

Lightning Protection and Earthing





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Technical Information



Leading the right way.

Conductors

and Accessories

extensive. From the cellar to the roof - conductors are at the core of any lightning protection and earthing system. Interception components and ground electrodes require suitable conductor systems to guarantee highest safety in various lightning protection systems.

diverse. The variety of materials, from aluminium over copper and stainless steel to galvanised steel, offers solutions for all sorts of applications. Outdoor installation, embedding in concrete or soil – everything is feasible. And even aesthetic aspects do not confine the range of choice.



RD, round wire; for lightning protection and earth-termination systems



hot-dip galvanised

item code	material	dn [mm]	L [m]	pl [kg]	ps [kg]	ref.
RD8fv	fv	8	125	500	50	006 818
RD10fv	fv	10	81	500	50	006 821



copper

item code	material	dn [mm]	spec.	L [m]	pl [kg]	ps [kg]	ref.
RD8Cu/w	Cu	8	soft	113	500	50	027 601
RD8Cu/hh	Cu	8	semi-hard	113	500	50	006 820



with plastic sheathing

item code	material	dn [mm]	spec.	L [m]	pl [kg]	ps [kg]	ref.
RD8fv/K	fv/K	8	–	113,5	500	50	085 064
RD8Al/K	Al/K	8	soft	100	300	20	061 422
RD10fv/K	fv/K	10	–	71,5	500	50	085 065



aluminium

item code	material	dn [mm]	spec.	L [m]	pl [kg]	ps [kg]	ref.
RD8Al/w	Al	8	soft	148	300	20	027 762
RD8Al/hh	Al	8	semi-hard	148	300	20	013 843



stainless steel

item code	material	dn [mm]	L [m]	pl [kg]	ps [kg]	ref.
RD8NiroV2A	V2A	8	125	500	50	085 066
RD8NiroV4A	V4A	8	148	500	50	085 067
RD10NiroV2A	V2A	10	80	500	50	085 068
RD10NiroV4A	V4A	10	80	500	50	085 069

EBE, flat strip; for earth-termination, lightning protection systems and ring equipotential bonding



hot-dip galvanised

item code	material	dim [mm]	L [m]	pl [kg]	ps [kg]	ref.
EBE30 x 3fv	fv	30 x 3	70	1000	50	006 845
EBE40 x 4fv	fv	40 x 4	40	1000	50	006 849



stainless steel V4A

item code	material	dim [mm]	L [m]	pl [kg]	ps [kg]	ref.
EBE30 x 3.5NiroV4A	V4A	30 x 3,5	59	1000	50	064 481
EBE40 x 4NiroV4a	V4A	40 x 4	40	1000	50	061 102

ST-BE, terminal flat strip; for connecting down-conductors to the earth-termination



item code	material	dim [mm]	L [m]	ps [kg]	ref.
ST-BE40 x 4/3 mfv	fv	40 x 4 x 3000	3	4	006 854
ST-BE30 x 3/3 mfv	fv	30 x 3 x 3000	3	2	006 852

SEIL, cable; for lightning protection and earth-termination systems



35mm² cross section

item code	material	dn [mm]	spec.	L [m]	ps [kg]	ref.
Seil 35 Cu / plain 50 kg coil	Cu	6,9	plain	162	50	081 942
Seil 35 Cu / zinc-plated 50 kg	Cu	6,9	zinc-plated	143	50	085 601



50mm² cross section

item code	ma- terial	dn [mm]	spec.	L [m]	cable strands x Ø	ps [kg]	ref.
Seil 50 Al 33kg coil	Al	9	plain	250	19 x 1,8	33	085 070
Seil 50 Cu / plain 50 kg coil	Cu	9	plain	113	19 x 1,8	50	021 722
Seil 50 Cu / zinc-plated 50 kg	Cu	9	zinc-plated	100	19 x 1,8	50	084 704



70mm² cross section

item code	ma- terial	dn [mm]	spec.	L [m]	cable strands x Ø	ps [kg]	ref.
Seil 70 Cu / plain 50 kg coil	Cu	10,5	plain	85	19x1,8	50	027 602
Seil 70 Cu / zinc-plated 50 kg	Cu	10,5	zinc-plated	71	19x1,8	50	084 705



95mm² cross section

item code	ma- terial	dn [mm]	spec.	L [m]	cable strands x Ø	ps [kg]	ref.
Seil95 steel / zinc-plated 50k	V2A	12,5	zinc-plated	68	19x2,5	50	085 829
Seil 95 Cu / zinc-plated 50 kg	Cu	12,5	zinc-plated	53	19x2,5	50	097 401

Bushings

ADR, cover bushing; impedes the draining of rain water along round wires and prevents claddings from subsequent stains



item code	material	colour	ps [pcs]	ref.
ADRfv	fv	light grey	100	063 938
ADRCu	Cu	-	100	063 937
ADR/Kgrey	K	grey	200	064 490

ADK, insulation bushing; for upgraded insulation, rainproof



item code	material	colour	ps [pcs]	ref.
ADK/PVC light grey	PVC	light grey	200	081 903

Wire Straighteners

DRM, wire straightener; for straightening round conductors made of different materials



5 guide pulleys, with handles

item code	material	dim [mm]	spec.	pieces	ref.
DRMA	St/tZn	180 x 290 (L x B)	supports rd 7–10 mm	1	063 984



10 guide pulleys, movable on rubber wheels

item code	material	spec.	pieces	ref.
DRMB	St/tZn	supports rd 8–10 mm	1	063 985



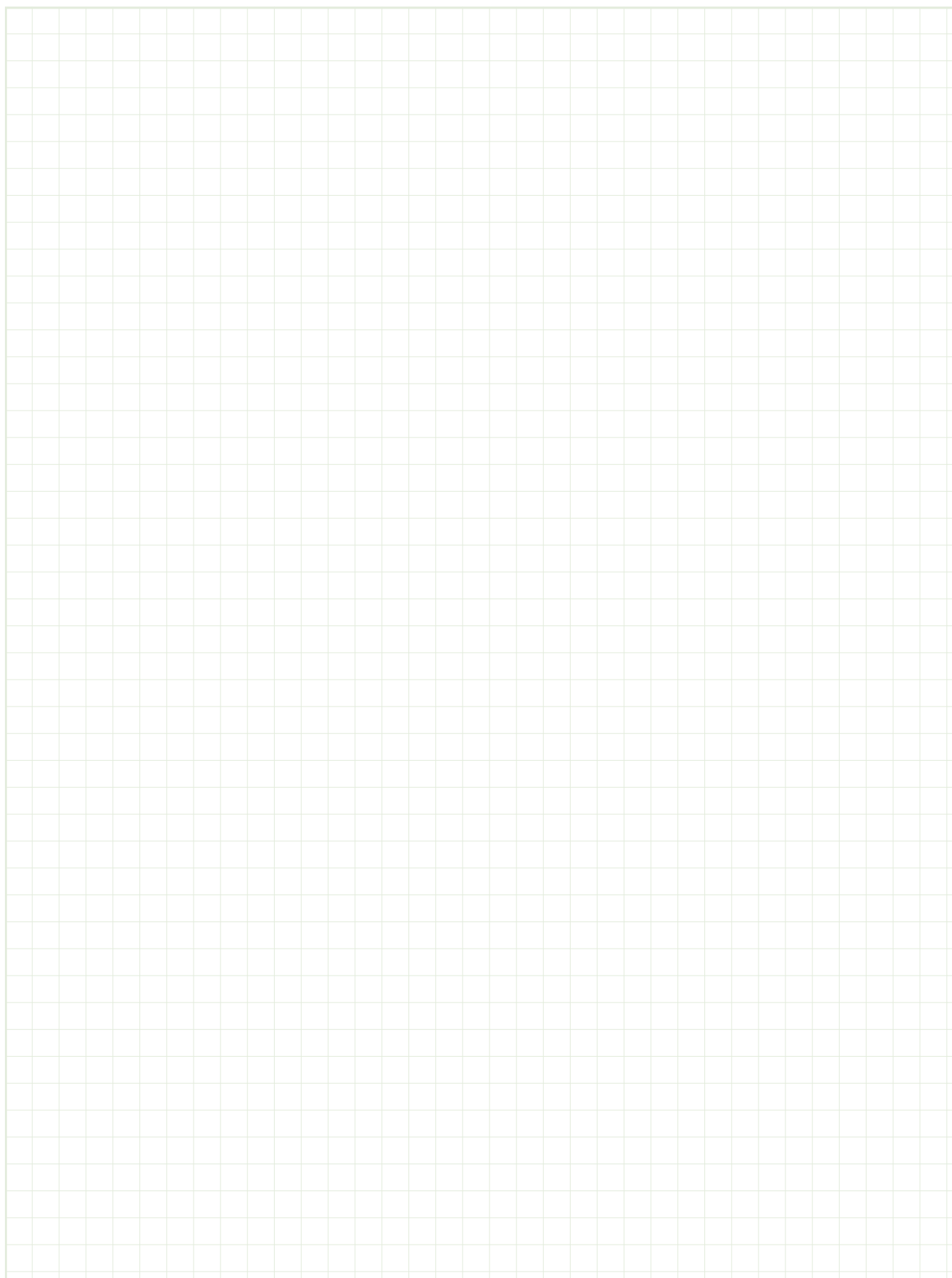
10 guide pulleys, movable on rubber wheels, with wire unwinding device, suitable for coils with an inner diameter of 450–800 mm and coil widths up to 150 mm (also suitable for unwinding flat strips)

item code	material	dim [mm]	spec.	pieces	ref.
DRMC	St/tZn	1680 x 1090 (L x B)	supports rd 7–10 mm	1	082 524

RE, straightening tool; suitable for angling and straightening round conductors and flat strips



item code	material	spec.	clp. r/f [mm]	L [mm]	pieces	ref.
RE/RD	steel	barnished	8–10/–4,5	260	1	006 478
RE/EBE	steel	barnished	8	260	1	006 479





Important for all installations.

Earthing Material and Accessories

essential. A high-grade earthing system is the best protection not only against lightning strikes but also against offset voltage – for the safety of people, structures and installations.

robust. Univolt earthing material offers highest quality. Our components are extremely durable and resistant against ground water, insensitive to corrosion and yet completely harmless for the environment.



TE, deep-driven earthing rod; for implementing earth-termination systems, with spigot and hole joints, simple installation with vibration hammer



round version

item code	material	dn [mm]	L [m]	pieces	ref.
TE20/1500fv	fv	20	1,5	1	063 898
TE25/1500fv	fv	25	1,5	1	063 897
TE20/1000Niro	V4A	20	1	1	064 051
TE20/1500Niro	V4A	20	1,5	1	063 882



with hexagonal joint

item code	material	dn [mm]	L [m]	pieces	ref.
TE-S20 x 1500fv	fv	20	1,5	1	063 868
TE-S25 x 1500fv	fv	25	1,5	1	063 869

ESP, driving tip; for driving earthing rods into the ground



round version

item code	material	dn [mm]	pieces	ref.
ESP20fv	fv	20	1	063 995
ESP25fv	fv	25	1	063 996



hexagonal joint

item code	material	dn [mm]	spec.	pieces	ref.
ESP-S20fv	fv	20	hexagonal	1	063 866
ESP-S25fv	fv	25	hexagonal	1	063 867

TES, TES connection clamp; for connecting deep-driven earthing rods to round wires



item code	material	spec.	for Ø [mm]	ps [pcs]	ref.
TES/KS20fv	fv	with contact screw	20	50	063 899
TES/KS25fv	fv	with contact screw	25	50	063 900
TES20Niro	V4A		20	50	064 052

TEK, connection clamp; for connecting earthing rods to round wires up to 16 mm diameter or to flat strips



item code	material	spec.	clp. r/f [mm]	for Ø [mm]	ps [pcs]	ref.
TEK20UNI fv 3 part	fv	universal	8–16/20 30–40/20	20	25	080 045
TEK25UNI fv 3 part	fv	universal	8–16/25 30–40/25	25	25	080 044

ESP, earth entry rod; for implementing earthing systems, with terminal lug, rod diameter 16 mm



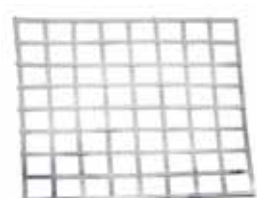
item code	material	dn [mm]	L [m]	pieces	ref.
ESP500fv	fv	16	0,5	1	006 496
ESP750fv	fv	16	0,75	1	006 497
ESP1000fv	fv	16	1	1	006 498
ESP1500fv	fv	16	1,5	1	006 499
ESP2000fv	fv	16	2	1	006 500

KE, cross-profile earthing rod; for implementing earthing systems, with 50x50x3 mm profile and terminal lug



item code	material	dn [mm]	L [m]	pieces	ref.
KE1000fv	fv	16	1	1	032 292
KE1500fv	fv	16	1,5	1	032 293
KE2000fv	fv	16	2	1	032 294
KE2500fv	fv	16	2,5	1	064 048
KE 1500fv incl KSV	fv	16	1,5	1	085 898

EG, earthing lattice; for implementing earthing systems at locations with limited space



item code	material	screw	material screw	dn [mm]	spec.	pieces	ref.
EG1000x1000fv	fv	2 cleat screws	GEO 321	1000x1000	flat strip 20x2 mm	1	006 040

EES, lead-in earthing rod; for implementing earthing systems, rod diameter 16 mm



complete with 2 contact screws and 1 disconnection sleeve, with 2 holes in the forged-on lug

item code	material	dn [mm]	L [m]	pieces	ref.
EES1500fv	fv	16	1,5	1	063 986



loose

item code	material	dn [mm]	L [mm]	ps [pcs]	ref.
EES1750fv	fv	16	1,75	10	006 411
EES2000fv	fv	16	2	10	006 412
EES2500fv	fv	16	2,5	10	006 413
EES3000fv	fv	16	3	10	006 414

AH, conductor holder; for foundation earth electrodes, suitable for round wires 8–10 mm and flat strips up to 40x4 mm



item code	material	spec.	clp. r/f [mm]	L [mm]	ps [pcs]	ref.
AHG8-10	fv	straight	8–10/40	280	100	063 940
AH8-10/fv	fv	cranked	8–10/40	300	100	063 939

EP, fixed earthing terminal; for the connection of earthing systems, reinforcements and conductor systems



item code	material	screw	material screw	dn [mm]	for Ø [mm]	ps [pcs]	ref.
EP/IGM12Niro	V2A	thread M12	200 mm	baseplate Ø80	3 x ø4	50	063 987

EB, earthing bush and retainer plate

Note: approved by Austrian Federal Railways



item code	material	pieces	ref.
EB/IGM16angleV2A	V2A	1	082 523
EB/IGM16angleV4A	V4A	1	087 464
EB-BP/nail RDX16	K	1	096 399

TSK, hammer insert; for driving earthing rods into the ground with mallet



item code	material	for Ø [mm]	ps [pcs]	ref.
TSK20	steel	20	5	065 677
TSK25	steel	25	5	065 678

Protection Tapes

KSB, protection tape; for covering underground joints exposed to corrosion risk

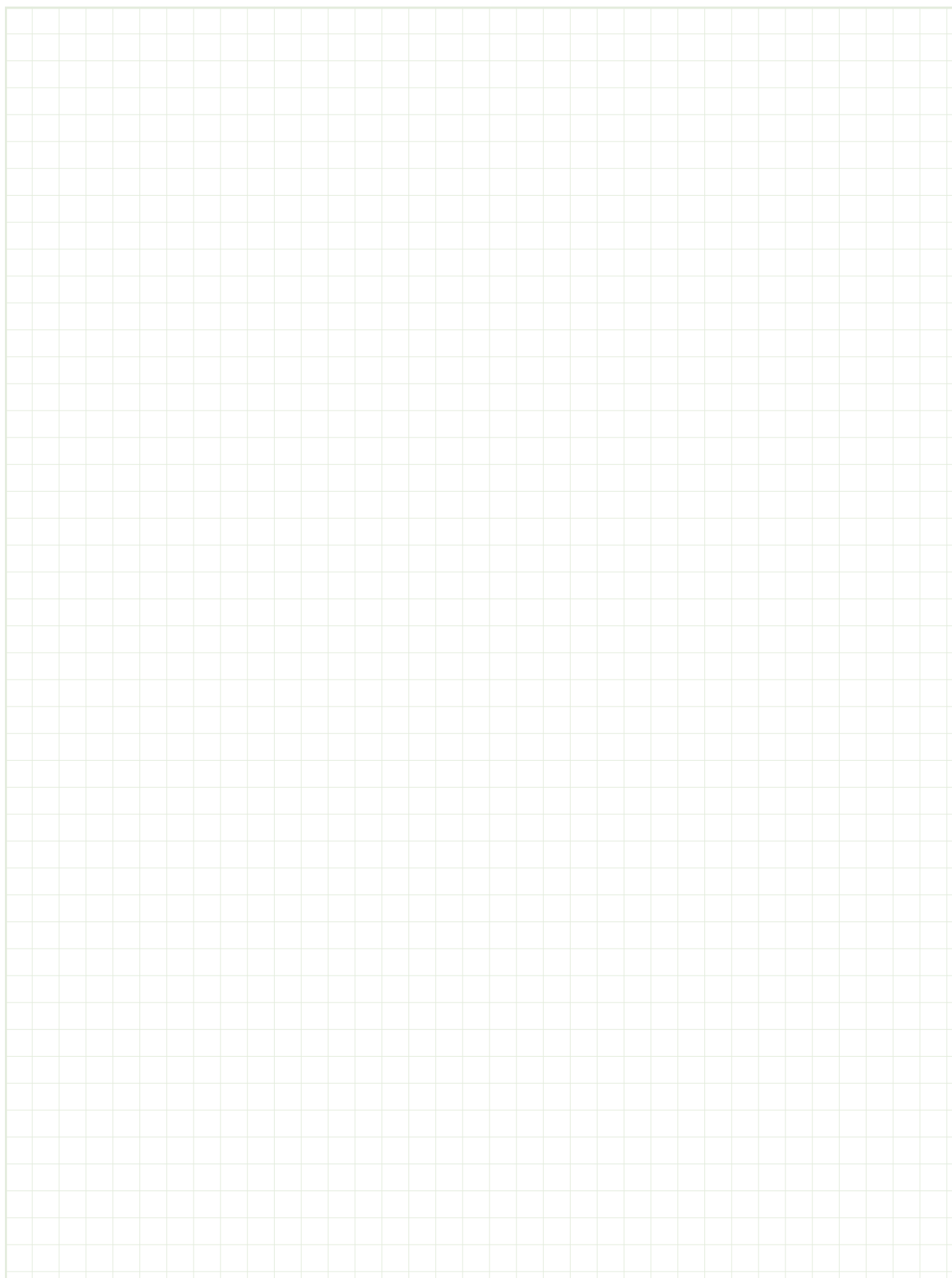


item code	material	spec.	L [m]	pieces	ref.
KSB50	Petrolat	width=50 mm	1 coil=10 m	1	037 435
KSB100	Petrolat	width=100 mm	1 coil=10 m	1	037 626

SB, protection tape; for covering components exposed to corrosion risk but not underground



item code	material	spec.	L [m]	ps [pcs]	ref.
SB50	Petrolat	width=50 mm	1 coil=10 m	36	006 439
SB100	Petrolat	width=100 mm	1 coil=10 m	18	006 440





The perfect fixing.

Conductor Holders and Accessories

suited. The range of Univolt conductor holders is ideally suited for our conductor systems. This allows constructing a consistent lightning protection system relating to quality, material and visual appearance.



versatile. Our conductor holders are suitable for all types of surfaces, roof covers and plasters. This makes the fixation of conductors safe and reliable.



LH, conductor holder; for fixing conductors, with cleat and two screws, for round wires and flat strips



with screw and plug

item code	material	screw	spec.	clp. r/r [mm]	ps [pcs]	ref.
LH+SD/ZG	ZG	5 x 60 mm	plug 8 x 40 mm	8	100	063 844
LH+SD/Cu	Cu	5 x 60 mm	plug 8 x 45 mm	8	75	063 829



with female thread

item code	material	clp. r/r [mm]	ps [pcs]	ref.
LH-IGZG	ZG	8	100	063 828



for round wires 8–13 mm or flat strips 30 mm

item code	material	screw	spec.	clp. r/f [mm]	ps [pcs]	ref.
LH8-10/30fv	fv	5 x 60 mm, plug 8 x 4 mm	with screw	8–10/30	100	063 827



for flat strips 40 mm

item code	material	clp. f/f [mm]	ps [pcs]	ref.
LH40fv	fv	40	100	063 826

ME, anchor bracket with cleat, adjustable; for fixing round wires



item code	material	clp. r/r [mm]	L [mm]	ps [pcs]	ref.
ME100ULvfv	fv	8	100	100	088 286
ME150ULvfv	fv	8	150	100	088 287
ME200ULvfv	fv	8	200	75	088 288
ME100ULvCu	Cu	8	100	100	088 289

RRS, downpipe clamp; for fixing conductors at downpipes



not adjustable, hot-dip galvanised

item code	material	screw	material screw	for cond. Ø [mm]	ps [pcs]	ref.
RRS50fv	fv	M6 x 25	GEO 321	50	25	006 358
RRS60fv	fv	M6 x 25	GEO 321	60	25	006 359
RRS70fv	fv	M6 x 25	GEO 321	70	25	006 360
RRS80fv	fv	M6 x 25	GEO 321	80	25	006 361
RRS90fv	fv	M6 x 25	GEO 321	90	25	006 362
RRS100fv	fv	M6 x 25	GEO 321	100	25	006 363
RRS110fv	fv	M6 x 25	GEO 321	110	25	006 364
RRS120fv	fv	M6 x 25	GEO 321	120	25	006 365
RRS130fv	fv	M6 x 25	GEO 321	130	25	006 366
RRS140fv	fv	M6 x 25	GEO 321	140	25	006 367
RRS150fv	fv	M6 x 25	GEO 321	150	25	006 368
RRS180fv	fv	M6 x 25	GEO 321	180	25	006 369
RRS200fv	fv	M6 x 25	GEO 321	200	25	006 370



not adjustable, stainless steel V2A

item code	material	screw	material screw	for cond. Ø [mm]	ps [pcs]	ref.
RRS80Niro	V2A	M6 x 25	V2A	80	25	038 650
RRS100Niro	V2A	M6 x 25	V2A	100	25	038 649
RRS120Niro	V2A	M6 x 25	V2A	120	25	038 648
RRS150Niro	V2A	M6 x 25	V2A	150	25	077 189



not adjustable, copper

item code	material	screw	material screw	for cond. Ø [mm]	ps [pcs]	ref.
RRS80Cu	Cu	M6 x 25	V2A	80	25	006 616
RRS90Cu	Cu	M6 x 25	V2A	90	25	006 617
RRS100Cu	Cu	M6 x 25	V2A	100	25	006 618
RRS110Cu	Cu	M6 x 25	V2A	110	25	006 619
RRS120Cu	Cu	M6 x 25	V2A	120	25	006 620
RRS150Cu	Cu	M6 x 25	V2A	150	25	006 621



adjustable, for round wires 6–10 mm

item code	material	screw	material screw	for cond. Ø [mm]	ps [pcs]	ref.
RRSUni/Niro	V2A	M8 x 16	V2A	50-120	10	065 682
RRSUni/Cu	Cu	M8 x 16	V2A	50-120	10	065 683



adjustable, for various pipe diameters, with twist protection cleat

item code	material	screw	material screw	for cond. Ø [mm]	ps [pcs]	ref.
RRS60-120fv	fv	M8 x25	V2A	60-120	10	063 819
RRS60-120Cu	Cu	M8 x25	V2A	60-120	10	063 818
RRS60-120Al	Al	M8 x25	V2A	60-120	10	063 803
RRS70-200fv	fv	M8 x25	V2A	70-200	10	063 822
RRS70-200Cu	Cu	M8 x25	V2A	70-200	10	063 821
RRS70-200Al	Al	M8 x25	V2A	70-200	10	063 820
RRS180-300Al	Al	M8 x25	V2A	180-300	10	063 802
RRS200/800Cu	Cu	M8 x20	V2A	200/800	25	006 622

RRS BAND, downpipe clamp tape; for fixing conductors at downpipes. 100 m tape in convenient packing for simple unwinding.



down pipe clamp tape

item code	material	dim [mm]	L [m]	pieces	ref.
RRS BAND 100 m Niro	V2A	12 x 0,3	100	1	082 456

RRS SPK, grip head for downpipe clamp tapes; for positioning downpipe clamp tapes



grip head for downpipe clamp tapes, for round wires 8–10 mm

item code	material	clp. r/r [mm]	pieces	ref.
RRS SPK Niro	V2A	8–10	1	082 454
RRS SPK fv	fv	8–10	1	082 455



grip head for downpipe clamp tapes, for connections to 16mm² earth conductors

item code	material	spec.	ps [pcs]	ref.
RRS SPK fv 16mm2	fv	cable terminal 16mm²	100	083 218

RK, pipe earthing clamp; for fixing conductors at pipes

with twist protection cleat



item code	material	clp. r/r [mm]	pipe clp. [inch]	ps [pcs]	ref.
RK16fv	fv	16	3/8"	50	064 510
RK20fv	fv	20	1/2"	50	064 511
RK25fv	fv	25	3/4"	50	064 512
RK16Niro	V2A	16	3/8"	50	064 506
RK20Niro	V2A	20	1/2"	50	064 507
RK25Niro	V2A	25	3/4"	50	064 508
RK20Al	Al	20	1/2"	50	063 800
RK25Al	Al	25	3/4"	50	063 801

SP, grip-type conductor holder; screw-less fixing system for conductors

complete with screw and plug



item code	material	clp. r/r [mm]	ps [pcs]	ref.
SPHNiro	V2A	8	75	063 886
SPHCu	Cu	8	75	063 885

with screw



item code	material	clp. r/r [mm]	ps [pcs]	ref.
SP8Niro+SD	V2A	8	200	065 672
SP8Cu+SD	Cu	8	200	065 673

without screw and plug



item code	material	clp. r/r [mm]	ps [pcs]	ref.
SP8Niro	V2A	8	300	063 884
SP8Cu	Cu	8	300	063 850

SP+ID, grip-type conductor holder with ISO plug; stainless steel 8 mm, with self-tapping ISO plug e.g. for insulating exterior plaster

Your advantages: simple mounting with self-tapping plug, simple fixing of round wires with conductor holder, also available with grip-type conductor holder 10mm



item code	material	clp. r/r [mm]	ps [pcs]	ref.
SP8Niro+ID	V2A/K	8	200	082 229

SD, snap-type conductor holder; screw-less fastening system for conductors



item code	material	L [mm]	colour	ps [pcs]	ref.
SD25grey	Nylon	25	grey	200	063 812
SD25Cu-brown	Cu	25	brown	200	063 811
SD40grey	Nylon	40	grey	150	063 814
SD40Cu-brown	Cu	40	brown	150	063 813

DLH/SP, grip-type roof conductor holder; for tiled, slated and bitumen sheeting roofs



straight version

item code	material	L [mm]	ps [pcs]	ref.
DLH250SPCu	Cu	250	100	063 907
DLH250SPNiro	V2A	250	100	063 908
DLH400SPCu	Cu	400	50	064 516
DLH400SPNiro	V2A	400	50	064 515



straight serrated version

item code	material	L [mm]	ps [pcs]	ref.
DLH190SPCu	Cu	190	100	063 903
DLH190SPNiro	V2A	190	100	063 904
DLH250SP/G/Cu	Cu	250	100	065 665
DLH250SP/G/Niro	V2A	250	100	065 664



angled version

item code	material	L [mm]	ps [pcs]	ref.
DLH140SPCu	Cu	140	150	063 911
DLH140SPAI	Al	140	150	063 910
DLH140SPNiro	V2A	140	150	063 912

DLH/SD, grip-type roof conductor holder; for tiled, slated and bitumen sheeting roofs



straight version

item code	material	L [mm]	ps [pcs]	ref.
DLH250SDCu	Cu	250	100	063 905
DLH250SDNiro	V2A	250	100	063 906



straight serrated version

item code	material	L [mm]	ps [pcs]	ref.
DLH190SD25Cu	Cu	190	100	063 913
DLH190SD25Niro	V2A	190	100	063 914
DLH190SD60Cu	Cu	190	75	063 915
DLH190SD60Niro	V2A	190	75	063 909



angled version

item code	material	L [mm]	ps [pcs]	ref.
DLH140SDCu	Cu	140	150	063 946
DLH140SDAl	Al	140	150	063 945
DLH140SDNiro	V2A	140	150	063 947

DLH/KTSP, roof conductor holder with sleeve; weather-proof sleeve and grip-type conductor holder, drilling hole 10.5 mm, e.g. for masoned ridges



item code	material	clp. r/r [mm]	ps [pcs]	ref.
DLH/KTSPNiro	V2A/K	8	100	083 080
DLH/15KTSPNiro	V2A/K/Al	8	100	083 084

DLKH/SP, grip-type roof conductor holder with clamp; for fixing of conductor holder on tiled, slated and bitumen sheeting roofs



length: 40 mm

item code	material	clp. r/r [mm]	L [mm]	ps [pcs]	ref.
DLKH40/8SPCu	Cu	8	40	100	063 928
DLKH40/8SPNiro	V2A	8	40	100	063 922
DLKH40/8SP/G	V2A	8	40	75	065 666



length: 50 mm

item code	material	clp. r/r [mm]	L [mm]	ps [pcs]	ref.
DLKH50/15SPCu	Cu	8	50	100	063 918
DLKH50/15SPNiro	V2A	8	50	100	063 919

DLKH/SD, snap-type roof conductor holder with clamp; for fixing of conductor holder on tiled, slated and bitumen sheeting roofs



length: 40 mm

item code	material	clp. r/r [mm]	L [mm]	ps [pcs]	ref.
DLKH40/8SDCu	Cu	8	40	100	063 926
DLKH40/8SDNiro	V2A	8	40	100	063 927



length: 50 mm

item code	material	clp. r/r [mm]	L [mm]	ps [pcs]	ref.
DLKH50/15SDCu	Cu	8	50	100	063 916
DLKH50/15SDNiro	V2A	8	50	100	063 917

DLH/WP, roof conductor holder; for mounting on corrugated sheet roofs



type A

item code	material	ps [pcs]	ref.
DLH/WP-Afv	fv	50	006 080



type B

item code	material	ps [pcs]	ref.
DLH/WP-Bfv	fv	50	006 081
DLH/WP-BCu	Cu	50	006 535



type C

item code	material	ps [pcs]	ref.
DLH/WP-Cfv	fv	50	006 083
DLH/WP-CCu	Cu	50	006 533



with snap-type conductor holder

item code	material	ps [pcs]	ref.
DLH/WPSDNiro	V2A	150	063 943



with grip-type conductor holder

item code	material	ps [pcs]	ref.
DLH/WPSPNiro	V2A	150	063 944

DLHZST, intersection for roof conductor holders; for mounting on corrugated sheet roofs



with snap-type conductor holder

item code	material	ps [pcs]	ref.
DLHZST/WP-SDNiro	V2A	100	063 924



with grip-type conductor holder

item code	material	ps [pcs]	ref.
DLHZST/WP-SPNiro	V2A	100	063 925

DLH/F, roof conductor holder; for mounting on corrugated sheet roofs with folds



with snap-type conductor holder

item code	material	L [mm]	ps [pcs]	ref.
DLH/F140SDNiro	V2A	140	150	063 954
DLH/F140SDCu	Cu	140	150	063 953



with grip-type conductor holder

item code	material	L [mm]	ps [pcs]	ref.
DLH/F140SPNiro	V2A	140	150	063 942
DLH/F140SPCu	Cu	140	150	063 948

DLH, conductor holder with cleat



angled version

item code	material	L [mm]	ps [pcs]	ref.
DLH115fv	fv	115	50	064 083
DLH115Cu	Cu	115	50	064 080
DLH410fv	fv	410	75	063 923
DLH410Cu	Cu	410	25	006 532
DLH410Niro	V2A	410	25	064 078



straight version

item code	material	L [mm]	ps [pcs]	ref.
DLH160fv	fv	160	50	006 079
DLH210fv	fv	210	50	006 086
DLH210Cu	Cu	210	50	006 531
DLH210Niro	V2A	210	50	064 082



cranked version

item code	material	L [mm]	ps [pcs]	ref.
DLH260fv	fv	260	50	006 082
DLH260Cu	Cu	260	50	006 529
DLH260Niro	V2A	260	50	064 081

FB/SP, grip-type ridge conductor holder; for fixing of conductors on roof ridges



grip-type conductor holder length = 25 mm

item code	material	clp. r/r [mm]	L [mm]	ps [pcs]	ref.
FB-SP160-170Cu	Cu	8	160-170	100	063 965
FB-SP160-170Niro	V2A	8	160-170	100	063 966
FB-SP180-260Cu	Cu	8	180-260	100	063 967
FB-SP180-260Niro	V2A	8	180-260	100	063 968
FB-SP190-400Cu	Cu	8	190-400	100	064 615
FB-SP190-400Niro	V2A	8	190-400	100	064 616



grip-type conductor holder length = 40 mm

item code	material	clp. r/r [mm]	L [mm]	ps [pcs]	ref.
FB-SP40/180-260Cu	Cu	8	180-260	100	063 962
FB-SP40/180-260Niro	V2A	8	180-260	100	063 956

FB/SD, snap-type ridge conductor holder; for fixing of conductors on roof ridges



item code	material	clp. r/r [mm]	L [mm]	ps [pcs]	ref.
FB-SD160-170Cu	Cu	8	160-170	100	064 000
FB-SD160-170Niro	V2A	8	160-170	100	063 999
FB-SD180-260Cu	Cu	8	180-260	100	063 963
FB-SD180-260Niro	V2A	8	180-260	100	063 964

BS, concrete base; for positioning of 8 mm round wires on flat roofs, frost resistant



item code	material	dn [mm]	weight [kg]	pieces	ref.
BS-recyclable	concrete	175 x 128 x 73	1	1	081 904
BS-concrete	K/concrete		1	1	063 934

UL, cleat; for 8 mm round wires



item code	material	spec.	clp. r/r [mm]	ps [pcs]	ref.
UL8-10/28fv	fv	hole spacing 28 mm	8-10	500	006 209
UL8-10/28Cu	Cu	hole spacing 28 mm	8-10	500	006 564
UL16/38fv	fv	hole spacing 38 mm	16	500	006 211

VS/UL, twist protection cleat; for 8 mm round wires



item code	material	clp. r/r [mm]	ps [pcs]	ref.
VS/ULNiro	V2A	6-8	100	063 872
VS/ULCu	Cu	6-8	100	063 871

DDF, roof bushing; for sealing of roofs at down conductor lead-in, for tiled and corrugated sheet roofs (drilling hole Ø 16 mm)



item code	material	spec.	for Ø [mm]	ps [pcs]	ref.
DDF/K8-10	K	Ø 34 mm, bore hole 16 mm	8-10	25	064 821



Good connections everywhere.

Connectors and Clamps

and Accessories

connected. Reliable and conductive connections of lightning protection components are essential for a proper installation. Our conductor holders are designed for various types of connections and materials.

individual. Any building requires an individual lightning protection and earthing concept. May it be on surface, under ground, within the fundament or in plaster – our conductor holders ensure a long-lasting and safe installation of all components.



KK, cross clamp; for connections of round wires or flat strips, suitable for cross or T-shape arrangements, for installation above or under ground



50x50 cross clamp for installation above or under ground, with screw M6

item code	material	screw	material screw	clp. r/r [mm]	ps [pcs]	ref.
KK8-10/8-10fvM6	fv	M6x20	GEO 321	8-10/8-10	50	006 232



50x50 cross clamp for installation above or under ground

item code	material	screw	material screw	clp. r/r [mm]	ps [pcs]	ref.
KKG8-10/8-10fvM6	fv	M6x16	GEO 321	8-10/8-10	50	006 233
KKG8-10/16fvM6	fv	M6x16	GEO 321	8-10/16	25	006 234
KKG8-10/8-10CuM6	Cu	M6x16	V2A	8-10/8-10	50	006 580
KKG8-10/16CuM6	Cu	M6x16	V2A	8-10/16	25	006 581
KK8-10/8-10fvM8	fv	M8x25	GEO 321	8-10/8-10	25	077 187



60x60 cross clamp for installation above or under ground, with intermediate plate

item code	material	screw	material screw	clp. f/f [mm]	clp. r/r [mm]	clp. r/r [mm]	ps [pcs]	ref.
KK8-10/30fvM6/3tlg	fv	M6x25	GEO 321		8-10/30		25	006 241
KK30/30fvM6/3tlg	fv	M6x25	GEO 321	30/30			25	006 239
KK8-10/8-10fvM8/3tlg	fv	M8x25	GEO 321		8-10/8-10		25	006 247
KK30/30fvM8/3tlg	fv	M8x25	GEO 321	30/30			25	006 251
KK40/40fvM8/3tlg.	fv	M8x25	GEO 321	40/40			20	083 211



60x60 cross clamp for installation above or under ground

item code	material	screw	material screw	clp. f/f [mm]	clp. r/r [mm]	clp. r/r [mm]	ps [pcs]	ref.
KK8-10/30fvM6	fv	M6	GEO 321		8-10/30		25	006 242
KK30/30fvM6	fv	M6x20	GEO 321	30/30			25	006 243
KK8-10/30fvM8	fv	M8x25	GEO 321		8-10/30		25	006 245
KK30/30fvM8	fv	M8x25	GEO 321	30/30			25	006 244
KKrd8-10/fl30Niro	V4A	M8x25			8-10/30		25	064 484
KKfl30/fl30Niro	V4A	M8x25		30/30			25	064 482
KKrd8-10/rd8-10Niro	V4A	M8x25			8-10/8-10		25	064 485



70x70 cross clamp for installation above or under ground

item code	material	screw	material screw	clp. f/f [mm]	clp. r/f [mm]	ps [pcs]	ref.
KK10/40fvM8	fv	M8x25	GEO 321		10/40	20	006 252
KK40/40fvM8	fv	M8x25	GEO 321	40/40		20	006 250
KKrd10/fl40NiroV4A	V4A	M8x25	V4A		10/40	20	080 509
KKfl40/fl40NiroV4A	V4A	M8x25	V4A	40/40		20	080 508



cross clamp for installation above or under ground, type EVN

item code	material	screw	material screw	clp. r/f [mm]	ps [pcs]	ref.
KK10/40EVN	fv	M10x35	GEO 321	10/40	10	034 061

MZK, multi-purpose clamp; for connections of round wires with one screw, suitable for parallel, cross or T-shape arrangements

without locknut



item code	material	screw	material screw	clp. r/r [mm]	ps [pcs]	ref.
MZK8-10/8-10fv	fv				50	065 705
MZK8-10/8-10Cu	Cu	M10	V2A	8-10/8-10	50	077 298

with locknut M10fv



item code	material	screw	material screw	clp. r/r [mm]	ps [pcs]	ref.
MZK8-10/8-10fv M10fv	fv	M10x30	GEO 321	8-10/8-10	50	065 706
MZK8+8NiroM10-Niro	V2A	M10	V4A	8/8	200	063 842
MZK10+10NiroM10-Niro	V2A				100	083 219

bimetallic



item code	material	screw	material screw	clp. r/r [mm]	ps [pcs]	ref.
MZK8-10/8-10CuM10Niro	Cu	M10	V4A	8-10/8-10	50	077 297
MZK8+8fvM10-Niro	fv	M10	GEO 321	8/8	50	063 841
MZK8+8AluM10-Niro	Al	M10	V4A	8/8	200	063 843

trimetallic



item code	material	screw	material screw	clp. r/r [mm]	ps [pcs]	ref.
MZK/ZM8+8Cu/fvM10-Niro	Cu	M10	V4A	8/8	50	063 848

MMZK, mini multi-purpose clamp; for connections of round wires with one screw, suitable for parallel, cross or T-shape arrangements



item code	material	clp. r/r [mm]	ps [pcs]	ref.
MMZK8+8Cu	Cu	8/8	100	064 499
MMZK8+8Al	Al	8/8	100	064 501
MMZK8+8Niro	V2A	8/8	100	064 500

VBK, intersection clamp; for connections of round wires, cables and flat strips



item code	material	clp. r/f [mm]	clp. r/r [mm]	ps [pcs]	ref.
VBK8-10/8-10fv	fv		8-10/8-10	100	063 852
VBK8-10/20fv	fv	8-10/20		100	063 857
VBK8-10/40fv	fv	8-10/40		100	063 851

VM, connection sleeve; for longitudinal connections of round wires



with 4 screws

item code	material	clp. r/r [mm]	ps [pcs]	ref.
VM8/8ZG	ZG	8/8	100	063 856
VM8/8Cu	Cu	8/8	100	063 855
VM8/8Al	Al	8/8	100	063 854
VM10/10ZG	ZG	10/10	100	063 853

UVB, universal connector; for connections of round wires in parallel or cross shape arrangements



item code	material	clp. r/r [mm]	ps [pcs]	ref.
UVB8-10/8-10fv	fv	8-10/8-10	100	065 667
UVB8-10/8-10Cu	Cu	8-10/8-10	100	065 668
UVB8-10/8-10Niro	V2A	8-10/8-10	100	065 669

UV, type U clamp; for connections of round wires and flat strips with one screw

Your advantages: connections with only one screw, economic alternative to cross clamps, easy to install



item code	material	screw	material screw	clp. r/f [mm]	clp. r/r [mm]	ps [pcs]	ref.
UVfvM10fv	fv	M10	GEO 321	8-10/30	8-10/8-10	100	083 085

KLV, wedge connector; suitable for parallel, cross or T-shape arrangements, for installation in concrete foundations



item code	material	ps [pcs]	ref.
KLVfv	fv	25	084 601

DRK, gutter clamp; for fixing conductors at the gutter



item code	material	clp. r/r [mm]	clp. range	ps [pcs]	ref.
DRK16-22fv	fv	8/8	16-22mm	100	063 991
DRK16-22Cu	Cu	8/8	16-22mm	100	063 990
DRK/2f.ULnarrowfv	fv	8/8		100	064 497
DRK/2f.ULbroadtfv	fv	8/8		100	064 498

AKL, saddle clamp; for connections to steel constructions and sheet steel



for sheet thickness up to 12mm

item code	material	clp. r/r [mm]	clp. range	ps [pcs]	ref.
AKLfv	fv	8-10	up to 12mm	50	063 941

suitable for parallel or cross shape arrangements for sheet thickness up to 18mm



item code	material	clp. r/r [mm]	clp. range	ps [pcs]	ref.
AKL8-18/TGtn	TG	7-10	8-18	25	064 823

EHFK, gutter board clamp with twist protection cleat; for connections of round wires to gutter folds, for sheet thickness up to 8mm



item code	material	clp. r/r [mm]	ps [pcs]	ref.
EHFKfv	fv	8	100	064 496
EHFKCu	Cu	8	100	064 525

FK, fold clamp; for connections of round wires to folds, for sheet thickness up to 8 mm



twistable version

item code	material	screw	material screw	clp. r/r [mm]	ps [pcs]	ref.
FKDfv	fv	M6 x 16	GEO 321	8	50	006 266
FKDCu	Cu	M6 x 16	Cu	8	50	006 592
FKD/U/M6/fv	fv	M6 x 16	GEO 321	8	100	006 267



twistable version, with double cleat

item code	material	clp. r/r [mm]	ps [pcs]	ref.
FK0,7-8 mm/2f.Ülfv	fv	8	100	082 414



round version

item code	material	clp. r/r [mm]	ps [pcs]	ref.
FKround/fv	fv	8	100	063 961
FKround/Cu	Cu	8	100	063 960



flat version

item code	material	clp. r/r [mm]	ps [pcs]	ref.
FKflat/fv	fv	8	150	063 959
FKflat/Cu	Cu	8	150	063 958
FKflat/Alu	Al	8	150	063 957



universal version

item code	material	clp. r/r [mm]	ps [pcs]	ref.
Fkuni/fv	fv	8	150	063 978
FKuni/Cu	Cu	8	100	063 977
FKuni/Al	Al	8	100	063 976
FKUniNiro	V2A	8	100	064 505

PV, parallel connector; for parallel connections of round wires



with 1 screw

item code	material	clp. r/r [mm]	ps [pcs]	ref.
PV1/8-10fv	fv	8-10	200	063 808
PV1/8-10Cu	Cu	8-10	200	063 807
PV1/8-10Al	Al	8-10	200	063 806



with 2 screws

item code	material	clp. r/r [mm]	ps [pcs]	ref.
PV2/8-10fv	fv	8-10	150	063 804
PV2/8-10Cu	Cu	8-10	150	063 810
PV2/8-10Al	Al	8-10	150	063 809

SFGK, snow guard clamp; for connections of conductors to snow guards, installation with cleat and two screws in cross shape arrangements



item code	material	clp. r/r [mm]	pieces	ref.
SFRGK+UL8fv	fv	8	1	097 399
SFRGK+UL8Cu	Cu	8	1	097 400

AZK, T-connector; for T-shape connections of 2 round wires



item code	material	screw	material screw	clp. r/r [mm]	ps [pcs]	ref.
AZK8-10ZG	ZG	M10x35	GEO 321	8-10	100	063 931
AZK8-10Cu	Cu	M10x35	Cu	8-10	100	063 930

KLS, clamping lug; for connections of conductors to structural parts



item code	material	dim [mm]	clp. r/r [mm]	for Ø [mm]	ps [pcs]	ref.
KLS8fv	fv	1	8	14x9	100	063 833
KLS8Al	Al	1	8	14x9	100	063 831
KLS8Cu	Cu	1	8	14x9	100	063 832
KLS10fv	fv	1	10	14x9	100	063 972



with 2 screws

item code	material	screw	material screw	clp. r/r [mm]	for Ø [mm]	ps [pcs]	ref.
KLS2/10fv	fv	M8x16	V2A	10	11	100	063 974
KLS2/10Cu	Cu	M8x16	Cu	10	11	100	063 973

KSV/KSZS/KS, contact coupling; for connections and arrangements of round wires 8–10 mm



complete version with contact screw M10 and nut

item code	material	clp. r/r [mm]	ps [pcs]	ref.
KSV8-10fv	fv	8–10	100	063 836
KSV8-10Cu	Cu	8–10	100	063 835



contact screw nut

item code	material	clp. r/r [mm]	ps [pcs]	ref.
KSZSAI	Al	8–10	100	063 830



contact screw

item code	material	clp. r/r [mm]	ps [pcs]	ref.
KS6-10fv	fv	6–10	100	063 834

ERS, pipe earthing clamp; for steel and copper pipes



item code	material	screw	for cond. Ø [mm]	ps [pcs]	ref.
ERS/M5-1/8"gv	gv	M5	1/8"	50	076 961
ERS/M5-1/4"Gv	gv	M5	1/4"	50	076 962
ERS/M6-3/8"gv	gv	M6	3/8"	50	076 963
Ers/M6-1/2"gv	gv	M6	1/2"	50	064 518
Ers/M6-3/4"gv	gv	M6	3/4"	50	064 519
Ers/M6-1"gv	gv	M6	1"	50	064 520
Ers/M6-5/4"gv	gv	M6	5/4"	50	064 521
Ers/M6-6/4"gv	gv	M6	6/4"	50	064 522
Ers/M6-2"gv	gv	M6	2"	25	064 523
Ers/M6-2 1/2"gv	gv	M6	2 1/2"	25	064 524
Ers/M5-1/8"Cu	Cu	M5	1/8"	50	064 473
Ers/M5-3/8"Cu	Cu	M5	3/8"	50	064 474
ERS/M5-1/4"Cu	Cu	M5	1/4"	50	064 475
Ers/M6-1/2"Cu	Cu	M6	1/2"	50	064 476
Ers/M6-3/4"Cu	Cu	M6	3/4"	50	064 477
Ers/M6-1"Cu	Cu	M6	1"	50	064 478
Ers/M6-5/4"Cu	Cu	M6	5/4"	50	064 479
Ers/M6-6/4"Cu	Cu	M6	6/4"	50	064 480

with cleat



item code	material	for cond. Ø [mm]	ps [pcs]	ref.
ERS3/4"fv	fv	1/2"	75	064 005
ERS1"fv	fv	1"	75	064 002
ERS5/4"fv	fv	5/4"	50	064 006
ERS6/4"fv	fv	6/4"	50	064 007
ERS2"fv	fv	2"	50	064 004

with contact screw coupling



item code	material	for cond. Ø [mm]	ps [pcs]	ref.
ERS+KS1/2"fv	fv	1/2"	25	006 342
ERS+KS3/4"fv	fv	3/4"	25	006 343
ERS+KS1"fv	fv	1"	25	006 344
ERS+KS5/4"fv	fv	5/4"	20	006 346
ERS+KS6/4"fv	fv	6/4"	25	006 345
ERS+KS2"fv	fv	2"	25	006 347
ERS+KS2 1/2"fv	fv	2 1/2"	15	006 348
ERS+KS3"fv	fv	3"	15	006 349

WLS, water pipe clamp; for connections of conductors to water pipes

with lug



item code	material	for cond. Ø [mm]	ps [pcs]	ref.
WLS1/2"fv	fv	1/2"	75	063 874
WLS3/4"fv	fv	3/4"	75	063 876
WLS1"fv	fv	1"	75	063 873
WLS5/4"fv	fv	5/4"	50	063 870
WLS6/4"fv	fv	6/4"	50	063 864
WLS7/4"fv	fv	7/4"	50	063 865
WLS2"fv	fv	2"	50	063 875

with contact screw coupling



item code	material	for cond. Ø [mm]	ps [pcs]	ref.
WLS20+KSfv	fv	20mm	50	065 670

EBRS, adjustable earthing clamp; for hot-dip galvanised steel conduits and copper conduits

Note: EBRS made from gal Sn are suitable for applications in mostly dry environments. EBRS made from V2A steel are suitable for applications in moist and wet rooms, for use in corrosive environments, such as agricultural holdings with livestock farming, water treatment plants etc. and in general for outdoor installations.



item code	material	L [mm]	pipe clp. [inch]	for Ø [mm]	ps [pcs]	ref.
EBRS1/8-11/2"16mm2	gal Sn	209	1/8 - 1 1/2"	8-50	10	064 487
EBRS1/8-4"16mm2	gal Sn	428	1/8 - 4"	8-114	10	064 488
EBRS1/8-6"16mm2	gal Sn	605	1/8 - 6"	8-165	10	064 489
EBRS1/8-1 1/2"Niro16mm2	V2A				10	064 590
EBRS1/8-4"Niro16mm2	V2A	428	1/8-4"	8-114	10	064 591
EBRS1/8-6"Niro16mm2	V2A	605	1/8 - 6"	8-165	10	064 592

ABRS, adjustable aerial clamp; for connections to aerial support elements with continuously adjustable strap. For connections to 1 conductor Rd 10mm, 1 or 2 conductors Rd 6-8mm respectively 4-25mm²



item code	material	screw	material screw	dim [mm]	clp. r/r [mm]	for cond. Ø [mm]	ps [pcs]	ref.
ABRS1"-6"ZG/Niro	V2A	M8x20	V2A	570x25x0,3	8-10mm	3/4 - 6"	10	065 680

STK, rod clamp; for connecting interception rods and round wires

item code	material	clp. r/r [mm]	ps [pcs]	ref.
STK8+16fv	fv	8+16	100	063 880
STK8+16Cu	Cu	8+16	100	063 879
STK8+16Niro	V2A	8+16	100	063 881

TK, test and disconnection clamp; for connections of down conductors to earth entry rods

with single screw



item code	material	screw	material screw	clp. r/r [mm]	ps [pcs]	ref.
TK8/8M10ZG	ZG	M10	V2A	8/8	100	063 890
TK8/8M10Cu	Cu	M10	Cu	8/8	100	063 896
TK8/10M10ZG	ZG	M10	V2A	8/10	100	063 901

without intermediate plate



item code	material	screw	material screw	clp. r/f [mm]	clp. r/r [mm]	ps [pcs]	ref.
TK8/16fv	fv	M10	GEO 321		8/16	100	063 902
TK8-10/30fv	fv	M10	GEO 321	8-10/30		100	063 891
TK8-10/30Niro	V2A	M10	V2A	8-10/30		100	063 892

with connecting screw



item code	material	screw	material screw	clp. r/r [mm]	ps [pcs]	ref.
TK7-10/7-10ZG	ZG	M10	V2A	7-10/7-10	50	064 824
TK7-10/7-16ZG	ZG	M10	V2A	7-10/7-16	25	064 822

TM, disconnection sleeve; for connections of down conductors to earth entry rods

open version for earth entry rods



item code	material	clp. r/r [mm]	ps [pcs]	ref.
TM8/16ZG	ZG	8/16	100	063 894
TM8/16Cu	Cu	8/16	100	063 893

TS, disconnection clamp; for connections of down conductors to earth entry rods



with intermediate plate

item code	material	clp. r/f [mm]	clp. r/r [mm]	ps [pcs]	ref.
TS8-10/8-10fv	fv		8-10/8-10	100	063 861
TS8-10/8-10Cu	Cu		8-10/8-10	100	063 860
TS8-10/16fv	fv		8-10/16	100	063 858
TS8-10/16Cu	Cu		8-10/16	100	063 895
TS8-10/30fv	fv	8-10/30		100	063 859



bimetallic

item code	material	clp. r/f [mm]	clp. r/r [mm]	ps [pcs]	ref.
TS/ZM 8-10 Cu/fl. 40 mm fv	Cu/fv	Cu 8-10/fv 40		100	065 446
TS/ZM8-10Cu/fl30 mmfv	Cu/fv	Cu 8-10/fv 30		100	064 486
TS/ZM8-10Cu/8-10fv	Cu/fv		Cu 8-10/fv 8-10	100	064 502
TS/ZM8-10Cu/16fv	Cu/fv		Cu 8-10/fv 16	100	064 503

BE-AD, test point and connection box; for concealed installation with integrated test point



item code	material	ps [pcs]	ref.
BE-AD	K	10	006 062

RK, test point box; for underfloor installation



item code	material	dim [mm]	spec.	pieces	ref.
RK	GU	200x130	eckig	1	063 798

TK, test point box; for under floor installation, oval



item code	material	spec.	pieces	ref.
TK Box	GU	oval	1	006 431

RT, inspection door; for concealed installation of test points, available with spring lock (RT+SV) or turning lock (RT+DR)

Note: revision doors available with individual embossings upon request and subject to quantity



item code	material	dim [mm]	ps [pcs]	ref.
RT+SV/fv	fv	230x180x15	10	060 791
RT+SV/Cu	Cu	230x180x15	10	064 106
RT+SV/fv/S	fv	230x180x15	10	064 567
RT+DR/fv	fv	230x180x15	10	006 396
RT+DR/Cu	Cu	230x180x15	10	006 634

AB, bridging bracket; for bridging expansion gaps on metal constructions, with central bore



item code	material	L [mm]	ps [pcs]	ref.
AB205Al	Al	205	100	063 936

AL, terminal bracket; for connections to metal constructions with blind rivets or screws



longitudinal or cross connection (e.g. for contact coupling)

item code	material	ps [pcs]	ref.
AL/Al	Al	100	063 935

AST, terminal bracket; for connections to metal constructions with blind rivets or screws



with twist protection cleat

item code	material	clp. r/r [mm]	ps [pcs]	ref.
AST/fv	fv	6–10	100	064 513
AST/Al	Al	8–10	100	063 929



with parallel connector cleat

item code	material	clp. r/r [mm]	ps [pcs]	ref.
AST/2-f.ULfv	fv	8–10/8–10	100	064 514

DB, expansion piece; for compensation of temperature induced elongations of conductors



item code	material	dn [mm]	ps [pcs]	ref.
DB/Al	Al	8	100	063 952

CH, cupal sleeve; for corrosion resistant connections of steel or aluminium with copper



item code	material	spec.	clp. r/r [mm]	L [mm]	ps [pcs]	ref.
CH1	Al/Cu	outside Al, inside Cu	8	32	100	063 950
CH2	Cu/Al	outside Cu, inside Al	8	32	100	063 951

UBB, shorting braid; for connections of metal constructions respectively for bridging expansion gaps



item code	material	L [mm]	ps [pcs]	ref.
UBB/Al	Al	180	100	063 862
UBB/Cu	Cu	180	100	063 863

UBS, bridging cable; for connections of metal constructions respectively for bridging expansion gaps

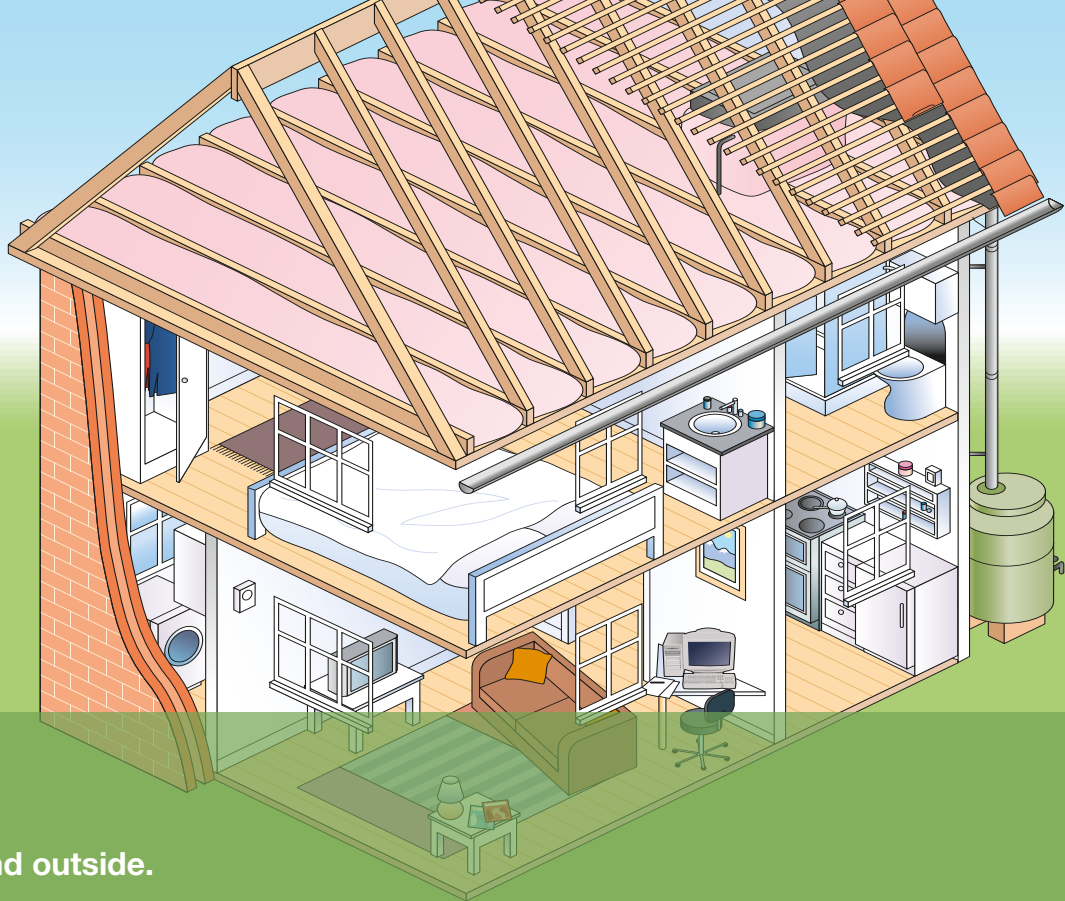


item code	material	L [mm]	pieces	ref.
UBS300Cu/Al	Cu/Al	300	1	097 397
UBS500Cu/Al	Cu/Al	500	1	097 398

WA, sealing collar; with drip nose



item code	material	pieces	ref.
WA	K	1	006 056



Safe within and outside.

Equipotential Bonding

equalised. All metal elements of a structure – from conductors over conduits systems and enclosures to aerials – eventually need to have the same potential and a proper earthing. Univolt equipotential bonding bars are easily installed and connected.

universal. Individual housing or large-scale manufacturing plants – Univolt equipotential bonding bars are suited for any type of lightning protection installation.

PAS, equipotential bonding bar; for main equipotential bonding



small version, for house systems up to 100A, nickel-plated brass, with plastic cover (sealable). With terminals for: 7 conductors of up to 25 mm², 1 flat strip 30 x 4 mm, 1 round wire 8–10 mm

item code	material	pieces	ref.
PASsmall	Me/Ni	1	063 805



large version, with terminal bar 35 x 4 mm, hot-dip galvanised, base plate and cover made of sheet steel. With terminals for: 1 round wire 8–10 mm, 2 flat strips 40 x 4 mm, 1 copper cable of up to 50 mm², 12 conductors up to 16 mm²

item code	material	pieces	ref.
PASlarge	fv	1	006 458




stainless steel version, V2A, base plate, cover and screws made from stainless steel. Layout for: 8 connections with screws M6, 3 connections with screw M10

item code	material	pieces	ref.
PASniro	V2A	1	077 331

ESCH, earthing bar; for screwing or welding to metal constructions, up to 6 connections possible



item code	material	L [mm]	pieces	ref.
ESCHfv	fv	394	1	064 565



Aiming high.

Interceptors

and Accessories

exceptional. Powerful interceptors are essential especially to larger buildings, skyscrapers, industrial plants and manufacturing halls. They not only protect the building structures alone, but also installations such as aerials or photovoltaic panels.

strong. As part of the exterior lightning protection, interceptors are designed to withstand even very high electrical discharges and currents and to conduct them adequately to the earthing systems. Univolt interceptors ideally fulfil these requirements.



FS, interception rod Ø 16 mm; for protection of roof structures, chimneys etc. Also for installation with concrete bases



item code	material	dn [mm]	L [m]	pieces	ref.
FS500fv	fv	16	0,5	1	006 406
FS750fv	fv	16	0,75	1	006 407
FS1000fv	fv	16	1	1	006 408
FS1250fv	fv	16	1,25	1	006 409
FS1500fv	fv	16	1,5	1	006 410
FS500Cu	Cu	16	0,5	1	006 637
FS1000Cu	Cu	16	1	1	006 638
FS1500Cu	Cu	16	1,5	1	006 639
FS2000fv	fv	16	2	1	083 572
FS2500fv	fv	16	2,5	1	083 573

FS/KS, interception rod Ø 16 mm with contact screw; for protection of roof structures, chimneys etc. Also for installation with concrete bases



item code	material	dn [mm]	spec.	L [m]	ps [pcs]	ref.
FS/KS 1000 fv	fv	16	with KS	1	5	063 981
FS/KS 1500 fv	fv	16	with KS	1,5	5	063 975

FS Alu, interception rod; tapered, made of aluminium. For installation with FM concrete bases

Your advantages: for stand-alone installation of interception system; simple mounting by wedging; easy handling due to low weight



item code	material	L [m]	pieces	ref.
FS1000/1000 10/16 mm Al	Al	2	1	083 158
FS1000/1500 10/16 mm Al	Al	2,5	1	083 159
FS1000/2000 10/16 mm Al	Al	3	1	083 160

GFS, threaded interception rod Ø 16 mm; for protection of roof structures, chimneys etc. Also for installation with concrete bases



item code	material	dn [mm]	L [m]	pieces	ref.
GFS1000Alu	Al	16	1	1	063 969
GFS1500Alu	Al	16	1,5	1	063 970
GFS2000Alu	Al	16	2	1	063 971

BS, concrete base; for threaded interception rods

with female thread M16

item code	material	dn [mm]	weight [kg]	pieces	ref.
BS/IG350	concrete	350	16	1	063 933



set consisting of concrete base IGM12 + interception rod GFS Alu7M12 + disconnection sleeve TM12mm Alu

item code	material	spec.	pieces	ref.
BS-SET M12/1000MM	concrete	L=1000 mm	1	080 130
BS-SET M12/1500MM	concrete	L=1500 mm	1	080 131

FM, interception mast; up to 8.5m height, complete with tripod made of stainless steel, cleat for Ø 8 mm conductors and concrete base holders. Suitable for levelling up to 10°.**Note:** recommended concrete bases FM-BS are not included in the set and have to be ordered separately

item code	material	spec.	L [m]	no. weights	pieces	ref.
FM 3 m	V2A/Al		3	3	1	081 905
FM 3,5 m	V2A/Al		3,5	3	1	081 906
FM 4 m	V2A/Al	3 concrete bases	4	3	1	081 907
FM 4,5 m	V2A/Al	3 concrete bases	4,5	3	1	081 908
FM 5 m	V2A/Al	6 concrete bases	5	6	1	081 909
FM 5,5 m	V2A/Al	6 concrete bases	5,5	6	1	081 910
FM 6 m	V2A/Al	6 concrete bases	6	6	1	081 911
FM 6,5 m	V2A/Al	6 concrete bases	6,5	6	1	081 912
FM 7 m	V2A/Al	9 concrete bases	7	9	1	081 913
FM 7,5 m	V2A/Al	9 concrete bases	7,5	9	1	081 914
FM 8 m	V2A/Al	12 concrete bases	8	12	1	081 915
FM 8,5 m	V2A/Al	12 concrete bases	8,5	12	1	081 916

FM Accessories

FMS-3B, interception mast tripod; made of stainless steel V2A, wedge mounting with three threaded rods and concrete bases, for installation of interception masts

Note: without concrete bases FM-BS, without threaded rods to fix concrete bases



item code	material	spec.	L [m]	pieces	ref.
FMS-3B 36 mm 1,35 m	V2A	support=36 mm	tripod=1,35	1	081 925
FMS-3B 31 mm 1,35 m	V2A	support=31 mm	tripod=1,35	1	081 926
FMS-3B 36 mm 1,85 m	V2A	support=36 mm	tripod=1,85	1	081 928

FM-GS, threaded rod; for mounting of concrete bases FM-BS on FMS-3B tripod

Note: concrete base FM-BS not included

for single concrete base



item code	material	L [mm]	pieces	ref.
FM-GS 180 mm	V2A	180	1	096 862

for 2 stacked concrete bases



item code	material	L [mm]	pieces	ref.
FM-GS 300 mm	V2A	300	1	096 863

for 3 stacked concrete bases



item code	material	L [mm]	pieces	ref.
FM-GS 390 mm	V2A	390	1	096 864

for 4 stacked concrete bases



item code	material	L [mm]	pieces	ref.
FM-GS 510 mm	V2A	510	1	096 861

FM-Screw, fixing screw; with M16 thread for FMS-3B tripod

item code	material	screw	pieces	ref.
FM-Screw M16x40	V2A	M16x40	1	081 936

FM-BS, concrete base for wedge mounting; stackable, with recess on bottom for easy handling, suitable for interception mast tripods

item code	material	dn [mm]	weight [kg]	pieces	ref.
FM-BS	concrete	340	17	1	081 937

FM-UP, base plate; for the protection of roof sheetings under concrete bases, suitable for all roof sheetings

item code	material	dn [mm]	pieces	ref.
FM-UP	K	370	1	081 938

FP, mushroom-shaped interceptor; for flat roofs capable of carrying personnel and vehicles, e.g. parking decks

item code	material	clp. r/f [mm]	ps [pcs]	ref.
FP7-10/30	fv	7-10/30	100	063 979

ESP, interceptor tip; for air-termination of interceptor rods with 8 mm diameter

item code	material	ps [pcs]	ref.
ESPCu	Cu	100	063 998
ESPAIu	Al	100	063 997

STH, rod holder; with cleat and two screws M6



for rod diameters of 16 mm

item code	material	clp. r/r [mm]	L [mm]	ps [pcs]	ref.
STH100fv	fv	16	100	75	063 888
STH150fv	fv	16	150	75	063 883
STH100Cu	Cu	16	100	75	063 887
STH150Cu	Cu	16	150	75	063 889



with female thread M8 for screw and plug combinations or wood screws, for rod diameters of 16 mm

item code	material	clp. r/r [mm]	ps [pcs]	ref.
STH-IGM8ZG	ZG	16	75	063 878
STH-IGM8Cu	Cu	16	75	063 877



with screw 5x60, plug 8x40 and PVC base

item code	material	clp. r/r [mm]	pieces	ref.
STHfv+SD+PVC-base	fv/K	16	1	064 491

TFS and FS, isolation spark gap; for indirect connection and earthing of functionally isolated components



item code	material	ps [pcs]	ref.
TFS	K	25	082 104
FS/KS	ceramics	25	063 980

Powerful protection for plants and people.

Insulated Lightning Protection

and Accessories

safe. Lightning discharges can generate up to 100,000 volt putting exceptional strains on the interceptors and the equipotential bonding. Insulated lightning protection enhances the safety for internal and external electrical installations as well as for people.

flexible. Whatever an individual lightning protection system requires, it can be realised with Univolt components – safe, flexible and in conformity with the standards.



Insulated Interception Masts

IFM GFK, insulated interception mast; 3m height, for installation of a separated lightning protection systems

Note: installation with 60x60 or 70x70 cross clamp above or under ground



item code	material	L [m]	pieces	ref.
IFM GFK 3000	GFK/Al	3	1	083 985

IFM, insulated interception mast; up to 6m height, for installation of a separated lightning protection system

Note: other lengths available upon request

Mounting set: fibreglass reinforced tube (Ø40mm, 1500mm), aluminium air-termination tip (Ø=10mm, 7500mm), 1 piece
MZK8-10 V2A, V2A support tube (Ø=40mm)



item code	material	L [m]	pieces	ref.
IFM 3500	GFK/V2A/Al	3,5	1	083 986
IFM 4000	GFK/V2A/Al	4	1	083 987
IFM 4500	GFK/V2A/Al	4,5	1	083 988
IFM 5000	GFK/V2A/Al	5	1	083 989
IFM 5500	GFK/V2A/Al	5,5	1	083 990
IFM 6000	GFK/V2A/Al	6	1	083 991

Accessories for Insulated Interception Masts

IFM GFK T, fibreglass cross beam; for installation on insulated interception masts and spacing of down conductors (e.g. Al wire 50mm²)

Note: fibreglass cross beam Ø32mm



item code	material	L [mm]	ins. dist. [mm]	pieces	ref.
IFM GFK T 650mm	GFI/V2A	650	500	1	083 992
IFM GFK T 950mm	GFI/V2A	950	800	1	083 993

IFM WBS, wall mounting clamp; with V2A mounting bracket 3 x 40 mm, for sturdy installation of insulated interception masts



item code	material	pieces	ref.
IFM WBS LP3 x 40 mm	V2A	1	083 994

IFM RBS, adjustable pipe clamp; with V2A strap for insulated interception masts



item code	material	for cond. Ø [mm]	pieces	ref.
IFM RBS 60-300 mm	V2A	60-300	1	083 995

FMS-3B, tripod for insulated interception masts; for the detached installation of insulated interception masts

Note: Concrete bases FM and threaded rods have to be ordered separately.



for insulated interception masts with 3 m height or more

item code	material	spec.	L [m]	pieces	ref.
FMS-3B 40 mm 1,35 m	V2A	support=40 mm	tripod=1,35	1	084 984



for insulated interception masts with 4.5 m height or more

item code	material	spec.	L [m]	pieces	ref.
FMS-3B 40 mm 1,85 m	V2A	support=40 mm	tripod=1,85	1	084 985

FM-GS, threaded rod; for mounting concrete bases on FMS-3B tripods

Note: concrete bases FM have to be ordered separately



for 1 concrete base

item code	material	L [mm]	pieces	ref.
FM-GS 180 mm	V2A	180	1	096 862



for 2 stacked concrete bases

item code	material	L [mm]	pieces	ref.
FM-GS 300 mm	V2A	300	1	096 863



for 3 stacked concrete bases

item code	material	L [mm]	pieces	ref.
FM-GS 390 mm	V2A	390	1	096 864



for 4 stacked concrete bases

item code	material	L [mm]	pieces	ref.
FM-GS 510 mm	V2A	510	1	096 861

Insulated Spacers

insulated spacers made of fibreglass reinforced Nylon Ø 25 mm, for maintaining separation distances

IDH25-T/RS 200-600, insulated spacer in trapeze shape for mounting on pipes Ø 200–600 mm; with hinges for vertical adjustments, for installation of interception rods Ø 16 mm on pipes



item code	material	ins. dist. [mm]	pieces	ref.
IDH750-25-T/16Niro/RS 200-600 m	NGF/V2A	650	1	084 823
IDH1000-25-T/16Niro/RS 200-600	NGF/V2A	850	1	084 824

IDH25-T/BPL2f, insulated spacer in trapeze shape with 2 mounting brackets; with hinges for vertical adjustments, for installation of interception rods Ø 16 mm on walls

Note: bore holes Ø4x5.1 mm / 1x8.5 mm / 1x11 mm



item code	material	ins. dist. [mm]	pieces	ref.
IDH750-25-T/16Niro/BPL2f. Al	NGF/V2A/Al	650	1	084 825
IDH1000-25-T/16Niro/BPL2f. Al	NGF/V2A/Al	850	1	084 826

IDH25-T/WA, insulated spacer in trapeze shape with 90° elbow connection Ø 10 mm for mounting with fold or multi-purpose clamps; for installation of interception rods Ø 16 mm



item code	material	ins. dist. [mm]	pieces	ref.
IDH750-25-T/16Niro/WA rd10Niro	NGF/V2A	650	1	084 827
IDH1000-25-T/16Niro/WA rd10Nir	NGF/V2A	850	1	084 828

IDH25-T/GB, insulated spacer in trapeze shape with threaded bolts M10x30mm; bolts slewable by 180°, for installation of interception rods Ø 16mm



item code	material	ins. dist. [mm]	pieces	ref.
IDH750-25-T/16Niro/GB M10x30GN	NGF/V2A	650	1	084 829
IDH1000-25-T/16Niro/GB M10x30G	NGF/V2A	850	1	084 830

IDH25-T/RS WG, insulated spacer in trapeze shape with pipe clamps, horizontally arranged; slewable, for installation of interception rods Ø 16mm



item code	material	pipe clp. [inch]	ins. dist. [mm]	pieces	ref.
IDH750-25-T/16Niro/RS 1 1/2-2"	NGF/V2A	1 1/2 - 2	650	1	084 831
IDH1000-25-T/16Niro/RS 1 1/2-2	NGF/V2A	1 1/2 - 2	850	1	084 832
IDH750-25-T/16Niro/RS 2 1/4-3"	NGF/V2A	2 1/4 - 3	650	1	084 833
IDH1000-25-T/16Niro/RS 2 1/4-3	NGF/V2A	2 1/4 - 3	850	1	084 834

IDH25-T/RS SG, insulated spacer in trapeze shape with pipe clamps, vertically arranged; slewable, for installation of interception rods Ø 16mm



item code	material	pipe clp. [inch]	ins. dist. [mm]	pieces	ref.
IDH750-25-T/16Niro/RS 1 1/2-2"	NGF/V2A	1 1/2 - 2	650	1	084 835
IDH1000-25-T/16Niro/RS 1 1/2-2	NGF/V2A	1 1/2 - 2	850	1	084 836
IDH750-25-T/16Niro/RS 2 1/4-3"	NGF/V2A	2 1/4 - 3	650	1	084 837
IDH1000-25-T/16Niro/RS 2 1/4-3	NGF/V2A	2 1/4 - 3	850	1	084 838

Insulated Spacers

insulated spacers made of fibreglass reinforced Nylon Ø 25 mm, for maintaining separation distances

IDH25/AS, insulated spacer with connection piece Ø 10 mm, crooked according to specification; for mounting with fold clamps or multi-purpose clamps, for installation of interception rods Ø 16 mm



item code	material	angle [°]	ins. dist. [mm]	pieces	ref.
IDH750-25/16Niro/AS90-10Niro	NGF/V2A	90	650	1	084 839
IDH1000-25/16Niro/AS90-10Niro	NGF/V2A	90	850	1	084 840
IDH750-25/16Niro/AS45-10Niro	NGF/V2A	45	650	1	084 841
IDH1000-25/16Niro/AS45-10Niro	NGF/V2A	45	850	1	084 842
IDH750-25/16Niro/AS0-10Niro	NGF/V2A	0	650	1	084 843
IDH1000-25/16Niro/AS0-10Niro	NGF/V2A	0	850	1	084 844

IDH25/BPL, insulated spacer with mounting bracket; for installation of interception rods Ø 16 mm or round wires Ø 6–11 mm

Technical details: Mounting bracket: material aluminium, LxWxB 120x30x4 mm, drilled holes 4x5.1 mm / 1x8.5 mm / 1x11 mm



item code	material	for Ø [mm]	ins. dist. [mm]	pieces	ref.
IDH500-16/16Niro/BPL AL	NGF/V2A	90	650	1	084 839
IDH750-25/16Niro/BPL Al	NGF/V2A	90	850	1	084 840
IDH1000-25/16Niro/BPL Al	NGF/V2A	45	650	1	084 841
IDH500-25/6-11Niro/BPL Al	NGF/V2A	45	850	1	084 842
IDH750-25/6-11Niro/BPL Al	NGF/V2A	0	650	1	084 843
IDH1000-25/6-11Niro/BPL Al	NGF/V2A	0	850	1	084 844

IDH25/BPQ, insulated spacer with square mounting plate; for installation of interception rods Ø 16 mm or round wires Ø 6–11 mm

Technical details: Mounting plate: material aluminium, LxWxB 120x120x3mm, 4 counter bores 6.5 mm



item code	material	for Ø [mm]	ins. dist. [mm]	pieces	ref.
IDH500-25/16Niro/BPQ Al	NGF/V2A	90	650	1	084 839
IDH750-25/16Niro/BPQ Al	NGF/V2A	90	850	1	084 840
IDH1000-25/16Niro/BPQ Al	NGF/V2A	45	650	1	084 841
IDH500-25/6-11Niro/BPQ Al	NGF/V2A	45	850	1	084 842
IDH750-25/6-11Niro/BPQ Al	NGF/V2A	0	650	1	084 843
IDH1000-25/6-11Niro/BPQ Al	NGF/V2A	0	850	1	084 844

IDH25/BPS, insulated spacer with bracket for lateral mounting; for installation of interception rods Ø 16 mm or round wires Ø 6–11 mm

Technical details: Mounting bracket: LxWxB 50x30x4 mm, bore holes: 4x5.1 mm / 1x6.5 mm / 1x8.5 mm / 1x11 mm



item code	material	for Ø [mm]	ins. dist. [mm]	pieces	ref.
IDH500-25/16Niro/BPS Niro	N/V2A	90	650	1	084 839
IDH750-25/16Niro/BPS Niro	NGF/V2A	90	850	1	084 840
IDH1000-25/16Niro/BPS Niro	NGF/V2A	45	650	1	084 841
IDH500-25/6-11Niro/BPS Niro	N/V2A	45	850	1	084 842
IDH750-25/16Niro/AS0-10Niro	NGF/V2A	0	650	1	084 843
IDH1000-25/16Niro/AS0-10Niro	NGF/V2A	0	850	1	084 844

IDH25/GB, insulated spacer with threaded bolts M10x30 mm; for installation of interception rods Ø 16 mm or round wires Ø 6–11 mm



item code	material	for Ø [mm]	ins. dist. [mm]	pieces	ref.
IDH750-25/16Niro/AS90-10Niro	N/V2A	90	650	1	084 839
IDH1000-25/16Niro/AS90-10Niro	NGF/V2A	90	850	1	084 840
IDH750-25/16Niro/AS45-10Niro	NGF/V2A	45	650	1	084 841
IDH1000-25/16Niro/AS45-10Niro	N/V2A	45	850	1	084 842
IDH750-25/16Niro/AS0-10Niro	NGF/V2A	0	650	1	084 843
IDH1000-25/16Niro/AS0-10Niro	NGF/V2A	0	850	1	084 844

IDH25/RRS, insulated spacer with downpipe clamp, adjustable; for installation of interception rods Ø 16 mm or round wires Ø 6–11 mm



item code	material	for cond. Ø [mm]	for Ø [mm]	ins. dist. [mm]	pieces	ref.
IDH750-25/16Niro/AS90-10Niro	N/V2A	90	16	1	1	084 839
IDH1000-25/16Niro/AS90-10Niro	NGF/V2A	90	16	1	1	084 840
IDH750-25/16Niro/AS45-10Niro	NGF/V2A	45	16	1	1	084 841
IDH1000-25/16Niro/AS45-10Niro	N/V2A	45	850	1	1	084 842
IDH750-25/16Niro/AS0-10Niro	NGF/V2A	0	650	1	1	084 843
IDH1000-25/16Niro/AS0-10Niro	NGF/V2A	0	850	1	1	084 844
IDH1000-25/16Niro/AS0-10Niro	N/V2A	0	16	1	1	084 844
IDH1000-25/16Niro/AS0-10Niro	NGF/V2A	0	16	1	1	084 844
IDH1000-25/16Niro/AS0-10Niro	NGF/V2A	0	16	1	1	084 844
IDH1000-25/16Niro/AS0-10Niro	N/V2A	0	850	1	1	084 844
IDH1000-25/16Niro/AS0-10Niro	NGF/V2A	0	850	1	1	084 844
IDH1000-25/16Niro/AS0-10Niro	NGF/V2A	0	850	1	1	084 844

IDH25/RS, insulated spacer with downpipe clamp; for installation of interception rods Ø 16 mm or round wires Ø 6–11 mm



item code	material	pipe clp. [inch]	for Ø [mm]	ins. dist. [mm]	pieces	ref.
IDH500-25/16Niro/RS 1 1/2-2"Ni	N/V2A	90	16	1	1	084 839
IDH750-25/16Niro/RS 1 1/2-2"Ni	NGF/V2A	90	16	1	1	084 840
IDH1000-25/16Niro/RS 1 1/2-2"N	NGF/V2A	45	16	1	1	084 841
IDH500-25/6-11Niro/RS 1 1/2-2"	N/V2A	45	850	1	1	084 842
IDH750-25/6-11Niro/RS 1 1/2-2"	NGF/V2A	0	650	1	1	084 843
IDH1000-25/16Niro/AS0-10Niro	NGF/V2A	0	850	1	1	084 844
IDH500-25/16Niro/RS 2 1/4-3"Ni	N/V2A	0	16	1	1	084 844
IDH750-25/16Niro/RS 2 1/4-3"Ni	NGF/V2A	0	16	1	1	084 844
IDH1000-25/16Niro/RS 2 1/4-3"N	NGF/V2A	0	16	1	1	084 844
IDH1000-25/16Niro/AS0-10Niro	N/V2A	0	850	1	1	084 844
IDH1000-25/16Niro/AS0-10Niro	NGF/V2A	0	850	1	1	084 844
IDH1000-25/16Niro/AS0-10Niro	NGF/V2A	0	850	1	1	084 844

Insulated Spacer Beams

insulated spacer beams made of fibreglass Ø 16 mm, for maintaining separation distances

IDH16/BPL, insulated spacer beam with mounting bracket; for installation of interception rods Ø 16 mm or round wires Ø 6–11 mm

Technical details: Mounting bracket: material aluminium, LxWxB 120x30x4 mm, drilled holes 4x5.1 mm / 1x8.5 mm / 1x11 mm



item code	material	for Ø [mm]	ins. dist. [mm]	pieces	ref.
IDH750-16/16Niro/BPL AI	NGF/V2A	90	650	1	084 839
IDH1000-16/16Niro/BPL AI	NGF/V2A	90	850	1	084 840
IDH1200-16/16Niro/BPL AI	NGF/V2A	45	650	1	084 841
IDH750-16/6-11Niro/BPL AI	NGF/V2A	45	850	1	084 842
IDH1000-16/6-11Niro/BPL AI	NGF/V2A	0	650	1	084 843
IDH1200-16/6-11Niro/BPL AI	NGF/V2A	0	850	1	084 844

IDH16/BPS, insulated spacer beam with plate for lateral mounting; for installation of interception rods Ø 16 mm or round wires Ø 6–11 mm

Technical details: Mounting bracket: LxWxB 50x30x4 mm, drilled holes: 4x5.1 mm / 1x6.5 mm / 1x8.5 mm / 1x11 mm



item code	material	for Ø [mm]	ins. dist. [mm]	pieces	ref.
IDH750-16/16Niro/BPS Niro	NGF/V2A	90	650	1	084 839
IDH1000-16/16Niro/BPS Niro	NGF/V2A	90	850	1	084 840
IDH1200-16/16Niro/BPS Niro	NGF/V2A	45	650	1	084 841
IDH750-16/6-11Niro/BPS Niro	NGF/V2A	45	850	1	084 842
IDH750-25/16Niro/AS0-10Niro	NGF/V2A	0	650	1	084 843
IDH1000-25/16Niro/AS0-10Niro	NGF/V2A	0	850	1	084 844

IDH16/RS, insulated spacer beam with pipe clamp; for installation of interception rods Ø 16 mm or round wires Ø 6–11 mm



item code	material	pipe clp. [inch]	for Ø [mm]	ins. dist. [mm]	pieces	ref.
IDH750-25/16Niro/AS90-10Niro	GFI/V2A	90	16	1	1	084 839
IDH1000-25/16Niro/AS90-10Niro	NGF/V2A	90	16	1	1	084 840
IDH750-25/16Niro/AS45-10Niro	NGF/V2A	45	16	1	1	084 841
IDH1000-25/16Niro/AS45-10Niro	GFI/V2A	45	850	1	1	084 842
IDH750-25/16Niro/AS0-10Niro	NGF/V2A	0	650	1	1	084 843
IDH1000-25/16Niro/AS0-10Niro	NGF/V2A	0	850	1	1	084 844
IDH1000-25/16Niro/AS0-10Niro	GFI/V2A	0	16	1	1	084 844
IDH1000-25/16Niro/AS0-10Niro	NGF/V2A	0	16	1	1	084 844
IDH1000-25/16Niro/AS0-10Niro	NGF/V2A	0	16	1	1	084 844
IDH1000-25/16Niro/AS0-10Niro	GFI/V2A	0	850	1	1	084 844
IDH1000-25/16Niro/AS0-10Niro	NGF/V2A	0	850	1	1	084 844
IDH1000-25/16Niro/AS0-10Niro	NGF/V2A	0	850	1	1	084 844

IDH16/RS 45-300mm, insulated spacer beam with pipe clamp suitable for Ø 45 mm to 300 mm; for installation of interception rods Ø 16 mm or round wires Ø 6–11 mm

Technical details: stainless steel strap 25x0.5 mm



item code	material	for Ø [mm]	ins. dist. [mm]	pieces	ref.
IDH750-25/16Niro/AS90-10Niro	GFI/V2A	90	600	1	084 917
IDH1000-25/16Niro/AS90-10Niro	NGF/V2A	90	800	1	084 918
IDH750-25/16Niro/AS45-10Niro	NGF/V2A	45	1000	1	084 919
IDH1000-25/16Niro/AS45-10Niro	GFI/V2A	45	850	1	084 920
IDH750-25/16Niro/AS0-10Niro	NGF/V2A	0	650	1	084 921
IDH1000-25/16Niro/AS0-10Niro	NGF/V2A	0	850	1	084 922

Insulated Spacer Supports

IDH500, insulated spacer support; 500 mm length, for maintaining separation distance, with clamp for round wires Ø 16 mm, hot-dip galvanised, spacer support made of fibreglass reinforced plastic tube Ø 25 mm, UV stabilised

Ordering note: available upon request: other dimensions and materials (copper), for 8mm down conductors and 16mm interception rods, other mounting solutions available



with square mounting plate 100x100 mm

item code	material	L [mm]	pieces	ref.
IDH500/16/EP100x100	GFK/fv	500	1	083 083



with mounting bracket 25x160 mm

item code	material	L [mm]	pieces	ref.
IDH500/16/LP25x160	GFK/fv/Al	500	1	083 087



for mounting on external angles and structural edges

item code	material	L [mm]	pieces	ref.
IDH500/16/EBP	GFK/fv	500	1	083 082



with pipe clamp 1 1/2 - 2 inches

item code	material	L [mm]	pieces	ref.
IDH500-25/16/RS1 1/2-2"	GFK/fv/Al	500	1	083 081

Insulated Poles

IS, insulated pole for the installation of conductors on flat roofs; with V2A conductor holder, for maintaining separation distances

Ordering note: concrete bases have to be ordered separately



IS Ø 16mm: for wedge mounting on concrete base FM-BS

item code	material	Ø dist. [mm]	cond. dist. [mm]	ins. dist. [mm]	pieces	ref.
IS420-16/6-8Niro	GFI/V2A	16	420	300	1	083 998
IS720-16/6-8Niro	GFI/V2A	16	720	600	1	083 999



IS Ø 25mm: for wedge mounting on concrete base FM-BS or for installation on concrete base with female thread M16 BS/IG

item code	material	Ø dist. [mm]	cond. dist. [mm]	ins. dist. [mm]	pieces	ref.
IS550-25/6-8Niro	NGF/V2A	25	550	300	1	083 996
IS850-25/6-8Niro	NGF/V2A	25	850	600	1	083 997

Accessories for Insulated Poles

FM-BS, concrete base for wedge mounting; stackable, with recess on bottom for easy handling, suitable for insulated poles



item code	material	dn [mm]	weight [kg]	pieces	ref.
FM-BS 8,5kg	concrete	240	8,5	1	084 000

Multi-Purpose Clamps

MZK, multi-purpose clamp; for connections of round wires with one screw, in parallel or T-shape arrangements



without locknut

item code	material	screw	material screw	clp. r/r [mm]	pieces	ref.
MZK8-16/15-25fv	fv	M12	GEO 321	8-16/15-25	1	083 982



with locknut

item code	material	screw	material screw	clp. r/r [mm]	pieces	ref.
MZK8-10/16NiroM10-Niro	V2A	M10	V2A	8-10/16	1	083 983
MZK8-10/16fvM10-fv	fv	M10	GEO 321	8-10/16	1	083 984



Facts and figures.

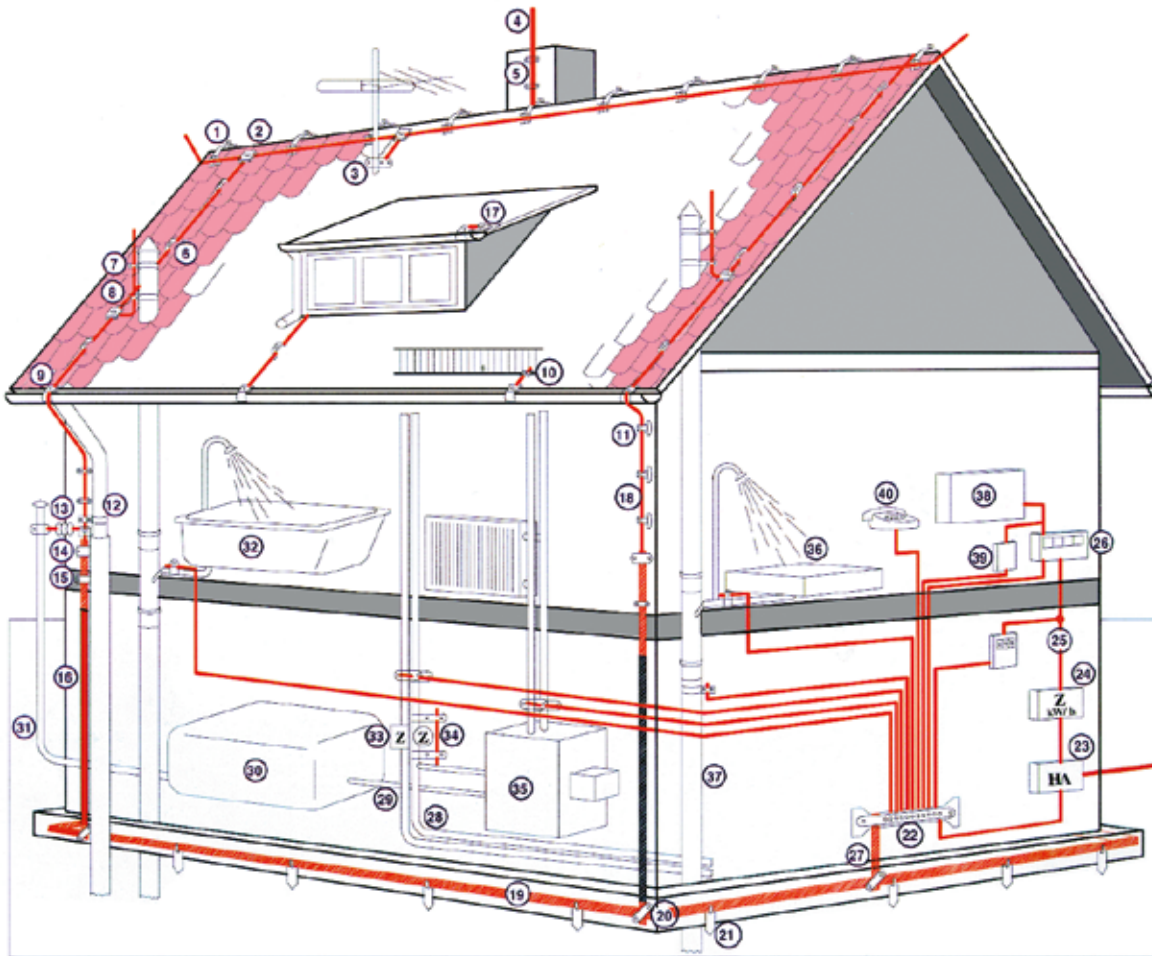
Technical Information

technical. The following pages contain annotations regarding the relevant standards referred to throughout this catalogue and material properties of our products.



commercial. For detailed information on the General Terms and Conditions, our international distribution network and general remarks concerning this catalogue kindly please pay attention to the concluding pages.





Lightning Protection

- | | |
|-----------------------------------|---------------------------------|
| 1 Ridge conductor holder | 21 Foundation electrodes holder |
| 2 Multi-purpose clamp | 22 Equipotential bonding bar |
| 3 Pipe earthing clamp | 23 House service connection |
| 4 Interception rod | 24 Electricity meter |
| 5 Rod holder | 25 Lightning current arrester |
| 6 Roof conductor holder | 26 Splitter |
| 7 Downpipe earthing clamp | 27 Equipotential bonding |
| 8 Single contact clamp | 28 Water supply |
| 9 Gutter clamp | 29 Gas supply |
| 10 Snow guard clamp | 30 Oil tank |
| 11 Wall conductor holder | 31 Oil tank breather |
| 12 Downpipe clamp | 32 Bathtub |
| 13 Isolating spark gap | 33 Gas meter |
| 14 Disconnection clamp round/flat | 34 Water meter |
| 15 Flat strip conductor holder | 35 Central heating |
| 16 Insulation | 36 Shower |
| 17 Saddle clamp | 37 Sewage system |
| 18 Conductor wire | 38 Electronic device |
| 19 Foundation earth electrodes | 39 Surge arrester |
| 20 Cross clamp | 40 Telephone system |

Coloured Lightning Protection Components – an optical gain

Optically appealing components of a lightning protection system have become an increasingly important issue for architects and building owners.

Especially for prefabricated houses the conductor system may spoil the appearance of cladding and roof and too often serves as an argument for building owners to abstain from installing a lightning protection system.



UNIVOLT 'Color' Lightning Protection Components

- no optical blemish
- additional customer satisfaction
- limited thermal expansion of the raw material (especially important in case of temperature extremes)

The lightning protection components are available with the following colour coatings:

Anthracite Grey	RAL 7016
Moss Green	RAL 6005
Traffic White	RAL 9016
Chestnut Brown	RAL 8015
Copper Brown	RAL 8004
Sepia Brown	RAL 8014
Orange Brown	RAL 8023
Pigeon Blue	RAL 5014

(Deviations from the colour shown due to printing variations)



All our lightning protection components from hot dip galvanised steel, stainless steel or aluminium are also available powder-coated. This holds also for the round wires RD8Alu/w in lengths from minimum 74 m (=10 kg). The coating thickness is approximately 70 µm. To ensure proper conductivity all clamping contacts remain uncoated.

Mounting Instructions:

Please note especially the following instructions for the mounting of coloured conductor systems:

- Coatings on conductors (acc. ÖNORM 2960) have to be removed at all clamping contacts to ensure a proper conductivity and failure-free connections of the system's components.
- The cross section of a conductor must not be reduced when removing the coating
- We recommend to use a insulation stripping knife to remove the coating. Clamps and holders are delivered without coating in such parts where electric contact is required.
- Coated components and conductors in industrial premises with potentially explosive atmospheres are prohibited.
- Round aluminium wires with 8 mm diameter (RD8Alu) shall be straightened with consideration and at low rotational speed.
- If using a wire straightener remove protection from guide rollers



Surcharges: For standard colours the surcharge per piece of component or meter of conductor is EUR 2.30

Delivery time: approximately 14 days after date of order.

Minimum order quantity: For each standard colour we require a minimum order quantity of 150 pieces of components or 150 meters of conductor. As markup for small-volume purchases we will charge additionally EUR 29.00 per colour



Interconnection of different materials

The table below shows which materials may be interconnected in a conductor system (yes) or require additional measures against corrosion (no). The material compatibility and long-term durability of plastic sheet roof coverings must be confirmed by the manufacturer before installing plastic lightning protection components on them.

	St/tZn	Al	Cu	V2A	Titan	Zinn
St/tZn*	yes	yes	no	yes	yes	yes
Al	yes	yes	no	yes	yes	yes
Cu	no	no	yes	yes	no	yes
V2A	yes	yes	yes	yes	yes	yes
Titan	yes	yes	no	yes	yes	yes
Zinn	yes	yes	yes	yes	yes	yes

* St/tZn = Steel, hot dip galvanised, respectively tin-plated steel

Tightening torques

Clamps and connectors must be firmly tightened by hand using standard tools. The tightening torque required mainly depends on the shape and material of the connector or clamp, and on the material and mechanical properties of the screws. We recommend the following torque values for fixing screws, regardless of the material used for the clamp or connector.

Screws	Tightening Torque
	in Nm
M6	4
M8	10
M10	20

Aluminium round wires AlMgSi

The 8mm round wire is a lightning down-conductor wire (acc. DIN 48 801, ÖNORM E 2950) made of a special wrought aluminium alloy either soft or semi-hard. It is suitable above ground and has much better mechanical properties than previously used pure aluminium wires of 10mm diameter. Furthermore, it is light to transport, easy to handle or install and highly resistant to corrosion. Please note that, as all aluminium materials, aluminium wires are not to be installed under plaster and renderings.

Die-cast zinc

Die-cast zinc components must not be used under plasters and renderings or buried underground.

Hot dip galvanised steel

Hot dip galvanised steel is also suitable for embedding in concrete.

Stainless steel

Stainless steel (catalogue abbreviation: NIRO; steel, stainless) has proven extremely durable under particularly harsh environmental conditions and can be installed above and below ground. For underground embeddings only stainless steel with the material code 1.4571/V4A is suitable.

Components with stainless steel screws

To improve quality, most of our components are fitted with stainless steel screws. Stainless steel screws emphasise the high quality of our components. The same is true for components made of copper. Corrosion behaviour is not affected by this.

Terminal lugs for connections between earth electrodes or foundation reinforcements and earthing systems laid underground must be corrosion-proof. Conductors with plastic sheathings, insulated lugs or terminal lugs from stainless steel type NIRO/V4A are best suited for this purpose. Additional measures against corrosion are required when components or conductors of different materials are interconnected, e.g. steel or aluminium to copper or stainless steel (see table on p. 65). In such cases, bimetallic connectors and disconnection clamps or liners (cupal sheets or sleeves) must be used. Centre plates made of lead are not permitted.

According to the installation standard DIN VDE V 0185-3 underground joints require additional corrosion protection, e.g. by using corrosion protection tapes.

Standards and Guidelines

In order to avoid damages caused by lightning discharges, buildings and structures are subject to particular safety measures. Scientific findings in the area of lightning research have an important impact on the relevant standards.

Since 1st January 2008 the corresponding standard for Austria is EN 62305, enacted as ÖVE/ÖNORM EN 62305 part 1-4. Our components for external lightning protection comply with these guidelines and standards. Deviating national or local provisions and regulations have to be observed in any case.

Quality

Our expertise and know-how in manufacturing and sourcing lightning protection components in terms of suitable materials, required minimum measurements and functionality made Univolt a recognised brand for lightning protection programmes. Not only electrical and mechanical requirements characterise our components but also considerations concerning the ease of installation and the proper protection against corrosion.

Application Remarks

UNIVOLT roof and wall conductor holders with single-screw cleats are both time and cost efficient.

The plastic snap-type holder '**Schnappduplo SD**' allows quick and easy installations (inserting the conductor, pressing it in the gap without using tools) and offers due to its sophisticated design (no mechanical loads on the snap fastener, the conductor cannot jump out) several advantages. '**Schnappduplo SD**' is applicable as single element (conductor holder) or as a roof conductor holder if installed with appropriated bases from aluminium, stainless steel or copper. This system facilitates efficient and professional installations.

'**Spannhalter SP**' is a screw-less grip-type percussion holder either of stainless steel or copper which supplements the plastic '**Schnappduplo SD**' conductor holder system. The screw-less holders can be used both as roof and wall holders for conductors of up to 8mm diameter. The conductor is fixed by simply pressing it into the holder. A new design of this grip-type holder system allows the conductor to expand thermally and also eases mounting and dismounting of conductors.

The complete sophisticated holder system '**Schnappduplo SD**' and '**Spannhalter SP**' guarantee short assembly times and cost efficiency.

**Snap-type conductor holder
'Schnappduplo SD'**



**Grip-type conductor
holder 'Spannhalter
SP'**



GEOMET®

A number of Univolt lightning protection components are furnished with **GEOMET® screws** which offer enhanced protection against corrosion. GEOMET® 321 is a water-based metallic coating, which consists of completely chromium-free zinc and aluminium lamellae in an inorganic matrix.

The coating thickness is only between 5 µm and 10 µm. This slender coating is ideal for plating most screw fittings.

The protective effect stems from:

- **Barrier effect:** The overlapping of zinc and aluminium lamellae creates a barrier between basic metal and corrosive environment
- **Galvanic effect:** Corrosion first affects zinc, which protects the basic metal
- **Passivation:** Metal oxides in the coating retard the corrosive reaction and offer a better resistance to corrosion compared to pure zinc

Products furnished with Geomet® screws are marked 'GEO 321' in this catalogue.

Material Identification

Materials	
Material Code	Description
Al	aluminium
Al/Cu	aluminium/copper
Al/K	aluminium/plastic
Al/V2A	aluminium/stainless steel V2A
Cu	copper
Cu/Al	copper/aluminium
Cu/fv	copper/hot-dip galvanised
Cu/fv/V2A	copper/hot-dip galvanised/stainless steel V2A
Cu/K	copper/plastic
Cu/Sn	copper/tin
Cu/V2A	copper/stainless steel V2A
fv	hot-dip galvanised
fv/K	hot-dip galvanised steel/plastic
fv/V2A	hot-dip galvanised steel/stainless steel V2A
gal Sn	galvanic tin
GFI/V2A	fibreglass/stainless steel V2A
GFI/V2A/Al	fibreglass/stainless steel V2A/aluminium
GFK	fibreglass reinforced plastic
GFK/fv	fibreglass reinforced plastic/hot-dip galvanised
GFK/fv/Al	fibreglass reinforced plastic/hot-dip galvanised/aluminium
GFK/Al	fibreglass reinforced plastic/aluminium
GFK/V2A	fibreglass reinforced plastic/stainless steel V2A
GFK/V2A/Al	fibreglass reinforced plastic/stainless steel V2A/aluminium
GU	die-cast
gv	zinc-plated
K	plastic/polyethylene/polyamide/polystyrene
K/concrete	plastic/concrete
Keramik	ceramics
Me/Ni	Nickle-plated brass
N/V2A	nylon/stainless steel V2A
N/V2A/Al	nylon/stainless steel V2A/Aluminium
NGF/V2A	nylon/fibreglass reinforced plastic/stainless steel V2A
NGF/V2A/Al	nylon/fibreglass reinforced plastic/stainless steel V2A /aluminium
Nylon	nylon
Petrolat	Petrolat (petroleum jelly)
PVC	polyvinylchloride
Sn	tin
St/tZn	tin-plated steel
TG	malleable iron
V2A	stainless steel (material grade 1.4301/1.4303)
V2A/Al	stainless steel (material grade 1.4571/1.4401)
V2A/K	stainless steel V2A/plastic
V2A/K/Al	stainless steel V2A/plastic/aluminium
V4A	stainless steel V4A
ZG	die-cast zinc
ZG/K	die-cast zinc/plastic
ZG/V2A	die-cast zinc/stainless steel V2A

Conversion Table Inch to Millimetres

inches fractional	inches decimal	mm metric
1/8"	0,125"	3,175 mm
1/4"	0,250"	6,350 mm
3/8"	0,375"	9,525 mm
1/2"	0,500"	12,700 mm
5/8"	0,625"	15,875 mm
3/4"	0,750"	19,050 mm
7/8"	0,875"	22,225 mm
1"	1"	25,400 mm
1 1/4"	1,250"	31,750 mm
1 1/2"	1,500"	38,100 mm
1 3/4"	1,750"	44,450 mm
2"	2"	50,800 mm
2 1/4"	2,250"	57,150 mm
2 1/2"	2,500"	63,500 mm
2 3/4"	2,750"	69,850 mm
3"	3"	76,200 mm
3 1/4"	3,250"	82,550 mm
3 1/2"	3,500"	88,900 mm
3 3/4"	3,750"	95,250 mm
4"	4"	101,60 mm
4 1/4"	4,250"	107,95 mm
4 1/2"	4,500"	114,30 mm
4 3/4"	4,750"	120,65 mm
5"	5"	127,00 mm
6"	6"	152,40 mm
7"	7"	177,80 mm
8"	8"	203,20 mm
9"	9"	228,60 mm
10"	10"	254,00 mm

Conversion Table of Conductor Material

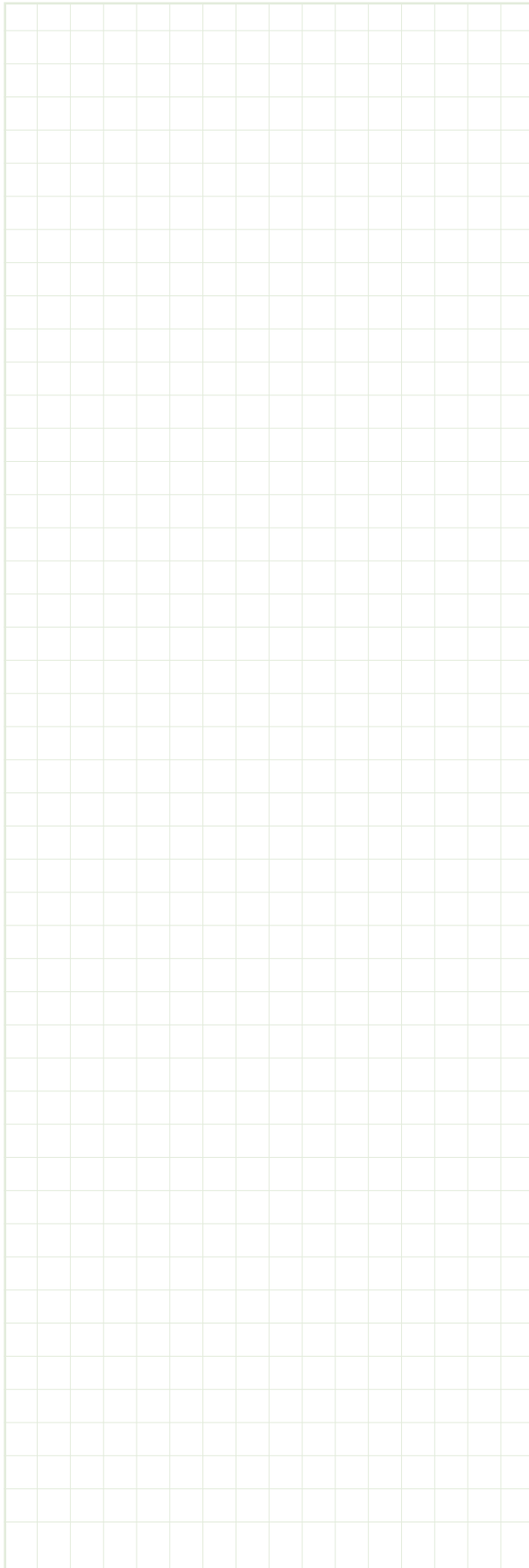
material	dimension in mm	1m = kg	1kg = m	cross section mm ²
round wire				
RD8fv	Ø 8mm	0,40	2,50	50
RD10fv	Ø 10mm	0,62	1,62	78
RD8Alu/hh	Ø 8mm	0,13	7,40	50
RD8Alu/w	Ø 8mm	0,13	7,40	50
RD8Alu/K 1,5mm	Ø 8mm	0,19	5,10	
RD8Cu/hh	Ø 8mm	0,45	2,25	50
RD8Cu/w	Ø 8mm	0,45	2,25	50
RD8Niro	Ø 8mm	0,40	2,50	50
RD10Niro	Ø 10mm	0,62	1,62	78
RD8fv/K	Ø 8/11mm	0,44	2,27	50
RD10Ffv/K	Ø 10/13mm	0,70	1,43	78
flat strips				
EBE30x3fv	30 x 3	0,71	1,40	90
EBE40x4fv	40 x 4	1,27	0,79	160
EBE30x3,5Niro	30 x 3,5	0,85	1,18	105

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All technical details in our catalogues and other information material derive from long term experience of our company in the field of cable management systems. Nevertheless, they only represent recommendations without any obligation.

Errors and modifications excepted.

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For more detailed information concerning our products and the relevant properties we kindly ask you to contact our Export Department.

Please note the following general annotations:

- **Technical specifications:** The technical details of conduit and trunking systems may vary for versions in other colours than those mentioned in this catalogue.
- **Colours:** Slight deviations in the colouring of our products are due to the production process and are not subject of any quality defects. RAL codes, therefore, are only of limited significance and inform solely about similarity with actual product colours.
- **Cable capacities:** Regulations concerning the cable capacities of conduit and trunking systems may vary considerably from country to country. Recommendations are available through our Export Department.
- **National regulations:** The information of application areas and possibilities given in this catalogue only represent recommendations. For particular cases the relevant building laws, installation instructions, regulations and provisions must be observed.
- **All given packing quantities refer to pieces, unless specified otherwise**

We are aware that the signs for decimal places vary from country to country. Nevertheless, for reasons of typographic restrictions and to ensure a common layout we decided to use commas consistently throughout our catalogue. We kindly ask you for your understanding.

Impressum

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Produktfotos: Carmen Kronspließ

General Terms and Conditions for Sale and Delivery of Dietzel GmbH



1. General Provisions

- 1.1 These general terms and conditions shall apply unless the parties to the contract have expressly made an explicit agreement to the contrary in writing.
- 1.2 Any quotations submitted by DIETZEL GmbH. (hereinafter briefly referred to as DIETZEL) shall be subject to change without notice. The contract shall only come into force upon written confirmation or delivery. The documents part of the quotation such as illustrations, drawings, weights and measurements in particular shall only be considered to be approximate statements unless they were expressly referred to as binding. Statements as to properties, weights, volumes, capacities, colours, prices and similar specifications shall only become an integral part of the contract to the extent they were used in the catalogues, circulars, brochures, adverts, illustrations and price lists used by DIETZEL in the course of its business operations.
- 1.3 DIETZEL expressly reserves the right to implement changes in the design and shape of the subject matter of the contract based on technical progress without prior announcement.
- 1.4 Guarantees, collateral agreements and changes in and amendments to this agreement shall only be effective in writing. This requirement cannot be dispensed with.
- 1.5 Changes in the general terms and conditions of sale and delivery shall become legally effective at the beginning of next but one month following the month during which the customer was notified and shall henceforth apply to any current and future business transactions between the customer and DIETZEL unless a written objection filed by the customer was received by DIETZEL prior to that date.

2. Prices and Terms of Payment

- 2.1 Unless otherwise agreed, DIETZEL's prices shall be ex works or warehouse, excluding loading, excluding VAT. For orders with a net value below EUR 200,- we will impose a surcharge for quantities below minimum of EUR 15,-. Unless otherwise agreed, we will charge the prices applicable on the day of delivery.
- 2.2 The indicated prices are including packaging as usual in trade. Any other packaging which might be required shall be charged at the actual fee. If reusable packaging which is provided upon delivery is not returned in time franco one of DIETZEL's warehouses, it shall be invoiced.
- 2.3 Unless otherwise agreed, invoices shall be payable within thirty days from date of invoice without deductions. If the customer effects payment within fourteen days from date of invoice, DIETZEL shall grant the customer a 2 % cash discount. No cash discount shall be granted for invoices concerning repair and outwork. The ordering party shall not be entitled to a cash discount if the ordering party is in default of payment obligations to DIETZEL based on any other contracts.
- 2.4 At request, the customer shall effect payment in instalments to DIETZEL relative to progress in performance of the contract.
- 2.5 The customer shall not be entitled to offset any counter-claims or warranty claims which are in dispute or have not been declared in a final and absolute judgement. This shall also apply to the assertion of a right of retention by the customer.

3. Delay in Payment

- 3.1 If the customer is in delay with payment of an agreed sum or any other performances, DIETZEL shall have the following rights:
 - the right to defer performance of its own obligations until the arrears were paid or any other performances were effected.
 - the right to implement a reasonable extension of the term of delivery.
 - the right to charge 8 % interest on arrears from the due date subject to assertion of higher actual damage due to delay in performance.
 - the right to rescind the contract after a reasonable period of grace has lapsed without results.
- 3.2 In any case, the customer shall be obliged to compensate DIETZEL for any costs incurred for demands for payment as well as any costs such as creditor protection association and collection agency costs and lawyer's fees incurred before institution of proceedings in particular.

4. Delivery and Performance

- 4.1 The term of delivery which must be expressly agreed shall start upon conclusion of the contract but, in any case, not before receipt of a down-payment which might have been agreed. One condition for DIETZEL respecting the term of delivery shall in any case be the performance of contractual obligations by the customer.
- 4.2 The term of delivery shall be deemed to have been observed if the subject of delivery was dispatched by DIETZEL to the customer or if notice of readiness for shipment was given to the customer by DIETZEL before expiry of the term of delivery. The term of delivery shall be prolonged correspondingly if changes or amendments are subsequently requested by the customer. This shall also apply if any impediments were to occur which had not been foreseeable upon execution to the extent such impediments are proven to influence the completion or delivery of the subject of performance such as, in particular, delays caused by force majeure, industrial strife, strikes, lock-outs, delays in the delivery of key raw

materials, materials or components. This shall also apply if the above-mentioned circumstances occur at one of DIETZEL's sub-suppliers. If the delivery cannot be effected due to the occurrence of such circumstances, DIETZEL shall be entitled to repudiate the contract. This shall not give rise to any customer claims whatsoever. This shall also apply if the above mentioned circumstances have occurred during an unrelated delay in performance.

- 4.3 If it is impossible to ship goods ready for shipment without DIETZEL being responsible for this inability to ship or if the customer refuses to take delivery of the goods, DIETZEL shall be entitled to store the goods at the customer's expense. In this case, delivery shall be deemed to have been effected upon delivery to the warehouse. This shall, however, be without prejudice to the agreed terms of payment.

5. Passage of Risks

- 5.1 Unless otherwise agreed, the goods shall be deemed to have been sold „ex works“ (readiness for collection). DIETZEL shall effect delivery excluding insurance and duties unpaid ex works. Part deliveries shall be allowed, unless otherwise agreed.
- 5.2 The risk of accidental perishing of a chattel and damage shall pass to the customer upon dispatch of the delivery parts at the latest even if part deliveries are effected and other items are included in DIETZEL's scope of performance such as consignment fees or delivery and installation.
- 5.3 Otherwise, the INCOTERMS as amended on the day of execution of the contract shall apply.

6. Reservation of Ownership and Assignment

- 6.1 DIETZEL reserves the proprietary right to the object of purchase until complete performance of all financial obligations by the customer.
- 6.2 The customer shall be entitled to sell the reserved goods in its ordinary course of business as long as it is not in delay with payment. It shall not be entitled to dispose of the reserved goods any other way (such as by chattel mortgage, assignment by way of pledge). The customer's claims to payment of the purchasing price or compensation for work arising from resale of the reserved goods shall be assigned to DIETZEL up to the amount of DIETZEL's claim to the customer.
- 6.3 In case of a delay in payment, the risk of cessation of payments or in the event of execution upon the customer's assets, DIETZEL shall be entitled to dismantle the reserved goods and/or otherwise require them to be returned. This shall not, however, be considered to be a repudiation of the contract. The customer is required to return property.
- 6.4 DIETZEL must promptly be informed if the reserved goods are assigned by way of pledge or if the reserved goods are affected any other way by third parties. The customer shall bear any costs incurred for such third-party attachment.
- 6.5 The customer expressly consents to DIETZEL's right to assign any claims to the customer to third parties for any purpose whatsoever. Any prohibition to assign which might be applicable shall only become legally effective if this was explicitly agreed between the parties to the contract in each specific case.
7. **Returned Goods**
- 7.1 Goods can only be returned if this was expressly agreed in writing beforehand. Goods must be returned franco warehouse specified by DIETZEL. The goods must be as good as new and packed in their original packaging. In any case, DIETZEL shall charge a reasonable manipulation fee.

8. Warranty

- 8.1 DIETZEL shall assume warranty for the accordance of the delivered goods with the order and for the fitness of the goods for normal use. It is expressly stated that indications as to the properties, weight, volume, capacity, colour, prices and any other specifications shall only become an integral part of the contract if these statements were used in the catalogues, circulars, brochures, adverts, illustrations and price lists used by DIETZEL in its ordinary course of business. Public statements on DIETZEL products by parties other than DIETZEL shall not be decisive for the evaluation of the integral parts of the contract.
- 8.2 DIETZEL shall only assume a warranty obligation for defects which are based on a design defect, faulty material or execution and even then only if such defects are noticed over a period of twelve months of common use from the passage of risks and/or the date of delivery:
 - a) Within the first six months, DIETZEL undertakes, at its absolute discretion, to rectify defects or replace parts in defective goods which turn out to be unfit for use or only suitable for considerably limited use due to a circumstance which occurred before the passage of risks such as, in particular, faulty construction, faulty material or faulty execution free of charge excluding incidental expenses (such as, in particular, travelling time costs, labour costs or transport costs and the like). DIETZEL reserves title to the replaced components. The customer must prove that the defect already existed at the time of delivery within the first six months after delivery.
 - b) Six months after performance, DIETZEL shall assume a guarantee for, at its absolute discretion, either repairing or replacing defective objects by objects free of defects for another six months if it can be proven that the defective goods are not fit for use or are only suitable for considerably limited use due to a manufacturing defect, faulty material or design. Any incidental expenses such as travelling time

expenses, labour costs or transport costs in particular, shall be borne by the customer. DIETZEL excludes liability for any other warranty claims such as, in particular, the right of rescission of sale or reduction in price (even in the event of failure of the rectification of defects and/or repeated delivery) as well as claims for damages on any legal basis whatsoever.

- 8.3 The customer shall only be entitled to claim relief based on its warranty rights if DIETZEL was promptly notified of the defects which have occurred in writing. In this case, DIETZEL shall have the following options if the defects can be rectified by DIETZEL based on the applicable provisions:
 - a) it can rectify defects in defective goods at the customer's premises;
 - b) it can ask the customer to send the defective goods or components to it for rectifying the defects;
 - c) it can replace the defective goods or components. If it is impossible to rectify the defects or if it would be disproportionately expensive to rectify the defects, DIETZEL shall also be entitled to grant a reasonable reduction in the price.
- 8.4 If the defective goods or components are returned for rectification of defects or replacement, the customer shall bear both the costs and risk of transportation.
- 8.5 The defective goods or components replaced pursuant to these provisions shall exclusively be placed at DIETZEL's disposal. DIETZEL's warranty obligations shall only apply to defects which have occurred subject to observance of the prescribed operating conditions and in the course of use common in trade. The customer must provide evidence. In particular, DIETZEL shall not assume warranty for defects which were caused due to improper installation by the customer or its agents, improper maintenance, improper repair or modifications by third parties which were not approved by DIETZEL in writing as well as common wear and tear.
- 8.6 DIETZEL's liability based on the special right of recourse shall in any case expire two years from DIETZEL's performance and the scope of liability shall be limited to the effect that the customer is only indemnified for any warranty costs which might be incurred by the customer to the amount of the actually agreed DIETZEL sales price of the defective goods minus any cash discounts or other discounts which might have been granted.
- 8.7 DIETZEL shall not assume liability for defects in excess of the afore mentioned provisions.

9. Liability

- 9.1 DIETZEL shall not assume liability for personal injury, for damage to goods which do not constitute a subject matter of the contract as well as for any other damage and lost profit unless it turns out in this individual case that this was caused by DIETZEL with gross negligence.
- 9.2 The goods delivered by DIETZEL are safe to the extent specified in the provisions for approval, operating instructions, DIETZEL instructions on how to use the object of purchase such as, in particular, with a view to any inspections which might be required and other warnings which might have been given. If sub-section 8.1 does not apply, DIETZEL's liability for slightly negligent damage shall in any case be limited to 5 % of the volume of the order.
- 9.3 Unless otherwise agreed, this stipulation shall exclude liability on the part of DIETZEL vis-à-vis the customer for production downtime, lost profits, loss of use, lost contracts or any other economic or indirect consequential damage.
- 9.4 The customer assumes liability and costs for all disputes arising from infringements of property rights which result from the manufacture and delivery of a customized production for DIETZEL. The customer especially assumes professional and court fees for actions based on the infringement of existing patents, trademarks, designs and copyright of third parties and will hold harmless and indemnify DIETZEL in this respect.

10. Data Protection

- 10.1 DIETZEL shall be entitled to store, transmit, revise or delete personal data concerning the customer in the course of its ordinary business.
- 10.2 The parties undertake to keep any information obtained within the framework of their business relations strictly confidential and refrain from disclosing it to third parties.

11. Place of Jurisdiction, Applicable Law, Place of Performance

- 11.1 The court which has jurisdiction as regards the subject matter at the registered office of DIETZEL GmbH. in Vienna shall be the place of jurisdiction for any disputes which might arise directly or indirectly from the contract. Regardless of this agreement, DIETZEL shall be entitled to invoke a court competent for the other party to the contract.
- 11.2 The remainder of this contract shall continue to be binding even if individual provisions of this contract may be or become legally invalid. This shall not apply if it would constitute an unreasonable hardship for either of the parties to continue to be bound by the terms of this contract.
- 11.3 This contract shall be governed by Austrian substantive law. Both parties have mutually agreed to exclude application of the United Nations Convention on Contracts for the International Sale of Goods.
- 11.4 The registered office of DIETZEL GmbH. in Vienna shall constitute the place of delivery and place of payment even if it is agreed to effect delivery to any other location.

Lightning Protection and Earthing



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material	dn [mm]	spec.	L [m]	pl [kg]
Cu	8	soft	113	50
Cu	8	semi-hard	113	50

cable strands x Ø	number of strands in the cable and strand diameter
clp. f/f [mm]	clamping range flat strip/flat strip
clp. r/f [mm]	clamping range round wire/flat strip
clp. r/r [mm]	clamping range round wire/round wire
clp. range	clamping range
cond. dist. [mm]	conductor distance in millimetres
dim [mm]	dimension in millimetres
dn [mm]	nominal diameter in millimetres
fl	flat strip
for cond. Ø [mm]	for conduit diameters in millimetres
for Ø [mm]	for diameters in millimetres
ins. dist. [mm]	insulation distance in millimetres
L [m]	length in metres
L [mm]	length in millimetres
no. weights	number of concrete bases (weights)
Ø dist. [mm]	diameter of the distance holder (pole)
pipe clp. [inch]	pipe clamp size in inches
pl [kg]	large packing unit in kilograms
pl [pcs]	small packing unit in pieces
ps [kg]	small packing unit in kilograms
ps [pcs]	large packing unit in pieces
rd	round wire
ref.	ordering reference number
spec.	item specificaton