination pole fastener

completely in stainless steel **V2A** composed of
2x parallel clamp for $\varnothing$ 48 mm onto $\varnothing$ 42.4 mm. Suitable for rafter fastener (Ord. no. 1230).

Specification	Fit	Fit in inches	PU	Ord. no.
Stainless steel V2A	$\varnothing$ 48 mm onto $\varnothing$ 42.4 mm	1 1/2" onto 1 1/4"	1	1237

Note: The Installation must be clarified with the building owner on site.

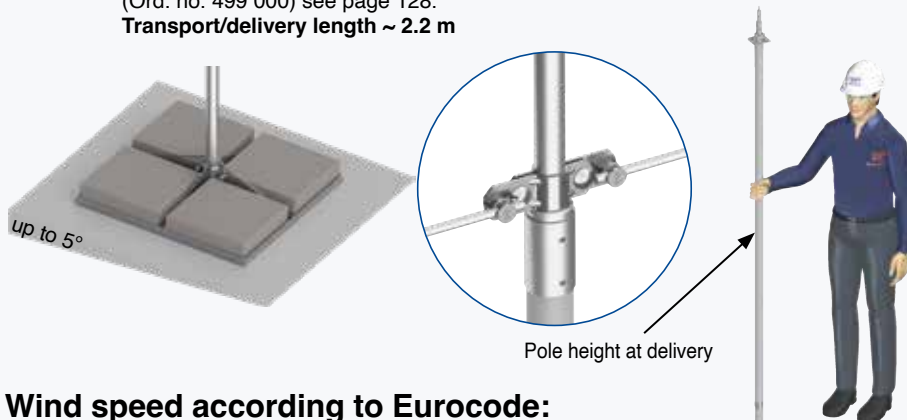
RS-Telescopic-air-termination pole, free-standing

aluminium with base frame for roof inclinations up to 10°

RS-Telescopic-air-termination pole, free-standing incl. base frame with roof inclination adjustment, connection clamp, 4 concrete bases and support plates.

Height of pole	Pole parts	Base frame	Concrete base	Ord. no.
up to 4.35 m (1.7 m GRP)	4-part	499 000 (5°)	4x 16 kg	912 605

Note: The air-termination pole base frame must be secured against slipping from a roof inclination of 5°. Roof inclination adjustment up to 10° (Ord. no. 499 700) for the base frame (Ord. no. 499 000) see page 128.
Transport/delivery length ~ 2.2 m



Wind speed according to Eurocode:

Height of pole	SET Ord. no.	Wind speed	
		Static safety factor 1.0	Static safety factor 1.5
up to 4.35 m	912 605	162 km/h	144 km/h

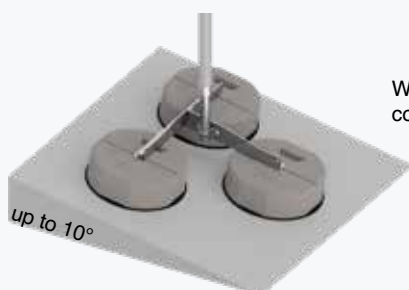
RS-Telescopic air termination pole



Insulated air-termination rod

Insulated air-termination rod set - in GRP / Stainless steel V2A with Aluminium - Air-termination tip. Includes V2A angle bracket with integrated roof inclination adjustment up to 10° (from 2.5 m height), concrete base and support plates.

Height	Floor space (mm)	Wind speed Static safety factor 1.5	Concrete base	Ord. no.
GRP ø 32 mm; 1.0 m (ISO-Length: 0.85 m)				
2.0 m	ø 375	115 km/h	1x 25 kg	912 813
2.5 m	880 x 335	122 km/h	2x 20 kg	912 810
3.0 m	920 x 375	125 km/h	2x 25 kg	912 811
GRP ø 48 mm; 1.1 m (ISO-Length: 0.95 m)				
3.5 m	920 x 800	132 km/h	3x 25 kg	912 812

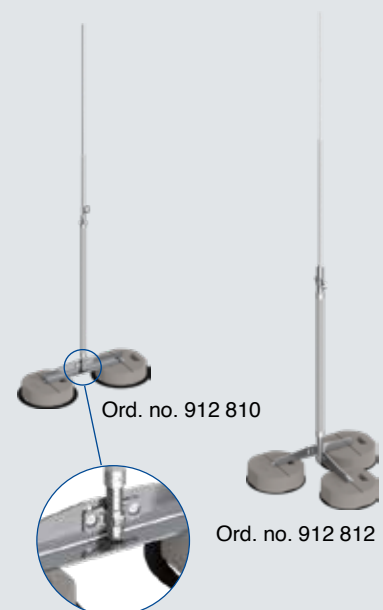


With integrated roof inclination adjustment up to 10° and connection possibility (square 11 mm) in all corners

Wind speed according to Eurocode:

Height of pole	SET Ord. no.	Wind speed	
		Static safety factor 1.0	Static safety factor 1.5
2.0 m	912 813	141 km/h	115 km/h
2.5 m	912 810	150 km/h	122 km/h
3.0 m	912 811	153 km/h	125 km/h
3.5 m	912 812	161 km/h	132 km/h

Air-termination rod



With integrated roof inclination adjustment up to 10°

Insulated lightning protection

- All stand-offs for air-termination rods (Al) $\varnothing$ 16 mm and down conductors $\varnothing$ 8-10 mm.
- Insulated stand-offs for free carrying of aluminium air-termination rods.

Insulated stand-off with mounting plate



Ord. no. 490 433 S



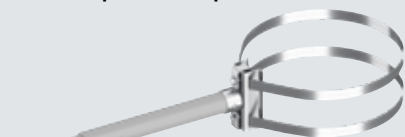
Ord. no. 490 430

Insulated stand-off with flat mounting plate (stainless steel V2A) for mounting on walls and metal sheets.

Specification	Length	PU	Ord. no.
Infinitely adjustable:	350 - 500 mm	1	490 433 S
Telescopic insulated stand-off GRP, $\varnothing$ 32/40 mm	650 - 1000 mm	1	490 433
for $\varnothing$ 16 mm and $\varnothing$ 8-10 mm			
with fixed length:	0.5 m	1	490 430
Insulated stand-off GRP, $\varnothing$ 32 mm	0.8 m	1	490 431
for $\varnothing$ 16 mm and $\varnothing$ 8-10 mm	1.0 m	1	490 432



Insulated stand-off with tape clamp



Ord. no. 490 443



Ord. no. 490 513

Insulated stand-off with tape pipe clamp (stainless steel V2A).

Specification	Length	PU	Ord. no.
Infinitely adjustable:	350 - 500 mm	1	490 443
Telescopic insulated stand-off GRP, $\varnothing$ 32/40 mm	650 - 1000 mm	1	490 444
for $\varnothing$ 16 mm and $\varnothing$ 8-10 mm			
tape pipe clamp max. $\varnothing$ 800 mm			
with fixed length:	0.5 m	1	490 513
Insulated stand-off GRP, $\varnothing$ 32 mm	0.8 m	1	490 514
for $\varnothing$ 16 mm and $\varnothing$ 8-10 mm	1.0 m	1	490 515
tape pipe clamp max. $\varnothing$ 800 mm			



Insulated stand-off with mounting bracket for rotatable or adjustable fixing elements.
The insulated stand-off is adjustable in all directions.

Specification	Length	PU	Ord. no.
Infinitely adjustable:			
Telescopic insulated stand-off GRP, ø 32/40 mm	350 - 500 mm	1	490 535
mounting bracket ø 12.5 mm, for ø 16 mm and ø 8-10 mm	650 - 1000 mm	1	490 536
with fixed length:			
Insulated stand-off GRP, ø 32 mm	0.5 m	1	490 530
mounting bracket ø 12.5 mm, for ø 16 mm and ø 8-10 mm	0.8 m	1	490 531
	1.0 m	1	490 532



Insulated stand-off with fixing bracket



Ord. no. 490 535



Ord. no. 490 530

Fixing element for insulated stand-off with bracket.

Specification	Clamping range	PU	Ord. no.
Fixing element stainless steel V2A with mounting plate including installation material for the insulated stand-offs (screw M12x20, spring washer and hexagonal nut)	-	1	490 505
Fixing element stainless steel V2A with two terminal clamps, heavy-duty type including installation material for the insulated stand-offs (screw M12x20, spring washer and hexagonal nut)	5 - 19 mm	1	490 506
	19 - 36 mm	1	490 507
	36 - 52 mm	1	490 508

Fixing element
(adjustable in all directions)



Ord. no. 490 505



Ord. no. 490 506

Insulated stand-off for mounting on corners and building edges.

Specification	Length	PU	Ord. no.
with fixed length:	0.5 m	1	490 450
Insulated stand-off GRP ø 32 mm	0.8 m	1	490 451
for ø 16 mm and ø 8-10 mm	1.0 m	1	490 452

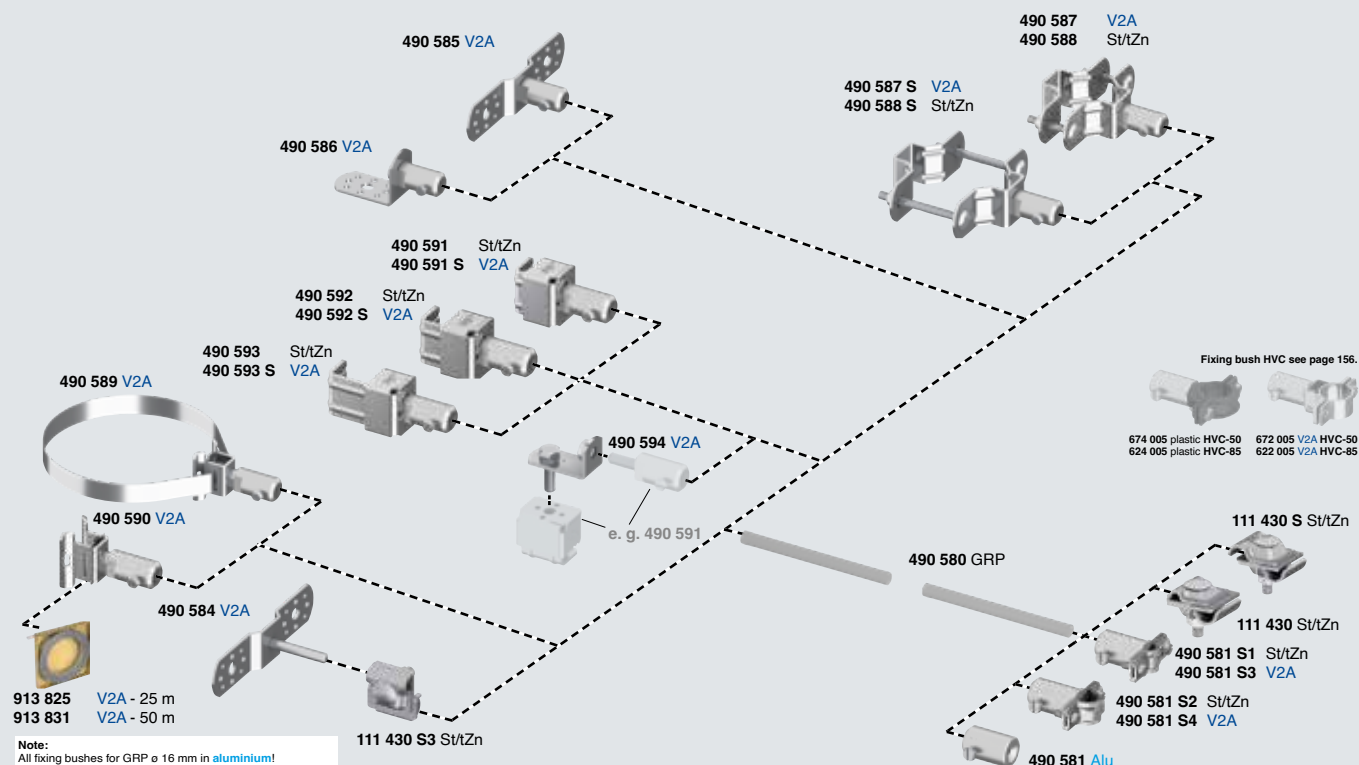
Additional stand-off lengths on request!

Insulated stand-off for corner mounting



Ord. no. 490 450

- Individual combinations.
- Suitable for fixing down conductors or air-termination rods with concrete bases.



Fixing side conductor or air-termination rod:

Fixing bush



Ord. no. 490 581 S2



Ord. no. 490 581 S1



Ord. no. 490 581

Multi-clamp



Ord. no. 111 430 S



Ord. no. 111 430

Fixing bush with fastener for fixing air-termination rods ø 16 mm and down conductors ø 8-10 mm to the solid rod GRP ø 16 mm.

Specification	Length	PU	Ord. no.
Fixing bush aluminium , for GRP ø 16 mm; for air-termination rods ø 16 mm			
with fastener steel, hot galvanized, for ø 16 mm	40 mm	25	490 581 S2
with fastener stainless steel V2A , for ø 16 mm	40 mm	25	490 581 S4
Fixing bush aluminium , for GRP ø 16 mm; for down conductors ø 8 - 10 mm			
with fastener steel, hot galvanized, for ø 8-10 mm	40 mm	25	490 581 S1
with fastener stainless steel V2A , for ø 8-10 mm	40 mm	25	490 581 S3
with inner thread M6	40 mm	25	490 581

Multi-clamp

Benefit: Proven multi-clamp system for rod connections ø 16 mm.

Specification	Fit	PU	Ord. no.
Steel, hot galvanized	ø 16 / ø 16 mm	25	111 430 S
Steel, hot galvanized	ø 8 - 10 / ø 16 mm	50	111 430

Solid rod GRP:

Solid rod GRP:



Ord. no. 490 580

Solid rod GRP to be cut to length.

Specification	Length	PU	Ord. no.
Solid rod GRP, ø 16 mm	3.0 m	10	490 580

Fixing side object:

Mounting plate and angle bracket for mounting on walls and metal sheets, with fixing bush **aluminium**, for GRP ø 16 mm.

Specification	PU	Ord. no.
Mounting plate stainless steel V2A	25	490 585
Angle bracket stainless steel V2A	25	490 586
Fixing bush aluminium , for GRP ø 16 mm with hexagonal screw M10 x 16 stainless steel V2A	25	490 582

Mounting plate and angle bracket



Mounting plate with bolt for mounting on walls and metal sheets.

Specification	PU	Ord. no.
Mounting plate with bolt ø 10 mm stainless steel V2A / 60 mm long	25	490 584
Multi-clamp steel, hot galvanized (ø 10 / ø 16 mm)	50	111 430 S3

Mounting plate with bolt



Terminal clamp, heavy-duty type for mounting on steel constructions or railings, with fixing bush **aluminium**, for GRP ø 16 mm.

Specification	Fit	PU	Ord. no.
Steel, hot galvanized	5 - 19 mm	25	490 591
Steel, hot galvanized	19 - 36 mm	25	490 592
Steel, hot galvanized	36 - 52 mm	25	490 593
Stainless steel V2A	5 - 19 mm	25	490 591 S
Stainless steel V2A	19 - 36 mm	25	490 592 S
Stainless steel V2A	36 - 52 mm	25	490 593 S
Angle bracket stainless steel V2A , for terminal clamp, with hexagonal screw, nuts and spring lock washer		25	490 594

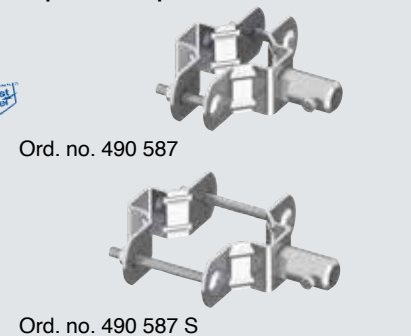
Terminal clamp heavy-duty type



Pipe clamp for mounting on pipes or railings with fixing bush **aluminium**, for GRP ø 16 mm.

Specification	Fit	Fit in inch	PU	Ord. no.
Pipe clamp stainless steel V2A with fixing screws in stainless steel V2A	ø 42.4 - 60.3 mm	1 1/4" - 2"	20	490 587
	ø 42.4 - 88.9 mm	1 1/4" - 3"	20	490 587 S
Pipe clamp steel, hot galvanized with fixing screws in stainless steel V2A	ø 42.4 - 60.3 mm	1 1/4" - 2"	20	490 588
	ø 42.4 - 88.9 mm	1 1/4" - 3"	20	490 588 S

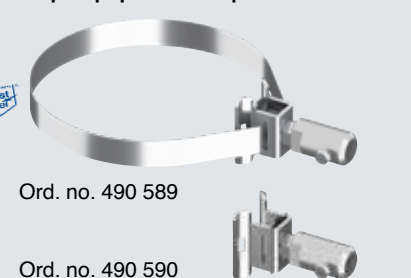
Pipe clamp



Tape pipe clamp for mounting on pipes up to ø 300 mm with fixing bush **aluminium** for GRP ø 16 mm.

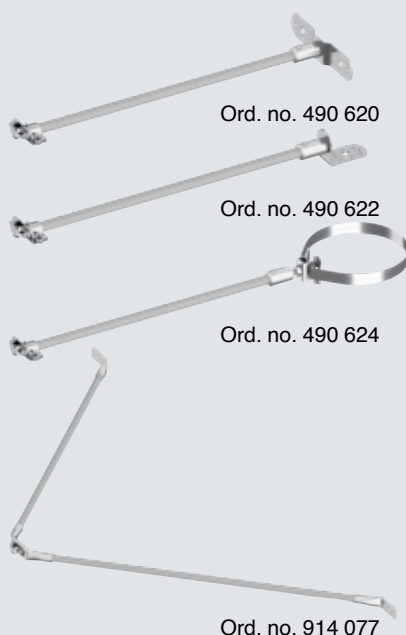
Specification	Pipe- ø	PU	Ord. no.
Tape pipe clamp with tensioning tape stainless steel V2A	max. ø 300 mm	10	490 589
Tape pipe clamp without tensioning tape stainless steel V2A	--	20	490 590
Tensioning tape stainless steel V2A , 22 x 0.4 mm	--	25 m	913 825
	--	50 m	913 831

Tape pipe clamp



Note: For sheet metal chimneys, use an intermediate plate (e. g.: a piece of VA-sheet)

Insulated stand-off - light-weight types



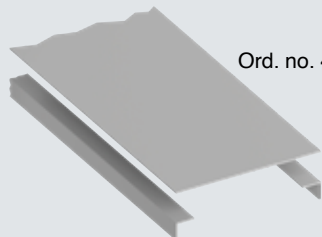
Ord. no. 490 620

Ord. no. 490 622

Ord. no. 490 624

Ord. no. 914 077

GRP-attic



Ord. no. 490 700

Ord. no. 490 701

Bridging-SET



Ord. no. 490 303

Insulated stand-off, light-weight type for fixing air-termination rods with concrete base. Stand-off GRP ø 16 mm for air-termination rods **aluminium** ø 16 mm.

Specification	Length	PU	Ord. no.
with mounting plate	0.50 m	1	490 620
	0.75 m	1	490 621
with angle bracket	0.50 m	1	490 622
	0.75 m	1	490 623
with tape pipe clamp up to ø 300 mm	0.50 m	1	490 624
	0.75 m	1	490 625
V-shape with mounting lugs (Actual insulated distance 600 mm)	0.60 m	1	914 077

Plastic attic made of GRP, for replacing metal attics with non-conducting material to control the separation distance.

Specification	Length	PU	Ord. no.
GRP-flat section (light grey) 450x3 mm	3.0 m	1	490 700
GRP-angle section (light grey) 60x40x3 mm	3.0 m	1	490 701

Note: flat and angle section are without bore holes and rivets (see page 168).

Accessories	PU	Ord. no.
Cleaning spray for GRP surfaces	1	490 702
Elastic universal adhesive and sealant	1	490 703

Bridging-SET

to bridge continuous rooflights or other roof structures. *)

Specification	Height	Width	PU	Ord. no.
Bridging complete in aluminium telescopic Ø 32/22/16/10 mm with fixing elements- stainless steel V2A incl. concrete bases and support plates	1.75 - 2.5 m	3.0 - 3.9 m	1	490 303

*) The aluminium air-termination rod Ø 10 mm, can be shortened to 1000 mm on site.
Possible width: 2.5 m

Additional types on request.

max. Wind speed according to Eurocode:

Ord. no.	Wind speed	
	Static safety factor 1.0	Static safety factor 1.5
490 303	158 km/h	129 km/h

Example of application:



Insulated conductor support (complete SET)

to raise the conductor leading

Insulated conductor support GRP ø 16 mm Includes round concrete base with wedge technology, base plate and stainless steel clip for ø 8 mm.

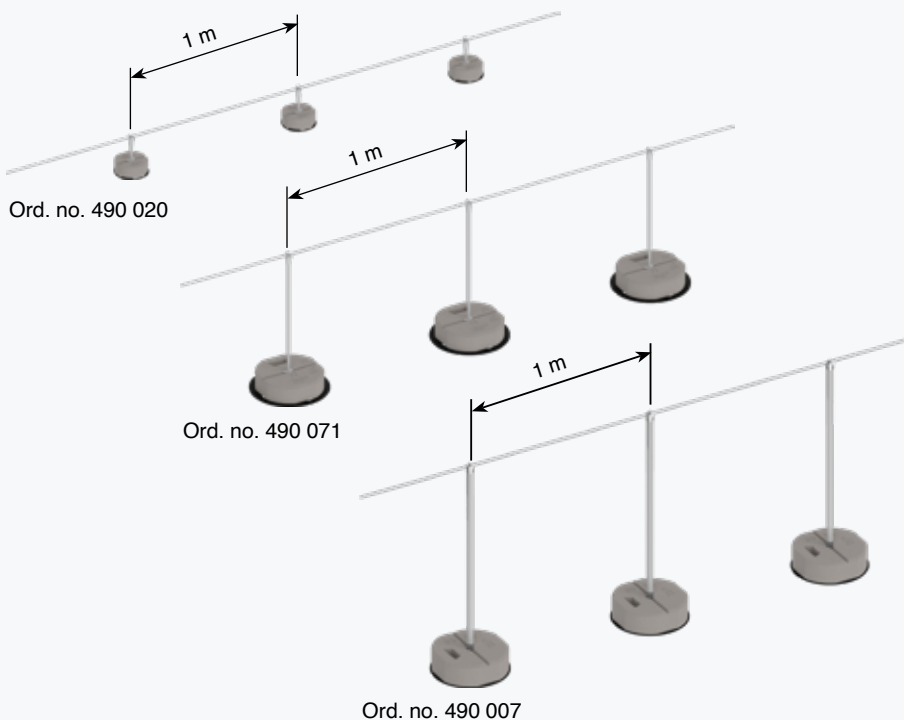
Height	ISO-Length	Concrete base	Wind speed *)	PU	Ord. no.
0.2 m	0.18 m	3 kg	126 km/h	1	490 020
		6 kg	174 km/h	1	490 021
0.3 m	0.28 m	3 kg	118 km/h	1	490 030
		6 kg	165 km/h	1	490 031
0.4 m	0.38 m	3 kg	100 km/h	1	490 040
		6 kg	155 km/h	1	490 041
0.5 m	0.48 m	6 kg	141 km/h	1	490 050
		12 kg	205 km/h	1	490 051
0.6 m	0.58 m	6 kg	124 km/h	1	490 060
		12 kg	195 km/h	1	490 061
0.7 m	0.68 m	12 kg	184 km/h	1	490 070
		16 kg	211 km/h	1	490 071
0.8 m	0.78 m	12 kg	166 km/h	1	490 080
		16 kg	192 km/h	1	490 081
0.9 m	0.88 m	12 kg	153 km/h	1	490 090
		16 kg	176 km/h	1	490 091

Insulated conductor support, GRP ø 32 mm Includes round concrete base, support plate and clamping frame **V2A** for ø 6-8 mm (50 mm²).

Height	Insulated-length	concrete base	Wind speed *)	PU	Ord. no.
1.1 m	0.94 m	25 kg	174 km/h	1	490 007
1.3 m	1.14 m	25 kg	150 km/h	1	490 008

*) Max. wind speed according to Eurocode with a 1.0 m center-to-center spacing of the Insulated cable supports

Example of applications:



ISO-conductor support
ø 16 mm



Ord. no. 490 030



Ord. no. 490 071

ISO-conductor support
ø 32 mm



Ord. no. 490 007

Insulated
lightning protection

Protection measures against touch voltages

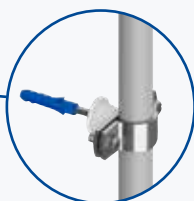
Complete-SET



Ord. no. 912 124

Complete-SET, total length 3.0 m

Specification	Fit	PU	Ord. no.
Complete-SET consisting of:		1	912 124
1. Insulation with length of: 3.0 m (PE with GRP-coat in light grey)	ø 22 mm		
2. Interior conductor Stainless steel V4A ,	ø 10 mm		
3. 4x Conductor holder	ø 22 mm		



Warning sign



Ord. no. 912 119

Warning sign, as protection measure against touch and step voltages of persons according to EN IEC 62305-3; weather proof and UV resistance. Sign with German and English text.

Specification	Fixing	PU	Ord. no.
Alu Dibond (DIN A5; 148 x 210 x 3 mm)	4 x ø 5.5 mm	1	912 119
NEW Alu Dibond (DIN A5; 148 x 210 x 3 mm)	Fastener ø 8 - 10 mm	1	912 129

With company logo imprint upon request.



Ord. no. 912 128

Warning sign as "protection measure against lightning voltage" during thunderstorms according to EN IEC 62305-3; weather-resistant and UV-stable. Sign with German and English text.

Specification	Fixing	PU	Ord. no.
Alu Dibond (DIN A5; 148 x 210 x 3 mm)	4 x ø 5.5 mm	1	912 118
NEW Alu Dibond (DIN A5; 148 x 210 x 3 mm)	Fastener ø 8 - 10 mm	1	912 128

Can also be printed with your company logo on request.

HVC-protected

**High voltage resistant conductor
HVC-50 & HVC-85**



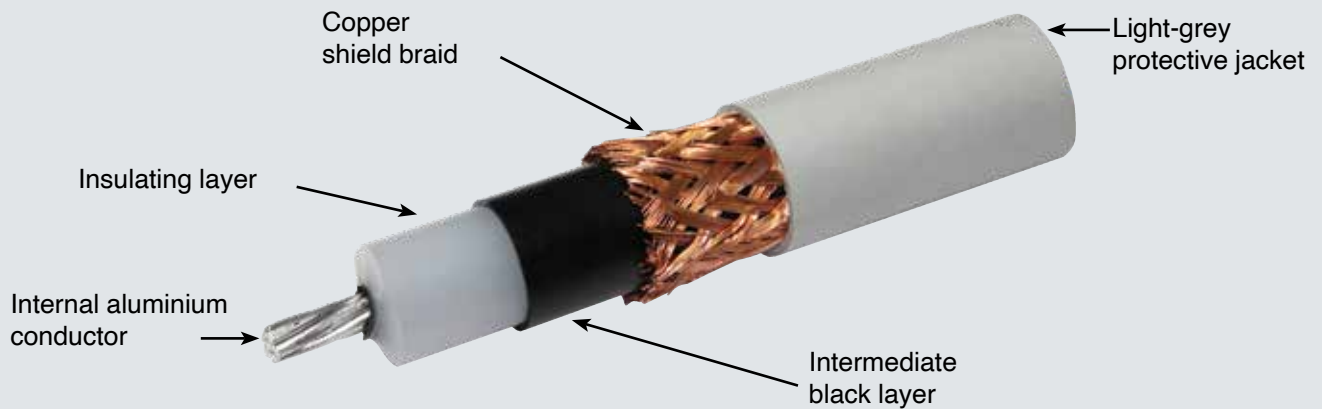


Benefits of the HVC-50 conductor:

- Significantly reduced installation work and time.
- The required equipotential bonding is provided by the integrated shield braid in the conductor – no separate conductor is needed.
- Mechanical and chemical protection by light grey, UV-resistant protective jacket.
- Equivalent separation distance "s" = **0.50 m** in air.
- No additional separation distances must be observed in the base area.

Installation is carried out in accordance with the installation instructions.

Design and technical data:



Equivalent separation distance "s" - air	≤ 500 mm
Equivalent separation distance "s" - solid material	≤ 1000 mm
Outer diameter	23 mm (± 0.5 mm)
Minimum bending radius	250 mm
Ambient temperature during installation	> 0°C
Permanent temperature range	-20°C to +70°C
Max. tensile load	1500 N
Weight	~ 0.635 kg/m
Cross section of stranded internal aluminium conductor	28 mm² / aluminium
Cross section of shield braid	16 mm² / copper
Fire load	3.2 kWh/m
Weatherproof and UV-resistant	yes

Maximum conductor length:

Class of LPS	Max. lightning current	No. of down conductors	Max. conductor length *)
I	200 kA	1	--
		2	12 m
		3	18 m
II	150 kA	1	8 m
		2	16 m
		3	25 m
III + IV	100 kA	1	12 m
		2	25 m
		3	37 m

*) : for "s" = 0.50 m in air

HVC-50 conductor



HVC-50 conductor



HVC-50 conductor

Specification	Fit	~ Weight/m	PU	Ord. no.
Length 25 m as a bunch	ø 23 mm	0.635 kg	1	650 001
Length 50 m on a non-returnable reel	ø 23 mm	0.635 kg	1	650 002
Length 100 m on a non-returnable reel	ø 23 mm	0.635 kg	1	650 003

Technical data:

Equivalent separation distance "s" - air	≤ 500 mm
Equivalent separation distance "s" - solid material	≤ 1000 mm
Outer diameter	23 mm (± 0.5 mm)
Minimum bending radius	250 mm
Ambient temperature during installation	> 0°C
Permanent temperature range	-20°C to +70°C
Max. tensile load	1500 N
Weight	~ 0.635 kg/m
Cross section of stranded internal aluminium conductor	28 mm² / aluminium
Cross section of shield braid	16 mm² / copper
Fire load	3.2 kWh/m
Weatherproof and UV-resistant	yes

List of maximum conductor lengths (while "s" = 0.50 in air) on page 141.

Head-unit for HVC-50 conductor

Head-unit



Ord. no. 651 101

HVC-conductor

Head-unit, for HVC-50 conductor, incl. a complete installation set consisting of two heat-shrink-tubings and a ferrule.

Specification	Connection	PU	Ord. no.
Aluminium - for exterior pole installation	Hex bolt V2A M10 x 20 mm with a tension washer	1	651 100
Aluminium - for interior pole installation	Threaded bolt V2A	1	651 101
Aluminium - for spanning objects incl. multi-clamp V2A	Threaded bolt V2A	1	651 102
Aluminium - for connection to the attic	Threaded bolt V2A ø 10 x 105 mm	1	651 103

Head-unit made of stainless steel V2A on request!

Application examples:



Head-unit
Ord. no. 651 100 +
with terminal plate
Ord. no. 632 400
(see page 159)



Head-unit
Ord. no. 651 101



Head-unit
Ord. no. 651 102

Spare parts, for head-unit

Specification	Fit	Length	PU	Ord. no.
Ferrule copper/tinned	ø 7 mm	30 mm	10	601 110
Heat-shrink-tubing with glue	ø 32 mm	100 mm	10	651 111

HVC-50 incl. installed head-unit

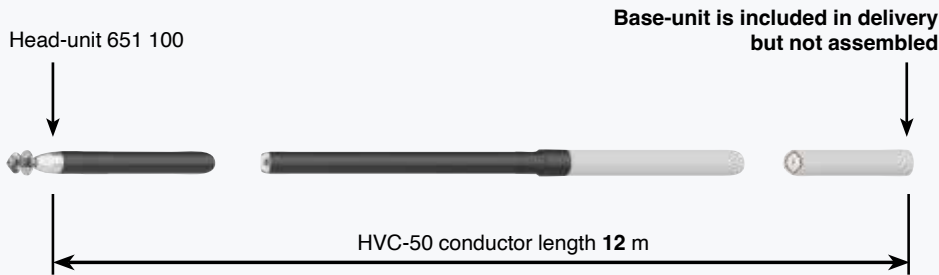
HVC-50 conductor, cut to length with installed head-unit. Including base unit (Ord. no. 651 200) for self-assembly. Minimum length of **HVC-50** conductor: 5.0 m.

Specification of head-unit (page 142)	Ord. no. 5.0 m	Ord. no. xx m
Aluminium - for exterior pole installation	651 100-5	651 100-xx
Aluminium - for interior pole installation	651 101-5	651 101-xx
Aluminium - for spanning objects incl. multi-clamp V2A	651 102-5	651 102-xx

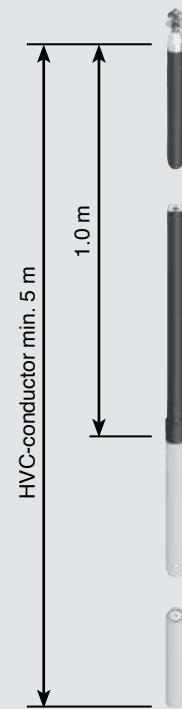
Head-unit made of **stainless steel V2A** on request.

The last digits of the Ord. no. (xx) indicate the overall conductor length.

Order example: 651 100-12



HVC-50 conductor with mounted head-unit



Base-unit is not assembled

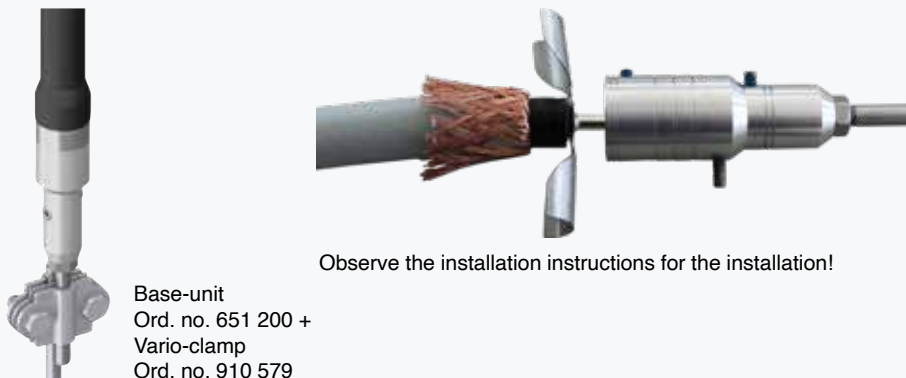
Base-unit for HVC-50 conductor

Base-unit, for **HVC-50** conductor, incl. terminal bolt $\varnothing$ 10 mm made of **stainless steel V2A** and a complete installation set consisting of a heat-shrink-tubing, contact sheet and a ferrule.

Specification	Fit	Length	PU	Ord. no.
Aluminium	$\varnothing$ 10 mm	70 mm	1	651 200

Base-unit made of **stainless steel V2A** on request.

Application example:



Base-unit
Ord. no. 651 200 +
Vario-clamp
Ord. no. 910 579

Base-unit



Ord. no. 651 200

Spare parts, for base-unit.

Specification	Fit	Length	PU	Ord. no.
Ferrule copper/tinned	$\varnothing$ 7 mm	30 mm	10	601 110
Heat-shrink-tubing with glue	$\varnothing$ 39 mm	125 mm	10	601 111
Contact sheet stainless steel V2A	$\varnothing$ 7 mm		5	651 113



High-performance sealing tape for HVC head- and base-units.
As an alternative product to head-shrink-tubing 601 111 and 651 111.

Specification	Width	Length	PU	Ord. no.
Acrylate adhesive tape on ionomer carrier	50 mm	33 m	1	640 030

High-performance sealing tape



Ord. no. 640 030

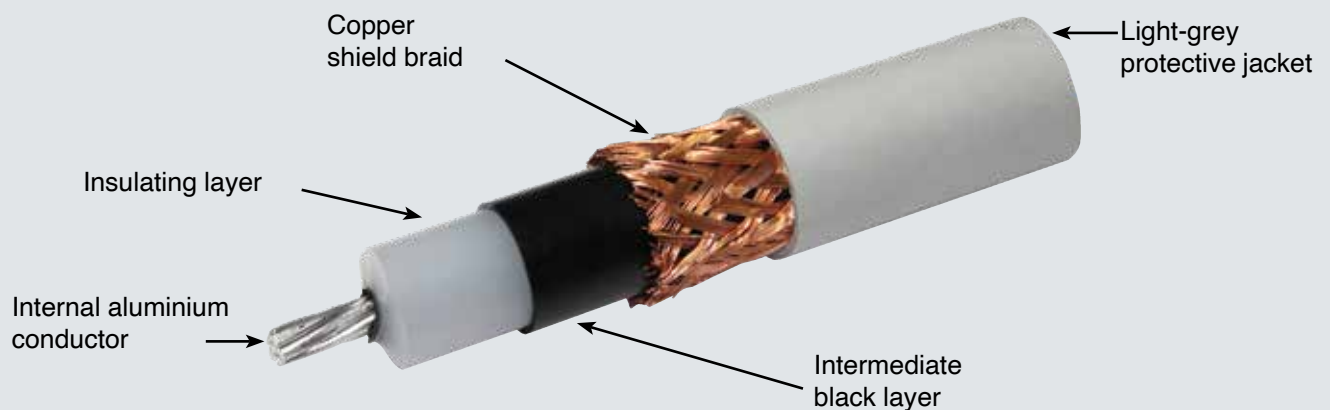


Benefits of the HVC-85 conductor:

- Significantly reduced installation work and time.
- The required equipotential bonding is provided by the integrated shield braid in the conductor – no separate conductor is needed.
- Mechanical and chemical protection by light grey, UV-resistant protective jacket.
- Equivalent separation distance "s" = **0.85 m** in air.
- No additional separation distances must be observed in the base area.

Installation is carried out in accordance with the installation instructions.

Design and technical data:



Equivalent separation distance "s" - air	≤ 850 mm
Equivalent separation distance "s" - solid material	≤ 1700 mm
Outer diameter	28 mm (± 1.0 mm)
Minimum bending radius	250 mm
Ambient temperature during installation	> 0°C
Permanent temperature range	-20°C to +70°C
Max. tensile load	1500 N
Weight	~ 0.860 kg/m
Cross section of stranded internal aluminium conductor	28 mm² / Aluminium
Cross section of shield braid	16 mm² / Copper
Fire load	5.83 kWh/m
Weatherproof and UV-resistant	yes

Maximum conductor length:

Class of LPS	Max. lightning current	No. of down conductors	Max. conductor length *)
I	200 kA	1	--
		2	21 m
		3	32 m
II	150 kA	1	14 m
		2	28 m
		3	42 m
III + IV	100 kA	1	21 m
		2	42 m
		3	64 m

*) for "s" = 0.85 m in air

HVC-85 conductor



HVC-85 conductor



HVC-85 conductor

Specification	Fit	~ Weight/m	PU	Ord. no.
Length 25 m as a bunch	ø 28 mm	0.860 kg	1	600 001
Length 50 m on a non-returnable reel	ø 28 mm	0.860 kg	1	600 002
Length 100 m on a non-returnable reel	ø 28 mm	0.860 kg	1	600 003

Technical data:

Equivalent separation distance "s" - air	≤ 850 mm
Equivalent separation distance "s" - solid material	≤ 1700 mm
Outer diameter	28 mm (± 1.0 mm)
Minimum bending radius	250 mm
Ambient temperature during installation	> 0°C
Permanent temperature range	-20°C to +70°C
Max. tensile load	1500 N
Weight	~ 0.860 kg/m
Cross section of stranded internal aluminium conductor	28 mm² / Aluminium
Cross section of shield braid	16 mm² / Copper
Fire load	5.83 kWh/m
Weatherproof and UV-resistant	yes

List of maximum conductor lengths (while "s" = 0.85 in air) on page 145.

Head-unit for HVC-85 conductor

Head-unit



Ord. no. 601 101

HVC-conductor

Head-unit, for HVC-85 conductor, incl. a complete installation set consisting of two heat-shrink-tubings and a ferrule.

Specification	Connection	PU	Ord. no.
Aluminium - for exterior pole installation	Hex bolt V2A M10x20 mm with a tension washer	1	601 100
Aluminium - for interior pole installation	Threaded bolt V2A	1	601 101
Aluminium - for spanning objects incl. multi-clamp V2A	Threaded bolt V2A	1	601 102
Aluminium - for connection to the attic	Threaded bolt V2A ø 10x105 mm	1	601 103

Head-unit made of stainless steel V2A on request!

Application examples:



Head-unit
Ord. no. 601 100 +
with terminal plate
Ord. no. 632 400
(see page 159)



Head-unit
Ord. no. 601 101



Head-unit
Ord. no. 601 102

Spare parts, for head-unit

Specification	Fit	Length	PU	Ord. no.
Ferrule copper/tinned	ø 7 mm	30 mm	10	601 110
Heat-shrink-tubing with glue	ø 39 mm	125 mm	10	601 111

HVC-85 incl. installed head-unit

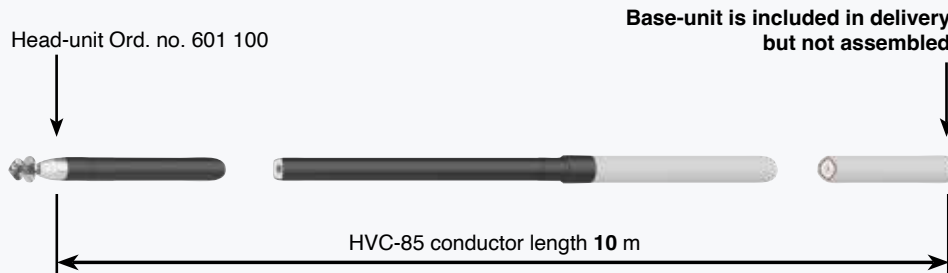
HVC-85 conductor, cut to length with installed head-unit. Including base unit (Ord. no. 601 200) for self-assembly. Minimum length of **HVC-85** conductor: 5.0 m.

Specification of head-unit (page 146)	Ord. no. 5.0 m	Ord. no. xx m
Aluminium - for exterior pole installation	601 100-5	601 100-xx
Aluminium - for interior pole installation	601 101-5	601 101-xx
Aluminium - for spanning objects incl. multi-clamp V2A	601 102-5	601 102-xx

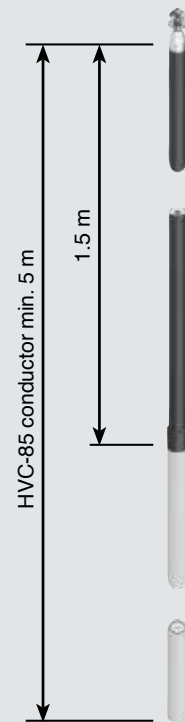
Head-unit made of **stainless steel V2A** on request.

The last digits of the Ord. no. (**xx**) indicate the overall conductor length.

Order example: Ord. no. 601 100-10



HVC-85 conductor with mounted head-unit



Base-unit is not assembled

Base-unit for HVC-85 conductor

Base-unit, for **HVC-85** conductor, incl. terminal bolt $\varnothing$ 10 mm made of **stainless steel V2A** and a complete installation set consisting of a heat-shrink-tubing, contact sheet and a ferrule.

Specification	Fit	Length	PU	Ord. no.
Aluminium	$\varnothing$ 10 mm	70 mm	1	601 200

Base-unit made of **stainless steel V2A** on request.

Application example:



Base-unit
Ord. no. 601 200 +
Vario-clamp
Ord. no. 910 579

Base-unit



Ord. no. 601 200

Spare parts, for base-unit.

Specification	Fit	Length	PU	Ord. no.
Ferrule copper/tinned	$\varnothing$ 7 mm	30 mm	10	601 110
Heat-shrink-tubing with glue	$\varnothing$ 52 mm	150 mm	10	601 112
Contact sheet stainless steel V2A	$\varnothing$ 7 mm		5	601 113

High-performance sealing tape for HVC head- and base-units.

As an alternative product to head-shrink-tubing 601 111 and 601 112.

Specification	Width	Length	PU	Ord. no.
Acrylate adhesive tape on ionomer carrier	50 mm	33 m	1	640 030

High-performance sealing tape



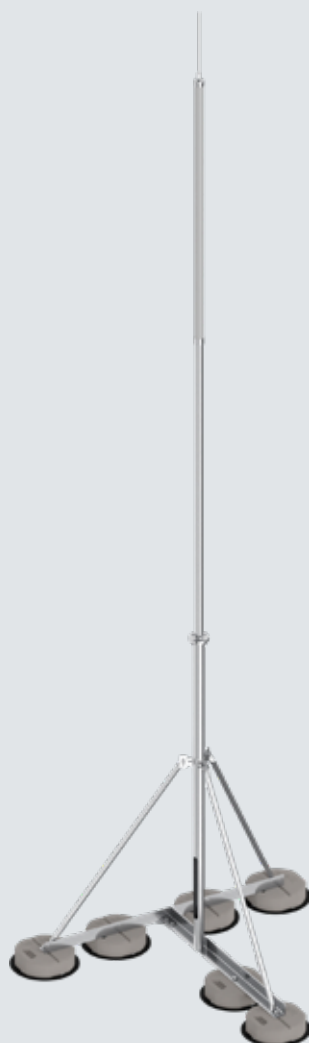
Ord. no. 640 030

Air-termination pole for HVC-50 and HVC-85

Free-standing up to a height of 8.0 m for **HVC-interior pole installation**.



Ord. no. 632 000



Ord. no. 632 003

Air-termination pole SET for HVC-conductor, free-standing

Specification according to EN IEC 62561-2 / IEC TS 62561-8:

Air-termination tip: Aluminium 0.4 m above air-termination conductor height

Insulated support: GRP 1.7 m

Stand pipe length: Stainless steel V2A variable

with opening to insert the HVC-conductor

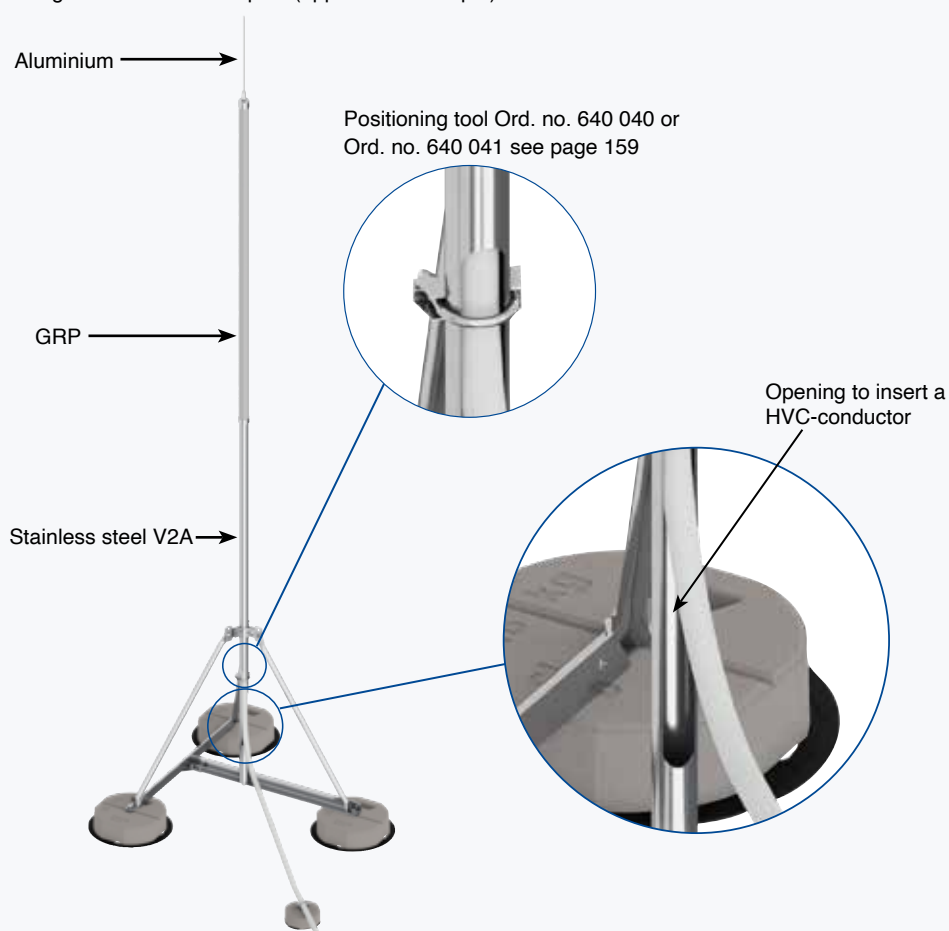
Including air-termination pole base frame, concrete bases and support plates

Total height	Pole parts	Pole base frame Ord. no.	Concrete base Ord. no.	Footprint	Ord. no.
3.0 m	1-part	499 000	4 x 499 100 (12 kg)	0.65 x 0.65 m	632 000
4.0 m	1-part	499 005	3 x 103 101 (16 kg)	1.29 x 1.24 m	632 001
5.0 m	2-part	499 005	3 x 103 118 (25 kg)	1.33 x 1.28 m	632 002
6.0 m	2-part	499 006	6 x 103 101 (16 kg)	1.83 x 1.62 m	632 003
7.0 m	2-part	499 006	6 x 103 110 (20 kg)	1.83 x 1.62 m	632 004
8.0 m	2-part	499 007 S	10 x 103 110 (20 kg)	1.83 x 1.70 m	632 005

Wind speed according to Eurocode:

Air-termination pole height	Ord. no.	Wind speed	
		Static safety factor 1.0	Static safety factor 1.5
up to 3.00 m	632 000	150 km/h	123 km/h
up to 4.00m	632 001	145 km/h	118 km/h
up to 5.00 m	632 002	139 km/h	113 km/h
up to 6.00m	632 003	154 km/h	126 km/h
up to 7.00 m	632 004	141 km/h	115 km/h
up to 8.00m	632 005	151 km/h	123 km/h

Design of air-termination pole (application example):



Air-termination pole for HVC-50 and HVC-85

Free-standing up to a height of 8.0 m, with telescopic termination rod for **HVC-exterior pole installation** or for meshed systems.

Benefits:

- Transport length of the pole parts **max. 2.8 m**.
- Telescopic air-termination rod in aluminium.
- Enormous saving of HVC-conductor lengths for meshed systems.
- Significantly less time required for the installation.
- Separation distances better manageable due to shorter HVC-conductor lengths.

Air-termination pole SET for HVC-conductor, free-standing with telescopic air-termination rod.

Specification according to EN IEC 62561-2 / IEC TS 62561-8:

Air-termination tip:	Aluminium	telescopic, variable length
Insulated support:	GRP	1.7 m
Stand pipe length:	Stainless steel V2A	variable

Including air-termination pole base frame, concrete bases and support plates

Total height	Height HVC-conductor connection	Pole base frame Ord. no.	Concrete base Ord. no.	Footprint	Ord. no.
4.0 m	1.8 m	499 000	8 x 499 101 (16 kg)	0.65 x 0.65 m	632 101
5.0 m	2.7 m	499 005	3 x 103 118 (25 kg)	1.33 x 1.28 m	632 102
6.0 m	3.3 m	499 006	6 x 103 101 (16 kg)	1.83 x 1.62 m	632 103
7.0 m	3.3 m	499 006	6 x 103 118 (25 kg)	1.87 x 1.66 m	632 104
8.0 m	4.3 m	499 006	6 x 103 118 (25 kg)	1.87 x 1.66 m	632 105

Wind speed according to Eurocode:

Air-termination pole height	Ord. no.	Wind speed	
		Static safety factor 1.0	Static safety factor 1.5
up to 4.00 m	632 101	157 km/h	128 km/h
up to 5.00 m	632 102	137 km/h	112 km/h
up to 6.00 m	632 103	139 km/h	113 km/h
up to 7.00 m	632 104	154 km/h	126 km/h
up to 8.00 m	632 105	125 km/h	102 km/h

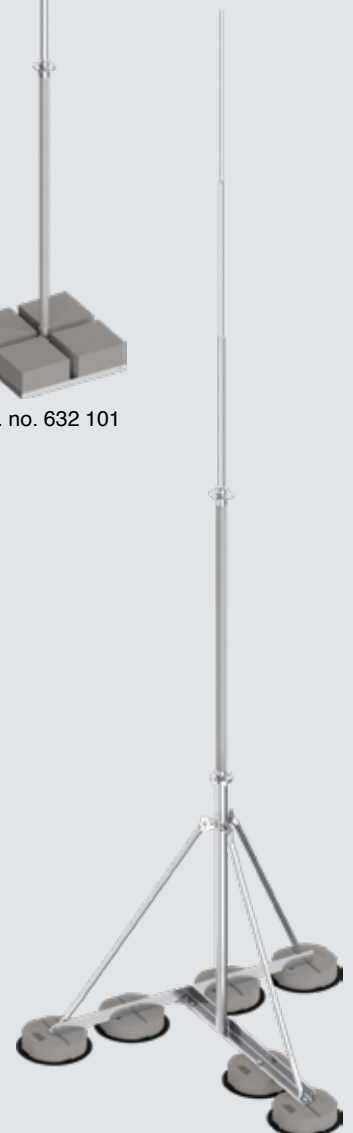
Design of air-termination pole (application example):



Air-termination pole, free-standing with telescopic termination rod



Ord. no. 632 101

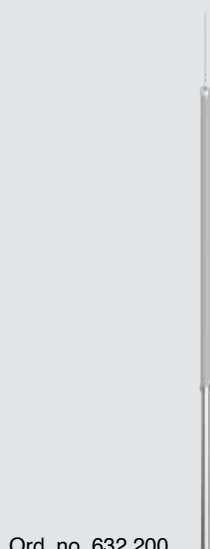


Ord. no. 632 103

HVC-conductor

Air-termination pole for wall mounting

self-supporting up to a height of 8.0 m, for HVC-interior pole installation



Ord. no. 632 200

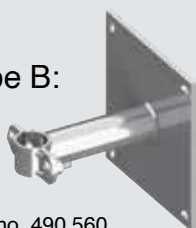
Wall fastener

Type A:



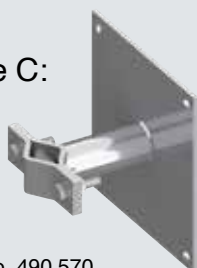
Ord. no. 490 550

Type B:



Ord. no. 490 560

Type C:



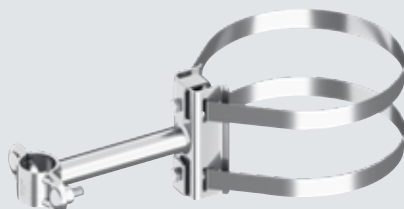
Ord. no. 490 570

Fixing anchors



Ord. no. 490 548

Air-termination pole fastener



Ord. no. 490 540

Air-termination pole for HVC-conductor, self-supporting.

Specification according to EN IEC 62561-2 / IEC TS 62561-8:

Air-termination tip: Aluminium 0.4 m above air-termination conductor height
Insulated support: GRP 1.7 m
Stand pipe length: Stainless steel V2A variable

Total height	Pole parts	Necessary wall fastener	Ord. no.
3.0 m	1-part	2x Type A	632 200
4.0 m	1-part	2x Type A	632 201
5.0 m	2-part	2x Type B	632 202
6.0 m	2-part	2x Type C	632 203
7.0 m	2-part	2x Type C	632 204
8.0 m	2-part	2x Type C	632 205

Additional pole fasteners e. g. Rafter fastener see page 130.

Wall fastener, type A for poles with HVC-conductor up to max. height of 4.0 m and ø 42 mm. Hole pattern for rivet and screw mounting and 2 x ø 10.5 mm.

Specification	Wall distance	PU	Ord. no.
Completely in stainless steel V2A for ø 42 mm	150 mm	1	490 550
pole clamp with 2 x screws M10	200 mm	1	490 551
spring lock washer and nut V2A	250 mm	1	490 552
	300 mm	1	490 553

Wall fastener, type B for poles with HVC-conductor up to max. height of 5.0 m and ø 42 mm. Hole pattern 4x ø 10.5 mm.

Specification	Wall distance	Pu	Ord. no.
Completely in stainless steel V2A for ø 42 mm	150 mm	1	490 560
pole clamp with 2 x screws M10	200 mm	1	490 561
spring lock washer and nut V2A	250 mm	1	490 562
mounting plate V2A: 200 x 200 x 8 mm	300 mm	1	490 563
hole pattern mounting plate: □ 170 x 170 mm			

Wall fastener, type C for poles with HVC-conductor up to max. height of 8.0 m and ø 60 mm. Hole pattern 4 x ø 12.5 mm.

Specification	Wall distance	PU	Ord. no.
Completely in stainless steel V2A for ø 60 mm	150 mm	1	490 570
pole clamp with 2 x screws M16	200 mm	1	490 571
spring lock washer and nut V2A	250 mm	1	490 572
mounting plate V2A: 300 x 300 x 8 mm	300 mm	1	490 573
hole pattern mounting plate: □ 260 x 260 mm			

Fixing anchors, stainless steel V4A for wall fastener on concrete walls.

Specification	PU	Ord. no.
M10 for wall fastener type A and type B	1	490 548
M12 for wall fastener type C	1	490 549

Air-termination pole fastener for poles with HVC-conductor up to 5.0 m height and ø 42 mm. Tape pipe clamp V2A for clamping range up to 800 mm.

Specification	Wall distance	PU	Ord. no.
Completely in stainless steel V2A for ø 42 mm	150 mm	1	490 540
pipe clamp with 2 x screws M10,	200 mm	1	490 541
spring lock washer and nut in V2A	250 mm	1	490 542
Tape pipe clamp with 2 x screws M8 V2A	300 mm	1	490 543

Air-termination pole for wall mounting

self-supporting up to a height of 8.0 m, with telescopic termination rod for **HVC-exterior pole installation** or for meshed systems

Benefits:

- Transport length of the pole parts **max. 2.8 m**.
- Telescopic air-termination rod in aluminium.
- Enormous saving of HVC-conductor lengths for meshed systems.
- Significantly less time required for the installation.
- Separation distances better manageable due to shorter HVC-conductor lengths.

Air-termination pole for HVC-conductor, self-supporting with telescopic termination rod.

Specification according to EN IEC 62561-2 / IEC TS 62561-8:

Air-termination tip: Aluminium telescopic, variable length

Insulated support: GRP 1.7 m

Stand pipe length: Stainless steel V2A variable

Total height	Height HVC-conductor connection	Necessary wall fastener	Ord. no.
5.0 m	2.6 m	2x Type B	632 302
6.0 m	3.2 m	2x Type C	632 303
7.0 m	3.2 m	2x Type C	632 304
8.0 m	4.2 m	2x Type C	632 305

Additional pole fasteners e. g. Rafter fastener see page 130.

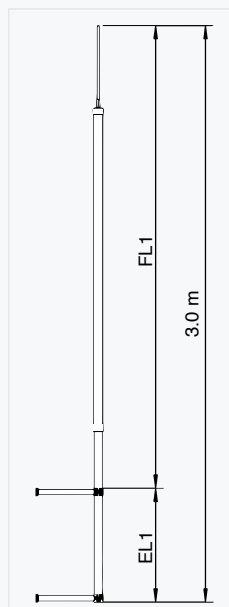
Wind speed according to Eurocode:

Air-termination pole height	Ord. no.	Wall fastener	FL 1	EL 1	Wind speed	
					Static safety factor 1.0	Static safety factor 1.5
Air-termination pole for wall mounting in Stainless steel V2A						
3.0 m	632 200	2x Type A	2.40 m	0.60 m	149 km/h	122 km/h
4.0 m	632 201	2x Type A	3.00 m	1.00 m	149 km/h	122 km/h
5.0 m	632 202	2x Type B	4.30 m	0.70 m	196 km/h	160 km/h
6.0 m	632 203	2x Type C	5.00 m	1.00 m	197 km/h	161 km/h
7.0 m	632 204	2x Type C	6.00 m	1.00 m	198 km/h	162 km/h
8.0 m	632 205	2x Type C	7.00 m	1.00 m	200 km/h	163 km/h
Telescopic air-termination pole Aluminium for wall mounting						
up to 5.0 m	632 302	2x Type B	4.30 m	0.70 m	196 km/h	160 km/h
up to 6.0 m	632 303	2x Type C	5.00 m	1.00 m	196 km/h	160 km/h
up to 7.0 m	632 304	2x Type C	6.00 m	1.00 m	176 km/h	144 km/h
up to 8.0 m	632 305	2x Type C	7.00 m	1.00 m	176 km/h	144 km/h

Explanation: Clamping lengths air-termination pole with wall fastener

Example:
3.0 m air-termination pole
Ord. no. 632 200 +
2x wall fastener Type A

EL1 = 0.6 m
FL1 = 2.4 m



Air-termination pole, free-standing with telescopic termination rod



Ord. no. 632 302

HVC-conductor

HVC-conductor fastener

HVC-conductor fastener

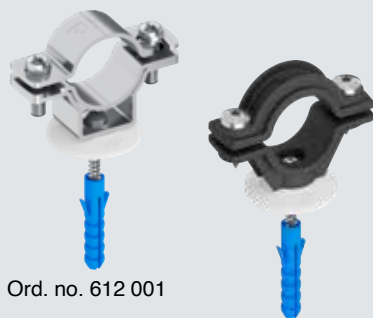


Ord. no. 612 003



Ord. no. 614 003

HVC-conductor fastener



Ord. no. 612 001



Ord. no. 614 001

HVC-50 conductor fastener

Specification	Fixing	Fit	PU	Ord. no.
Stainless steel V2A	ø 6.2 mm	ø 23 mm	50	662 003
Stainless steel V2A	ø 9 mm	ø 23 mm	50	662 002
Plastic	ø 6.2 mm	ø 23 mm	50	664 003



HVC-85 conductor fastener

Specification	Fixing	Fit	PU	Ord. no.
Stainless steel V2A	ø 6.2 mm	ø 28 mm	50	612 003
Stainless steel V2A	ø 9 mm	ø 28 mm	50	612 002
Plastic	ø 6.2 mm	ø 28 mm	50	614 003



HVC-50 conductor fastener, with washer, screw and ø 8 mm dowel.

Specification	Conductor height	Fit	PU	Ord. no.
Stainless steel V2A	20 mm	ø 23 mm	50	662 001
Plastic	15.5 mm	ø 23 mm	50	664 001

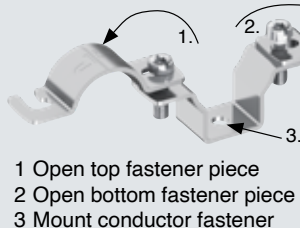


HVC-85 conductor fastener, with washer, screw and ø 8 mm dowel.

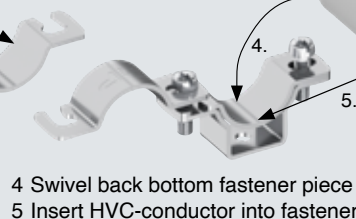
Specification	Conductor height	Fit	PU	Ord. no.
Stainless steel V2A	17.5 mm	ø 28 mm	50	612 001
Plastic	13 mm	ø 28 mm	50	614 001



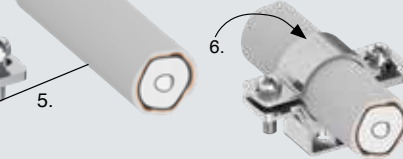
Delivery state



- 1 Open top fastener piece
- 2 Open bottom fastener piece
- 3 Mount conductor fastener



- 4 Swivel back bottom fastener piece
- 5 Insert HVC-conductor into fastener



- 6 Close top fastener piece and tighten screws

HVC-conductor fastener



Ord. no. 612 004

HVC-conductor

HVC-50 conductor fastener, for the direct fixing to walls. Also suitable for external thermal insulation composite systems.

Specification	Fixing	Fit	PU	Ord. no.
Stainless steel V2A	ø 7x8.5 mm	ø 23 mm	50	662 004



HVC-85 conductor fastener, for the direct fixing to walls. Also suitable for external thermal insulation composite systems.

Specification	Fixing	Fit	PU	Ord. no.
Stainless steel V2A	ø 7x8.5 mm	ø 28 mm	50	612 004



Roof conductor holder

Roof conductor holder, for flat roofs with **HVC-50** conductor fastener ø 23 mm, including concrete base and support plate.

Specification	Concrete base	Fit	PU	Ord. no.
Conductor fastener stainless steel V2A	3 kg	ø 23 mm	1	672 000
Conductor fastener stainless steel V2A	6 kg	ø 23 mm	1	672 001
Conductor fastener plastic	3 kg	ø 23 mm	1	674 000
Conductor fastener plastic	6 kg	ø 23 mm	1	674 001
Snap holder plastic	3 kg	ø 23 mm	1	674 008
Snap holder plastic	6 kg	ø 23 mm	1	674 009

Roof conductor holder, for flat roofs with **HVC-85** conductor fastener ø 28 mm, including concrete base and support plate.

Specification	Concrete base	Fit	PU	Ord. no.
Conductor fastener stainless steel V2A	3 kg	ø 28 mm	1	622 000
Conductor fastener stainless steel V2A	6 kg	ø 28 mm	1	622 001
Conductor fastener plastic	3 kg	ø 28 mm	1	624 000
Conductor fastener plastic	6 kg	ø 28 mm	1	624 001
Snap holder plastic	3 kg	ø 28 mm	1	624 008
Snap holder plastic	6 kg	ø 28 mm	1	624 009

Application example:



Benefits:

- Laying the **HVC**-conductor on flat roofs without additional screwing effort through clip fastening.
- Easier handling due to the low weight of the individual holders.

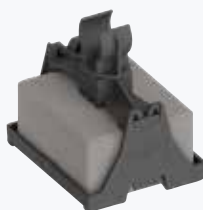
PR-ÖKO 2 adapter, for **HVC-50** conductor, suitable for 1 kg roof conductor holder Ord. no. 111 630.

Specification	Fit	PU	Ord. no.
Plastic screwed	ø 23 mm	50	674 003

PR-ÖKO 2 adapter, for **HVC-85** conductor, suitable for 1 kg roof conductor holder Ord. no. 111 630.

Specification	Fit	PU	Ord. no.
Plastic screwed	ø 28 mm	50	624 003

Application example:



PR-ÖKO 2 roof conductor holder for flat roofs with conductor holder ø 8 mm. For use with the PR-ÖKO 2 adapter for HVC.

Specification	Fit	PU	Ord. no.
Plastic part with concrete stone	ø 8 mm	10	111 630

Roof conductor holder



Ord. no. 624 000



Ord. no. 624 008

PR-ÖKO 2 Adapter



Ord. no. 624 003

PR-ÖKO 2 (J.P.-patent) Roof conductor holder



Ord. no. 111 630

Roof conductor holder

Roof conductor holder for Kalzip



Ord. no. 614 060

Roof conductor holder for RIB-ROOF 500



Ord. no. 614 070

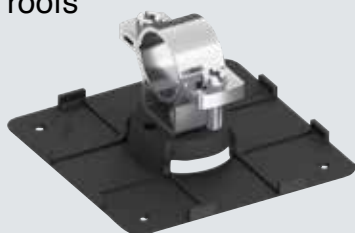
Roof conductor holder for standing seam



Ord. no. 612 100

Ord. no. 614 100

Roof conductor holder for synthetic roofing membranes and bitumen roofs



Ord. no. 612 090

Roof conductor holder, for Kalzip with HVC-conductor fastener.

Specification with HVC-50 conductor holder		Fit	PU	Ord. no.
Support	Fastener			
Stainless steel V2A	Stainless steel V2A	ø 23 mm	25	662 060
Stainless steel V2A	Plastic	ø 23 mm	25	664 060

Specification with HVC-85 conductor holder		Fit	PU	Ord. no.
Support	Fastener			
Stainless steel V2A	Stainless steel V2A	ø 28 mm	25	612 060
Stainless steel V2A	Plastic	ø 28 mm	25	614 060

Roof conductor holder, for RIB-ROOF 500 with HVC-conductor fastener.

Specification with HVC-50 conductor holder		Fit	PU	Ord. no.
Support	Fastener			
Stainless steel V2A	Stainless steel V2A	ø 23 mm	25	662 070
Stainless steel V2A	Plastic	ø 23 mm	25	664 070

Specification with HVC-85 conductor holder		Fit	PU	Ord. no.
Support	Fastener			
Stainless steel V2A	Stainless steel V2A	ø 28 mm	25	612 070
Stainless steel V2A	Plastic	ø 28 mm	25	614 070

Also available for RIB-ROOF 465 upon request.

Roof conductor holder, for standing seam (clamping range up to 8 mm), with HVC-conductor fastener.

Specification with HVC-50 conductor holder		Fit	PU	Ord. no.
Support	Fastener			
Stainless steel V2A	Stainless steel V2A	ø 23 mm	25	662 100
Stainless steel V2A	Plastic	ø 23 mm	25	664 100

Specification with HVC-85 conductor holder		Fit	PU	Ord. no.
Support	Fastener			
Stainless steel V2A	Stainless steel V2A	ø 28 mm	25	612 100
Stainless steel V2A	Plastic	ø 28 mm	25	614 100

Roof conductor holder with HVC-conductor fastener, for synthetic roofing membranes and bitumen roofs. To be fixed onto synthetic roofing membranes with weldable fastening tapes; glued directly onto bitumen roofs.

Specification with HVC-50 conductor holder	Conductor height	Fit	PU	Ord. no.
Support	Fastener			
Plastic PE-HD	Stainless steel V2A	28 mm	ø 23 mm	50
				662 090

Specification with HVC-85 conductor holder	Conductor height	Fit	PU	Ord. no.
Support	Fastener			
Plastic PE-HD	Stainless steel V2A	28 mm	ø 28 mm	50
				612 090

NEW Conductor support

Conductor support-SET for raising the HVC-conductor on flat roofs.

For connection to metal objects.

- Includes:
- HVC-conductor fastener and head-unit holder ø 8-10 mm.
 - Concrete base with wedge adapter and support plate.

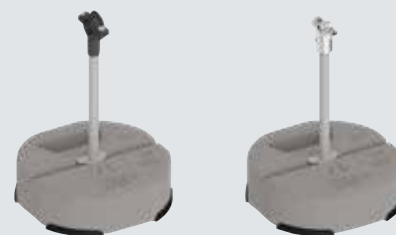
Specification with HVC-50 conductor holder (ø 23 mm)	Concrete bases	Height	PU	Ord. no.
NEW Conductor support GRP ø 16 mm (SET)	2 x 6 kg	300 mm	1	674 130
NEW Conductor support GRP ø 16 mm (SET)	2 x 16 kg	700 mm	1	674 170

Specification with HVC-85 conductor holder (ø 28 mm)	Concrete bases	Height	PU	Ord. no.
NEW Conductor support GRP ø 16 mm (SET)	2 x 6 kg	300 mm	1	624 130
NEW Conductor support GRP ø 16 mm (SET)	2 x 16 kg	700 mm	1	624 170

Application example for order no 624 170:



Conductor support-SET



Ord. no. 624 130

Roof conductor holder, for universal use with HVC-conductor fastener.

Specification with HVC-50 conductor holder	Length	Fit	PU	Ord. no.
Stainless steel V2A	210 mm	ø 23 mm	1	662 080
Stainless steel V2A	280 mm	ø 23 mm	1	662 081
Stainless steel V2A	410 mm	ø 23 mm	1	662 082

Specification with HVC-85 conductor holder	Length	Fit	PU	Ord. no.
Stainless steel V2A	210 mm	ø 28 mm	1	612 080
Stainless steel V2A	280 mm	ø 28 mm	1	612 081
Stainless steel V2A	410 mm	ø 28 mm	1	612 082

Application example:



Roof conductor holder
(J.P.-patent)



Ord. no. 612 080

Adjustable roof conductor holder

for all sizes of ridge tiles, with HVC-conductor holder.

Specification with HVC-50 conductor holder	Fit	PU	Ord. no.
Support	Holder		
NEW Stainless steel V2A	Stainless steel V2A	ø 23 mm	25 662 078

Specification with HVC-85 conductor holder	Fit	PU	Ord. no.
Support	Holder		
NEW Stainless steel V2A	Stainless steel V2A	ø 28 mm	25 612 078

Adjustable roof conductor holder



Ord. no. 612 078

Gutter clamp for installation on gutters, with HVC-conductor holders.

Suitable for bead thicknesses up to 20 mm.

Specification with HVC-50 conductor holder	Fit	PU	Ord. no.
Support	Holder		
NEW Stainless steel V2A	Stainless steel V2A	ø 23 mm	25 662 073

Specification with HVC-85 conductor holder	Fit	PU	Ord. no.
Support	Holder		
NEW Stainless steel V2A	Stainless steel V2A	ø 28 mm	25 612 073

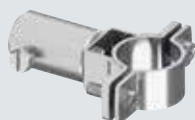
Gutter clamp



Ord. no. 612 073

Mounting clamps

Fixing bush



Ord. no. 622 005



Ord. no. 624 005

Fixing bush for **16plus** with HVC-conductor fastener for fixing to the solid rod GRP ø 16 mm.

Specification with HVC-50 conductor holder	Fit	Length	PU	Ord. no.
Fixing bush aluminium , for GRP ø 16 mm;				
with HVC-50 conductor fastener, stainless steel V2A	ø 23 mm	40 mm	25	672 005
with HVC-50 conductor fastener, plastic	ø 23 mm	40 mm	25	674 005

Specification with HVC-85 conductor holder	Fit	Length	PU	Ord. no.
Fixing bush aluminium , for GRP ø 16 mm;				
with HVC-85 conductor fastener, stainless steel V2A	ø 28 mm	40 mm	25	622 005
with HVC-85 conductor fastener, plastic	ø 28 mm	40 mm	25	624 005

Combination possibilities system **16plus** please see page 134.

Mounting plate and angle bracket



Ord. no. 614 010



Ord. no. 614 011

Terminal clamp, heavy duty type



Ord. no. 612 021

Mounting plate and angle bracket, to mount the HVC-conductor on walls and metal sheets.

Specification	HVC-50 conductor fastener	Fit	PU	Ord. no.
Mounting plate stainless steel V2A	Plastic	ø 23 mm	25	664 010
Angle bracket stainless steel V2A	Plastic	ø 23 mm	25	664 011
Mounting plate stainless steel V2A	Stainless steel V2A	ø 23 mm	25	662 010
Angle bracket stainless steel V2A	Stainless steel V2A	ø 23 mm	25	662 011

Specification	HVC-85 conductor fastener	Fit	PU	Ord. no.
Mounting plate stainless steel V2A	Plastic	ø 28 mm	25	614 010
Angle bracket stainless steel V2A	Plastic	ø 28 mm	25	614 011
Mounting plate stainless steel V2A	Stainless steel V2A	ø 28 mm	25	612 010
Angle bracket stainless steel V2A	Stainless steel V2A	ø 28 mm	25	612 011

Terminal clamp, heavy-duty type, to mount the HVC-conductor to steel constructions or railings with fixing bush **aluminium** and fastener, **stainless steel V2A**.

Specification with HVC-50 conductor holder	Clamping area	Fit	PU	Ord. no.
Stainless steel V2A	5 - 19 mm	ø 23 mm	25	662 020
Stainless steel V2A	19 - 36 mm	ø 23 mm	25	662 021
Stainless steel V2A	36 - 52 mm	ø 23 mm	20	662 022

Specification with HVC-85 conductor holder	Clamping area	Fit	PU	Ord. no.
Stainless steel V2A	5 - 19 mm	ø 28 mm	25	612 020
Stainless steel V2A	19 - 36 mm	ø 28 mm	25	612 021
Stainless steel V2A	36 - 52 mm	ø 28 mm	20	612 022

Beam clip



Ord. no. 624 007



Ord. no. 624 006

Beam clip for HVC-conductor; screwed on (for conductor relief) and snapped on (to fix the position)

Specification with HVC-50 conductor holder	Clamping range	Fit	PU	Ord. no.
Conductor fastener plastic	8 - 12.5 mm	ø 23 mm	50	674 006
Beam clip steel/hot galvanized		snapped on		
Conductor fastener stainless steel V2A	8 - 12.5 mm	ø 23 mm	50	674 007
Beam clip steel/hot galvanized		screwed on		
Additional clamping range on request.				

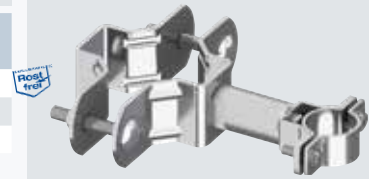
Specification with HVC-85 conductor holder	Clamping range	Fit	PU	Ord. no.
Conductor fastener plastic	8 - 12.5 mm	ø 28 mm	50	624 006
Beam clip steel/hot galvanized		snapped on		
Conductor fastener stainless steel V2A	8 - 12.5 mm	ø 28 mm	50	624 007
Beam clip steel/hot galvanized		screwed on		
Additional clamping range on request.				

Pipe clamp, to mount the **HVC-conductor** on pipes or railings with fixing bush, **aluminium** and fastener, **stainless steel V2A**.

Specification with HVC-50 conductor holder	Fit pipe		Fit	PU	Ord. no.
	diameter	Pipe- $\varnothing$			
Pipe clamp stainless steel V2A with mounting screw	$\varnothing$ 42.4 - 60.3 mm	1 1/4" - 2"	$\varnothing$ 23 mm	20	662 030
stainless steel V2A	$\varnothing$ 42.4 - 88.9 mm	1 1/4" - 3"	$\varnothing$ 23 mm	20	662 031

Specification with HVC-85 conductor holder	Fit pipe		Fit	PU	Ord. no.
	diameter	Pipe- $\varnothing$			
Pipe clamp stainless steel V2A with mounting screw	$\varnothing$ 42.4 - 60.3 mm	1 1/4" - 2"	$\varnothing$ 28 mm	20	612 030
stainless steel V2A	$\varnothing$ 42.4 - 88.9 mm	1 1/4" - 3"	$\varnothing$ 28 mm	20	612 031

Pipe clap



Ord. no. 612 030

Tape pipe clamp, to mount the **HVC-conductor** on pipes up to 300 mm with fixing bush, **aluminium** and fastener, **stainless steel V2A**. Height of conductor 100 mm.

Specification with HVC-50 conductor holder	Pipe- $\varnothing$	Fit	PU	Ord. no.
Tape pipe clamp with tensioning tape stainless steel V2A	up to $\varnothing$ 300 mm	$\varnothing$ 23 mm	10	662 041
Tape pipe clamp without tensioning tape stainless steel V2A	-	$\varnothing$ 23 mm	20	662 040
Tensioning tape stainless steel V2A , 22 x 0.4 mm	-	-	25 m	913 825
	-	-	50 m	913 831

Specification with HVC-85 conductor holder	Pipe- $\varnothing$	Fit	PU	Ord. no.
Tape pipe clamp with tensioning tape stainless steel V2A	up to $\varnothing$ 300 mm	$\varnothing$ 28 mm	10	612 041
Tape pipe clamp without tensioning tape stainless steel V2A	-	$\varnothing$ 28 mm	20	612 040
Tensioning tape stainless steel V2A , 22 x 0.4 mm	-	-	25 m	913 825
	-	-	50 m	913 831

Tape pipe clamp



Ord. no. 612 041



Ord. no. 612 040

Tape pipe clamp low type, to mount the **HVC-conductor** on pipes up to 300 mm. With tensioning tape and conductor fastener **V2A**. Height of conductor 30 mm.

Specification with HVC-50 conductor holder	Pipe- $\varnothing$	Fit	PU	Ord. no.
Tape pipe clamp with tensioning tape stainless steel V2A	$\varnothing$ 50 - 150 mm	$\varnothing$ 23 mm	10	662 045
Tape pipe clamp with tensioning tape stainless steel V2A	$\varnothing$ 50 - 300 mm	$\varnothing$ 23 mm	10	662 046
Tape pipe clamp without tensioning tape stainless steel V2A	-	$\varnothing$ 23 mm	20	662 047
Tensioning tape stainless steel V2A , 15 x 0.4 mm	-	-	25 m	110 248

Specification with HVC-85 conductor holder	Pipe- $\varnothing$	Fit	PU	Ord. no.
Tape pipe clamp with tensioning tape stainless steel V2A	$\varnothing$ 50 - 150 mm	$\varnothing$ 28 mm	10	612 045
Tape pipe clamp with tensioning tape stainless steel V2A	$\varnothing$ 50 - 300 mm	$\varnothing$ 28 mm	10	612 046
Tape pipe clamp without tensioning tape stainless steel V2A	-	$\varnothing$ 28 mm	20	612 047
Tensioning tape stainless steel V2A , 15 x 0.4 mm	-	-	25 m	110 248

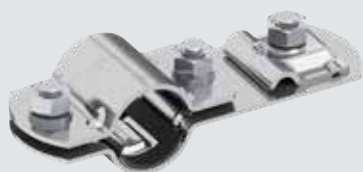
Tape pipe clamp (low type)



Ord. no. 612 045

Equipotential bonding clamp

Equipotential bonding clamp



Ord. no. 612 051

Equipotential bonding clamp, with self-sealing and bonding plate for HVC-conductor.

Specification for HVC-50 conductor	Fit	PU	Ord. no.
Stainless steel V2A	Square profile 9 mm	1	662 050
Stainless steel V2A	6 mm ² (ø 2.8 mm) - 50 mm ² (ø 8 mm)	1	662 051



Specification for HVC-85 conductor	Fit	PU	Ord. no.
Stainless steel V2A	Square profile 9 mm	1	612 050
Stainless steel V2A	6 mm ² (ø 2.8 mm) - 50 mm ² (ø 8 mm)	1	612 051



Equipotential bonding clamp



Ord. no. 612 055



Ord. no. 612 056

Equipotential bonding clamp with seal and contact plate for HVC-conductor.

Specification for HVC-50 conductor	Fit	PU	Ord. no.
Stainless steel V2A	ø 6 - 8 mm	1	662 055
Stainless steel V2A	6 mm ² (ø 2.8 mm) - 50 mm ² (ø 8 mm)	1	662 056



Specification for HVC-85 conductor	Fit	PU	Ord. no.
Stainless steel V2A	ø 6 - 8 mm	1	612 055
Stainless steel V2A	6 mm ² (ø 2.8 mm) - 50 mm ² (ø 8 mm)	1	612 056



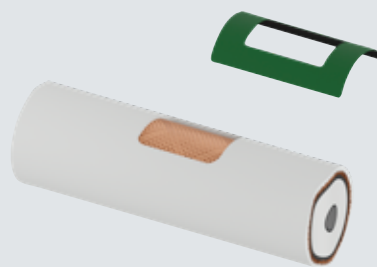
Mounting with cutting tool (look at page 163):



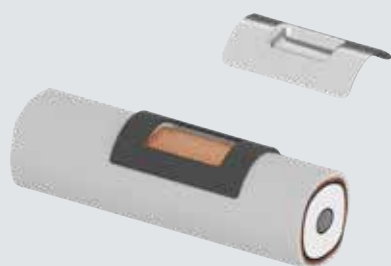
- 1 Clean HVC-conductor
- 2 Position cutting tool congruently



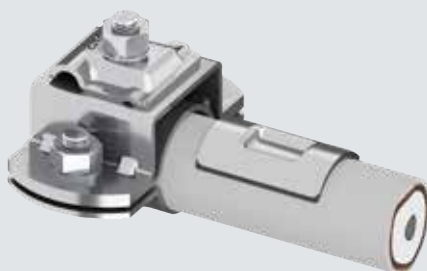
- 3 Screw the cutting tool down and afterwards open it



- 4 Remove cut material and cutting tool (expose copper shield braid)
- 5 Pull off foil from sealing and stick on one side



- 6 Pull off foil from sealing and stick on bonding plate



- 7 Position and tighten mounting clamp with bonding plate (10 Nm)



- 8 Attachment of the equipotential bonding conductor

Accessories for HVC-50 and HVC-85

Attention sign "Attention Insulated lightning protection" / "Achtung Isolierter Blitzschutz"

Specification	Language	Fit	PU	Ord. no.
Aluminium with adhesive label	German	2 x ø 6.5 mm Hole spacing 125 mm	1	640 000
Aluminium with adhesive label	English	2 x ø 6.5 mm Hole spacing 125 mm	1	640 001
Adhesive label	German	95 mm x 55 mm	1	640 002
Adhesive label	English	95 mm x 55 mm	1	640 003

Attention sign "Attention Equipotential bonding" / "Achtung Potentialausgleich"

Specification	Language	Fit	PU	Ord. no.
Aluminium with adhesive label	German	2 x ø 6.5 mm Hole spacing 125 mm	1	640 004
Aluminium with adhesive label	English	2 x ø 6.5 mm Hole spacing 125 mm	1	640 005
Adhesive label	German	95 mm x 55 mm	1	640 006
Adhesive label	English	95 mm x 55 mm	1	640 007

Conductor fastener for exterior air-termination installation of the HVC-conductor in the area of the insulated support GRP ø 48 mm.

Specification	Clamping range	Fit	PU	Ord. no.
Conductor fastener plastic with cable tie	ø 48 mm	up to 4 HVC-conductors (HVC-50 / HVC-85)	1	632 449

Positioning support with bracket made of round material for easier installation of the conductor when interior pole installation.

Specification	Fit (Pole diameter)	PU	Ord. no.
Stainless steel V2A	ø 42 mm	1	640 040
Stainless steel V2A	ø 60 mm	1	640 041

Terminal plate, for exterior air-termination installation of the HVC-conductor. Up to 4 contact connections are possible.

Specification	Fit	PU	Ord. no.
Aluminium	ø 10.5 mm	1	632 400

Cable tie, UV-resistant and weatherproof.

Specification	Length	PU	Ord. no.
Plastic black	7.6 x 560 mm	100	640 010

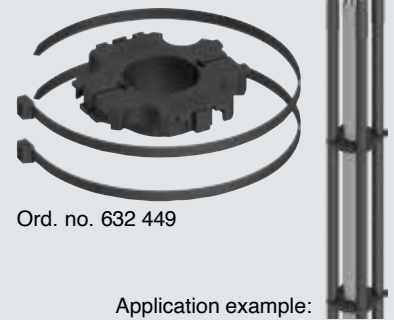
Cover cap, for HVC-conductor, to prevent water and dirt entering during transport.

Specification	Fit	PU	Ord. no.
Plastic blue	ø 23 mm (HVC-50 conductor)	10	690 020
Plastic blue	ø 28 mm (HVC-85 conductor)	10	640 020

Attention sign



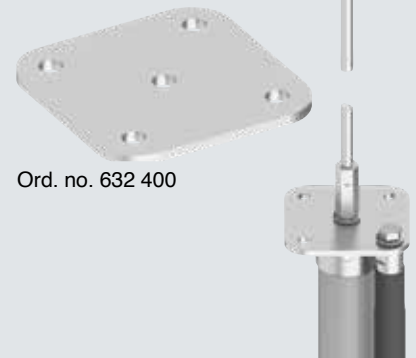
Conductor fastener



Positioning support



Terminal plate



Terminal plate Ord. no. 632 400 + head-unit e. g. Ord. no. 601 100 (on page 142 and 146)

Cover cap



Insulation test for HVC-50 and HVC-85



The HVC-50 and HVC-85 conductors are the first insulated conductors used in lightning protection that can be tested for function. Here, for the first time, it is possible to determine by a simple and practical measurement that no lightning-induced insulation breakdown of the insulated cables has occurred and that they are therefore still safe and fully functional.

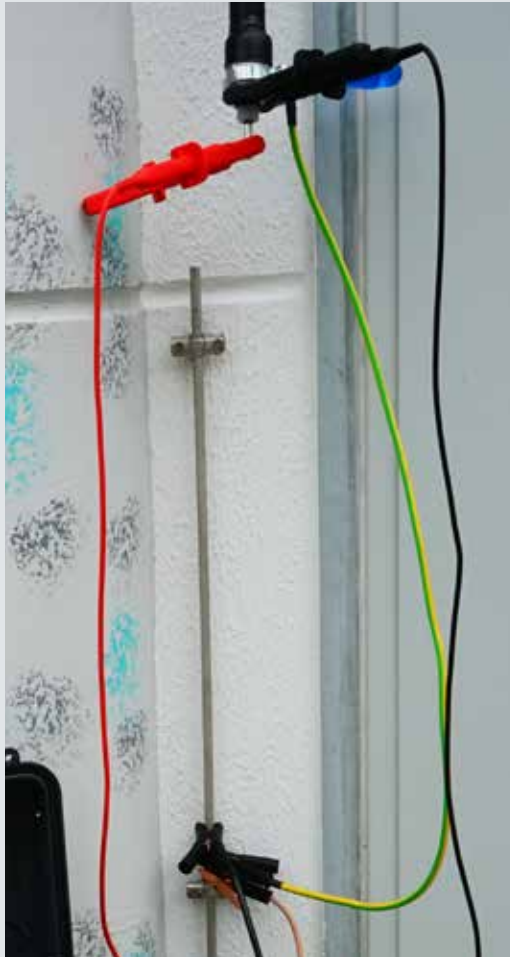
A real innovation from the house of J. Pröpster.

Benefits:

- Regular insulation testing of the HVC-conductors
- Simple and practical implementation of the insulation test
- Permanent protection can be guaranteed
- **NEW:**
 - Now with a divisible base.
 - Smart design through compact construction.
 - Time savings during the assembly of the base and during the insulation test.



Existing test joint (base-unit-SET):



Required test-equipment for the insulation test:



Passed insulation test



Installation video
for HVC insulation testing



Video on how to perform
the HVC insulation test

Supplementary articles for the insulation test

Divisible base-unit for insulation testing of HVC-conductors. Compact design.

Specification	Fit	PU	Ord. no.
Stainless steel V2A/Aluminium	ø 23 mm (HVC-50)	1	652 220
Stainless steel V2A/Aluminium	ø 28 mm (HVC-85)	1	602 220

Note: Please follow the installation instructions for installation!
The Black-Ex milling head for removing the intermediate black layer can be found on page 162.

Application example:



Base unit
Ord. no. 652 220
with Vario-clamp
Ord. no. 910 579

Insulation cap, for the insulation test (HVC-50 / HVC-85).

Specification	Length	PU	Ord. no.
PE black, for detached head-units	210 mm	1	600 620
PA 66 black, for divisible base-unit	150 mm	1	600 622

Divisible base-unit (J&P-patent)



Ord. no. 602 220

Insulation cap



Ord. no. 600 620

Insulation test set for HVC

Specification	PU	Ord. no.
Case with complete equipment for testing the HVC-conductor	1	600 710
Insulation tester and accessories:		
- Insulation tester Megger MIT1525 (Ord. no. 600 610) including measuring clamps		
- Discharge rod (Ord. no. 600 611)		
- Equipotential bonding bridge (Ord. no. 600 613)		
- 3x warning sign for insulation testing for barrier (Ord. no. 600 614)		
- 10x warning sign for insulation testing of HVC-conductor (Ord. no. 600 615)		
- 10x Long insulating cap for head piece (Ord. no. 600 620)		
- 10x long insulating cap for the separable base (Ord. no. 600 622)		
Spare parts:		
- 10x O-ring 29x3x35 for separable base HVC-85 (Ord. no. 602 221)		
- 10x O-ring 25x3x31 for separable base HVC-50 (Ord. no. 652 221)		
- 10x O-ring 6.5x1.5 for separable base (Ord. no. 652 222)		
- 10x cylinder head screw M6 x 6.0 (Ord. no. 652 223)		

Insulation test set



Ord. no. 600 710

Insulation measuring device and accessories

Specification	PU	Ord. no.
Insulation measuring device Megger MIT1525	1	600 610
including measuring clamp in red, black and blue		
testvoltage: up to 15 kV		
case: 360 x 305 x 194 mm, IP 65 (closed)		
weight: ~ 6.5 kg		
Discharge stick Megger EST35	1	600 611
including connection cable and optionally with clamp		
voltage: up to 35 kV length: 500 mm		
weight: ~ 0.95 kg		
Function earth connection	1	600 612
for connecting measuring device and earth		
black with ring cable lug and clamp		
length: 1.5 m cable: copper 10 mm²		
Equipotential bonding bridge	1	600 613
for bridging the equipotential bonding (copper shield braid) with the grounding system during the test procedure.		

Insulation measuring device



Ord. no. 600 610

Ord. no. 600 611

Ord. no. 600 612

Ord. no. 600 613

Installation tools for HVC-50 and HVC-85

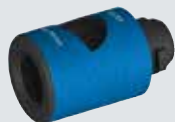
Peeling tool



Ord. no. 600 502



Ord. no. 600 505



Ord. no. 600 501

Peeling tool, for uncovering the internal conductor of the HVC-conductor.

Specification		PU	Ord. no.
Peeling tool	Completely with handle and peeling head. For HVC-50	1	650 502
Peeling tool head	Matching for the handle piece or adapter. For HVC-50	1	650 501
Substitute blades	For the peeling tool head HVC-50 and HVC-85	1	600 503
Peeling tool	To be used with a cordless screwdriver, completely with adapter and peeling tool head. For HVC-50	1	650 505
Adapter	For the use of the peeling head with a cordless screwdriver. For HVC-50 and HVC-85	1	600 504
Peeling tool	Completely with handle and peeling head. For HVC-85	1	600 502
Peeling tool head	Matching for the handle piece or adapter. For HVC-85	1	600 501
Peeling tool	To be used with a cordless screwdriver, completely with adapter and peeling tool head. For HVC-85	1	600 505

BLACKex milling-head



Ord. no. 600 575

BLACKex milling-head, to remove the Intermediate black layer.

Specification	PU	Ord. no.
BLACKex milling head for use with the cordless screwdriver for HVC-50	1	650 575
BLACKex milling head for use with the cordless screwdriver for HVC-85	1	600 575

Installation tools for HVC-50 and HVC-85

Stripping knife, to remove the outer jacket of the HVC-conductor.

Specification	PU	Ord. no.
Stripping knife for HVC-50 conductor	1	650 510
Stripping knife for HVC-85 conductor	1	600 570

Shear for conductor, to cut the HVC-conductor with ratchet mechanism.

Specification	PU	Ord. no.
Shear for conductor for HVC-50 and HVC-85	1	600 520

Shear for shield braid,
to cut the shield braid of the HVC-conductor.

Specification	PU	Ord. no.
Shear for shield braid	1	600 530

Unwinder for reel, to unwind the HVC-conductor.

Specification	PU	Ord. no.
To unwind 50 m and 100 m reels Suitable for a reel width up to 520 mm	1	600 550

Cutting tool for uncovering the contact surface to install the equipotential bonding clamp on the HVC-conductor.

Specification for HVC-50 conductor	PU	Ord. no.
Stainless steel V2A with crank handle	1	650 560
Stainless steel V2A for use with cordless screwdriver	1	650 561
Cutting head hardened steel for cutting tool	1	650 562
Specification for HVC-85 conductor	PU	Ord. no.
Stainless steel V2A with crank handle	1	600 560
Stainless steel V2A for use with cordless screwdriver	1	600 561
Cutting head hardened steel for cutting tool	1	600 562

Stripping knife



Ord. no. 600 570

Shear for conductor



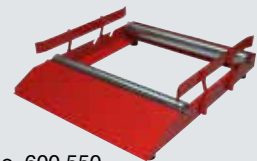
Ord. no. 600 520

Shear for shield braid



Ord. no. 600 530

Unwinder for reel



Ord. no. 600 550

Cutting tool



Ord. no. 600 560



HVC-conductor

Up-to-date instructions for the proper testing and installation of HVC-conductors are available on our homepage www.proepster.de



Installation instructions



Insulation test

The installation of HVC-conductors as well as HVC insulation testing may only be carried out by qualified personnel, e. g. a lightning protection specialist.

We also recommend training by J. Pröpster GmbH.

Our technical advisors will be happy to assist you with any questions.

Phone: +49 (0)9181/2590-56 or

Phone: +49 (0)9181/2590-27

E-Mail: iso@proepster.de

Accessories

Straightening tools for wires and tapes, screws and earth testers



Straightening tool for round wires and tapes

Straightening tool



Ord. no. 111 080

Straightening tool, (2-part) without reel-off unit. For wire ø 8-10 mm.

Specification	Processing of	PU	Ord. no.
Technical data:	round wire Aluminium	1	111 080
Weight: 15 kg	round wire Copper		
Consists of			
8 Aluminium brackets			
60 x 60 x 5 x 350 mm			
and 6 levelling rolls -			
steel with bronze bushing sleeve.			
Precise alignment of the wire in horizontal and vertical directions. (Levelling rolls individually adjustable)			

Straightening tool



Ord. no. 111 081

Straightening tool, (2-part) with horizontal reel-off unit. For wire ø 8-10 mm.

Specification	Processing of	PU	Ord. no.
Technical data:	round wire Aluminium	1	111 081
Weight: 25 kg	round wire Copper		
Straightening device (as described above)			
Reel-off unit, adjustable to different coil diameters.			
Demountable, space saving design.			

Universal straightening tool



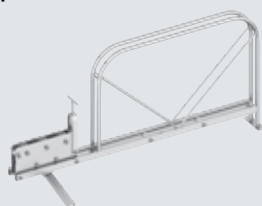
Ord. no. 111 082

Universal straightening tool, (2-part) with vertical reel-off unit.

For round wire ø 8 - 10 mm and tapes 30 x 3.5 mm.

Specification	Processing of	PU	Ord. no.
Technical data:	round wire Aluminium	1	111 082
Weight: 47 kg	round wire Copper		
Straightening device (as described above)	Earthing tape		
Reel-off unit, adjustable to different coil diameters.	Steel, hot galvanized		
Uncoiling unit is also suitable for tapes 30 x 3.5 mm.	Earthing tape		
	Stainless steel V2A		

Straightening tool for tapes



Ord. no. 111 083

Straightening tool for tapes with 5 levelling rolls, for tapes 30 x 3.5 mm.

Specification	Processing of	PU	Ord. no.
Technical data:	Earthing tape	1	111 083
Weight: 23 kg	Steel, hot galvanized		
Length: 1390 mm,	Earthing tape		
Height: 670 mm,	Stainless steel V2A		
Width: 120 mm, base can be swivelled in			
Uncoiling, straightening and installation in a			
single operation.			
Time savings through clean, effortless and			
fast installation of the earthing tape. Simple handling.			

Uncoiling unit



Ord. no. 111 084

Uncoiling unit for tapes 30 x 3.5 mm.

Specification	Processing of	Pu	Ord. no.
Technical data:	Earthing tape	1	111 084
Weight: 13 kg	Steel, hot galvanized		
Length: 1060 mm,	Earthing tape		
Height: 670 mm,	Stainless steel V2A		
Width: 120 mm, base can be swivelled in			
Uncoiling, rough alignment and installation in a			
single operation.			
Lightweight and straightforward operation.			
Excessively uncoiled tape can be rewound.			

Straightening tool for round wires and tapes

Manual straightening and bending tool - light version

manual tool for round wires.

Specification	Weight	Fit	PU	Ord. no.
Made of forged steel - chromium-plated surface, hardened straightening bolts. Optimal straightening geometry for fast straightening and bending of round wires.	280 g	ø 8-10 mm wrench width 13 and 17	1	110 247

Niro-Clip opening tool - for unclipping round wire ø 8 mm from Niro-Clip and roof conductor holder. Bending and straightening function for soft materials (e. g. aluminium up to ø 8 mm)

Specification	Weight	Fit	PU	Ord. no.
Niro-Clip opening tool made of polyamide with bi-hexagon wrench width 13/17	54 g	ø 8 mm	1	110 230

Manual straightening and bending tool - to unclip round wires from Niro-Clip.

Specification	Weight	Fit	PU	Ord. no.
Steel, hot galvanized	390 g	ø 8 mm	1	1049

Manual straightening tool - for round wires.

Specification	Weight	Fit	PU	Ord. no.
as tube with levelling studs	330 g	ø 8 - 10 mm	1	110 245

Manual straightening tool - for tapes.

Specification	Weight	Fit	PU	Ord. no.
as tube with levelling studs and bending slots	600 g	ø 8 - 10 mm / flat 30 mm	1	110 246

Manual straightening and bending tool - heavy-duty type

manual tool for wire and tape straightening.

Specification	Weight	Fit	PU	Ord. no.
Consisting of a stainless steel V2A tube, PVC handle and a swivelling straightening head made of hardened steel, with 3 attached straightening bolts and an alignment slot. The 9 steps adjustable straightening head can be optimally fitted to the respective work situation.	1200 g	ø 10 mm / flat 30 mm	1	110 244

Manual straightening tool - light version



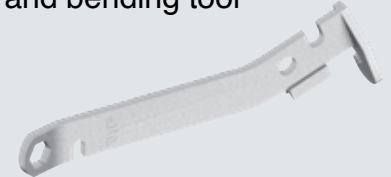
Ord. no. 110 247

Niro-Clip opener



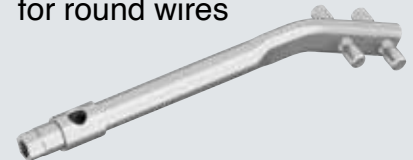
Ord. no. 110 230

Manual straightening and bending tool



Ord. no. 1049

Manual straightening tool - for round wires



Ord. no. 110 245

Manual straightening tool - for tapes



Ord. no. 110 246

Manual straightening tool - heavy-duty type



Ord. no. 110 244



Mounting aid for connecting clamps (e. g. 111 330 on page 100/101)

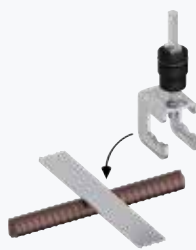
Mounting aid for connecting clamps for hex head size 17 -
for simple mounting, also in difficult to access reinforcement cages.

Specification		Length	PU	Ord. no.
Magnetic socket Drive with Hexagon wrench width 10	without lengthening and handle	40 mm	1	110 241
	with lengthening 400 mm and freewheeling handle	400 mm	1	110 242
	with lengthenings 800 mm and freewheeling handle	800 mm	1	110 243
Magnetic socket Drive with 1/2 inch square drive	with lengthening 400 mm and freewheeling handle	400 mm	1	110 342
	with lengthening 800 mm and freewheeling handle	800 mm	1	110 343
Spring-loaded magnetic socket Drive with Hexagon wrench width 10	without lengthening and handle	116 mm	1	110 441
	with lengthening 400 mm and freewheeling handle	400 mm	1	110 442
	with lengthening 800 mm and freewheeling handle	800 mm	1	110 443

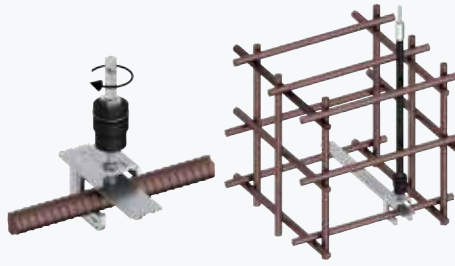
Note: connecting clamps on page 100/101



Place magnetic side of the socket wrench on the hexagon bolt of the connecting clamp.

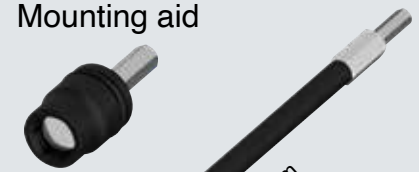


Position the clamp

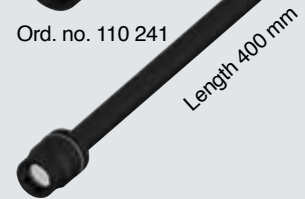


Tighten the positioned clamp until the required torque is reached (cordless screw-driver could be used).

Mounting aid



Ord. no. 110 241



Ord. no. 110 242

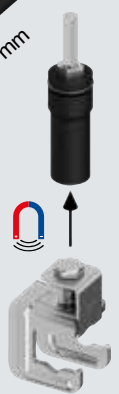


Ord. no. 110 441



Ord. no. 110 442

Application example:
Ord. no. 110 441



Lightning strike counter, P-LSC 1

Type	Ord. no.
P-LSC 1	306 015
Technical data	
Threshold current (8/20 μ s) I_{tc}	1 kA
Maximum counting discharge current (10/350 μ s) I_{mcw}	100 kA
IP code	IP 65
Mounting on	flat- and round conductors
Fit	$\varnothing$ 8 - 10 mm / fl. 30 mm
Count area	999
Average battery lifetime	5 years
Operating temperature range	-20 °C to +60 °C
Dimensions LxWxH (mm)	144 x 88 x 44 mm
Test standard	EN IEC 62561-6

Protective spark gap

made of porcelain with corrosion proof connectors e. g. for roof racks.

Specification	Power frequency withstand voltage (U_{aw})	PU	Ord. no.
with connection bolt made of stainless steel V2A $\varnothing$ 10 mm	~ 2.5 kV (50 Hz)	1	111 061

Isolating spark gap encapsulated with plastic coating; anti-tracking.

Specification	PU	Ord. no.
with connection bolt made of stainless steel V2A $\varnothing$ 8 mm	1	111 065
Technical data:		
Power frequency withstand voltage	U_{aw}	< 2.5 kV (50 Hz)
Lightning impulse current	I_{imp}	100 kA (10/350 μ s)

Lightning strike counter



Ord. no. 306 015

Protective spark gaps



Ord. no. 111 061

Isolating spark gaps



Ord. no. 111 065

Earth testing instruments

Earth resistance and soil resistivity tester



Ord. no. 2062



Ord. no. 2097

Accessory set for earth and soil resistivity tester



Ord. no. 2063

Clamp-on ground resistance tester



Ord. no. 2084

Ord. no. 2086

Continuity tester/insulation tester



Ord. no. 2061

Tester for measuring earth resistance and soil resistivity with digital-display (LCD).

Specification	PU	Ord. no.
C.A 6460 - earth and soil resistivity tester Range: 0.00 ... /2000 Ω within 3 ranges automatic range change Measurement frequency: 128 Hz Case: 273 x 247 x 127 mm, IP 53 Weight: ~ 2.8 kg	1	2062
C.A 6462 - earth and soil resistivity tester Equal to C.A 6460 but with an internal charger Weight: ~ 3.3 kg	1	2062 S
C.A 6422 - earth tester Range: 0.5 - 2000 Ω automatic range change Measurement frequency: 128 Hz or 256 Hz Case: 223 x 126 x 70 mm, IP 65 Weight: 1.0 kg	1	2097

Earth tester case

Specification	PU	Ord. no.
Earth tester case including 2 earth spikes (T-shaped) Cable: flat spool: green 10 m; wire coils: blue 1 x 150 m, red 1 x 150 m, 1 set of connection clamps and hammer in carrying bag	1	2063

Clamp-on ground resistance tester

measuring instrument to review ground loops, with digital-display (OLED).

Specification	PU	Ord. no.
C.A 6416 - clamp-on ground resistance tester Range: Loop impedance measurement: 0.01 - 1500 Ω Loop inductance measurement: 10 - 500 μ H Current measurement: 0.2 mA - 40 A Measurement frequency: 2083 Hz Data storage: 300 measurements with timestamp. Case: 262 x 95 x 55 mm Weight: ~ 1.0 kg	1	2081
C.A 6417 - clamp-on ground resistance tester Equal to C.A 6416 but with Bluetooth, Software GTC and data storage for 2000 measurements with timestamp	1	2084
C.A 6418 - clamp-on ground resistance tester Range: Loop impedance measurement: 0.01 - 1200 Ω Current measurement: 0.5 mA - 20 A Measurement frequency: 2083 Hz Data storage: 300 measurements with timestamp. Case: 300 x 103 x 56 mm Weight: ~ 1.2 kg including battery	1	2086
Calibration loop for clamp-on ground resistance tester	1	2090

Continuity and insulation tester

e. g. for standardized continuity testing with a test current of 200 mA.

Specification	PU	Ord. no.
C.A 6528 - Continuity and insulation tester Test current for continuity testing: 200 mA according to EN 61557-4 Continuity testing with buzzer. Insulation testing: 250 V / 500 V / 1000 V Voltage measurement: 1 to 700 V AC/DC Case: 218 x 95 x 63 mm, IP40 Weight: ~ 760 g	1	2061

Surge protection

Power supply, photovoltaic systems,
measurement and control technology,
information technology



Combined arrester *max*, type 1+2

multipole / mains system compliant e. g. for industrial plants

Benefits:

- Safe fixation and contact ensured by module locking mechanism.
- P-HMS 280 *max* having 25 kA (10/350 μ s) /pole and 100 kA (10/350 μ s) 4-pole.
- Max. backup fuse 250 A gL/gG.

P-HMS 280 *max*



Ord. no. 317 235



Ord. no. 317 247

P-HMS 280 (Fm) *max*; (class I+II)/LPZ 0_A-LPZ 2

Combined arrester, pluggable

Type		System	Ord. no.
P-HMS 280 <i>max</i> 3	3-pole	TN-C	317 235
P-HMS 280 <i>max</i> 4	4-pole	TN-S	317 255
P-HMS 280 <i>max</i> 3+1	3+1-pole	TT	317 245

Combined arrester, pluggable with remote signalling contact (Fm)

Type		System	Ord. no.
P-HMS 280 Fm <i>max</i> 3	3-pole	TN-C	317 237
P-HMS 280 Fm <i>max</i> 4	4-pole	TN-S	317 257
P-HMS 280 Fm <i>max</i> 3+1	3+1-pole	TT	317 247

Technical data

Type P-HMS 280 (Fm) <i>max</i>	3-pole	4-pole	3+1-pole
Mains system	TN-C	TN-S	TT
Dimensions	6 mods.	8 mods.	8 mods.
Nominal discharge current (8/20 μ s) /total I_n	120 kA	120 kA	100 kA
Max. discharge current (8/20 μ s) /total I_{max}	150 kA	150 kA	150 kA
Lightning impulse current (10/350) /total I_{imp}	75 kA	100 kA	100 kA
Voltage protection level U_p	< 1.3 kV	< 1.3 kV	< 1.5 kV
Response time t_A	< 25 ns	< 25 ns	< 100 ns
Max. backup fuse	250 A gL/gG		
parallel wiring	125 A gL/gG		
serial wiring	125 A gL/gG		
Max. continuous operating voltage U_c	L-N 280 V~ / N-PE 255 V~		
Cross section for connection	min. 4 mm ² single-core/ finely-stranded max. 50 mm ² stranded / 35 mm ² finely-stranded		

Important notes and explanations for the section "surge protection"!

For surge protective devices marked with "Fm", the following applies:

Remote signalling contact (Fm):

Contact	Change-over contact	Diagram:
Switching capacity	250 V / 5.0 A~ 75 V / 0.75 A- 125 V / 0.5 A- 250 V / 0.25 A-	
Cross section for connection	0.08 - 1.5 mm ²	

For all surge protective devices illustrated in the catalogue the following applies:

Dimensions according to DIN 43 880	17.5 mm (1 mod. = 18 mm)
Temperature range	- 40 °C ... + 80 °C, unless otherwise specified
Housing material	Thermoplastic UL 94 V-0
IP code	IP 20
Mounting on DIN rail	35 mm according to EN 60715
Installation tool	Screwdriver:
	Slot, size 5.5 Phillips, size 3
Function indicator of type 1+2 and type 2 rail-mounted device	OK:
	Defect:
	GREEN or TRANSPARENT Logo "DEFECT"

Important:

Defect arresters offer no protection and must be replaced!

If specifications differ, please refer to the information supplied in the "technical data" tables for the respective device.

Space-saving combined arrester, type 1+2

leakage-current free; multipole / mains system compliant

Benefits:

- Quick and easy installation by snapping onto 40 mm busbar systems.
- Meets all requirements for use upstream of the meter.
- VDE tested quality and safety.
- Leakage-current free due to series connection of gas discharge tube and varistor.
- No follow current.
- Integrated overcurrent-protected phase taps.
- P-ZP FP 3+1 having 12.5 kA (10/350 μ s)/pole and 50 kA (10/350 μ s) as 3+1-pole.
- Optimal price/performance ratio.
- Space-saving design with a width of 36 mm.

P-ZP; (class I+II)/LPZ 0_A-LPZ 2

Combined arrester with 7.5 kA (10/350 μ s) /pole

Type	System	Ord. no.
P-ZP FB 3	TN-C	336 333
P-ZP FB 3+1	TN-S / TT	336 343

Combined arrester with 12.5 kA (10/350 μ s) /pole

Type	System	Ord. no.
P-ZP FP 3	TN-C	337 333
P-ZP FP 3+1	TN-S / TT	337 343

Technical data: Type P-ZP

Ord. no.	336 333	337 333	336 343	337 343
Mains system	TN-C	TN-C	TN-S / TT	TN-S / TT
Lightning impulse current (10/350 μ s) /pole I _{imp}	7.5 kA	12.5 kA	7.5 kA / 30 kA [N-PE]	12.5 kA / 50 kA [N-PE]
Lightning impulse current (10/350 μs) /total I_{imp}	22.5 kA	37.5 kA	30 kA	50 kA
Nominal discharge current (8/20 μ s) /pole I _n	20 kA		20 kA / 80 kA [N-PE]	
Voltage protection level U _p	< 1.5 kV			
Response time t _A	< 100 ns			
Max. backup fuse	160 A gG			
Max. continuous operating voltage U _c	300 V~		300 V / 305 V [N-PE]	
Cross section for connection	max. 35 mm ² single-core/multi-stranded / 25 mm ² finely-stranded			
Test standard	EN 61643-11			
Approval	VDE			

Feeder terminal P-ZP TB for the combined arrester P-ZP

Specification	Ord. no.
NEW Feeder terminal P-ZP TB	336 101

Technical data: P-ZP TB

Max. backup fuse	NH 00 gG 100 A
Connection technology	tension spring connection
Mounting	40 mm busbar, 12 x 5 mm
Cross section for connection	min. 1.5 mm ² (single/multi/fine-stranded) max. 25 mm ² multi-stranded / 16 mm ² fine-stranded

Cable set P-ZP C for the combination arrester P-ZP

Specification	Ord. no.
NEW Cable set P-ZP C	336 100

Technical data: P-ZP C

Rated current	9.5 A
Cable length a - Modem connection cable	80 cm
Cable length b - Gateway connection cable	115 cm
Connection	Plug BLF 5.08

P-ZP



Ord. no. 336 343



Ord. no. 336 101



Ord. no. 336 100

Combined arrester, type 1+2 (leakage-current free; multipole / mains system compliant)

Benefits:

- Leakage-current free due to series connection of gas discharge tube and varistor.
- Safe fixation and contact ensured by module locking mechanism.
- P-HMS 280 G having 12.5 kA (10/350 μ s) /pole and 50 kA (10/350 μ s) 4-pole.
- Max. backup fuse 160 A gL/gG.
- Optimal price/performance ratio.
- Min. cross section for connection 4 mm².

P-HMS 280 G



Ord. no. 327 230



Ord. no. 327 242

P-HMS 280 (Fm) G; (class I+II)/LPZ 0_A-LPZ 2

Combined arrester, pluggable

Type	System	Ord. no.
P-HMS 280 G 3	TN-C	327 230
P-HMS 280 G 4	TN-S	327 250
P-HMS 280 G 3+1	TT	327 240

Combined arrester, pluggable with remote signalling contact (Fm)

Type	System	Ord. no.
P-HMS 280 Fm G 3	TN-C	327 232
P-HMS 280 Fm G 4	TN-S	327 252
P-HMS 280 Fm G 3+1	TT	327 242

Technical data

Type P-HMS 280 (Fm) G	3-pole	4-pole	3+1-pole
Mains system	TN-C	TN-S	TT
Dimensions	3 mods.	4 mods.	4 mods.
Nominal discharge current (8/20 μ s) /total I _n	75 kA	100 kA	75 kA
Max. discharge current (8/20 μ s) /total I _{max}	120 kA	150 kA	100 kA
Lightning impulse current (10/350 μs) /total I_{imp}	37.5 kA	50 kA	50 kA
Voltage protection level U _p	< 1.5 kV		
Response time t _A	< 100 ns		
Max. backup fuse	160 A gL/gG		
Max. continuous operating voltage U _c	255 V~		
Cross section for connection	min. 4 mm ² single-core/ finely-stranded max. 50 mm ² stranded / 35 mm ² finely-stranded		

Combined arrester P-HM 280, type 1+2 (multipole / mains system compliant)

Benefits:

- Narrow installation width of only 3 mods.
- Compact design facilitates retrofitting in existing systems.
- Push-in connection terminals for quick and tool-free installation—even without ferrules.
- Optimal price/performance ratio.

P-HM 280



Ord. no. 347 240

P-HM 280 (Fm); (class I+II)/LPZ 0_A-LPZ 2

Combined arrester

Type	System	Ord. no.
P-HM 280 3	TN-C	347 230
P-HM 280 3+1	TN-S / TT	347 240

Combined arrester with remote signalling contact (Fm)

Type	System	Ord. no.
P-HM 280 Fm 3	TN-C	347 232
P-HM 280 Fm 3+1	TN-S / TT	347 242

Technical data: Type P-HM 280 (Fm)

Ord. no. without Fm	347 230	347 240
Ord. no. with Fm	347 232	347 242
Mains system	TN-C	TN-S / TT
Dimensions	3 mods.	
Nominal discharge current (8/20 μ s) /total I _n	60 kA	
Lightning impulse current (10/350 μs) /total I_{imp}	21 kA	28 kA
Voltage protection level U _p	< 1.3 kV	
Response time t _A	< 25 ns	< 100 ns
Max. backup fuse	100 A gL/gG or C 100 A	
Max. continuous operating voltage U _c [L-N] / [N-PE]	280 V~ / 255 V~	
Cross section for connection	0.75 - 25 mm ² single-core/ finely-stranded 0.75 - 16 mm ² with ferrule	

Combined arrester, type 1+2 e. g. for residential or office buildings

Benefits:

- Safe fixation and contact ensured by module locking mechanism.
- P-HMS 280 R having 12.5 kA (10/350 μ s) /pole and 50 kA (10/350 μ s) 4-pole.
- Max. backup fuse 160 A gL/gG.
- Optimal price/performance ratio.
- Min. cross section for connection 4 mm².

Multipole/mains system compliant - P-HMS 280 (Fm) R;

(class I+II)/LPZ 0_A-LPZ 2

Combined arrester, pluggable

Type	System	Ord. no.
P-HMS 280 R 2	2-pole	317 220
P-HMS 280 R 1+1	1+1-pole	317 210
P-HMS 280 R 3	3-pole	317 230
P-HMS 280 R 4	4-pole	317 250
P-HMS 280 R 3+1	3+1-pole	317 240

Combined arrester, pluggable with remote signalling contact (Fm)

Type	System	Ord. no.
P-HMS 280 Fm R 2	TN	317 222
P-HMS 280 Fm R 1+1	TT	317 212
P-HMS 280 Fm R 3	TN-C	317 232
P-HMS 280 Fm R 4	TN-S	317 252
P-HMS 280 Fm R 3+1	TT	317 242

Technical data

Type P-HMS 280 (Fm) R	2-pole	1+1-pole	3-pole	4-pole	3+1-pole
Mains system	TN	TT	TN-C	TN-S	TT
Dimensions	2 mods.	2 mods.	3 mods.	4 mods.	4 mods.
Nominal discharge current (8/20 μ s) /total I _n	60 kA	40 kA	90 kA	120 kA	75 kA
Max. discharge current (8/20 μ s) /total I _{max}	100 kA	60 kA	150 kA	150 kA	100 kA
Lightning impulse current (10/350) /total I_{imp}	25 kA	25 kA	37.5 kA	50 kA	50 kA
Voltage protection level U _p	< 1.3 kV	< 1.5 kV	< 1.3 kV	< 1.3 kV	< 1.5 kV
Response time t _A	< 25 ns	< 100 ns	< 25 ns	< 25 ns	< 100 ns
Max. backup fuse	160 A gL/gG				
Max. continuous operating voltage U _c	L-N 280 V~ / N-PE 255 V~				
Cross section for connection	min. 4 mm ² single-core/ finely-stranded max. 50 mm ² stranded / 35 mm ² finely-stranded				

Single pole - P-HMS 280 (Fm) R and P-N/PE BC R;

(class I+II)/LPZ 0_A-LPZ 2

Combined arrester, pluggable with or without remote signalling contact (Fm)

Type	Ord. no.
P-HMS 280 R	317 200
P-HMS 280 Fm R	317 202
with remote signalling contact	

N/PE combined arrester for TT-system

Type	System	Ord. no.
P-N/PE BC R	TT	317 260
P-N/PE BC R 50	TT	317 262

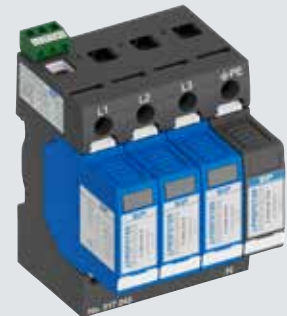
Technical data

Type	P-HMS 280 (Fm) R	P-N/PE BC R	P-N/PE BC R 50
Mains system		TT	TT
Dimensions	1 mod.	1 mod.	1 mod.
Nominal discharge current (8/20 μ s) I _n	30 kA	40 kA	75 kA
Max. discharge current (8/20 μ s) I _{max}	50 kA	60 kA	100 kA
Lightning impulse current (10/350) I_{imp}	12.5 kA	25 kA	50 kA
Voltage protection level U _p	< 1.3 kV	< 1.5 kV	< 1.5 kV
Max. backup fuse	160 A gL/gG	---	---
Max. continuous operating voltage U _c	280 V~	255 V~	255 V~
Cross section for connection	min. 4 mm ² single-core/ finely-stranded max. 50 mm ² stranded / 35 mm ² finely-stranded		

P-HMS 280 R



Ord. no. 317 220



Ord. no. 317 242

P-HMS 280 R



Ord. no. 317 200

P-N/PE BC R



Ord. no. 317 260

Surge arrester, type 2

Benefits:

- Safe fixation and contact ensured by module locking mechanism.
- Min. cross section for connection 4 mm².

P-VMS 280 R



Ord. no. 316 220



Ord. no. 316 224

P-VMS 280 R



Ord. no. 316 280

P-N/PE C (S)



Ord. no. 316 286

P-VMS 280 (Fm) R; (class II)//LPZ 1-LPZ 2

Multipole surge arrester, pluggable

Type		System	Ord. no.
P-VMS 280 R 2	2-pole	TN	316 226
P-VMS 280 R 1+1	1+1-pole	TT	316 228
P-VMS 280 R 3	3-pole	TN-C	316 220
P-VMS 280 R 4	4-pole	TN-S	316 221
P-VMS 280 R 3+1	3+1-pole	TT	316 222

Multipole surge arrester, pluggable with remote signalling contact (Fm)

Type		System	Ord. no.
P-VMS 280 Fm R 2	2-pole	TN	316 227
P-VMS 280 Fm R 1+1	1+1-pole	TT	316 229
P-VMS 280 Fm R 3	3-pole	TN-C	316 223
P-VMS 280 Fm R 4	4-pole	TN-S	316 224
P-VMS 280 Fm R 3+1	3+1-pole	TT	316 225

Technical data

Type P-VMS 280 (Fm)	2-pole	1+1-pole	3-pole	4-pole	3+1-pole
Mains system	TN	TT	TN-C	TN-S	TT
Dimensions	2 mods.	2 mods.	3 mods.	4 mods.	4 mods.
Nominal discharge current (8/20 μs) /total I _n	40 kA	40 kA	60 kA	80 kA	40 kA
Max. discharge current (8/20 μs) /total I _{max}	80 kA	60 kA	120 kA	150 kA	60 kA
Response time t _A	< 25 ns	< 100 ns	< 25 ns	< 25 ns	< 100 ns
Voltage protection level U _p	< 1.3 kV	< 1.5 kV	< 1.3 kV	< 1.3 kV	< 1.5 kV
Max. continuous operating voltage U _c	L-N 280 V~ / N-PE 255 V~				
Max. backup fuse	125 A gL/gG				
Cross section for connection	min. 4 mm ² single-core/ finely-stranded max. 50 mm ² stranded / 35 mm ² finely-stranded				

P-VMS (Fm) R and P-N/PE C R; (class II)//LPZ 1-LPZ 2

Surge arrester pluggable with or without remote signalling contact (Fm)

Type		Ord. no.
P-VMS 280 R	1-pole	316 280
P-VMS 280 Fm R	1-pole	316 282

P-VMS 440 R	1-pole	316 441
P-VMS 440 Fm R	1-pole	316 443

N/PE surge arrester pluggable for TT-System

Type		System	Ord. no.
P-N/PE C R	1-pole	TT	316 286

Technical data

Type	P-VMS 280 (Fm) R	P-VMS 440 (Fm) R	P-N/PE C (S) (R)
Dimensions	1 mod.	1 mod.	1 mod.
Max. continuous operating voltage U _c	280 V~	440 V~	255 V~
Voltage protection level U _p	< 1.3 kV	< 1.8 kV	< 1.5 kV
Nominal discharge current (8/20 μs) I _n	20 kA		40 kA
Max. discharge current (8/20 μs) I _{max}	40 kA		60 kA
Response time t _A	< 25 ns		< 100 ns
Max. backup fuse	125 A gL/gG		---
Cross section for connection	min. 4 mm ² single-core/ finely-stranded max. 50 mm ² stranded / 35 mm ² finely-stranded		

Surge arrester, P-VM 280 *slim*, type 2+3 (multipole / mains system compliant)

Benefits:

- Narrow installation width of only 2 mods. facilitates retrofitting in existing systems.
- Push-In terminal block for fast connection without tools.
- Combined medium and fine protection type 2+3.
- Ideal surge protection for industrial terminal devices with three-phase connection.

P-VM 280 (Fm) *slim*; (class II+III)/LPZ 1-LPZ 3

Surge arrester

Type	System	Ord. no.
P-VM 280 <i>slim</i> 1+1	TN / TT	346 228
P-VM 280 <i>slim</i> 3	TN-C	346 220
P-VM 280 <i>slim</i> 3+1	TN-S / TT	346 222

Surge arrester with remote signalling contact (Fm)

Type	System	Ord. no.
P-VM 280 Fm <i>slim</i> 1+1	TN / TT	346 229
P-VM 280 Fm <i>slim</i> 3	TN-C	346 223
P-VM 280 Fm <i>slim</i> 3+1	TN-S / TT	346 225

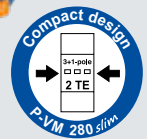
Technical data: Type P-VM (Fm) *slim*

Ord. no. without Fm	346 228	346 220	346 222
Ord. no. with Fm	346 229	346 223	346 225
Mains system	TN / TT	TN-C	TN-S / TT
Dimensions	2 mods.		
Nominal voltage U _N	230 V~		
Max. continuous operating voltage U _c	[L-N] / [N-PE]	280 V~ / 255 V~	
Nom. discharge current (8/20 μs) I _n	[L-N] / [N-PE]	10 kA / 40 kA	10 kA / 40 kA
Max. discharge current (8/20 μs) I _{max}	[L-N] / [N-PE]	20 kA / 40 kA	20 kA / 40 kA
Total discharge current (8/20 μs) I _{total}	[L-N]-PE	20 kA	30 kA
Voltage protection level U _p at I _n	L-N (PEN)	< 1.3 kV	
Voltage protection level U _p at I _n	N-PE	< 1.4 kV	
Max. backup fuse	63 A gL/gG or C 63 A		
Response time t _A	< 100 ns	< 25 ns	< 100 ns
Cross section for connection	0.5 - 10 mm ² single-core/finely-stranded 0.5 - 6 mm ² with ferrule		
Test standard	EN 61643-11		

P-VM 280 *slim*



Ord. no. 346 222



NEW Surge arrester, P-VMS 280 F, type 2 (multipole / mains system compliant)

Benefits:

- Space and cost savings due to integrated fuse.
- Ideal for retrofitting in existing systems.
- Safe fixation and contact ensured by module locking mechanism.

P-VMS 280 Fm F; (class II)/LPZ 1-LPZ 2

Plug-in surge arrester with remote signalling contact (Fm)

Type	System	Ord. no.
NEW P-VMS 280 Fm F 3	TN-C	356 223
NEW P-VMS 280 Fm F 3+1	TN-S / TT	356 225

Technical data: Type P-VMS 280 Fm F

Ord. no.	356 223	356 225
Mains system	TN-C	TN-S / TT
Dimensions	3 mods.	4 mods.
Max. continuous operating voltage U_c	[L-N] / [N-PE]	300 V~ / 305 V~
Nom. discharge current (8/20 μ s) I_n	[L-N] / [N-PE]	20 kA / -
Max. discharge current (8/20 μ s) I_{max}	[L-N] / [N-PE]	40 kA / -
Total discharge current (8/20 μ s) I_{total}	[L+N]-PE	60 kA
Voltage protection level U_p at I_n	L-N (PEN)	< 1.5 kV
Voltage protection level U_p at I_n	N-PE	< 1.5 kV
Response time t_A	< 25 ns	< 100 ns
Cross section for connection	min. 1.5 mm ² (single/multi/finely-stranded) max. 35 mm ² stranded / 25 mm ² finely-stranded	
Test standard	EN 61643-11	

P-VMS 280 F



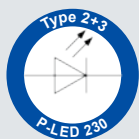
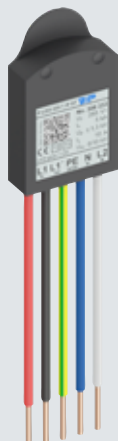
Ord. no. 356 223

Surge arrester, type 2+3 (Specially designed for the protection of LED applications)

P-LED 230



Ord. no. 306 330



Ord. no. 306 333

P-LED 230; (class II+III)/LPZ 1-LPZ 3

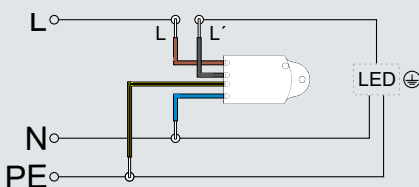
Surge arrester Type	Protection class	Ord. no.
P-LED 230 1	I	306 330
P-LED 230 1 IP	I	306 332
P-LED 230 1 IP ST	I	306 333
P-LED 230 2	II	306 331

Technical data: P-LED	230 1	230 1 IP	230 2	230 1 IP ST
Protection class (acc. to EN 61140)	I	I	II	I
IP code	IP 20	IP 65	IP 20	IP 65
Nominal discharge current (8/20 μ s) I_n		10 kA		5 kA
Max. discharge current (8/20 μ s) I_{max}		20 kA		10 kA
Nominal voltage U_N		230 V~		
Max. continuous operating voltage U_c		255 V~		
Voltage protection level U_p		< 1.3 kV		
Combination wave U_{oc}		6 kV		
Max. back-up fuse	16 A gL/gG or B 16 A			
Dimensions LxWxH (mm)	55x33x12.5		55x33x14	

Schematic diagrams:

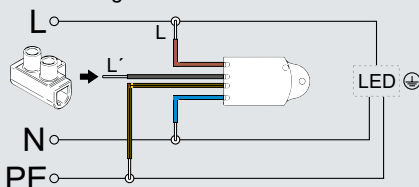
P-LED 230 1 (IP)

Parallel wiring



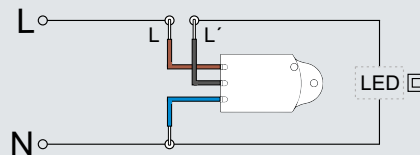
P-LED 230 1 (IP)

Serial wiring



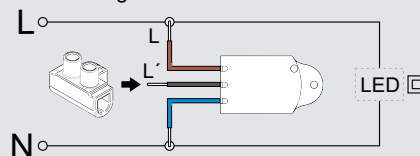
P-LED 230 2

Parallel wiring



P-LED 230 2

Serial wiring



Compact surge arrester, type 2+3 for wall boxes

P-VM Fm WB 3+1



Ord. no. 336 225

P-VM Fm WB 3+1; (class II+III)/LPZ 1-LPZ 3

Surge arrester Type	Ord. no.
P-VM Fm WB 3+1	336 225

Technical data: P-VM Fm WB 3+1		
Mains system	TN / TT	
Nominal voltage U_N	240 V~ + 6 %	
Max. continuous operating voltage U_c	[L-N] / [N-PE]	300 V~ / 255 V~
Nominal discharge current (8/20 μ s) I_n	[L-N] / [N-PE]	10 kA / 10 kA
Max. discharge current (8/20 μ s) I_{max}	[L-N] / [N-PE]	20 kA / 40 kA
Voltage protection level U_p at I_n	L-N (PEN)	< 1.5 kV
Voltage protection level U_p at I_n	N-PE	< 1.5 kV
Combination wave U_{oc}	[L-N] / [N-PE]	6 kV / 6 kV
Max. backup fuse	63 A gL/gG	
IP code according to IEC/EN 60529	IP 20	
Cross section for connection	0.25 - 1.5 mm ² single-core/ finely-stranded	

Surge arrester, type 3 (fine protection)

P-DA; (class III)/LPZ 2-LPZ 3

Type	Ord. no.		
P-DA 230	306 460		
P-DA 48	306 430		
P-DA 24	306 420		
Technical data			
Type P-DA	230	48	24
Dimensions	1 mod.		
Nominal voltage U_N	230 V~	48 V~	24 V~
Max. continuous operating voltage U_c	255 V~	60 V~	30 V~
Total discharge current (8/20 μ s) I_{total}	L+N $\Rightarrow$ PE 6 kA	2 kA	2 kA
Combination wave U_{oc}	L+N $\Rightarrow$ PE 10 kV	4 kV	4 kV
Voltage protection level U_p	L $\Rightarrow$ N < 1300 V	< 400 V	< 225 V
Response time t_A	L $\Rightarrow$ N	< 25 ns	
Max. backup fuse	16 A gL/gG or B 16		
Cross section for connection	0.14 - 2.5 mm ²		
Remote signalling contact (Fm):			
Contact	Floating break contact (21/22)		
Switching capacity	250 V~ / 1 A		
Cross section for connection	0.08 - 1.5 mm ²		

P-DA 230



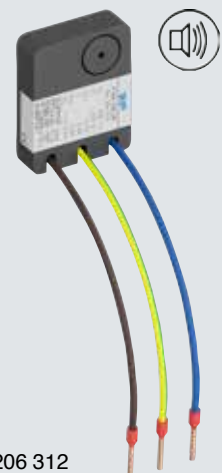
Ord. no. 306 460

Surge protection for flush-mounted sockets, type 3 (Flush mounting)

P-DA 230 UP; (class III)/LPZ 2-LPZ 3; with acoustic fault indication

Type	Description	Ord. no.
P-DA 230 UP	Surge protective adapter	206 312
Technical data		
Type	P-DA 230 UP	
Max. continuous operating voltage U_c	255 V~	
Total discharge current (8/20 μ s) I_{total}	L+N $\Rightarrow$ PE	6 kA
Voltage protection level U_p	L/N $\Rightarrow$ PE	1.3 kV
Response time t_A	L $\Rightarrow$ N	< 25 ns
Max. backup fuse	16 A gL/gG or B 16	
Dimensions LxWxH (mm)	45x35x12	

P-DA 230 UP



Ord. no. 206 312

Combined arrester for photovoltaic systems, type 1+2

Benefits:

- Safe fixation and contact ensured by module locking mechanism.
- Type 1+2 having 12.5 kA (10/350 μ s) /pole.
- Min. cross section for connection 4 mm².

P-HYS R PV

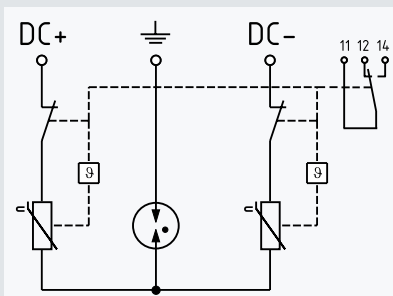


Ord. no. 317 766



Ord. no. 317 796

Basic circuit diagram:



P-HYS (Fm) R PV; (class I+II)/LPZ 0_A-LPZ 2

Combined arrester, pluggable

Type		Ord. no.
P-HYS 605 R PV	Y-circuit	317 762
P-HYS 805 R PV	Y-circuit	317 782
P-HYS 1005 R PV	Y-circuit	317 792

Combined arrester, pluggable with remote signalling contact (Fm)

Type		Ord. no.
P-HYS 605 Fm R PV	Y-circuit	317 766
P-HYS 805 Fm R PV	Y-circuit	317 786
P-HYS 1005 Fm R PV	Y-circuit	317 796

Technical data

Type P-HYS (Fm) R PV	605	805	1005
Dimensions	3 mods.	3 mods.	5 mods.
Max. continuous operating voltage U_{CPV}	600 V-	800 V-	1000 V-
Nominal discharge current (8/20 μ s) I_n	DC+ $\rightarrow$ DC- 30 kA DC+/DC- $\rightarrow$ PE 30 kA Total $\rightarrow$ PE 30 kA		
Max. discharge current (8/20 μ s) I_{max}	DC+ $\rightarrow$ DC- 50 kA DC+/DC- $\rightarrow$ PE 50 kA Total $\rightarrow$ PE 60 kA		
Lightning impulse current (10/350 μs) I_{imp}	DC+ $\rightarrow$ DC- 12.5 kA DC+/DC- $\rightarrow$ PE 12.5 kA Total $\rightarrow$ PE 20 kA 18 kA 16 kA		
Voltage protection level U_p	DC+ $\rightarrow$ DC- < 2.4 kV < 2.9 kV < 3.4 kV DC+/DC- $\rightarrow$ PE < 1.8 kV < 2.0 kV < 2.3 kV		
Response time t_A	< 100 ns		
Cross section for connection	min. 4 mm ² single-core/ finely-stranded max. 50 mm ² stranded / 35 mm ² finely-stranded		

Note: This product series is specially designed for the use in the DC side of **not earthed PV-systems** (not earthed plus or minus pole).
The maximum continuous operating voltage U_{CPV} of the device shall be selected to be always higher than the maximum open circuit voltage of the PV-generator!

Combined arrester for photovoltaic systems, type 1+2

Benefits:

- Safe fixation and contact ensured by module locking mechanism.
- Type 1+2 having 12.5 kA (10/350 μ s) /pole.
- Optimal price-performance ratio.
- Suitable for PV-systems with earthed plus or minus pole.
- Min. cross section for connection 4 mm².

P-HYS (Fm) R PV; (class I+II)/LPZ 0_A-LPZ 2

Combined arrester, pluggable

Type		Ord. no.
NEW P-HYS 300 R PV	Y-circuit	317 741
P-HYS 600 R PV	Y-circuit	317 761
P-HYS 800 R PV	Y-circuit	317 781
P-HYS 1000 R PV	Y-circuit	317 701

Combined arrester, pluggable with remote signalling contact (Fm)

Type		Ord. no.
NEW P-HYS 300 Fm R PV	Y-circuit	317 745
P-HYS 600 Fm R PV	Y-circuit	317 765
P-HYS 800 Fm R PV	Y-circuit	317 785
P-HYS 1000 Fm R PV	Y-circuit	317 705

Technical data

Type P-HYS (Fm) R PV	300	600	800	1000
Dimensions	3 mods.	3 mods.	3 mods.	6 mods.
Max. continuous operating voltage U_{CPV}	300 V-	600 V-	800 V-	1000 V-
Nominal discharge current (8/20 μ s) I_n	(DC+ $\Rightarrow$ DC-) 30 kA			
	(DC+/DC- $\Rightarrow$ PE) 30 kA			
Max. discharge current (8/20 μ s) I_{max}	(DC+ $\Rightarrow$ DC-) 50 kA			
	(DC+/DC- $\Rightarrow$ PE) 50 kA			
Lightning impulse current (10/350 μs) I_{imp}	(DC+ $\Rightarrow$ DC-) 12.5 kA			
	(DC+/DC- $\Rightarrow$ PE) 12.5 kA			
Voltage protection level U_p	(DC+ $\Rightarrow$ DC-) < 1.3 kV	< 2.4 kV	< 2.9 kV	< 3.4 kV
	(DC+/DC- $\Rightarrow$ PE) < 1.3 kV	< 2.4 kV	< 2.9 kV	< 3.4 kV
Response time t_A	< 25 ns			
Cross section for connection	min. 4 mm ² single-core/ finely-stranded max. 50 mm ² stranded / 35 mm ² finely-stranded			

Note: The product series P-HYS is specially designed for the use in the DC side of photovoltaic systems.
The maximum continuous operating voltage U_{CPV} of the device shall be selected to be always higher than the maximum open circuit voltage of the PV-generator!

P-HYS R PV

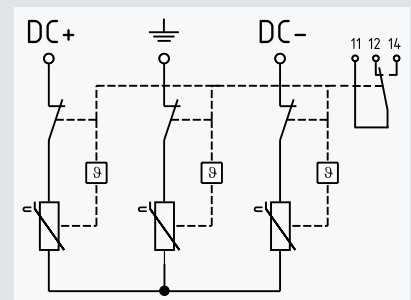


Ord. no. 317 761



Ord. no. 317 705

Basic circuit diagram:



Combined arrester P-HYS 1000/1500 BOX for photovoltaic systems, type 1+2

Benefits:

- Compact pre-assembled surge arrester for photovoltaic systems.
- P-HYS 1500 1 (2) BOX usable for a max. continuous operating voltage up to 1500 V.
- P-HYS 1000/1500 2 BOX for protecting 2 MPP-trackers.
- P-HYS 1000 3 BOX for protecting 3 MPP-trackers.
- Suitable for PV-systems with earthed plus or minus pole.
- Push-In terminal block for fast connection without tools.
- Suitable for indoor and outdoor use.
- Optimal price/performance ratio.

P-HYS 1000/1500

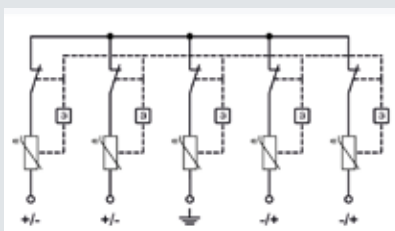


Ord. no. 317 711



Ord. no. 317 752

Basic circuit diagram P-HYS 1000/1500 2:



P-HYS 1000/1500 BOX; (class I+II)/LPZ 0_A-LPZ 2

Combined arrester for 1 MPP-tracker

Type		Ord. no.
P-HYS 1000 1 BOX	Y-circuit	317 711
P-HYS 1500 1 BOX	Y-circuit	317 751

Combined arrester for 2 MPP-trackers

Type		Ord. no.
P-HYS 1000 2 BOX	Y-circuit	317 712
P-HYS 1500 2 BOX	Y-circuit	317 752

Combined arrester for 3 MPP-trackers

Type		Ord. no.
NEW P-HYS 1000 3 BOX	Y-circuit	317 715

Technical data

Type P-HYS	1000 1	1500 1	1000 2	1500 2	1000 3
SPD	type 1+2				
Max. continuous operating voltage (DC) U_{CPV}	1100 V	1500 V	1100 V	1500 V	1100 V
Nom. discharge current (8/20 μ s) I_n	20 kA				
	I_{total} 50 kA				
Max. discharge current (8/20 μ s) I_{max}	40 kA	50 kA	40 kA	50 kA	40 kA
	DC+ $\Rightarrow$ DC-				
	DC+/DC- $\Rightarrow$ PE				
	Total $\Rightarrow$ PE				
Lightning impulse current (10/350 μ s) I_{imp}	6.25 kA				
	I_{total} 12.5 kA				
Voltage protection level U_p	DC+ $\Rightarrow$ DC- DC+/DC- $\Rightarrow$ PE	< 4.4 kV	< 5.2 kV	< 4.4 kV	< 5.2 kV
					< 4.4 kV
Rated load current I_L	35 A				45 A
Response time t_A	< 25 ns				
Number of MPP-trackers	1	1	2	2	3
Mounting type	Wall installation				
IP code	IP 65				
Connecting type	Push-In				
Outside diameter of the conductor	4 mm (min) 8 mm (max) (stranded, finely stranded)				
Conductor cross-section (cable gland)	0.2 mm ² (min) 16 mm ² (max) (stranded, finely stranded)				
Dimensions LxWxH (mm)	160x120x91				225x155x91

Note: The product series P-HYS BOX is specially designed for the use in the DC side of photovoltaic systems.
The maximum continuous operating voltage U_{CPV} of the device shall be selected to be always higher than the maximum open circuit voltage of the PV-generator!

Combined arrester P-HYS 1000 MC4 BOX for photovoltaic systems, type 1+2

Benefits:

- Compact pre-assembled surge arrester for photovoltaic systems.
- P-HYS 1000 MC4 BOX usable for a max. continuous operating voltage up to 1000 V.
- P-HYS 1000 2 MC4 BOX for the protection of 2 MPP-trackers.
- P-HYS 1000 3 MC4 BOX for the protection of 3 MPP-trackers.
- Suitable for PV-systems with earthed plus or minus pole.
- MC4-plug for fast and tool-free connection.
- Suitable for indoor and outdoor use.
- Optimal price/performance ratio.

P-HYS 1000 MC4 BOX; (class I+II)//LPZ 0_A-LPZ 2

Combined arrester for 1 MPP-tracker

Type		Ord. no.
P-HYS 1000 1 MC4 BOX	Y-circuit	317 713

Combined arrester for 2 MPP-trackers

Type		Ord. no.
P-HYS 1000 2 MC4 BOX	Y-circuit	317 714

Combined arrester for 3 MPP-trackers

Type		Ord. no.
NEW P-HYS 1000 3 MC4 BOX	Y-circuit	317 716

Technical data

Type P-HYS	1000 1 MC4	1000 2 MC4	1000 3 MC4
SPD		type 1+2	
Max. continuous operating voltage (DC) U_{CPV}		1100 V	
Nominal discharge current (8/20 μ s) I_n		20 kA	
		50 kA	
Max. discharge current (8/20 μ s) I_{max}	DC+ $\Rightarrow$ DC- DC+/DC- $\Rightarrow$ PE Total $\Rightarrow$ PE	40 kA	
Lightning impulse current (10/350 μs) I_{imp}		6.25 kA 12.5 kA	
Voltage protection level U_p	DC+ $\Rightarrow$ DC- DC+/DC- $\Rightarrow$ PE	< 4.4 kV	
Rated load current I_L		35 A	45 A
Response time t_A		< 25 ns	
Number of MPP-trackers	1	2	3
Mounting type		Wall installation	
IP code		IP 67	
Connecting type		MC4/Push-In	
Outside diameter of the conductor		4 mm (min) 8 mm (max) (stranded, finely stranded)	
Conductor cross-section (cable gland)		0.2 mm ² (min) 16 mm ² (max) (stranded, finely stranded)	
Dimensions LxWxH (mm)		160x120x91	225x155x91

Note: This product series is specially designed for the use in the DC side of **not earthed PV-systems** (not earthed plus or minus pole).
The maximum continuous operating voltage U_{CPV} of the device shall be selected to be always higher than the maximum open circuit voltage of the PV-generator!

P-HYS 1000 MC4

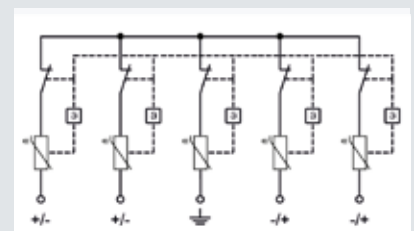


Ord. no. 317 713



Ord. no. 317 714

Basic circuit diagram P-HYS 1000 2:



Surge arrester for photovoltaic systems, type 2

Benefits:

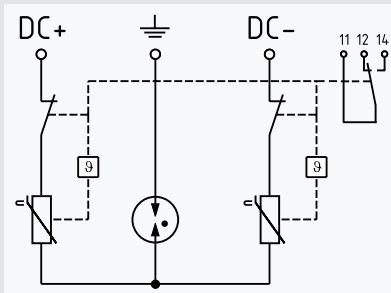
- Safe fixation and contact ensured by module locking mechanism.
- Min. cross section for connection 4 mm².

P-VYS R PV



Ord. no. 316 766

Basic circuit diagram:



P-VYS (Fm) R PV; (class II)//LPZ 1-LPZ 2

Surge arrester, pluggable

Type		Ord. no.
P-VYS 605 R PV	Y-circuit	316 762
P-VYS 805 R PV	Y-circuit	316 782
P-VYS 1005 R PV	Y-circuit	316 792

Surge arrester, pluggable with remote signalling contact (Fm)

Type		Ord. no.
P-VYS 605 Fm R PV	Y-circuit	316 766
P-VYS 805 Fm R PV	Y-circuit	316 786
P-VYS 1005 Fm R PV	Y-circuit	316 796

Technical data

Type P-VYS (Fm) R PV	605	805	1005
Dimensions	3 mods.	3 mods.	3 mods.
Max. continuous operating voltage U_{CPV}	600 V-	800 V-	1000 V-
Nominal discharge current (8/20 μ s) I_n	DC+ $\Rightarrow$ DC- DC+/DC- $\Rightarrow$ PE Total $\Rightarrow$ PE	20 kA 20 kA 30 kA	
Max. discharge current (8/20 μ s) I_{max}	DC+ $\Rightarrow$ DC- DC+/DC- $\Rightarrow$ PE Total $\Rightarrow$ PE	40 kA 40 kA 60 kA	
Voltage protection level U_p	DC+ $\Rightarrow$ DC- DC+/DC- $\Rightarrow$ PE	< 2.5 kV < 1.7 kV	< 3.0 kV < 1.8 kV < 3.5 kV < 2.0 kV
Response time t_A	< 100 ns		
Cross section for connection	min. 4 mm ² single-core/ finely stranded max. 50 mm ² stranded / 35 mm ² finely-stranded		

Note: This product series is specially designed for the use in the DC side of **not earthed** PV-systems (not earthed plus or minus pole).
The maximum continuous operating voltage U_{CPV} of the device shall be selected to be always **higher than the maximum open circuit voltage** of the PV-generator!

Surge arrester for photovoltaic systems, type 2

Benefits:

- Safe fixation and contact ensured by module locking mechanism.
- Optimal price-performance ratio.
- Suitable for PV-systems with earthed plus or minus pole.
- Min. cross section for connection 4 mm².

P-VYS (Fm) R PV; (class II)//LPZ 1-LPZ 2

Surge arrester, pluggable

Type		Ord. no.
P-VYS 300 R PV	Y-circuit	316 741
P-VYS 600 R PV	Y-circuit	316 761
P-VYS 800 R PV	Y-circuit	316 781
P-VYS 1000 R PV	Y-circuit	316 701

Surge arrester, pluggable with remote signalling contact (Fm)

Type		Ord. no.
P-VYS 300 Fm R PV	Y-circuit	316 745
P-VYS 600 Fm R PV	Y-circuit	316 765
P-VYS 800 Fm R PV	Y-circuit	316 785
P-VYS 1000 Fm R PV	Y-circuit	316 705

Technical data

Type P-VYS (Fm) R PV	300	600	800	1000
Dimensions	3 mods.	3 mods.	3 mods.	3 mods.
Max. continuous operating voltage U_{CPV}	300 V-	600 V-	800 V-	1000 V-
Nominal discharge current (8/20 μ s) I_n	(DC+ $\Rightarrow$ DC-) 20 kA	(DC+/DC- $\Rightarrow$ PE) 20 kA	(DC+ $\Rightarrow$ DC-) 40 kA	(DC+/DC- $\Rightarrow$ PE) 40 kA
Max. discharge current (8/20 μ s) I_{max}	(DC+ $\Rightarrow$ DC-) 40 kA	(DC+/DC- $\Rightarrow$ PE) 40 kA	(DC+ $\Rightarrow$ DC-) < 1.3 kV	(DC+/DC- $\Rightarrow$ PE) < 1.3 kV
Voltage protection level U_p	(DC+ $\Rightarrow$ DC-) < 1.3 kV	(DC+/DC- $\Rightarrow$ PE) < 2.5 kV	< 3.0 kV	< 3.5 kV
Response time t_A	< 25 ns			
Cross section for connection	min. 4 mm ² single-core/ finely stranded max. 50 mm ² stranded / 35 mm ² finely-stranded			

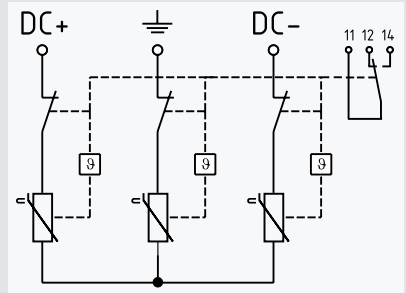
Note: The product series P-VYS is specially designed for the use in the DC side of photovoltaic systems.
The maximum continuous operating voltage U_{CPV} of the device shall be selected to be always **higher than the maximum open circuit voltage** of the PV-generator!

P-VYS R PV



Ord. no. 316 761

Basic circuit diagram:



Surge arrester P-VYS 1000/1500 BOX for photovoltaic systems, type 2

Benefits:

- Compact pre-assembled surge arrester for photovoltaic systems.
- P-VYS 1500 1 (2) BOX usable for a max. continuous operating voltage up to 1500 V.
- P-VYS 1000 (1500) 2 BOX for protecting 2 MPP-trackers.
- P-VYS 1000 3 BOX for protecting 3 MPP-trackers.
- Suitable for PV-systems with earthed plus or minus pole.
- Push-In terminal block for fast connection without tools.
- Suitable for indoor and outdoor use.
- Optimal price/performance ratio.

P-VYS 1000/1500

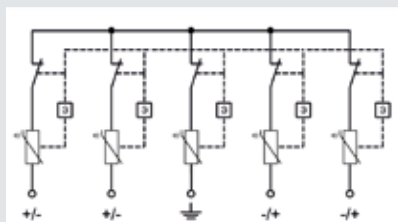


Ord. no. 316 711



Ord. no. 316 752

Basic circuit diagram P-VYS 1000/1500 2:



P-VYS 1000/1500 BOX; (class II)/LPZ 1-LPZ 2

Surge arrester with 1 MPP-tracker

Type		Ord. no.
P-VYS 1000 1 BOX	Y-circuit	316 711
P-VYS 1500 1 BOX	Y-circuit	316 751

Surge arrester with 2 MPP-trackers

Type		Ord. no.
P-VYS 1000 2 BOX	Y-circuit	316 712
P-VYS 1500 2 BOX	Y-circuit	316 752

Surge arrester with 3 MPP-trackers

Type		Ord. no.
NEW P-VYS 1000 3 BOX	Y-circuit	316 715

Technical data

Type P-VYS	1000 1	1500 1	1000 2	1500 2	1000 3
SPD	Type 2				
Max. continuous operating voltage (DC) U_{CPV}	1100 V	1500 V	1100 V	1500 V	1100 V
Nominal discharge current (8/20 μ s) I_n	20 kA	15 kA	20 kA	15 kA	20 kA
Max. discharge current (8/20 μ s) I_{max}	40 kA				
Voltage protection level U_p	<div>DC+ $\Rightarrow$ DC-</div> <div>DC+/DC- $\Rightarrow$ PE</div>				
	< 4.2 kV	< 4.8 kV	< 4.2 kV	< 4.8 kV	< 4.2 kV
Rated load current I_L	35 A				45 A
Response time t_A	< 25 ns				
Number of MPP-trackers	1	1	2	2	3
Mounting type	Wall installation				
IP code	IP 65				
Connecting type	Push-In				
Outside diameter of the conductor	4 mm (min) 8 mm (max) (stranded, finely stranded)				
Conductor cross-section (cable gland)	0.2 mm ² (min) 16 mm ² (max) (stranded, finely stranded)				
Dimensions LxWxH (mm)	160x120x91				225x155x91

Note: The product series P-VYS BOX is specially designed for the use in the DC side of photovoltaic systems.
The maximum continuous operating voltage U_{CPV} of the device shall be selected to be always higher than the maximum open circuit voltage of the PV-generator!

Surge arrester P-VYS 1000 MC4 BOX for photovoltaic systems, type 2

Benefits:

- Compact pre-assembled PV surge protection.
- P-VYS 1000 MC4 BOX can be used for a maximum continuous voltage of up to 1000 V.
- P-VYS 1000 2 MC4 BOX for the protection of 2 MPP-trackers.
- P-VYS 1000 3 MC4 BOX for the protection of 3 MPP-trackers.
- Suitable for grounded and ungrounded PV systems.
- MC4-plug for quick and tool-free connection.
- Suitable for indoor and outdoor use.
- Optimal price/performance ratio.

P-VYS 1000 MC4 BOX; (class II)/LPZ 1-LPZ 2

Surge arrester for 1 MPP-tracker

Type		Ord. no.
P-VYS 1000 1 MC4 BOX	Y-circuit	316 713

Surge arrester for 2 MPP-trackers

Type		Ord. no.
P-VYS 1000 2 MC4 BOX	Y-circuit	316 714

Surge arrester for 3 MPP-trackers

Type		Ord. no.
NEW P-VYS 1000 3 MC4 BOX	Y-circuit	316 716

Technical data

Type P-VYS	1000 1 MC4	1000 2 MC4	1000 3 MC4
SPD	Type 2		
Max. continuous operating voltage (DC) U_{CPV}	1100 V		
Nominal discharge current (8/20 μ s) I_n	20 kA		
Max. discharge current (8/20 μ s) I_{max}	40 kA		
Voltage protection level U_p	< 4.2 kV		
	DC+ $\rightarrow$ DC- DC+/DC- $\rightarrow$ PE		
Rated load current I_L	35 A		45 A
Response time t_A	< 25 ns		
Number of MPP-trackers	1	2	3
Mounting type	Wall installation		
IP code	IP 67		
Connecting type	MC4/Push-In		
Outside diameter of the conductor	4 mm (min) 8 mm (max) (stranded, finely stranded)		
Conductor cross-section (cable gland)	0.2 mm ² (min) 16 mm ² (max) (stranded, finely stranded)		
Dimensions LxWxH (mm)	160x120x91	225x155x91	

Note: The product series P-VYS BOX is specially designed for the use in the DC side of photovoltaic systems.
The maximum continuous operating voltage U_{CPV} of the device shall be selected to be always higher than the maximum open circuit voltage of the PV-generator!

P-VYS 1000 MC4

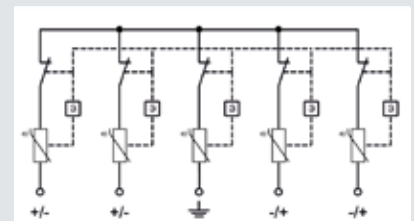


Ord. no. 316 713



Ord. no. 316 714

Basic circuit diagram P-VYS 1000 2:



Surge arrester for high-frequency signal circuits

P-1 SQ 5 HF



Ord. no. 230 105

P-2 SQ 24 HF



Ord. no. 230 624

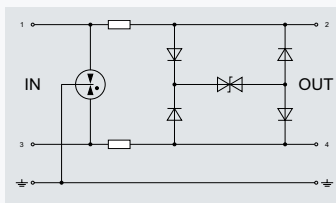
P-1(2)SQ HF; LPZ 0 - LPZ 3

Differential mode protection for LPZ 0 - 3		U_N	Ord. no.
P-1 SQ 5 HF	1 signal circuit	5 V-	230 105
P-1 SQ 24 HF	1 signal circuit	24 V-	230 124
P-2 SQ 5 HF	2 signal circuits	5 V-	230 605
P-2 SQ 24 HF	2 signal circuits	24 V-	230 624

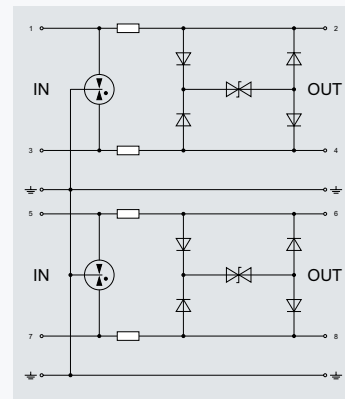
Technical data			
Type P-1 (2)	SQ 5 HF	SQ 24 HF	
Nominal voltage U_N	5 V-	24 V-	
Max. continuous operating voltage U_C	7 V- 4.9 V~	30 V- 21.2 V~	
C3 Voltage protection level at 1 kV/ μ s U_p	line-line < 12 V line-PE < 550 V	< 40 V	
C2 Voltage protection level at 10 kA U_p	line-line < 55 V line-PE < 800 V	< 85 V	
C2 Voltage protection level at 5 kA U_p	line-line < 35 V line-PE < 650 V	< 67 V	
Nominal current		0.8 A	
C2 Nominal discharge current (8/20 μ s) I_n	per pair	10 kA	
D1 Lightning impulse current (10/350 μ s) I_{imp}	per pair	5 kA	
Response time t_A		1 ns	
Line resistance		1.0 Ω	
Cut-off frequency f_g		100 MHz	
Cross section for connection		0.14 - 2.5 mm ²	
Test category according to EN 61643-21		C1, C2, C3, D1	
Housing material		Thermoplastic, UL 94 V-0, colour orange	

Note: Surge arrester for earth-potential free signal circuits.

Basic circuit diagram P-1 SQ HF:



Basic circuit diagram P-2 SQ HF:



Type structure

Signal circuit		
P-1	1 signal circuit	
P-2	2 signal circuits	
Basic protection (LPZ 0 - LPZ 1)		
P- S	signal circuit basic protection	
Basic protection + fine protection for (LPZ 0 - LPZ 3)		
P- SQ	differential mode protection	line/line
P- SQL	differential and common mode protection	line/line + line/PE
High-frequency		
P- HF	with high cut-off frequency	

Surge arrester for information, measurement and control technology

P-1(2) SQ; LPZ 0 - LPZ 3

Type for analogue telephone lines

		U_N	Ord. no.
P-1 SQ 110	1 signal circuit	110 V~	220 194
P-2 SQ 110	2 signal circuits	110 V~	220 694
Differential mode protection for LPZ 0 - 3		U_N	Ord. no.
P-1 SQ 5	1 signal circuit	5 V-	220 105
P-1 SQ 12	1 signal circuit	12 V-	220 112
P-1 SQ 24	1 signal circuit	24 V-	220 124
P-1 SQ 48	1 signal circuit	48 V-	220 148
P-1 SQ 60	1 signal circuit	60 V-	220 160
P-2 SQ 5	2 signal circuits	5 V-	220 605
P-2 SQ 12	2 signal circuits	12 V-	220 612
P-2 SQ 24	2 signal circuits	24 V-	220 624
P-2 SQ 48	2 signal circuits	48 V-	220 648
P-2 SQ 60	2 signal circuits	60 V-	220 660

Technical data

Type P-1 (2)	SQ 5	SQ 12	SQ 24	SQ 48	SQ 60	SQ 110
Nominal voltage U_N	5 V-	12 V-	24 V-	48 V-	60 V-	110 V~
Max. continuous operating voltage U_C	6 V-	15 V-	33.3 V-	58 V-	70 V-	170 V-
	4.5 V~	10.5 V~	23.5 V~	41 V~	50 V~	120 V~
C3 Voltage protection level at 1 kV/ μ s U_p	line-line < 9 V	line-line < 20 V	line-line < 45 V	line-line < 75 V	line-line < 90 V	line-line < 210 V
	line-PE < 550 V					
C2 Voltage protection level at 10 kA U_p	line-line < 15 V	line-line < 28 V	line-line < 48 V	line-line < 85 V	line-line < 105 V	line-line < 240 V
	line-PE < 700 V					
Nominal current	0.75 A					
C2 Nominal discharge current (8/20 μ s) I_n	total 20 kA					
	per line 10 kA					
D1 Lightning impulse current (10/350 μ s) I_{imp}	total 5 kA					
	per line 2.5 kA					
Response time t_A	1 ns					
Line resistance	2.2 Ω					
Cut-off frequency f_g	1.2 MHz	3.2 MHz	6 MHz	9.2 MHz	12 MHz	23 MHz
Cross section for connection	0.14 - 2.5 mm ²					
Test category according to EN 61643-21	C1, C2, C3, D1					
Housing material	Thermoplastic, UL 94 V-0, colour orange					

Note: Surge arrester for earth-potential free signal circuits

P-1 SQ 110



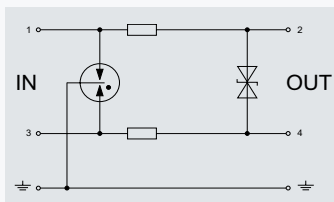
Ord. no. 220 194

P-2 SQ 24

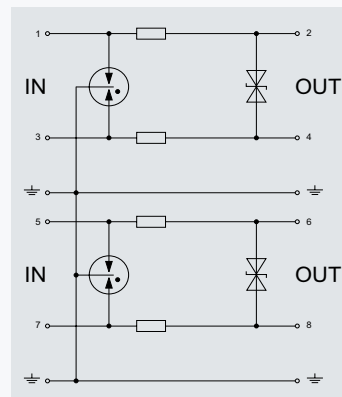


Ord. no. 220 624

Basic circuit diagram P-1 SQ:



Basic circuit diagram P-2 SQ:



P-1 S



Ord. no. 220 000

P-2 SQL 12

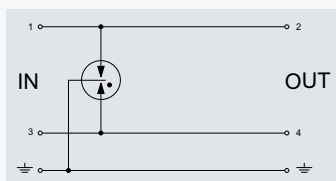


Ord. no. 220 712

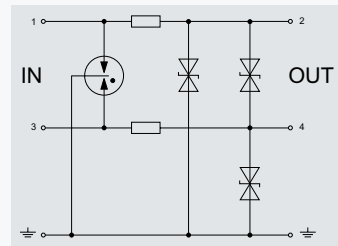
P-1(2) S; LPZ 0 - LPZ 1 and P-1(2) SQL; LPZ 0 - LPZ 3

Signal circuit - basic protection for LPZ 0 - 1				U _N		Ord. no.	
P-1 S		1 signal circuit		110 V~		220 000	
P-2 S		2 signal circuits		110 V~		220 500	
Differential and common mode protection for LPZ 0 - 3				U _N		Ord. no.	
P-1 SQL 5		1 signal circuit		5 V-		220 205	
P-1 SQL 12		1 signal circuit		12 V-		220 212	
P-1 SQL 24		1 signal circuit		24 V-		220 224	
P-1 SQL 48		1 signal circuit		48 V-		220 248	
P-1 SQL 60		1 signal circuit		60 V-		220 260	
P-2 SQL 5		2 signal circuits		5 V-		220 705	
P-2 SQL 12		2 signal circuits		12 V-		220 712	
P-2 SQL 24		2 signal circuits		24 V-		220 724	
P-2 SQL 48		2 signal circuits		48 V-		220 748	
P-2 SQL 60		2 signal circuits		60 V-		220 760	
Technical data							
Type P-1 (2)		SQL 5	SQL 12	SQL 24	SQL 48	SQL 60	S
Nominal voltage U _N		5 V-	12 V-	24 V-	48 V-	60 V-	110 V~
Max. continuous operating voltage U _C		6 V-	15 V-	33.3 V-	58 V-	70 V-	180 V-
		4.5 V~	10.5 V~	23.5 V~	41 V~	50 V~	130 V~
C3 Voltage protection level at 1 kV/μs U _p	line-line	< 9 V	< 20 V	< 45 V	< 75 V	< 90 V	< 650 V
	line-PE	< 9 V	< 20 V	< 45 V	< 75 V	< 90 V	< 550 V
C2 Voltage protection level at 10 kA U _p	line-line	< 15 V	< 28 V	< 48 V	< 85 V	< 105 V	< 900 V
	line-PE	< 20 V	< 40 V	< 55 V	< 100 V	< 110 V	< 700 V
Nominal current		0.75 A					10 A
C2 Nominal discharge current (8/20μs) I _N	total	20 kA					
	per line	10 kA					
D1 Lightning impulse current (10/350μs) I _{imp}	total	5 kA					
	per line	2.5 kA					
Response time t _A		1 ns					100 ns
Line resistance		2.2 Ω					-
Cut-off frequency f _g		0.8 MHz	2 MHz	4 MHz	7.5 MHz	8.7 MHz	200 MHz
Cross section for connection		0.14 - 2.5 mm ²					
Test category acc. to EN 61643-21		C1, C2, C3, D1					
Housing material		Thermoplastic, UL 94 V-0, colour orange					

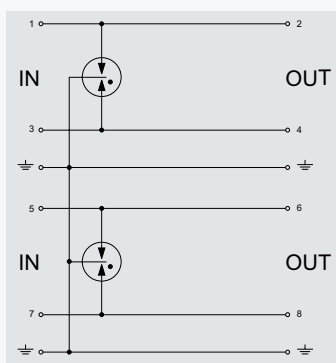
Basic circuit diagram P-1 S



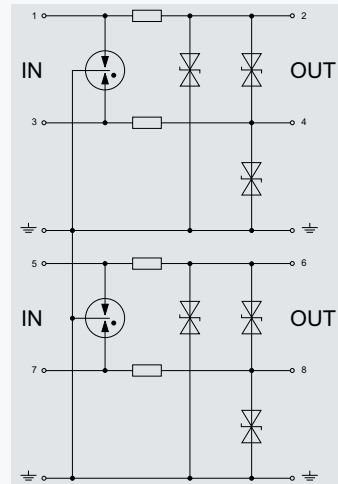
Basic circuit diagram P-1 SQL



Basic circuit diagram P-2 S



Basic circuit diagram P-2 SQL



Surge arrester for information, measurement and control technology

P-1 SQ 36 DC; LPZ 0 - LPZ 3

Type		U_N	Ord. no.
P-1 SQ 36 DC	1 signal circuit	36 V-	220 136
Technical data			
Type P-1		SQ 36 DC	
Nominal voltage U_N		36 V-	
Max. continuous operating voltage U_C		45 V-	
C2 Voltage protection level	line-line	< 180 V	
at 10 kA U_p	line-PE	< 1000 V	
Rated load current I_L	at 45°C	7 A	
	at 80°C	5 A	
C2 Nominal discharge current (8/20µs) I_n		10 kA	
D1 Lightning impulse current (10/350µs) I_{imp}		2.5 kA	
Response time t_A		1 ns	
Line resistance		< 1 Ω	
Cross section for connection		2.5 mm²	
Test category according to EN 61643-21		C1, C2, C3, D1	
Housing material		Thermoplastic, colour gray	

Note: Surge arrester for earth-potential free signal circuits

P-1 SQ 36 DC



Ord. no. 220 136

Combined arrester P-HF BOX

Benefits:

- Compact design.
- Quick and easy installation by surface-mounted box.
- IP code IP 65.
- Universally usable surge arrester for different telecommunication interfaces, such as VoIP.
- Cut-off frequency up to 250 MHz.
- Push-In terminal block for fast connection without tools (simple, push-in terminations of solid and ferruled conductors).
- High discharge capacity up to 2.5 kA (10/350 µs) per line.

P-HF Box; combined arrester in a surface-mounted enclosure for telecommunication interfaces. LPZ 0-LPZ 3

Combined arrester type	Ord. no.
P-HF BOX	210 090
Technical data: Type P-HF BOX	
SPD class	D1 + C2
Max. continuous voltage $U_{c ac}$	125 V
Max. continuous voltage $U_{c dc}$	180 V
Lightning impulse current (10/350 µs) /per line I_{imp} (D1)	2.5 kA
Lightning impulse current (10/350 µs) /total I_{imp} (D1)	7.5 kA
Nominal discharge current (8/20 µs) /per line I_n (C2)	7.5 kA
Nominal discharge current (8/20 µs) /total I_n (C2)	15 kA
Nominal current I_L	0.75 A
Voltage protection level U_p - Line-Line	< 350 V
Voltage protection level U_p - Line-PE	< 550 V
Cut-off frequency < 3 dB	250 MHz
Series resistance per line	1.8 Ω
Capacitance - Line-Line	< 20 pF
Capacitance - Line-PE	< 20 pF
Mounting type	Surface-mounted
Dimensions LxWxH (mm)	93x93x55
IP code	IP 65
Operating temperature range	-25°C up to +40°C
Connecting type	Push-In
Cross section for connection	0.20 - 1.5 mm² Signal line 0.25 - 2.5 mm² Earth terminal
Cable relief and fixing of conductors	Cable tie

P-HF BOX



Ord. no. 210 090



Communication and network protection

P-TK/Z-CAT 6 A



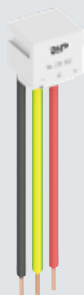
Ord. no. 210 140

P-TK/Z-CAT 5, -CAT 6 S, -CAT 6 A; (LPZ 0_B-LPZ 3)

Type		Ord. no.
P-TK/Z-CAT 5	Including network patch cable	210 110
P-TK/Z-CAT 6 S	Including network patch cable	210 130
P-TK/Z-CAT 6 A	Including network patch cable	210 140

Technical data			
Type P-TK/Z	-CAT 5	-CAT 6 S	-CAT 6 A
Max. continuous operating voltage U_C	8.5 V-	60 V-	60 V-
Nominal current I_L	500 mA	1 A	1 A
Nominal discharge current (8/20 μ s) I_n	1.6 kA	1.6 kA	10 kA
Voltage protection level U_p	line-PE line-line	< 130 V	< 120 V
Transmission rate		10 Gbit/s	
Response time t_A		< 1 ns	
Connection		2x RJ 45	
Dimensions LxWxH (mm)		90 x 25 x 47	

P-KNX



Ord. no. 210 160

P-KNX; for direct insertion into the slot of the bus coupling unit. (LPZ 0_B-LPZ 3)

Type	Ord. no.
P-KNX	210 160

Technical data	
Nominal voltage U_N	24 V AC
Nominal current at 25 °C I_L	7 A
Nominal discharge current (8/20 μ s) I_n	5 kA
Voltage protection level U_p	line-line line-PE
	< 1000 V < 600 V
Response time t_A	< 100 ns
Cut-off frequency f_g	50 MHz
Length of connection cable	200 mm

P-TK/Z-SAT



Ord. no. 210 210

Coax surge protection devices P-TK/Z

Type basic protection; LPZ 0 _A - LPZ 1	Ord. no.
P-TK/Z-SAT	210 210

Technical data	
Type	P-TK/Z-SAT
Max. continuous operating voltage U_C	70 V-
Nominal current I_L	4 A
Lightning impulse current (10/350 μ s) I_{imp}	2.5 kA
Nominal discharge current (8/20 μ s) I_n	10 kA
Voltage protection level U_p	line / PE
	< 600 V
Response time t_A	< 100 ns
Wave impedance Z	75 Ω
Frequency range f	< 2.15 GHz
Connection	2x F-socket
Dimensions LxWxH (mm)	45 x 25 x 47
Test standard	IEC 61643-21

Accessories

Busbars

for multipole connection of lightning current and surge arresters.

Specification	Fit	Length	PU	Ord. no.
Copper with plastic strip	16 mm ²	1 m	1	206 060
2 mods. with integrated end cap	16 mm ²	36 mm	1	206 062
3 mods. with integrated end cap	16 mm ²	54 mm	1	206 063
4 mods. with integrated end cap	16 mm ²	72 mm	1	206 064
6 mods. with integrated end cap	16 mm ²	108 mm	1	206 065

Earth-side bridging bar

for the bridging of earthing terminals for 2, 3 or 4 single-pole lightning current and surge arresters.

Specification	PU	Ord. no.
Brass / tinned with terminal clamp 25 mm ² 2-pole to 4-pole	1	2064
Earthing terminals for the connection of an additional protective conductor up to 35 mm ²	1	207 000

Distribution board

grey; IP 65, as insulation material housing for lightning current and surge arresters.

Housing type	Dimensions (W x H x D)	PU	Ord. no.
KV 3 TE	100x150x96 mm	1	206 010
KV 5 TE	125x200x122 mm	1	206 005
KV 9 TE	200x200x122 mm	1	206 004
KV 12 TE	250x200x122 mm	1	206 011

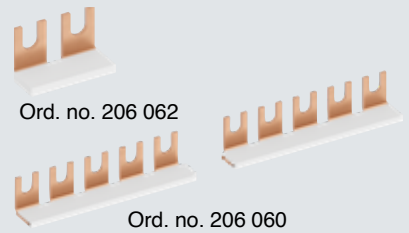
Other housing dimensions on request.

Spare parts

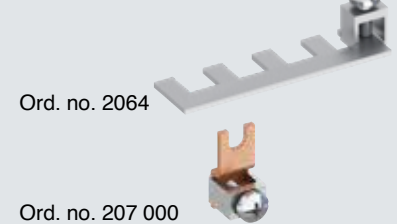
Plug-in - type	Housing colour	Ord. no.
P-HMS 280	red	207 201
P-HMS 280 Fm	red	207 203
P-HMS 360	red	207 301
P-HMS 360 Fm	red	207 303
P-HMS 440	red	207 401
P-HMS 440 Fm	red	207 403
P-HMS 280	blue	307 201
P-HMS 300 PV	blue	307 201 PV
P-HMS 280 Fm	blue	307 203
P-HMS 300 Fm PV	blue	307 203 PV
P-VMS 280	red	206 281
P-VMS 280 Fm	red	206 283
P-VMS 360	red	206 364
P-VMS 360 Fm	red	206 366
P-VMS 440	red	206 442
P-VMS 440 Fm	red	206 444
P-VMS 280	blue	306 281
P-VMS 300 PV	blue	306 281 PV
P-VMS 280 Fm	blue	306 283
P-VMS 300 Fm PV	blue	306 283 PV
P-HMS 280 R	blue	317 201
P-HMS 280 <i>max</i>	blue	317 206
P-VMS 280 R	blue	316 281
P-HMS 280 G	blue	327 201

Additional spare parts on request or under www.propster.de.

Busbars



Earth-side bridging bar



Distribution boards



Spare parts



Keyword register

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Test requirements for lightning protection comp. acc. to EN IEC 62561

Document	Requirements for	Legend	Classification	Document	Requirements for	Legend	Classification
Part 1	connection components	①	H / N 100 kA / 50 kA	Part 5	earth electrode inspection housings and earth electrode seals	⑤	
Part 2	conductors and earth electrodes	②		Part 7	earthing enhancing compounds	⑦	
Part 3	isolating spark gaps	③		Part 8	isolated lightning protection system	⑧	H2 / H1 / H / N
Part 4	conductor fasteners	④		Shortcircuit current (50Hz)	(1s; ≤ 300°C) in kA (1s; ≤ 150°C) in kA	I _k I _k value*	
Requirements and test methods for surge protection device			Energy technology EN 61643-11				⑨
			Photovoltaics EN 61643-31				⑩
			Information technology EN 61643-21				⑪

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1153	④	-	48
1154	④	-	48
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Test requirements for lightning protection comp. acc. to EN IEC 62561

Document	Requirements for	Legend	Classification	Document	Requirements for	Legend	Classification
Part 1	connection components	①	H / N 100 kA / 50 kA	Part 5	earth electrode inspection housings and earth electrode seals	⑤	
Part 2	conductors and earth electrodes	②		Part 7	earthing enhancing compounds	⑦	
Part 3	isolating spark gaps	③		Part 8	isolated lightning protection system	⑧	H2 / H1 / H / N
Part 4	conductor fasteners	④		Shortcircuit current (50Hz)	(1s; ≤ 300°C) in kA (1s; ≤ 150°C) in kA	I _k I _k value*	
Requirements and test methods for surge protection device			Energy technology EN 61643-11				Ⓔ
			Photovoltaics EN 61643-31				Ⓘ
			Information technology EN 61643-21				Ⓛ

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111 225	④	-	50
111 225 G	④	-	50
111 227	④	-	50
111 227 G	④	-	50
111 228	④	-	50
111 232	④	-	50
111 232 G	④	-	50
111 235	④	-	50
111 235 G	④	-	50
111 237	④	-	50
111 237 G	④	-	50
111 238	④	-	50
111 240	①/H	-	110
111 241	①/H	-	110
111 242	①/H	-	110
111 243	①/H	-	110
111 244	①/H	-	110
111 245	①/H	-	110
111 246	①/H	-	110
111 247	①/H	-	110
111 248	①/H	-	110
111 249	①/H	-	110
111 260	①/N	-	111
111 261	①/H	-	110
111 265	④	-	50
111 265 G	④	-	50
111 266	④	-	50
111 266 G	④	-	50
111 267	④	-	50
111 267 G	④	-	50
111 268	④	-	50
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111 304	①/N	-	75
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111 306	①/N	-	75
111 307	①/N	-	75
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111 310	①/N	-	72
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Test requirements for lightning protection comp. acc. to EN IEC 62561

Document	Requirements for	Legend	Classification	Document	Requirements for	Legend	Classification
Part 1	connection components	①	H / N 100 kA / 50 kA	Part 5	earth electrode inspection housings and earth electrode seals	⑤	
Part 2	conductors and earth electrodes	②		Part 7	earthing enhancing compounds	⑦	
Part 3	isolating spark gaps	③		Part 8	isolated lightning protection system	⑧	H2 / H1 / H / N
Part 4	conductor fasteners	④		Shortcircuit current (50Hz)	(1s; ≤ 300°C) in kA (1s; ≤ 150°C) in kA	I _k I _k value*	
Requirements and test methods for surge protection device		Energy technology EN 61643-11					Ⓔ
		Photovoltaics EN 61643-31					Ⓕ
		Information technology EN 61643-21					Ⓖ

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Part 1	connection components	①	H / N 100 kA / 50 kA	Part 5	earth electrode inspection housings and earth electrode seals	⑤	
Part 2	conductors and earth electrodes	②		Part 7	earthing enhancing compounds	⑦	
Part 3	isolating spark gaps	③		Part 8	isolated lightning protection system	⑧	H2 / H1 / H / N
Part 4	conductor fasteners	④		Shortcircuit current (50Hz)	(1s; ≤ 300°C) in kA (1s; ≤ 150°C) in kA	I _k I _k value*	
Requirements and test methods for surge protection device			Energy technology EN 61643-11				Ⓔ
			Photovoltaics EN 61643-31				Ⓕ
			Information technology EN 61643-21				Ⓖ

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TERMS OF SALE AND DELIVERY

for commercial business transactions

THIS IS AN ENGLISH TRANSLATION FOR INFORMATION PURPOSES ONLY. FOR ALL LEGAL PURPOSES REFERENCE SHOULD BE MADE TO THE GERMAN ORIGINAL

1. General:

All deliveries are subject to our terms, even if the customer specifies different terms. Any arrangements that have not been included in the confirmed order or that have not been confirmed by us in writing, are non-binding.

On publishing the new main catalogue all previously existing prices and price agreements lose their validity.

2. Quotation:

If not arranged otherwise, our quotations are non-binding and without engagement.

We do not accept any responsibility or liability whatsoever for the functionality of products manufactured according to the customer's drawings or for any other defects which may occur as a result of the customer's instructions. Documents, such as diagrams, drawings, information about weight and dimensions of products represent approximations only; unless such information is described as "binding". We reserve the copyright for all cost estimates, drawings and other documents. Any such documents become our property and may not be disclosed to third parties. Any infringements are liable for full damages. In case of infringement, we also reserve the right to withdraw immediately from a contract. Constructional designs are also subject to change. Drawings and other documents included in our bids must be returned to us or remunerated on request or, if we have not been granted the contract, immediately. The amount payable will be determined by us based on economic factors at our reasonable discretion.

3. Order – Completion of the contract:

Orders are not valid until they have been confirmed by us in writing. A commercial invoice may also serve as order confirmation.

4. Prices

All prices are in EURO excluding sales tax. Unless otherwise agreed, prices are stated ex works, including standard packaging. Sales tax will be calculated based on the valid rate on the day of delivery. Any discounts will be deducted from the list prices. We reserve the right to re-calculate the prices for products or energy costs that are associated with an official authorization, if the official authorization takes effect in the time between contracting and product delivery. Additionally, we also reserve the right for a re-calculation, if collectively agreed upon wage and salary increases have taken effect in the time between contracting and product delivery. The prices listed for components made of copper, brass or red brass are based on a DEL copper quote of 800.00 EUROS. Should the DEL quote increase by more than 12.80 EUROS per 100 kg, we will charge an additional non-ferrous metal fee. The price calculation is based on the DEL quote on the day after receipt of the clarified order. If one of our cost price factors is excluded from the price fixing process and a traceable cost price factor arises subsequently, we will be authorized to re-calculate the price, if the price increase occurs in the time between contracting and product delivery. The prices listed are non-binding, recommended prices. Our products may be resold at a higher or lower price by our customers.

5. Terms of payment

Unless otherwise agreed in writing, all payments must be made either within 8 days after invoice date with a 2% cash discount or in full within 30 days after invoice date. Payment is automatically considered overdue the day after these appointed payment dates have expired. A payment reminder to establish the debt is not required.

We reserve the right to appropriate any payments made first to the cost, then to the interest and thereafter to the oldest, still outstanding invoices, even if the customer makes different stipulations at the time of making a payment. If, after conclusion of the contract, it comes to our notice through our enquiries and other facts that it is, at our discretion, not advisable to allow the customer credit to the amount of the invoice we will be entitled to ask for advance payments, security for all deliveries or to withdraw from the contract. If advanced payments or security deposits are not made within the time period stipulated by us, we are entitled to claim damages due to default. If the customer falls behind with making partial or full payment, all of our payment claims become due immediately.

The customer has no right to retain or reject the services owed to him. From the due date of the payment, the customer will be charged with interest on arrears which is 2% higher than the interest normally charged by our bank. For orders with a net value (value of items without shipping costs and sales tax) of less than EURO 40.00, an extra charge of EURO 5.00 for small quantities will be invoiced. Cash sales are excluded.

6. Reservation of title

We reserve the right of ownership in respect of the goods supplied until such time as all claims under the business relationship with the partner have been met. The customer's claims from the resale of the reserved goods and/or further manufacturing steps involving the use of our goods are fully transferred to us. Passing on our goods is only permitted within the context of proper business operations. In the event that the customer sells or delivers the reserved goods, with or without further processing, together with other goods that are not our property, then the assignment of the accounts receivable resulting from the resale only applies to the value of the reserved goods. The customer has no other rights of disposal concerning the reserved goods. At our request the customer is obliged to inform us about his customer and the agreed selling price and to inform his customer of any assignment to us..

7. Delivery

The agreed delivery times commence on the day on which the contract becomes legally effective. Unforeseen events, such as war, mobilization, natural phenomena, disturbances of normal factory operations which are beyond our control, delayed delivery or quality defects of raw materials, etc., damage to important workpieces, or difficulties of various kinds due to unstable economic conditions, entitle us to extend the delivery time by the time required to deal with these events. We are also entitled to withdraw from the contract if any such events occur, even if the delivery time has already been extended. Such circumstances neither entitle the customer to withdraw from the contract nor to claim damages.

8. Shipping

The delivery is considered to have been effected as soon as the goods have left the factory or the warehouse, even if delivery carriage paid has been arranged. Upon request by and at the expense of the customer, we can insure the consignment against breakage, fire and transport damage.

9. Warranty and liability

The customer or his representative must inform us immediately on receipt of the goods in writing about any immediately apparent defects and any latent defects which are discovered upon careful inspection of the goods delivered, including incomplete delivery. We are entitled to take back faulty goods, to issue a credit note or to replace with faultless goods, if the defect has been claimed immediately. This also applies to defects that were not recognized during the immediate entry inspection. We shall not assume liability for any damage caused by incorrect installation or modifications made to the product. Further claims by the customer, such as redhibitory action, reduction of the purchasing price, compensation, as well as claims brought forth by third parties are excluded. We are not liable for any damage not deriving from the delivered goods themselves. In particular, we are not liable for lost profit or other financial losses incurred by the customer. The aforementioned limitations of liability do not apply in the case of specific intent or gross negligence. They also do not apply if the customer has claimed damages due to default because the product is lacking an advertised property according to §§ 463, 480 II BGB (German Civil Code). Compensation is limited to foreseeable damage. In the event that we violate a cardinal duty or a contractual obligation through negligence or we are responsible for a culpa in contrahendo we are liable only for standard contractual loss or loss which might reasonably have been expected.

We deliver only functional goods. A warranty for using the goods for the purpose intended by the customer can only be given, if we have issued our express written consent.

So far as our liability for damages is excluded or limited, it can also be applied to any other claims, including claims due to culpa in contrahendo, infringement of minor obligations and claims arising from the producer's liability according to § 823 BGB (German Civil Code).

The above paragraph does not apply to claims according to §§ 1, 4 of the Produkthaftungsgesetz (German Product Liability Law) or in cases of inability or impossibility.

So far as our liability is excluded or limited this also applies to the personal liability of our employees, representatives, deputies and assistants.

Any liability claims cease in agreement with § 477 BGB (German Civil Code), excluding claims arising from the producer's liability according to §§ 823 cont. BGB (German Civil Code).

10. Returning material

Delivered products can only be returned in exceptional cases and only with our approval. The goods must be in their original packaging. Goods which were delivered more than 3 months ago cannot be returned. Products manufactured to customer specifications or individually customized are excluded from return.

In order to cover the costs of handling returned goods, we charge a return fee amounting to 10% of the goods' net value. If, for special reasons, we agree to take back unpacked parts or parts that are not in their original packaging, a fee for new packaging amounting to 10% will be added to the return fee. Transport costs for returned goods will not be paid by us.

11. Data privacy

We process personal data exclusively in accordance with the GDPR and the German Federal Data Protection Act (BDSG). Information on data processing, storage duration and the rights of data subjects can be found in our privacy policy at www.proepster.de.

12. Place of fulfilment, place of jurisdiction

German law is applicable to these terms of sale and delivery and to the entire legal relationship between the contractual partners. The UN Convention on Contracts for the International Sale of Goods (CISG) from 04/11/1980 is not applicable.

Place of fulfilment and jurisdiction for delivery, payment and all liabilities, including any action relating to payment by bill of exchange or cheque, is the town of Neumarkt/Opf. Invalidity of one part of these terms of delivery does not affect the other parts of this agreement. In this case, the invalid part is replaced by the current legal regulation. Any changes or alterations to these terms of delivery require the written consent of the seller.

Sales tax identification no.: DE 133211151 J. Pröpster GmbH.

Register of companies Nuremberg, HRB 8169,

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