

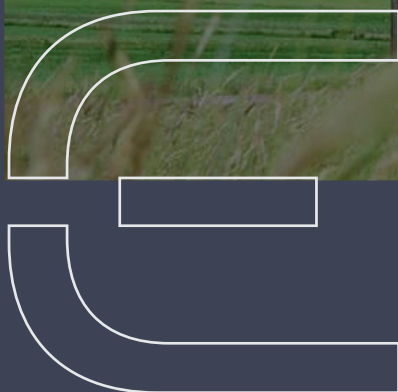
Solutions for Overhead Line Networks

Accessories for up to 45 kV



| catalog

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Russian production company ENERVIC

ENERVIC is the legal successor of the Finnish family company Ensto, retaining the equipment and production facilities in St. Petersburg, technologies, qualified personnel, experience in the development and setting up the production of new products.

ENERVIC offers innovative and reliable, long-lifecycle overhead lines, underground networks, network automation and new smart technology products and solutions.

The company produces its own products under the brand ENERVIK on the territory of the Russian Federation, in accordance with European and Russian quality standards.

We focus on expertise, product quality with long-term trouble-free operation, on our own production, where we use the long-term experience of the company and employees in the Russian and international markets.

Since 2017 production of pole accessories and metal constructions is localised in St. Petersburg, Russia. All products made by ENERVIK passed the stages of development and production according to ISO 9001 and GOST R 15.301.

The precision of cutting parts, bending and assembling products is provided by high-precision equipment, including the TruLaser 5000 series and TruBend 5000 series TRUMPF

It is important for us to ensure safety, identification and traceability when delivering products. We devote up to 30 % of our time to packaging and labeling products. We strive for superior quality, efficiency, delivery capability and reliability in everything we do.

The company operates in accordance with high quality standards, with 30 years of experience, by keeping traditions, reliability, the previous team of professionals and the reputation gained over the years.





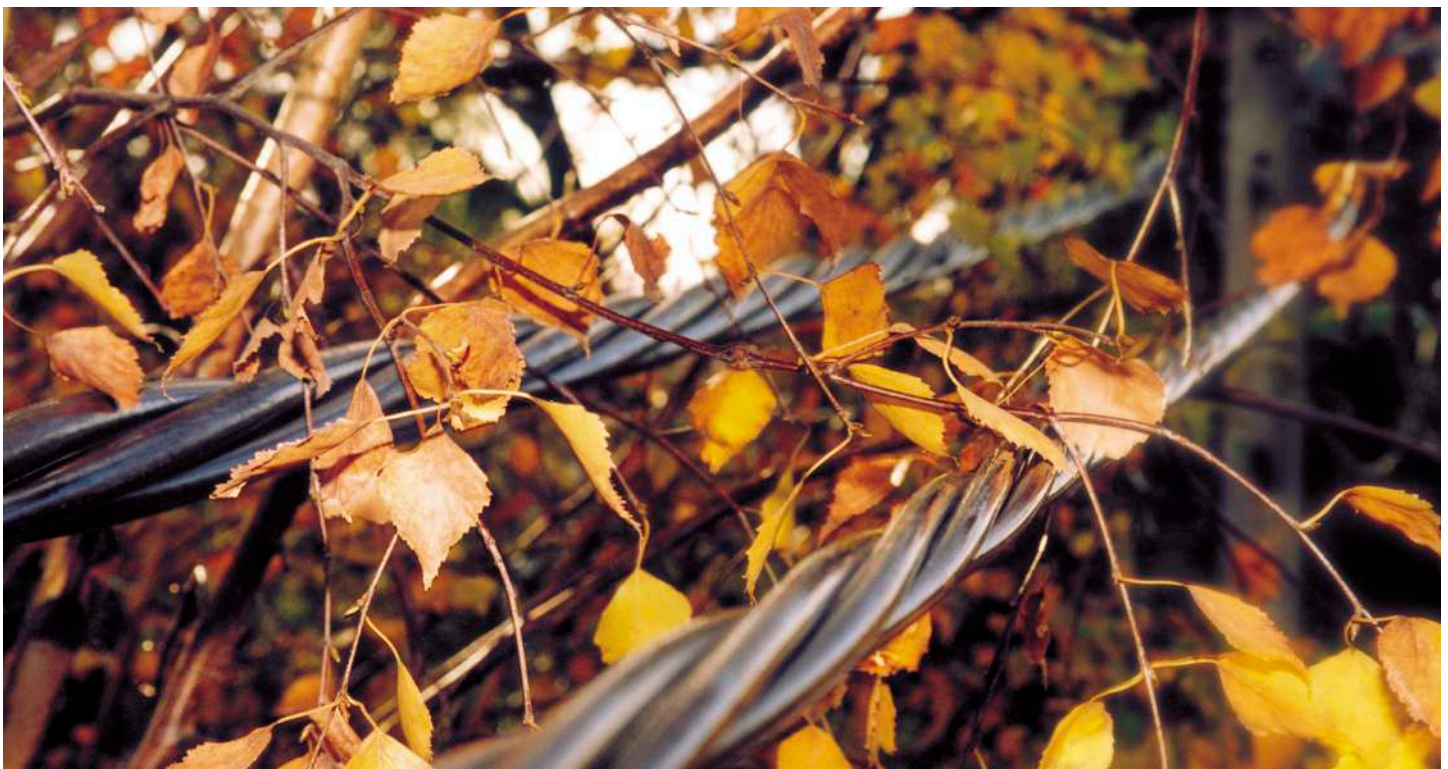
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Low Voltage Overhead Line Solutions

Properties and Typical Values of LV ABC (Aerial Bundle Cable)

CHARACTER/CRITERIA	FOUR CORE SYSTEM	INSULATED NEUTRAL MESSENGER WIRE	UNINSULATED NEUTRAL MESSENGER WIRE
Description	Four equal aluminium alloy conductors including phase - and neutral conductors. The cable can also have separate conductors for street lighting	Insulated aluminium phase conductors. Insulated aluminium alloy messenger wire, which is also the neutral conductor. The cable can also have separate conductors for street lighting.	Insulated aluminium phase conductors. Bare aluminium alloy messenger wire, which is also the neutral conductor. The cable can also have separate conductors for street lighting.
Minimum breaking loads for the conductor	4×35 mm ² = 22.4 kN 4×50 mm ² = 33.2 kN 4×70 mm ² = 45.3 kN 4×95 mm ² = 60.8 kN 4×120 mm ² = 75.2 kN	3×35 mm ² + 54.6 mm ² = 16.0 kN 3×70 mm ² + 54.6 mm ² = 16.0 kN 3×120 mm ² + 70.0 mm ² = 17.7 kN	3×35 mm ² + 50 mm ² = 14.7 kN 3×70 mm ² + 95 mm ² = 27.9 kN 3×120 mm ² + 95 mm ² = 27.9 kN
Sharing of mechanical load	Mechanical load applied in all conductors.	Messenger wire carries all mechanical load.	Messenger wire carries all mechanical load.
Tensile strength of wires of conductor (N/mm ²)	All conductors 160 N/mm ²	Neutral 300 N/mm ² Phases 120 N/mm ²	Neutral 300 N/mm ² Phases 120 N/mm ²
Risk of neutral breaking under unexpected loads like falling trees etc.	The neutral is unlikely to break alone, if the installation is made properly. High mechanical strength.	The neutral may break alone, if not provided with weak links. Risk to personnel and apparatus due to risen phase voltage and high potential in neutral, if the earthing is not made properly.	The neutral is reinforced, but it may break alone. Risk to personnel and apparatus due to risen phase voltage and high potential in neutral, if the earthing is not made properly.
Live line work	No special requirements.	No special requirements.	No special requirements. Uninsulated neutral may have touch voltage in poor earthing conditions. Proper earthing is essential.
Risk of corrosion in the neutral	Reduced risk.	Reduced risk.	Potential risk in extreme climatic conditions.
Installation methods	No special tools or methods. Suspension clamps with incorporated pulleys available.	No special tools or methods. Pulleys are needed.	No special tools or methods. Pulleys are needed. Economical fittings.



Low Voltage Overhead Line Solutions

Products for Four Core System

Tension clamp SO274S, SO275S и SO276S

Tension clamp for the termination of 4 core overhead cables. The tension clamp is equipped with shear-head nuts.

PRODUCT CODE	GTIN	CONDUCTOR SIZE, MM ²	CABLE DIA., MM	SMFL kN	WEIGHT, G	PACK./ PCS
SO274S	6418677446696	4x(25-50)	7-10.2	13 / 17.8 / 25	1000	10
SO275S	6418677446719	4x(50-70)	11.6-13.2	25 / 36	1160	10
SO276S	6438100312008	4x(70-150)	12.7-17.6	50	2300	4



Tension clamp SO234SR

For the termination of four core overhead cables. The tension clamp is equipped with shearhead nuts.

PRODUCT CODE	GTIN	CONDUCTOR SIZE, MM ²	CABLE DIA., MM	MFL kN	WEIGHT, G	PACK./ PCS
SO234SR	4610016592084	4x(50-120)	10.8-16.7	40	1300	10



Tension clamp SO118.425S и SO118.1201S

For the termination of four core LV AB cable with a hook fixing. Clamp is equipped with shear-head nuts. The clamps have strong springs which keep the clamp in an open position during the installation of conductors.

PRODUCT CODE	GTIN	CONDUCTOR SIZE, MM ²	CABLE DIA., MM	SMFL kN	WEIGHT, G	PACK./ PCS
SO118.425S	6418677442261	4x(25-35)	8.4-9.2	13 / 17.8 / 25	1000	10
SO118.1201S	6418677442247	4x(50-120)	10.8-16.7	23 / 33 / 35 / 35	1200	10



Tension clamp SO118.1202S и SO117.50952S

For the termination of four core LV AB cable with hook or universal fixing. fixing. Clamp is equipped with shear-head nuts. The clamps have strong springs which keep the clamp in an open position during the installation of conductors.

PRODUCT CODE	GTIN	CONDUCTOR SIZE, MM ²	CABLE DIA., MM	SMFL kN	WEIGHT, G	PACK./ PCS
SO118.1202S	6418677442254	4x(50-120)	10.8-16.7	27 / 35 / 35 / 35	1380	10
SO117.50952S	6418677442285	4x(50-95)	10.8-15.8	16.6 / 23	1350	10



Low Voltage Overhead Line Solutions

Suspension clamp SO270R

For the installation and suspension of four core ABC cables from poles with standard hook attachment. For straight lines and, depending on cross-section, angles up from 30° (from 2x25 to 4x35 mm²) to 15° (from 4x50 to 4x70 mm²).

PRODUCT CODE	GTIN	CONDUCTOR SIZE, MM ²	CABLE DIA., MM	SMFL, kN	WEIGHT, G	PACK./ PCS
SO270R	4610016592336	4x16, 2-4x(25-120)	12-42	5	150	25



Suspension clamps SO130R и SO130.02R

SO130R is used for the installation and suspension of LV ABC cables to poles with standard hook attachment. For straight lines and angles up to 30° 4x(25-120 mm²) and 60° 4x(25-50). Thanks to the integrated construction, no extra parts are needed for the installation. The body is made of corrosion proof aluminium and the inserts of weather resistant plastic. SO130.02R is equipped with a wing nut.

PRODUCT CODE	GTIN	CONDUCTOR SIZE, MM ²	WING NUT	SMFL, kN	WEIGHT, G	PACK./ PCS
SO130R	4610016590714	2-4x(25-50) ≤ 60° 2-4x(25-120) ≤ 30°	No	18	294	25
SO130.02R	4610016591629	2-4x(25-50) ≤ 60° 2-4x(25-120) ≤ 30°	Yes	18	310	25



Suspension clamp SO99

Used for the installation and suspension of cables from poles in straight lines and at angles of up to 90° with 4x25 mm² and 4x50 mm² cables or up to 60° with 4x95 mm² cables. The body is made of hot-dip galvanized steel, and there is a stainless steel reinforced ring in the hook attachment. The integral rollers are made of weather resistant plastic.

PRODUCT CODE	GTIN	CONDUCTOR SIZE, MM ²	CABLE DIA., MM	WEIGHT, G	PACK./ PCS
SO99	6418677405181	4x(25-95)	18-39	825	10



Suspension clamps SO136 и SO136.02

For the installation and suspension of four core LV ABC cables to poles with standard hook attachment. For straight lines and angles up to 90°. No extra parts are needed for the installation. SO136.02 is equipped with a wing nut.

PRODUCT CODE	GTIN	CONDUCTOR SIZE, MM ²	WING NUT	SMFL, kN	WEIGHT, G	PACK./ PCS
SO136	6418677404368	2-4x(25-120) ≤ 90°	No	40	730	10
SO136.02	6418677419225	2-4x(25-120) ≤ 90°	Yes	40	745	10



Low Voltage Overhead Line Solutions

Service Line Accessories

Tension clamp SO243

The SO243 is a tension clamp for four core service connections. The light weight design of SO243 provides extremely easy and quick an-choring of LV overhead cables – either to poles or walls by means of standard hooks. No tools are required during the installation.

PRODUCT CODE	GTIN	CONDUCTOR SIZE, MM ²	CABLE DIA., MM	SMFL, kN	WEIGHT, G	PACK./ PCS
SO243	6418677437977	2-4x(16-25)	6.8-10.0	2	70	50



Tension clamps SO157.1R и SO158.1R

SO157.1R is used for the anchoring of a two core overhead cable to poles or walls by means of standard hooks. SO158.1R is used for the tensioning of a four core overhead cable to poles or walls by means of standard hooks.

PRODUCT CODE	GTIN	CONDUCTOR SIZE, MM ²	CABLE DIA., MM	SMFL, kN	WEIGHT, G	PACK./ PCS
SO157.1R	4610016590745	2x16 / 2x25 / 2x35	7.0-10.2	3.4 / 6.0 / 7.2	90	50
SO158.1R	4610016590752	4x16 / 4x25 / 4x35	7.0-10.2	5.0 / 8.5 / 8.5	100	50



Tension clamp SO243.1R

PRODUCT CODE	GTIN	CONDUCTOR SIZE, MM ²	SMFL, kN	WEIGHT, G	PACK./ PCS
SO243.1R	4610016592091	4x(16-35)	2.5	124	50



Tension clamp SO80

The clamps are equipped with a spring to make the installation easier.

PRODUCT CODE	GTIN	CONDUCTOR SIZE, MM ²	CABLE DIA., MM	SMFL, kN	WEIGHT, G	PACK./ PCS
SO80	4610016590912	4x(16-35)	7.0-10.2	7.0 / 10.0 / 12.0	230	50



Tension-suspension clamp SO80.1R

PRODUCT CODE	GTIN	CONDUCTOR SIZE, MM ²	SMFL, kN	WEIGHT, G	PACK./ PCS
SO80.1R	4610016592114	4x(16-50)	12.0	620	50



Tension clamp SO95

Used for the tensioning of all cables dia. 11-19 mm with round shape. Light weight, no loose parts. The clamp is easy to install, without cutting the cable. The body is made of weather and UV-radiation resistant thermoplastic and the bail of hot-dip galvanized steel.

PRODUCT CODE	GTIN	CABLE DIA., MM	SMFL, kN	WEIGHT, G	PACK./ PCS
SO95	4610016592114	11-19	0.75 (d11 mm), 2.0 (d19 mm)	100	50



Suspension clamp SO239

Used for suspensioning of 2 or 4-core LV ABC cables (service lines) with hook or universal fixing. For straight lines ans angles up to 30°.

PRODUCT CODE	GTIN	CONDUCTOR SIZE, MM ²	CABLE DIA., MM	WING NUT	SMFL, kN	WEIGHT, G	PACK./ PCS
SO239	6418677418969	4x(50-120)	5.0-9.0	+	15.2	130	50



Low Voltage Overhead Line Solutions

Insulated Messenger Wire system

Tension clamps series SO250R, SO251R, SO252R, SO258

SO250-series consists of clamps for different messenger cross sections suitable for various climatic conditions. The clamps are easy to install without tools and available for both bracket and hook installation to wooden, concrete or steel poles. Clamps are supplied with or without the bracket.

PRODUCT CODE	GTIN	CONDUCTOR SIZE, MM ²	CABLE DIA., MM	SMFL, kN	WEIGHT, G	PACK./ PCS
Tension clamps						
SO250.01R	4610016590783	50-70	11-14	15	470	25
SO258.01	6438100319458	50-70	11-14	20	693	20
SO251.01R	4610016590424	95	15-15.5	15	470	25
SO252.01R	4610016590448	25-35	8.5-11	12	470	25
Tension clamps with the bracket						
SO250.04F	6438100319939	50-70	11-14	15	610	10
SO258.04F	6438100319885	50-70	11-14	20	840	10



SO250.01R



SO250.04F

Suspension clamp SO265 и SO265.1

For suspending of LV ABC cables in an insulated messenger wire system (IMWS) with standard hook installation. Easy to install without tools. The messenger is placed to the groove and locked with the locking part. Clamp equipped with wear protection plate.

PRODUCT CODE	GTIN	CONDUCTOR SIZE, MM ²	CABLE DIA., MM	SMFL, kN	WEIGHT, G	PACK./ PCS
SO265	6418677419546	16-95	7.5-15.5	12	100	20
SO265.1	6418677419553	16-95	7.5-15.5	12	100	20



Suspension clamp SO69.95R

The suspension clamp is used for the suspension of the insulated messenger in straight lines and at angles up to 90°.

PRODUCT CODE	GTIN	CONDUCTOR SIZE, MM ²	CABLE DIA., MM	SMFL, kN	WEIGHT, G	PACK./ PCS
SO69.95R	4610016590851	16-95	7.0-16.5	22	244	50



Suspension clamp SO260

For suspending of LV ABC cables in an insulated messenger wire system (IMWS). Suitable for every climatic conditions. Bracket pre installed.

PRODUCT CODE	GTIN	CONDUCTOR SIZE, MM ²	CABLE DIA., MM	SMFL, kN	WEIGHT, G	PACK./ PCS
SO260	6418677418914	25-95	8.5-15.5	12	370	20
SO260.1	6418677419058	25-95	8.5-15.5	12	160	50



Products for Uninsulated Messenger Wire System (AMKA)

Tension clamp SO65

Used for tensioning of AAAC or uninsulated messenger wires (AMKA). Insulation shall be peeled of before installation.


PRODUCT CODE	GTIN	CONDUCTOR SIZE, MM ²	CABLE DIA., MM	SMFL, kN	WEIGHT, G	PACK./ PCS
SO65	6418677404832	16-70	4.9-9.8	18.6 (70 MM ²)	230	50



Low Voltage Overhead Line Solutions


Insulation Piercing Connectors SLIW50 series

Insulation piercing connector SLIW50R и SLIW52R

PRODUCT CODE	GTIN	CONDUCTOR SIZE, MM ² ²		TYPE OF CONTACT SURFACE	CONDUCTOR DIAMETER, MM	WEIGHT, G	PACK./ PCS
		MAIN CONDUCTOR	BRANCH CONDUCTOR				
SLIW50R	4610016590288	10 - 50 Al/Cu	1.5-10 Al/Cu		6.1 -12.5/3.0 - 7.0	50	120
SLIW52R	4610016590165	16 - 150 Al/Cu	1.5-16 Al/Cu		7.0-18.6/3.0 - 7.8	62	120




Insulation piercing connector SLIW54R и SLIW56R

PRODUCT CODE	GTIN	CONDUCTOR SIZE, MM ² ²		TYPE OF CONTACT SURFACE	CONDUCTOR DIAMETER, MM	WEIGHT, G	PACK./ PCS
		MAIN CONDUCTOR	BRANCH CONDUCTOR				
SLIW54R	4610016590295	16 - 120 Al/Cu	6 -50 Al/Cu		7.0 -17.6/4.0 - 12.1	85	100
SLIW56R	4610016590349	25 - 150 Al/Cu	6 -35 Al/Cu		8.0 -18.6/4.0 - 10.9	75	60




Insulation piercing connector SLIW57R и SLIW58R

PRODUCT CODE	GTIN	CONDUCTOR SIZE, MM ² ²		TYPE OF CONTACT SURFACE	CONDUCTOR DIAMETER, MM	WEIGHT, G	PACK./ PCS
		MAIN CONDUCTOR	BRANCH CONDUCTOR				
SLIW57R	6438100303686	25 - 150 Al/Cu	25 -95 Al/Cu		8.4 - 18.5/8.4 - 15.2	113	60
SLIW58R	6438100307387	50 - 150 Al/Cu	50 - 150 Al/Cu		12.5 - 18.5/12.5 - 18.5	139	60



Connector for bare / insulated SLIW63 and IPC / Bare connector SLIW64

Used for all connections of uninsulated aluminium and copper main and insulated branch conductors up to 1000 V AC. Equipped with shear head screw.



PRODUCT CODE	GTIN	CONDUCTOR SIZE, MM ² ²		TYPE OF CONTACT SURFACE	CONDUCTOR DIAMETER, MM	WEIGHT, G	PACK./ PCS
		MAIN CONDUCTOR	BRANCH CONDUCTOR				
SLIW63	6438100317812	16 - 95 Al/Cu	2.5 - 25 Al/Cu		4.0 - 14/3.0 - 10	110	60
SLIW64	6438100317799	16 - 95 Al/Cu	16 - 95 Al/Cu		4.0 - 14/4.0 - 16.1	120	60



Low Voltage Overhead Line Solutions

Insulation piercing connector SLIW59 и SLIW59.1

Used with insulated aluminium or copper conductors. Fully insulated bolt provides safe live line working. Test voltage 6 kV/50 Hz/1 min in water. Connector's design enables live line installation without peeling insulation from conductor.

PRODUCT CODE	GTIN	CONDUCTOR SIZE, MM ²		TYPE OF CONTACT SURFACE	CONDUCTOR DIAMETER, MM	WEIGHT, G	PACK./ PCS
		MAIN CONDUCTOR	BRANCH CONDUCTOR				
SLIW59.1	6438100335915	70 - 120 Al/Cu	70 - 240 Al/Cu		9.3 - 22.8	280	24
SLIW59	6438100314637	70 - 150 Al/Cu	70 - 240 Al/Cu		9.3 - 22.8	510	12



SLIW59.1



SLIW59

End cap PK553R и PK555R

Used for preventing water entry into the end of the branch cable.

PRODUCT CODE	GTIN	CONDUCTOR SIZE, MM ²	CONDUCTOR DIAMETER, MM	PACK./ PCS
PK553R	6438100306892	4-50	4.0-13.0	120
PK555R	6438100306908	25-150	8.0-19.0	120



Reusable connectors SLIW65 и SLIW65S

Reusable connectors are specially designed for use with universal piercing connectors e.g. SLIW54, 57, 58, SLIP22.1R, SLIW65S up to 1 kV. They allow service line disconnection without removing a main connector. SLIW65 and SLIW65S can be used with aluminium or copper conductors.

PRODUCT CODE	GTIN	FOR CONDUCTOR, MM ²	CONDUCTOR DIAMETER, MM	TIGHTENING TORQUE, NM	WEIGHT, G	PACK./ PCS
SLIW65	6438100312695	2.5-35 Al/Cu	3.5-11.0	11 ± 1	52	60
SLIW65S	6438100312701	2.5-35 Al/Cu	3.5-11.0	11 ± 1	52	60



SLIW65S + прокалывающий зажим

Insulation piercing connectors SLIW66

Multitap connectors is specially designed for use with universal piercing connectors e.g. SLIW57R, SLIW58R, SLIP22.1R, SLIP22.127R and SLIP32.2 up to 1000 V a.c. to facilitate several outgoing conductors. Each branch conductor can be connected with a separate screw.

PRODUCT CODE	GTIN	FOR CONDUCTOR, MM ²	CONDUCTOR DIAMETER, MM	TIGHTENING TORQUE, NM	WEIGHT, G	PACK./ PCS
SLIW66	6438100317973	2 x 6-35 Al/Cu	4.5-11	10 ± 1	103	40



Insulation piercing connectors SLIW67

Multitap connectors is specially designed for use with universal piercing connectors e.g. SLIW57R, SLIW58R, SLIP22.1R, SLIP22.127R and SLIP32.2 up to 1000 V a.c. to facilitate several outgoing conductors. Each branch conductor can be connected with a separate screw.

PRODUCT CODE	GTIN	FOR CONDUCTOR, MM ²	CONDUCTOR DIAMETER, MM	TIGHTENING TORQUE, NM	WEIGHT, G	PACK./ PCS
SLIW67	6438100317980	4 x 6-35 Al/Cu	4.5-11	10 ± 1	198	20



Low Voltage Overhead Line Solutions

Waterproof piercing connectors

Insulation piercing connector SLIP12.1R

Used for all connections of insulated aluminium and copper main and branch conductors up to 1 kV. The design enables hot line installation. Equipped with shear head screw.

PRODUCT CODE	GTIN	CONDUCTOR SIZE, MM ² 2		TYPE OF CONTACT SURFACE	CONDUCTOR DIAMETER, MM	WEIGHT, G	PACK./ PCS
		MAIN CONDUCTOR	BRANCH CONDUCTOR				
SLIP12.1R	4610016590646	10-95 Al/Cu	1.5-50 Al/Cu		3-16	108	50



Синий

Insulation piercing connector SLIP22.1R

Used for all connections of insulated aluminium and copper main and branch conductors up to 1 kV. The design enables hot line installation. The shear head is insulated from the bolt and the connector body. Equipped with shear head screw.

PRODUCT CODE	GTIN	CONDUCTOR SIZE, MM ² 2		TYPE OF CONTACT SURFACE	CONDUCTOR DIAMETER, MM	WEIGHT, G	PACK./ PCS
		MAIN CONDUCTOR	BRANCH CONDUCTOR				
SLIP22.1R	4610016590660	10-95 Al 1.5-70 Cu	10-95 Al 1.5-70 Cu		3-16	124	50



Черный

Insulation piercing connectors SLIP32.2

PRODUCT CODE	GTIN	CONDUCTOR SIZE, MM ² 2		TYPE OF CONTACT SURFACE	CONDUCTOR DIAMETER, MM	WEIGHT, G	PACK./ PCS
		MAIN CONDUCTOR	BRANCH CONDUCTOR				
SLIP32.2	6418677442001	16-150 Al/Cu	16-120 Al 16-95 Cu		7-19	150	50



Insulation piercing connector SLIP12.127R

Used for all connections of uninsulated aluminium or copper main and insulated branch conductors up to 1 kV. Equipped with shear head screw.

PRODUCT CODE	GTIN	CONDUCTOR SIZE, MM ² 2		TYPE OF CONTACT SURFACE	CONDUCTOR DIAMETER, MM	WEIGHT, G	PACK./ PCS
		MAIN CONDUCTOR	BRANCH CONDUCTOR				
SLIP12.127R	4610016590653	10-95 Al 1.5-70 Cu	1.5-50 Al/Cu		3-12.1	108	50



Голубой

Insulation piercing connector SLIP22.127R

Used for all connections of uninsulated aluminium and copper main and insulated branch conductors up to 1 kV. Equipped with shear head screw.

PRODUCT CODE	GTIN	CONDUCTOR SIZE, MM ² 2		TYPE OF CONTACT SURFACE	CONDUCTOR DIAMETER, MM		WEIGHT, G	PACK./ PCS
		MAIN CONDUCTOR	BRANCH CONDUCTOR		MAIN CONDUCTOR	BRANCH CONDUCTOR		
SLIP22.127R	4610016590677	25-95 Al 25-70 Cu	2.5-95 Al 1.5-70 Cu		6.5-16	3-16	120	50



Желтый

Insulation piercing connectors SLIP32.21

Used for all connections of uninsulated aluminium and copper main and insulated branch conductors up to 1 kV. Equipped with shear head screw.

PRODUCT CODE	GTIN	CONDUCTOR SIZE, MM ² 2		TYPE OF CONTACT SURFACE	CONDUCTOR DIAMETER, MM	WEIGHT, G	PACK./ PCS
		MAIN CONDUCTOR	BRANCH CONDUCTOR				
SLIP32.21	6418677442018	16-150 Al/Cu	16-120 Al 16-95 Cu		7-19	150	50



Low Voltage Overhead Line Solutions

Aluminium to aluminium parallel groove connectors

Parallel groove connectors SL37.1R, SL37.2R, SL39.2R

Non tension aluminium to aluminium connector SL37.2R и SL39.2R are equipped with two M8 bolts.

PRODUCT CODE	GTIN	CONDUCTOR SIZE, MM ² ²		CONDUCTOR DIAMETER, MM		TIGHTENING TORQUE, Nm	PLASTIC COVER	WEIGHT, G	PACK./ PCS
		MAIN CONDUCTOR	BRANCH CONDUCTOR	D1	D2				
SL37.1R	4610016590639	6-95 Al	6-95 Al	3-13	3-13	22	SP15	62	200
SL37.2R	4610016590271	6-95 Al	6-95 Al	3-13	3.5-13	22	SP15	104	50
SL39.2R	4610016592329	16-150 Al	16-150 Al	4.5 -17.5	4.5 -17.5	22	SP15	120	50



Parallel groove connectors SL4.21, SL4.25 и SL8.21

SL4.21 and SL8.21 are brushed and prepared with joint compound; thus only the conductors need brushing and greasing. SL4.25 is equipped with springs.

PRODUCT CODE	GTIN	CONDUCTOR SIZE, MM ² ²		CONDUCTOR DIAMETER, MM	TIGHTENING TORQUE, Nm	PLASTIC COVER	WEIGHT, G	PACK./ PCS
		MAIN CONDUCTOR	BRANCH CONDUCTOR					
SL4.21	6418677403736	16-120 Al	16-120 Al	4.21-13.2	20	SP15	130	50
SL4.25	6418677403750	16-120 Al	16-120 Al	4.6-13.5	20	SP15	130	50
SL8.21	6418677403781	50-240 Al	50-240 Al	7.7-20	44	SP16	290	25



Low Voltage Overhead Line Solutions

Aluminium to copper parallel groove connectors

Aluminium to copper connectors SM1.x, SM2.x, SM4.x

The connectors are brushed and prepared with joint compound; thus only the conductors need brushing and greasing. SM2.25 is equipped with springs to make the installation easier.

PRODUCT CODE	GTIN	CONDUCTOR SIZE, MM ²		CONDUCTOR DIAMETER, MM		TIGHTENING TORQUE, Nm	PLASTIC COVER	WEIGHT, G	PACK./ PCS
		MAIN CONDUCTOR	BRANCH CONDUCTOR	D1	D2				
SM1.11	6418677403880	10-50 Al	1.5-10 Cu	3.5-8.6	1.35-3.6	20	SP14	54	200
SM2.11	6418677403903	16-95 Al	2.5-25 Cu	4.6-10	2.3-6.5	20	SP15	84	100
SM2.21	6418677403927	16-120 Al	6-35 Cu	4.6-13.2	2.8-7.5	20	SP15	140	50
SM2.25	6418677403941	16-120 Al	6-35 Cu	4.6-13.2	2.8-7.5	20	SP15	137	50
SM4.21	6418677403965	50-240 Al	10-95 Cu	8.6-20	3.5-12.5	44	SP16	326	25



Aluminium / copper to aluminium / copper connectors SL4.26, SL14.2 и SL37.27

For Al or Cu to Al or Cu connections where no mechanical tension is involved. The body is made from tin plated aluminium alloy, and the bolts are hot-dip galvanized steel.

PRODUCT CODE	GTIN	CONDUCTOR SIZE, MM ²		CONDUCTOR DIAMETER, MM	TIGHTENING TORQUE, Nm	PLASTIC COVER	WEIGHT, G	PACK./ PCS
		MAIN CONDUCTOR	BRANCH CONDUCTOR					
SL4.26	6418677403767	16-120 Al/Cu	16-120 Al, 16-95 Cu	4.6-14	20	SP15	125	50
SL14.2	6418677403552	50-240 Al/Cu	50-185 Al, 50-150 Cu	7.7-20	44	SP16	280	25
SL37.27	6418677416118	6-95 Al/Cu	6-95 Al/Cu	3-13	22	SP15	100	50



Insulating cover SP14, SP15 и SP16

Used as a connector cover. The cover has to be installed so that the drain hole for ambient water is downwards. The cover is made of UV-radiation and weather resistant thermoplastic. SP24 has cable outlets only in one end. SP25 has cable outlets in both ends.

PRODUCT CODE	GTIN	FOR CONNECTORS	WEIGHT, G	PACK./ PCS
SP14	6418677405204	SL2.11, SM1.11	10	100
SP15	6418677405211	SM2.11, SM2.21, SL4.21, SL37.1, SL37.2, SL39.2, SL37.27, SL4.26	30	100
SP16	6418677410208	SM4.21, SL8.21, SL14.2, SL25.2, SE20	40	40
SP24	6418677405259	SL19.4	40	25
SP25	6418677408175	SL19.4	40	25



Low Voltage Overhead Line Solutions

Cable Lugs, Cable joints, Earthing Connectors and Earthing Bars

LUG shear head bolt cable lugs

The cable lugs are used for terminating conductors of up to 1 kV cables. Because of the shear head bolt construction, no crimping tools are needed. The required torque is achieved by tightening the bolt until it breaks off. The lugs are water tight and suitable for solid and stranded, sector shaped and circular conductors.

PRODUCT CODE	GTIN	CONDUCTOR SIZE, MM ²	NUMBER OF BOLTS, PCS	SHEAR HEAD SIZE, MM	WEIGHT, G	PACK./ PCS
LUG6-50LVTINR	4610016593234	6-50 Al / Cu	1	10	0.04	100
LUG16-95LVTINR	4610016593241	16-95 Al / Cu	1	14	0.08	100
LUG25-150LVTINR	4610016593258	25-150 Al / Cu	2	17	0.14	50
LUG70-240LVTINR	4610016593265	70-240 Al / Cu	2	19	0.33	50



SLJ shear head bolt connectors

The connectors are used for jointing conductors of up to 1 kV cables. Because of the shear head bolt construction, no crimping tools are needed. The required torque of SLJ connectors is achieved by tightening the bolt until it breaks off.

PRODUCT CODE	GTIN	CONDUCTOR SIZE, MM ²	NUMBER OF BOLTS, PCS	SHEAR HEAD SIZE, MM	WEIGHT, G	PACK./ PCS
SLJ6-50R	4610016592718	6-50	2	10	34	100
SLJ16-95R	4610016592879	16-95	2	14	67	100
SLJ25-150R	4610016593210	25-150	4	17	278	50
SLJ70-240R	4610016593227	70-240	4	19	382	50



Low Voltage Overhead Line Solutions

Pre-insulated compress joint SJ9

Used for compression joint to connect LV insulated overhead phase conductors. Tested according self supporting system.

PRODUCT CODE	GTIN	CONDUCTOR SIZE, MM ²	CRIMPING TOOL	COLOR MARK	WEIGHT, G	PACK./ PCS
SJ9.16	6438100318512	16/16	E140	Blue	60	10
SJ9.25	6438100318529	25/25	E173	Orange	55	10
SJ9.35	6438100318536	35/35	E173	Red	55	10
SJ9.50	6438100318543	50/50	E173	Yellow	50	10
SJ9.70	6438100318550	70/70	E173	White	45	10
SJ9.95	6438100318567	95/95	E215	Grey	40	10
SJ9.120	6438100322311	120/120	E215	Pink	70	10
SJ9.150	6438100322328	150/150	E215	Violet	80	10



For 4-Core system

PRODUCT CODE	GTIN	CONDUCTOR SIZE, MM ²	CRIMPING TOOL	COLOR MARK	WEIGHT, G	PACK./ PCS
SJ9.700	6438100332167	70/70	E215	White	108	
SJ9.950	6438100332174	95/95	E215	Grey		
SJ9.1200	6438100332150	120/120	E215	Pink		

For IMWS neutral messenger

PRODUCT CODE	GTIN	CONDUCTOR SIZE, MM ²	CRIMPING TOOL	WEIGHT, G	PACK./ PCS
SJ9.351		35/35	E173	85	10
SJ9.501		50/50 (54,6)	E173	75	10
SJ9.701		70/70	E173	75	10

Pre-insulated compress lugs SJL9

PRODUCT CODE	GTIN	CONDUCTOR SIZE, MM ²	INNER DIAMETER, MM	HOLE DIAMETER, MM	COLOR MARK
SJL9.16	16	E173	5,3	10,5	Blue
SJL9.25	25	E173	6,5	10,5	Orange
SJL9.35	35	E173	7,5	12,8	Red
SJL9.50	50 (54,6)	E173	9	12,8	Yellow
SJL9.70	70	E173	10,5	12,8	White
SJL9.95	95	E173	12	12,8	Grey



Low Voltage Overhead Line Solutions

Pole fuse switch disconnectors

Pole fuse switch disconnectors are used for protecting low-voltage networks. They combine the functions of a fuse, a switch and a disconnecter. Pole fuse switches are easy to use as they can be operated from the ground by using a rod. They are also reliable and work for decades even in the most severe conditions. Their reliability and safety has been proved in numerous tests in accordance with IEC and national standards. We manufacture 160 A and 400 A pole fuse switches.

Benefits:

- Safe and easy to install
- Separate terminal covers
- Operating stick
- Suitable for extreme conditions
- Type tested
- Laser marking
- Robust locking mechanism



Low Voltage Overhead Line Solutions

Pole fuse switch disconnectors 160 A

Pole fuse switch disconnecter SZ160.1

Pole fuse switches include separate terminal covers for in-coming and out-going conductors, thus making installation safer.

PRODUCT CODE	GTIN	NUMBER OF POLES	CONDUCTOR SIZE, MM ²	CONNECTORS INCLUDED	WEIGHT, G	PACK./ PCS
SZ160.1	6438100318307	1	2x(16-120) Al/Cu	2xKG45.5	1800	2



Pole fuse switch disconnecter SZ160.3

PRODUCT CODE	GTIN	NUMBER OF POLES	CONDUCTOR SIZE, MM ²	CONNECTORS INCLUDED	WEIGHT, G	PACK./ PCS
SZ160.3	6438100318314	3	2x(16-120) Al/Cu	6xKG45.5	3700	1



Pole fuse switch disconnecter SZ160.32

These pole fuse switches include separate terminal covers for in-coming and out-going conductors, thus making installation safer. Connectors included 7 x KG45.5, poles 3+PEN connector.

PRODUCT CODE	GTIN	NUMBER OF POLES	CONDUCTOR SIZE, MM ²	CONNECTORS INCLUDED	WEIGHT, G	PACK./ PCS
SZ160.32	6438100318321	3 + PEN	2x(16-120) Al/Cu	6xKG45.5 + 1xKG45	3900	1



Pole fuse switch disconnecter SZ160.4

PRODUCT CODE	GTIN	NUMBER OF POLES	CONDUCTOR SIZE, MM ²	CONNECTORS INCLUDED	WEIGHT, G	PACK./ PCS
SZ160.4	6438100318338	4	2x(16-120) Al/Cu	8xKG45.5	4800	1



Pole fuse switch disconnecter SZ160.41

These pole fuse switches include separate terminal covers for in-coming and out-going conductors, thus making installation safer. N-pole is permanently connected. Connectors included 8 x KG45.5, poles 3+PEN.

PRODUCT CODE	GTIN	NUMBER OF POLES	CONDUCTOR SIZE, MM ²	CONNECTORS INCLUDED	WEIGHT, G	PACK./ PCS
SZ160.41	6438100318345	3 + PEN	2x(16-120) Al/Cu	8xKG45.5	4800	1



Low Voltage Overhead Line Solutions

Pole fuse switch disconnectors 400 A

Benefits:

- Separate terminal covers
- Laser marking
- Robust locking mechanism

Pole fuse switch disconnector SZ400.3

PRODUCT CODE	GTIN	NUMBER OF POLES	CONDUCTOR SIZE, MM ²	CONNECTORS INCLUDED	WEIGHT, G	PACK./ PCS
SZ400.3	6438100328689	3	2x(50-240) Al	6xKG4.3.6	9900	1



Pole fuse switch disconnector

For protecting stranded overhead cables and underground cables in LV-networks. Fuse-switch can be operated from the ground level by using operating rods. The fourth pole is there for extra phase conductor. It is opened and closed together with the other phase-poles. Connectors included 8 x KG4.3.6, poles 4.

PRODUCT CODE	GTIN	NUMBER OF POLES	CONDUCTOR SIZE, MM ²	CONNECTORS INCLUDED	WEIGHT, G	PACK./ PCS
SZ400.4	6438100328696	4	2x(50-240) Al	8xKG4.3.6	12500	1
SZ400.41	6438100328702	3 + PEN	2x(50-240) Al	8xKG4.3.6	12800	1



Low Voltage Overhead Line Solutions

Accessories for pole fuse switch disconnectors

Multi-bracket PEK49

Used for the attachment of pole fuse switches to steel, concrete and wooden poles by screw or band fixing. The bracket is made of hot-dip galvanized steel.

PRODUCT CODE	GTIN	FOR POLE FUSE SWITCHES	WEIGHT, G	PACK./ PCS
PEK49	6418677400414	160 A и 400 A	1556	10



Operating rods ST19 и ST33

Pole fuse switches can be operated from the ground by using the operating rod.

PRODUCT CODE	GTIN	LENGTH, M	WEIGHT, G	PACK./ PCS
ST19	6418677405464	1	356	1
ST33	6418677405532	2 (транспортная длина 1,3 м)	1000	1



Marking sets for pole fuse switches

The marking set consists of an aluminium fastening bar PEM216 and plastic number plates PEM242.X.

PRODUCT CODE	GTIN	DESCRIPTION	LABEL HEIGH, MM	DIMENSIONS MM	WEIGHT, G	PACK./ PCS
PEM216R	6418677400421	Attachment bar for marking plates. Made of aluminium.	-	250x30x3	120	50
PEM242.25R	6418677411830	Number plates 25 A - 400 A	40	145x60x1.5	18	10
PEM242.32R	6418677429309					
PEM242.40R	6418677400612					
PEM242.50R	6418677429323					
PEM242.63R	6418677400636					
PEM242.80R	6418677400643					
PEM242.100R	6418677400568					
PEM242.125R	6418677400575					
PEM242.160R	6418677400582					
PEM242.200R	6418677400599					
PEM242.250R	6418677400605					
PEM242.400R	6418677400629					
PEM241.1R	4610016591803					
PEM241.2R	4610016591810					
PEM241.3R	4610016591827					
PEM241.4R	4610016591834					
PEM241.5R	4610016591841					
PEM241.6R	4610016591858					
PEM241.7R	4610016591865					
PEM241.8R	4610016591872					
PEM241.9R	4610016591889					



Low Voltage Overhead Line Solutions

Temporary earthing connector

Temporary earthing bail set ST208R

Preparing a point for temporary earthing in an ABC cable.
Short-time withstand current 5 kA/1s.

PRODUCT CODE	GTIN	DESCRIPTION	CONDUCTOR SIZE, MM ²	WEIGHT, G	PACK./ PCS
ST208.1R	4610016590967	earthing bail	-	64	50 pcs
ST208.57R	4610016591445	Set includes 4 pcs connectors SLIW57R and 4 pcs ST208.1R	25 - 150 Al/Cu	680	5 packs



Temporary earthing connector and Temporary earthing set ST202R

Connectors have been created for preparing temporary earthing and measuring point on an ABC line. They enable earthing low voltage phases with usage of appropriate grounding device. Connector includes removable phase indicators. Connector cover is equipped with a plug that enables safe voltage check on connection pin. Temporary earthing set includes insulation piercing connectors SLIW54 for main connection.

PRODUCT CODE	GTIN	DESCRIPTION	CONDUCTOR SIZE, MM ²	WEIGHT, G	PACK./ PCS
ST202R	4610016592343	without insulation piercing connector	-	80	50
ST202.54R	4610016592350	includes insulation piercing connectors SLIW54	16 - 120 Al/Cu	170	20
ST202.57R	4610016592367	includes insulation piercing connectors SLIW57	25 - 150 Al/Cu	200	20



Low Voltage Overhead Line Solutions

Protection devices

Covered fuse bases for overhead lines SV29

Covered SV29 fuse bases without connectors for lamp post installations on overhead lines.

PRODUCT CODE	GTIN	FUSE MAX, A	FUSE TYPE	SCREW INSERT	WEIGHT, G	PACK./ PCS
SV29.25	6418677432873	25	size D II (max 25 A)	-	230	10
SV29.253	6418677434877	25	size D II (max 25 A)	+	234	10
SV29.63	6418677432880	63	size D III (max 63 A)	-	384	10



Surge arresters with insulation piercing connectors SE45R

SE45R serie includes a new piercing connector specially designed for surge arrester. This connector is used when installing the surge arrester on insulated LV overhead lines. It can be installed on insulated Al/Cu conductors with cross section range 10-150 mm². Continuous operating voltage 280V.

PRODUCT CODE	GTIN	SURGE ARRESTER	RATED DISCHARGE CURRENT, kA	DISCONNECTOR	ENERGY ABSORPTION, kJ	WEIGHT, G	PACK./ PCS
SE45.275-15R	4610016590554	275	15	+	2.45	220	15
SE45.440-15R	4610016590561	440	15	+	3.2	220	15
SE45.690-15R	4610016591155	690	15	+	3.96	220	15



Surge arresters with insulation piercing connectors SE46R

The design of SE46 serie enables installation on insulated conductor and branch connection, the same connector is used for both. Connector can be installed on insulated Al conductors with cross section range 10 - 95 mm² and Cu conductors with cross section range 1.5 - 70 mm² and branch connection with the same range of conductors.

PRODUCT CODE	GTIN	SURGE ARRESTER	RATED DISCHARGE CURRENT, kA	DISCONNECTOR	ENERGY ABSORPTION, kJ	WEIGHT, G	PACK./ PCS
SE46.275-15R	4610016590578	275	15	+	2.45	220	15
SE46.440-15R	4610016591162	440	15	+	3.2	220	15
SE46.690-15R	4610016591414	690	15	+	3.96	220	15



Low Voltage Overhead Line Solutions

Lamp post fixtures

Branching connectors KE10.xR

Connectors are tinned to suit for both aluminium and copper conductors (4 or 6 conductors). KE10.1 connector can be used for aluminium and copper conductors. Tightening torque is 10 Nm.

PRODUCT CODE	GTIN	CASE COLOR	CONDUCTOR SIZE, MM ²	CONDUCTOR DIAMETER, MM	WEIGHT, G	PACK./ PCS
KE10.1R	4610016590226	white	4x(10-35 Al / 1.5-25 Cu)	1.7-9.0	44	50
KE10.1NR	4610016591070	blue	4x(10-35 Al / 1.5-25 Cu)	1.7-9.0	44	50
KE10.3R	4610016590233	white	6x(10-35 Al / 1.5-25 Cu)	1.7-9.0	65	50
KE10.504R	4610016591094	white	4x(10-50 Al / 2.5-35 Cu)	2.0-10.2	58	50
KE10.504NR	4610016591100	blue	4x(10-50 Al / 2.5-35 Cu)	2.0-10.2	58	50
KE10.506R	4610016591117	white	6x(10-50 Al / 2.5-35 Cu)	2.0-10.2	70	50
PMR2680.4R	4610016590523	transparent	-	-	104	10



KE10.3



KE10.1N



PMR2680.4

Lamp post connector sets

Connector sets includes three phase connectors KE10.1, one neutral connector KE10.3 and a 0.35 m long 16 mm² earthing wire with a cable lug.

PRODUCT CODE	GTIN	SET COMPOSITION	CONDUCTOR SIZE, MM ²	WEIGHT, G	PACK./ PCS
SV15R	4610016590240	3xKE10.1 + KE10.3	10-35 Al/1,5-25 Cu	270	10
SV17R	4610016590264	3xKE10.1 + KE10.3 + 3xPMR2680	10-35 Al/1,5-25 Cu	297	10
SV15.5R	4610016590257	4xKE10.1 + KE10.3	10-35 Al/1,5-25 Cu	304	10
SV19R	4610016591353	4xKE10.1 + KE10.3 + 4xPMR2680	10-35 Al/1,5-25 Cu	408	10
SV50R	4610016591049	3xKE10.504 + KE10.506	10-50 Al/2,5-35 Cu	315	10
SV18R	4610016591346	3xKE10.504 + KE10.506 + 3xPMR2680	10-50 Al/2,5-35 Cu	393	10
SV15.12R	4610016591339	SV15 + SVV3	10-35 Al/1,5-25 Cu	484	10



Fuse bases LFB16R

LFB16RR fuse base is equipped with 4 mm² Cu cable as a feeder. Cable from lamp to fuse base can be between 1.5-6 mm² Cu. Max. fuse size is 16A.

PRODUCT CODE	GTIN	FUSE BASE INCLUDED, A	FUSE TYPE	WIRE CROSS SECTION, MM ²	WEIGHT, G	PACK./ PCS
LFB16R-10A-R	6438100321260	10	size D II	1.5-10 Cu	150	10
LFB16R-06A-R	4610016591568	6	size D II	1.5-10 Cu	150	10



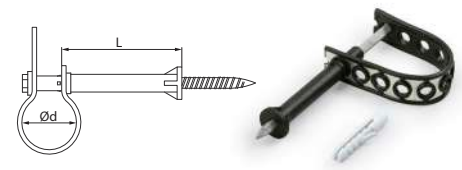
Low Voltage Overhead Line Solutions

Distance nails

Distance nails SO70R, SO76R, SO71R

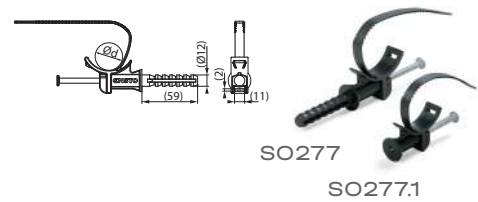
Used for the attachment of an overhead cable or a conductor to a pole or a wall. The nails are designed so that the installed cable does not come into contact with the pole or wall surface.

PRODUCT CODE	GTIN	D, MM	L, MM	USED FOR	SCREW/NAIL MM	WEIGHT, G	PACK./ PCS
SO70R	4610016590868	12-47	40			10	50
SO70.11R	4610016591308	12-47	40	Wooden surfaces	130 nail	40	50
SO70.16R	4610016592022	12-47	40	Wooden surfaces	6.7x120 screws	40	50
SO70.17R	4610016592053	12-47	40	Hard walls	6.7x120 screws, 10x50 screws	60	50
SO76R	4610016591315	12-47	60	-	-	20	50
SO76.11R	4610016592060	12-47	60	Wooden surfaces	5.5x145 nail	50	50
SO76.19R	4610016592077	12-47	60	Hard walls	5.5x145 nail, 10x50 screw	60	50
SO71R	4610016590875	12-47	90	Wooden surfaces	180 nail	50	50
SO71.1R	4610016592145	12-47	-	-	-	10	50



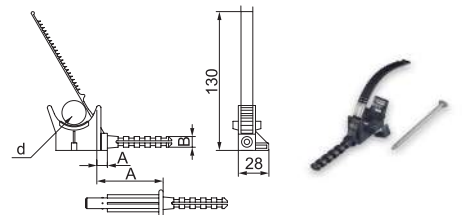
Distance nail SO277

PRODUCT CODE	GTIN	D, MM	DISTANCE FROM SURFACE, MM	USED FOR	CREW/NAIL MM	WEIGHT, G	PACK./ PCS
SO277	6418677448461	14.8-50	35	Hard walls	5x100 nail	30	100
SO277.1	6418677448478	14.8-50	35	Wooden surfaces	5.1x90 nail	30	100



Distance nail SO90.1

PRODUCT CODE	GTIN	CONDUCTOR DIAMETER, MM	A, MM	WEIGHT, G	PACK./ PCS
SO90.1	6418677405150	15-45	10	25	100

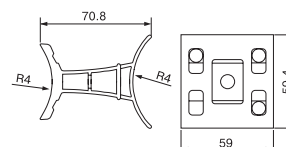


Low Voltage Overhead Line Solutions

Distance clip SO75.100 for all surfaces

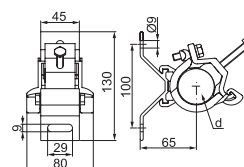
For the attachment underground cables to wooden poles.

PRODUCT CODE	GTIN	CONDUCTOR DIAMETER, MM	DISTANCE FROM SURFACE, MM	WEIGHT, G	PACK./ PCS
SO75.100	6418677421730	45-100	50	100	15



Wall mounted clamp SO125

PRODUCT CODE	GTIN	CONDUCTOR DIAMETER, MM	CONDUCTOR SIZE, MM ²	TIGHTENING TORQUE, NM	WEIGHT, G	PACK./ PCS
SO125	6418677404238	12-44	16-120	10	330	25



Distance clips SO79.x

Used for the attachment of an overhead cable or a conductor to metal and concrete poles. Steel band fastening.

PRODUCT CODE	GTIN	D, MM	DISTANCE FROM SURFACE, MM	BAND LENGTH, MM	WEIGHT, G	PACK./ PCS
SO79.1	6418677405006	45	25	1000	180	25
SO79.5	6418677405013	45	25	Without band	65	50



Distance clips SO50.95R

PRODUCT CODE	GTIN	D, MM	DISTANCE FROM SURFACE, MM	WEIGHT, G	PACK./ PCS
SO50.95R	4610016592121	50-95	18	40	25



Cable ties

Cable ties PER15

PRODUCT CODE	GTIN	SIZE, MM	DIAMETER, MM	MATERIAL	WEIGHT, G	PACK./ PCS
PER15.1R	4610016591902	200x4.8	5-50	polyamide	0,001	500/4000
PER15.2R	4610016591919	290x4.8	5-80	polyamide	0,002	100/2500
PER15.3R	4610016591926	370x4.8	5-100	polyamide	0,002	100/2000

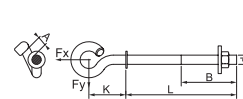


Low Voltage Overhead Line Solutions

Suspension Hooks

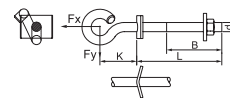
Suspension hooks through the pole SOT21R

PRODUCT CODE	GTIN	D, MM	L, MM	B, MM	K, MM	TEST LOAD, Fx/kN	TEST LOAD, Fy/kN	WEIGHT, G	PACK./ PCS
SOT21.16R	4610016592435	M16	200	120	80	11.9	2.4	780	20
SOT21.116R	4610016592459	M16	240	120	80	11.9	2.4	840	20
SOT21.216R	4610016592466	M16	320	120	80	11.9	2.4	970	20
SOT21R	4610016592473	M20	200	120	80	30	10	1220	20
SOT21.1R	4610016590035	M20	240	120	80	30	10	1320	20
SOT21.2R	4610016592480	M20	320	120	80	30	10	1510	20
SOT21.3R	4610016592497	M20	350	120	80	30	10	1580	20



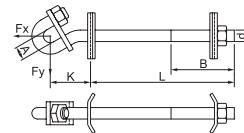
Suspension hooks through the pole SOT21.0xR

PRODUCT CODE	GTIN	D, MM	L, MM	B, MM	K, MM	TEST LOAD, Fx/kN	TEST LOAD, Fy/kN	WEIGHT, G	PACK./ PCS
SOT21.01R	4610016592503	M20	240	120	80	14.5	4.6	1390	20
SOT21.02R	4610016592510	M20	320	120	80	14.5	4.6	1510	20



Suspension hooks through the pole SOT101R

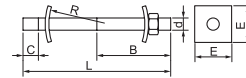
PRODUCT CODE	GTIN	D, MM	L, MM	B, MM	K, MM	TEST LOAD, Fx/kN	TEST LOAD, Fy/kN	WEIGHT, G	PACK./ PCS
SOT101.1R	4610016592527	M20	250	110	70	50	12	1700	10
SOT101.2R	4610016592534	M20	310	140	70	50	12	1850	10



Low Voltage Overhead Line Solutions

Double arming bolts

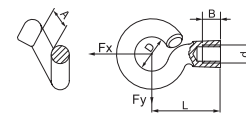
PRODUCT CODE	GTIN	D, MM	L, MM	B, MM	C, MM	R, MM	E, MM	WEIGHT, G	PACK./ PCS
SOT4.8R	4610016590066	M16	240	120	25	100	60	500	20
SOT4.9R	4610016590073	M16	280	120	25	100	60	610	20
SOT4.10R	4610016592541	M16	360	120	25	100	60	690	20
SOT4.5R	4610016592558	M20	240	120	25	100	60	600	20
SOT4.6R	4610016590042	M20	280	120	25	100	60	720	20
SOT4.7R	4610016590059	M20	360	120	25	100	60	870	20



Nut hooks

Used when a parallel line is required. Also used as Tension hooks.

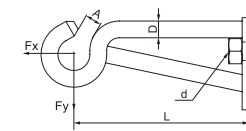
PRODUCT CODE	GTIN	D, MM	D ₁ , MM	L, MM	B, MM	A, MM	TEST LOAD, Fx/kN	TEST LOAD, Fy/kN	WEIGHT, G	PACK./ PCS
PD2.3R	4610016592565	M16	38	76	18	20	15.4	2.0	383	25
PD2.2R	4610016592572	M20	38	76	18	20	15.5	4.0	550	25



Nut hooks for external angles

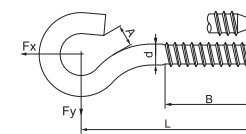
The nut hook is used at external line angles.

PRODUCT CODE	GTIN	D	D ₁ , MM	L, MM	A, MM	TEST LOAD, Fx/kN	TEST LOAD, Fy/kN	WEIGHT, G	PACK./ PCS
PD3.3R	4610016592589	M16	16	206	20	9.7	6.2	1230	10
PD3.2R	4610016592596	M20	20	200	20	13.3	8.6	1900	10



Screw hooks with wood thread

PRODUCT CODE	GTIN	D, MM	L, MM	B, MM	A, MM	TEST LOAD, Fx/kN	TEST LOAD, Fy/kN	WEIGHT, G	PACK./ PCS
SOT16.12R	4610016592602	12	165	85	16	5	2	240	50
SOT16.10R	4610016592619	16	170	90	16	15	4	440	30



Bracket for tension clamp SO253R

Bracket for tension clamps. SO253 is a bracket for anchoring. Made of corrosion resistant aluminium alloy. The bracket is easy to install with screws as no special tools are needed

PRODUCT CODE	GTIN	SMFL, kN	WEIGHT, G	PACK./ PCS
SO253R	4610016592626	15	110	25
SO253.2000R	4610016592633	20	204	25

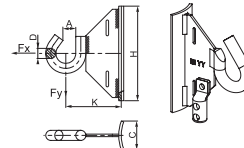


Low Voltage Overhead Line Solutions

Band hooks

Used for steel and concrete poles. The band hooks are mounted on poles by using band and buckles.

PRODUCT CODE	GTIN	D, MM	A, MM	K, MM	H, MM	TEST LOAD, Fx/kN	TEST LOAD, Fy/kN	WEIGHT, G	PACK./ PCS
SOT29.10R	4610016592640	16	18	86	150	21	18	640	25
SOT39R	4610016592657	20	20	91	150	25	13	740	25



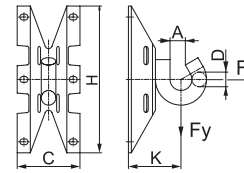
SOT29.10R



Universal hooks

Universal hooks are used with bands for pole and with screws for wall installations.

PRODUCT CODE	GTIN	D, MM	A, MM	K, MM	H, MM	C, MM	TEST LOAD, Fx/kN	TEST LOAD, Fy/kN	WEIGHT, G	PACK./ PCS
SOT76R	4610016592664	16	18	67	200	105	20	20	610	25
SOT76.2R	4610016592671	16	18	67	200	105	20	20	650	25



SOT76R



PRODUCT CODE	DELIVERY INCLUDES	USED FOR
SOT76R	Hook without any screws	
SOT76.2R	Hook and six hexagon head wood screws 6x50 DIN 571 and six plastic plugs 10x50.	Hard walls, wooden surfaces

Light Pole Bracket SO279

Used with bands for pole installation and with screws for wall installation.

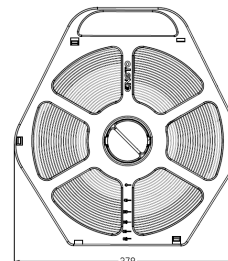
PRODUCT CODE	GTIN	SMFL kN	WEIGHT, G	PACK./ PCS
SO279	4610016590837	2.0	36	50



Band for band hooks

Installation with tightening tool CT42.

PRODUCT CODE	GTIN	SIZE, MM	SMFL, MPa	WEIGHT, G	PACK./ PCS
COT37R	4610016591421	20x0.7	820	2.9	25 M
COT37.2R	4610016591261	20x0.7	820	6.0	50 M



Buckle for band hooks

Installation with tightening tool CT42.

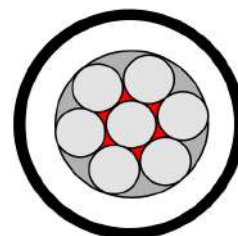
PRODUCT CODE	GTIN	WEIGHT, G	PACK./ PCS
COT36R	4610016592138	13g/pcs	100



Medium Voltage Overhead Line Solutions

CCSX Covered Conductors

Conductor, AAAC AL7 W
Extruded, longitudinal waterblocking layer
Extruded, inner semiconductive layer
Insulation of XLPE
Outer layer of UV-resistant XLPE
Made in Russia.



Full Covered conductor 35 kV

WIRE CHARACTERISTICS	CCSX 1x35-35	CCSX 1x50-35	CCSX 1x70-35	CCSX 1x95-35	CCSX 1x120-35	CCSX 1x150-35	CCSX 1x185-35	CCSX 1x240-35
Crosssection, mm ²	35	50	70	95	120	150	185	240
Rated voltage, kV	40,5	40,5	40,5	40,5	40,5	40,5	40,5	40,5
DC-resistance at 20°C, Ohm/km	0,986	0,720	0,493	0,363	0,288	0,236	0,188	0,145
Number of conductor wires	7	7	7	7	19	19	19	19
Diameter over covering, mm	15,9	17,3	19,0	20,8	22,4	24,2	25,9	28,4
Tensile strength (295 N/mm ²), kN	10,3	14,2	20,6	27,9	35,2	43,4	53,5	69,5
Elastic modulus, N/mm ²	6,2*10 ³	6,2*10 ³	6,2*10 ³	6,2*10 ³	6,2*10 ³	6,2*10 ³	6,2*10 ³	6,2*10 ³
Linear expansion coefficient, 1/°C	23*10 ⁻⁶	23*10 ⁻⁶	23*10 ⁻⁶	23*10 ⁻⁶	23*10 ⁻⁶	23*10 ⁻⁶	23*10 ⁻⁶	23*10 ⁻⁶
Inner semi conductive layer, thickness, mm	0,3	0,3	0,3	0,3	0,3	0,3	0,3	0,3
Inner XLPE covering, thickness, mm	3,3	3,3	3,3	3,3	3,3	3,3	3,3	3,3
Outer UV-resist. XLPE-covering, thickness, mm	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0
Max load 20 °C, A	220	270	340	400	460	520	600	670
Weight, kg/km	254	317	396	492	574	681	801	987

Full Covered conductor 6-20 kV

WIRE CHARACTERISTICS	CCSX 1x35-20	CCSX 1x50-20	CCSX 1x70-20	CCSX 1x95-20	CCSX 1x120-20	CCSX 1x150-20	CCSX 1x185-20	CCSX 1x240-20
Crosssection, mm ²	35	50	70	95	120	150	185	240
Rated voltage, kV	24	24	24	24	24	24	24	24
DC-resistance at 20°C, Ohm/km	0,986	0,720	0,493	0,363	0,288	0,236	0,188	0,145
Number of conductor wires	7	7	7	7	19	19	19	19
Diameter over covering, mm	13,2	14,6	16,3	18,1	19,8	21,4	23,2	25,7
Tensile strength (295 N/mm ²), kN	10,3	14,2	20,6	27,9	35,2	43,4	53,5	69,5
Elastic modulus, N/mm ²	6,2*10 ³	6,2*10 ³	6,2*10 ³	6,2*10 ³	6,2*10 ³	6,2*10 ³	6,2*10 ³	6,2*10 ³
Linear expansion coefficient, 1/°C	23*10 ⁻⁶	23*10 ⁻⁶	23*10 ⁻⁶	23*10 ⁻⁶	23*10 ⁻⁶	23*10 ⁻⁶	23*10 ⁻⁶	23*10 ⁻⁶
Inner semi conductive layer, thickness, mm	0,3	0,3	0,3	0,3	0,3	0,3	0,3	0,3
Inner XLPE covering, thickness, mm	1,4	1,4	1,4	1,4	1,4	1,4	1,4	1,4
Outer UV-resist. XLPE-covering, thickness, mm	1,1	1,1	1,1	1,1	1,1	1,1	1,1	1,1
Max load 20 °C, A	200	245	310	370	430	485	560	600
Weight, kg/km	193	250	322	410	485	585	698	873

Medium Voltage Overhead Line Solutions

Insulators

Composite line post insulators

Used with bare wires or covered conductors. Coating is made of two-component silicone, that gives the insulator excellent dielectric strength and makes it resistant to UV radiation and harsh weather conditions:

PRODUCT CODE	SDI82.1M20	SDI84.1M24
GTIN	6438100316013	6438100316044
Network voltage, kV	20	35
Insulator pin	M20 x 140 mm	M24 x 140 mm
SMFL, kN	12.5	12.5
Creepage distance, mm	561	1168
Pollution GOST 9920	II	III
Dry lightning impulse withstand voltage, kV	156	181
Wet power frequency withstand voltage kV	72	92
Weight, g	2560	2960
Neck diameter, mm	73	73
Pack., pcs	1	1

Composite line post Insulator 24 kV with pin M20x140. Benefits: easier and faster to install, safe and undisturbed, durable and long lasting, material is self-cleaning:

PRODUCT CODE	SDI82.2M20R	SDI84.2M20R
GTIN	6438100340414	6438100341510
Network voltage, kV	20	35
Insulator pin	M20 x 140 mm	M20 x 140 mm
SMFL, kN	12.5	12.5
Creepage distance, mm	561	1168
Pollution GOST 9920	II	III
Dry lightning impulse withstand voltage, kV	156	181
Wet power frequency withstand voltage kV	72	92
Weight, g	2560	2960
Wire cross section, mm ²	50-241	35-241
Neck diameter, mm	12-26	11-26
Pack., pcs	6	6

Pin insulator SDI30R

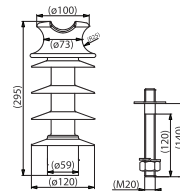
Used with bare wires or covered conductors. Suitable for installation on pin SOT24R. The conductor can be tied to the top-groove or to the neck. In angles, always tie to the neck. Creepage distance 325 mm. Neck diameter 85 mm.

PRODUCT CODE	GTIN	CREEPAGE DISTANCE, MM	BREAKING LOAD, kN	INSULATOR PIN	WEIGHT, G	PACK., PCS	NECK DIAMETER, MM
SDI30R	4610016591674	325	12,5	SOT24R	3370	3	85

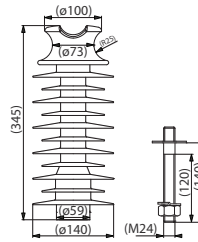
Pin insulator SDI37R

Used with bare wires or covered conductors up to 20 kV. The plastic sleeve in the top-groove of the insulator enables pulling of conductor without using pulleys. The conductor can be tied to the top-groove or to the neck. In angles, always tie to the neck.

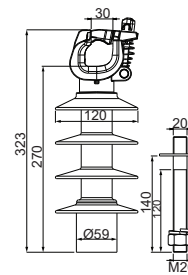
PRODUCT CODE	GTIN	CREEPAGE DISTANCE, MM	BREAKING LOAD, kN	INSULATOR PIN	WEIGHT, G	PACK., PCS	NECK DIAMETER, MM
SDI37R	4610016590110	325	12,5	SOT24R	3800	3	85



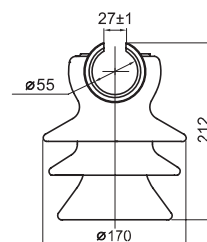
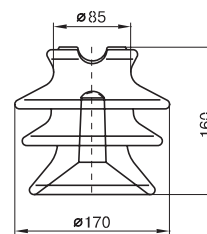
SDI82.1M20



SDI84.1M24



SDI82.2M20R



Medium Voltage Overhead Line Solutions

Composite insulators SDI90R series

The SDI90.xR insulator is made in Russia.

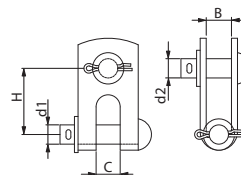
PRODUCT CODE	GTIN	U _{NOM} , kV	MFL, kN	CREEPAGE DISTANCE, MM	END FITTINGS	WEIGHT, G	PACK., PCS
SDI90.150R	4610016592695	10	70	391	eye / eye	1	6
SDI90.152R	4610016592701	10	70	420	socket / eye	1.2	6
SDI90.280R	4610016591131	20	70	613	eye / eye	1.1	6
SDI90.282R	4610016591148	20	70	613	socket / eye	1.3	6
SDI90.350R	6438100369446	35	70	850	eye / eye	1.4	6
SDI90.352R	4610016592688	35	70	860	socket / eye	1.4	6



Cross clevis SH195R

Cross clevis can be used when the string's eye ball cannot be directly attached to crossarm or pole structure.

PRODUCT CODE	GTIN	WEIGHT, G	H, MM	B, MM	C, MM	d1, MM	d2, MM	PACK., PCS
SH195R	4610016590608	550	55	21	22	16	16	18



Medium Voltage Overhead Line Solutions

Tension clamps

Waterproof tension clamps

For dead-ending covered conductors. The clamp is very easy to install compared with the other clamps on the market as there is no need to peel the conductor. The insulation piercing part of the clamp keeps the parts of the clamp at the same potential and prevents partial discharges and radio disturbances. The insulation piercing part also makes it possible to add an arc protection device to the clamp. Used with tension clamps SO 255.3R or SO256.3R to create a temporary earthing point. A temporary earthing device with screw fixing can be installed to the horn of SO257S.

PRODUCT CODE	GTIN	CONDUCTOR SIZE, MM ²	MFL, kN	SMFL, kN	TIGHTENING torque, Nm	WEIGHT, G	PACK., PCS
SO255R	4610016590790	35-70	23	20	40	1.13	9
SO255.3R	4610016591254	35-70	23	20	40	1.50	9
SO256R	4610016590806	95-150	31.5	28.5	40	2.53	3
SO256.3R	4610016591285	95-150	31.5	28.5	40	3.03	3
SO257S	6438100332129	120-241	65	60	40	2.74	3



SO255R



SO255.3R

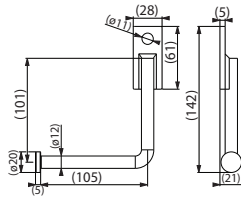


SO257S

Earthing set PSS699R

Used with tension clamps SO255R or SO256R to create a temporary earthing point. A temporary earthing device with screw fixing can be installed to the horn.

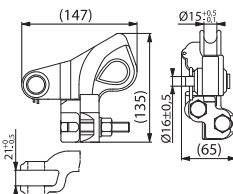
PRODUCT CODE	GTIN	WEIGHT, G	PACK., PCS
PSS699R	4610016591773	253	1



Tension clamp

For dead-ending bare and covered conductors. The covered conductor has to be peeled before installing the clamp. The body is made of corrosion resistant aluminium alloy and the bolts are hot dip galvanized steel. Breaking load 35 kN.

PRODUCT CODE	GTIN	CONDUCTOR SIZE, MM ²	CABLE DIA., MM	SUSPENSION BOLT, MM	MFL, kN	WEIGHT, G	PACK., PCS
SO85R	4610016590929	CC 35-150 AAAC 25-150	6-14,9	16	35	743	25+



SO85R

Arc protection horn PSS465R

Used with dead-end clamps SO85R, SO105R and SO146R on covered lines. The arc protection horn is made of hot-dip galvanized steel and supplied with a bolt and a nut.

PRODUCT CODE	GTIN	WEIGHT, G	PACK., PCS
PSS465R	4610016592404	260	1



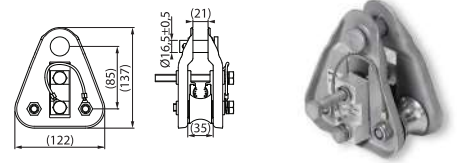
Medium Voltage Overhead Line Solutions

Suspension clamp

Suspension clamp for AAAC covered conductors

Suspension clamp with pulley for covered conductors PAS/BLL AlMgSi. The clamp also functions as an installation pulley thereby completely eliminating the need for separate pulleys. Conductor joints with diameter under 30 mm can be pulled through the suspension clamp. Suitable for covered conductors and angles up to 90°.

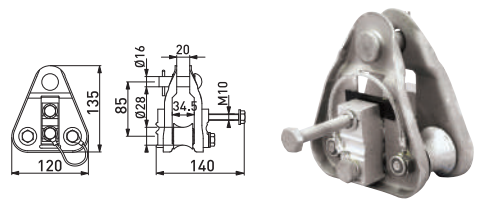
PRODUCT CODE	GTIN	CONDUCTOR SIZE, MM ²	SMFL, kN	SUSPENSION BOLT, MM	WEIGHT, G	PACK., PCS
SO181.6R	4610016590769	35-150	30	16	1.22	3
SO183S	6438100332112	120-241	60	16	2.0	3



Suspension clamp for bare conductors

Suitable for bare conductors and angles up to 90°. The clamp also functions as an installation pulley thereby completely eliminating the need for separate pulleys. Conductor joints with diameter under 30 mm can be pulled through the suspension clamp. Has no loose parts, so it is easy to handle even in difficult conditions. The serrated clamping piece is connected to the body with a wire for balancing the potential. Tested for radio interference. Breaking load is >36 kN.

PRODUCT CODE	GTIN	CONDUCTOR SIZE, MM ²	SMFL, kN	SUSPENSION BOLT, MM	WEIGHT, G	PACK., PCS
SO181	6418677404474	Al/Fe 25-131 AAAC 35-201	60	16	1.19	3



Helical tie sets

Used with covered conductors for tying the conductors to the insulators. Can be used as both top and side ties. Easy to install without tools. The tie is installed on the insulation of the covered conductor. The sets include 6 pcs ties (one set/cross arm). The right size is easy to recognize by the colour code.

PRODUCT CODE	GTIN	COVERED CONDUCTORS, MM ²	INSULATOR NECK, MM	COLOUR CODE	WEIGHT, G	UNIT	SETS INCLUDE PCS TIES	PACK., PCS
CO35.2R	4610016591742	35-50	73-85	Yellow	88	pcs	1	150
CO70.2R	4610016591766	70-95	73-85	Green	109	pcs	1	150
CO120.2R	4610016591728	120-150	73-85	Black	119	pcs	1	72
SO216.157R	6418677404542	157-185	73-85	Blue	801	set	6	25
SO216.241R	6418677404559	240-241	85	Yellow	1600	set	6	10



Medium Voltage Overhead Line Solutions

Insulation piercing connector for covered conductors

Insulation piercing connector 6-35 kV

The watertight shear head bolt connectors are for Medium Voltage Covered Conductors (MV CC) non-tension aluminium to aluminium connections without peeling the insulation. The nominal insulation thickness of the conductor can be between 2.3- 4.0 mm.

PRODUCT CODE	GTIN	CONDUCTOR SIZE, MM ²	TIGHTENING TORQUE, NM	WEIGHT, G	PACK., PCS
SLW26	6438100309053	35-157/35-157	35	280	24
SLW27	6438100320065	150-241/95-241	35	280	24



Insulation piercing connectors 6-20 kV

Used as a branch connector for covered conductors. There is no need to peel the covered conductor because the connector is equipped with insulation piercing teeth. The connector is made of corrosion resistant aluminium and the bolts are hot-dip galvanized steel. The connector is prepared with joint compound. Can be used with insulation cover SP16.

PRODUCT CODE	GTIN	CONDUCTOR SIZE, MM ²	TIGHTENING TORQUE, NM	SHEAR HEADS	PLASTIC COVER	WEIGHT, G	PACK., PCS
SLW25.2R	6438100304201	35-157/35-157	40	-	-	246	25
SLW25.22R	4610016590691	35-157/35-157	40	+	SP16	246	20



IPC / Bare connectors

IPC / Bare connector 6-35 kV

The connector can be used for medium voltage covered conductor to bare conductor connections. Nominal insulation thickness of the conductor can be between 2.3-4.0 mm.

PRODUCT CODE	GTIN	COVERED CONDUCTOR, MM ²	BARE CONDUCTOR, MM ²	TIGHTENING TORQUE, NM	WEIGHT, G	PACK., PCS
SLW34	6438100332204	35-241	35-157	35	280	24



IPC / Bare connector 6-20 kV

The connectors can be used with arc protection horn for arc protection for covered conductors and to bare conductor connections. The connector has a place for an Al-thread, so it also works as an arc protection device. The connector is watertight by silicone greased teeth.

PRODUCT CODE	GTIN	COVERED CONDUCTOR, MM ²	BARE CONDUCTOR, MM ²	TIGHTENING TORQUE, NM	WEIGHT, G	PACK., PCS
SEW20R	4610016590585	35-157	35-157	40	266	25
SEW20.7R	4610016591179	50-157	35-157	40	266	25
SEW21R	6438100304560	150-241	150-241	40	284	25



SEW20R /SEW21R



SEW20.7R

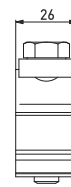
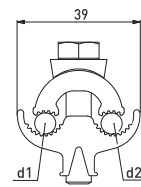
Medium Voltage Overhead Line Solutions

Aluminium to Aluminium Parallel Groove Connectors

Aluminium to aluminium connectors SL37.1R, SL37.2R and SL39.2R

Non tension aluminium to aluminium connector SL37.1R is equipped with one M8 bolt. Non tension aluminium to aluminium connector SL 37.2R is equipped with two M8 bolts.

PRODUCT CODE	GTIN	MAIN CONDUCTOR, MM ²	BRANCH CONDUCTOR, MM ²	TIGHTENING TORQUE, NM	WEIGHT, G	PACK., PCS
SL37.1R	4610016590639	Al 6-95	Al 6-95	22	55	200
SL37.2R	4610016590271	Al 6-95	Al 6-95	22	100	50
SL39.2R	4610016592329	Al 16-150	Al 16-150	22	120	50



Insulating cover

Used as a connector cover. The cover has to be installed so that the drain hole for ambient water is downwards. The cover is made of UV-radiation and weather resistant thermoplastic.

PRODUCT CODE	GTIN	TYPE OF CONNECTOR	WEIGHT, G	PACK., PCS
SP15	6418677405211	SL4.25, SL37.1, SL37.2, SL39.2	30	100
SP16	6418677410208	SL8.21, SL14.2, SEW20, SEW21, SLW25.2	50	40



Medium Voltage Overhead Line Solutions

Automatic tension joints

Automatic tension joints CIL

The automatic joint is easy and quick to make. The installation can be made without tools. The colour codes make it easy to identify the right type. Assembly without flame is faster and easier.

PRODUCT CODE	GTIN	FOR CONDUCTOR, MM ²	CONDUCTOR DIAMETER, MM	COLOUR CODE	WEIGHT, G	PACK., PCS
Includes an insulation sleeve						
CIL66	6418677414251	25-50	5.8-8.6	Orange/Red	260	25
CIL67	6418677414268	70-95	9.3-12.1	Yellow/Gray	470	25
CIL68	6418677414275	120-150	12.8-14.9	Pink/Black	790	25
CIL69	6418677438899	185-240	14.7-18.4	Green/Brown	850	20
Includes two cold shrink insulation sleeves						
CIL106	6438100320621	25-50	5.8-8.6	Orange/Red	600	12
CIL107	6438100320225	70-95	9.2-12.0	Yellow/Gray	780	12
CIL108	6438100320607	120-150	12.8-14.9	Pink/Black	1015	12
CIL109	6438100320614	185-240	14.7-18.4	Green/Brown	1420	12
CIL110	6438100327330	300	18.8-21.7	Blue	1950	12



Automatic tension joints CIL

The automatic joints are reliable and fast to make. The installation can be made without tools. The colour codes make it easy to identify the right type. The wedges ensure a safe joint.

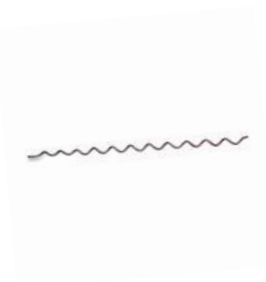
PRODUCT CODE	GTIN	FOR CONDUCTOR, MM ²	CONDUCTOR DIAMETER, MM	COLOUR CODE	WEIGHT, G	PACK., PCS
CIL63	6418677414220	25 - 50	5.81 - 8.64	Orange/Red	150	25
CIL64	6418677414237	70 - 95	9.3 - 12.0	Yellow/Gray	280	25
CIL65	6418677414244	120 - 150	12.8 - 14.9	Pink/Black	480	25
CIL71	6418677417726	185 - 240	14.7 - 18.4	Green/Brown	840	10
CIL72	6418677418440		18.8 - 21.7	Blue/Green	1080	10



Spiral vibration dampers

Spiral Vibration Dampers are designed to control high frequency aeolian vibration and are particularly effective on small sized earth wires and cables. They do not impose a concentrated mass or clamping stress on the conductor or cable at the point of attachment and are therefore ideally suited for use on PAS/BLL, OPGW, OPGON and ADSS applications.

PRODUCT CODE	GTIN	CONDUCTOR DIAMETER, MM	LENGTH, MM	COLOUR CODE	WEIGHT, G	PACK., PCS
CO27R	4610016592381	11.7 - 14.3	1540	Yellow	0.33	25
CO28R	4610016592398	14.3 - 19.5	1710	Green	0.9	10



Medium Voltage Overhead Line Solutions

Disconnecter

Disconnecter SZ24

Z24 is easy and quick to install even on existing lines as no additional construction is needed. SZ24 disconnecters is 1-pole operated by standard live-line tools e.g. CT48.64. Its breaking capacity is 12.5 A, sufficient for rural areas on branch lines.

Normal current I_r - 400A.

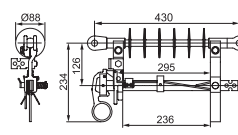
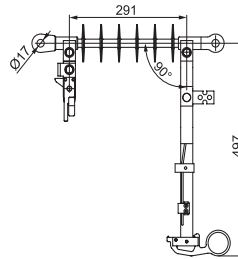
Short time withstand current I_k - 10 kA.

Mainly active load-breaking current I_1 - 12,5 A.

Cable charging breaking current 14a - 10 A (30 closing and opening operations).

Line-charging breaking current 14b - 10 A (30 closing and opening operations).

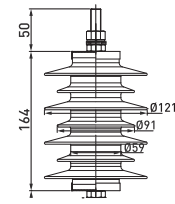
PRODUCT CODE	GTIN	LEAKAGE DISTANCE, MM	WEIGHT, G	PACK., PCS
SZ24	4610016591001	628	9.6	1



Surge Arresters

Protection of transformers, switchgears and transmission lines against atmospheric and switching overvoltages.

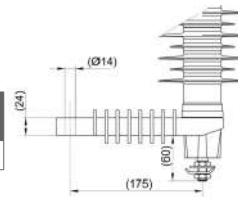
PRODUCT CODE	GTIN	I_n , kA	U_{nom} , kV	U_c , kV	U_r , kV	WEIGHT, G	PACK., PCS
HE-09SGAR	4610016593197	10	6	7.2	9	1.3	6
HE-15SGAR	4610016591018	10	10	12.0	15	1.7	6
HE-24SGAR	4610016593203	10	20	20.0	24	2.1	6
HE-42SGAR	4610016591506	10	35	40.8	42	3.4	6



Insulating bracket

Insulating bracket with built-in disconnector and hardware for HE/HE-S.

PRODUCT CODE	GTIN	U_{nom} , kV	WEIGHT, G	PACK., PCS
S3D2R	6438100388812	6-20	0.5	3

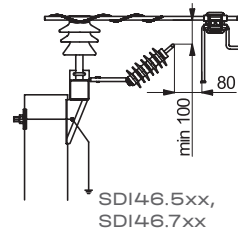


Current limiting devices

Current limiting devices for intermediate poles

Used on straight line crossarms with post line insulators for arc protection. The set includes a surge arrester, a fixing bracket, a connector, a spark horn/an arc protection horn and a cover. Three sets are needed for one crossarm.

PRODUCT CODE	GTIN	CONDUCTOR SIZE, MM ²	CROSSARM	U_{nom} , kV	ARK GAP, MM	WEIGHT, G	PACK., PCS
with IPC SEW20 and SP16							
SDI46.710R	4610016590530	Al 35-157	pin	10	45 ± 5	3.57	1
SDI46.510R	6418677418655	Al 35-157	line-post	10	45 ± 5	3.16	1
SDI46.7R	6418677401626	Al 35-157	pin	20	60 ± 5	3.00	1
with IPC SEW30							
SDI48.545R	4638100334215	Al 50- 157	line-post	35	90 ± 5	5.40	1

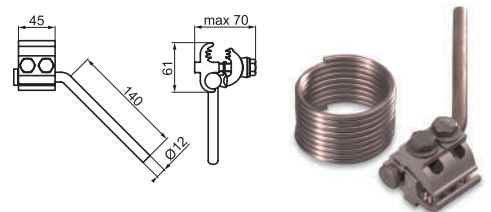


Medium Voltage Overhead Line Solutions

Arc protection devices SEW20R и SEW21R

Used with covered conductors for arc protection. There is no need to peel the covered conductor. The connector includes an arc protection horn suitable also for use with temporary earthing devices with a screw fixing. The connector has a place for installing the Al-thread, which must be connected to the neck of the insulator. The products includes a 25 mm² Al thread 2.1 m.

PRODUCT CODE	GTIN	CONDUCTOR SIZE, MM ²	ALUMINUM WIRE	TIGHTENING TORQUE NM	WEIGHT, G	PACK., PCS
SEW20.1R	6438100305529	35-150	-	40	500	24
SEW20.2R	6438100305543	35-150	+	40	630	24
SEW21.1R	6438100305505	150-241	-	40	481	24
SEW21.2R	6438100305512	150-241	+	40	570	24



Power arc device SDI20R

Used as a arcing protection device for covered conductors. The device is suitable for horizontal, covered conductor, suspension crossarms that are equipped with line post insulators. The set includes the arc protection device SEW20.1 and the power arc horn set PSS715. The distance between the peaks is 100 - 150 mm at 24 kV.

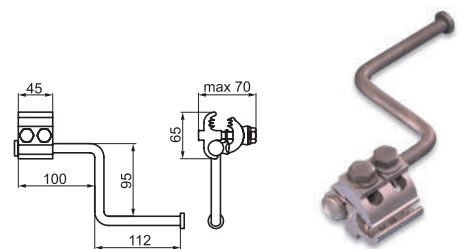
PRODUCT CODE	GTIN	CROSSARM	CONDUCTOR SIZE, MM ²	MODIFICATION	WEIGHT, G	PACK., PCS
SDI20.2R	6418677418600	line-post	35-150	line-post insulator	1.86	12
SDI20.3R	6418677401534	pin	35-150	pin insulator	1.60	9
SDI20.469R	6418677457449	pin	35-150	with earthing horn	1.69	9
PSS715R	6418677401312	pin	-	-	1.14	12



Temporary earthing connector SEW20R и SEW21R

Used as a temporary earthing connector where the arc protection devices SEW20.1R or SEW20.2R are not present. The connectors include an arc protection horn suitable for use with temporary earthing devices with screw fixing. The connectors include an Al-thread to connect the connector to the neck of the insulator. The length of 25 mm² Al thread is 2.1 m. The connector are watertight by silicone greased teeth.

PRODUCT CODE	GTIN	CONDUCTOR SIZE, MM ²	ALUMINUM WIRE	TIGHTENING TORQUE, NM	WEIGHT, G	PACK., PCS
SEW20.3R	4610016590592	35-150	-	40	570	24
SEW20.4R	4610016591025	35-150	+	40	670	24
SEW21.3R	6438100306281	150-241	-	40	570	24
SEW21.4R	6438100328627	150-241	+	40	670	24



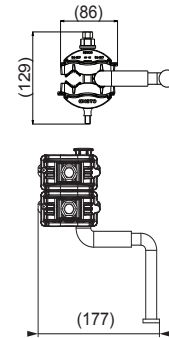
Medium Voltage Overhead Line Solutions

Temporary grounding device

Insulation piercing connector SEW30, SEW31

Used for temporary earthing for Medium Voltage Covered Conductors (MV CC). The connector is watertight by silicone greased teeth. The nominal insulation thickness of the conductor can be between 2.3–4.0 mm.

PRODUCT CODE	GTIN	CONDUCTOR SIZE, MM ²	WEIGHT, G	PACK., PCS
SEW30	6438100320072	50-157	1.09	6
SEW31	6438100320089	150-241	1.09	6



Live-line connectors SL30

SL30 is used as a live-line branching connector for bare conductors. The connector is made of corrosion resistant aluminium and the bolts of stainless steel. The installation can be made with a live-line stick (e.g. CT48).

PRODUCT CODE	GTIN	MAIN CONDUCTOR, MM ²	BRANCH CONDUCTOR, MM ²	TIGHTENING TORQUE, NM	WEIGHT, G	PACK., PCS
SL30	6418677403705	Al 25-150	Al 25-150	40/44	476	24

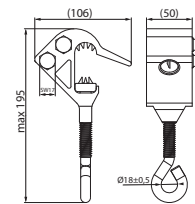


SL30

Live-line connector SLW36

The connector SLW36 is made of corrosion resistant aluminium and the bolts of stainless steel. The installation can be made with a live-line stick (e.g. CT48).

PRODUCT CODE	GTIN	MAIN CONDUCTOR, MM ²	BRANCH CONDUCTOR, MM ²	TIGHTENING TORQUE, NM	WEIGHT, G	PACK., PCS
SLW36	6418677411793	Al 35-185	Al 35-157	40	440	24



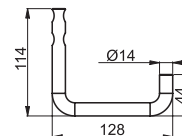
SLW36



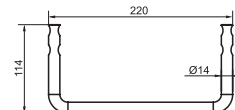
Stirrups PSS923R и PSS924R

Branching and temporary earthing can be made with SL36 and SL30 by using stirrups PSS923R and PSS924R. The stirrup is made of corrosion resistant aluminium. PSS923R is a stirrup of L-shape. PSS924R is a stirrup of U-shape.

PRODUCT CODE	GTIN	STIRRUP SHAPE	WEIGHT, G	PACK., PCS
PSS923R	4610016592190	L- shape	100	100
PSS924R	4610016592374	U-shape	170	50



PSS923R



PSS924R



Medium Voltage Overhead Line Solutions

Bird Protectors

Cable protector set SP31.3

Flexible cover for jumpers or conductors close to insulators. Can be used together with SP36.3 for pin insulators or transformer bushings. Easy tie fixing. Made of weather and UV resistant plastic.

PRODUCT CODE	GTIN	WEIGHT, G	PACK., PCS
SP31.3	6418677405266	330	One set consists of 3 units.



Bird protection set SP36.3

Used for bushings, insulators and surge arresters in dia. 100-180 mm. Can be used together with flexible protector SP31.3. Easy tie fixing. Made of weather and UV resistant plastic.

PRODUCT CODE	GTIN	WEIGHT, G	PACK., PCS
SP36.3	6418677405280	445	One set consists of 3 units.



Bird protector set SP45.3

SP45.3 bird protectors prevent failures created by birds or other animals in bare or covered lines. These protectors are suitable for different pin and line post insulators. They are also easy to install even in line angles or when the conductor is attached to the neck of the insulator. SP45.3 covers arc protecting devices (i.e. SE20.2) in covered conductor lines and it is weather resistant. The SP45.3 bird protector is 1000 mm long.

PRODUCT CODE	GTIN	WEIGHT, G	PACK., PCS
SP45.3	6418677405327	875	One set consists of 3 units



Bird protector set SP46.3 for underground cable terminals

Prevents short-circuiting by large birds or airborne debris at surge arresters or cable terminals in medium voltage networks. Bare jumpers can be protected with flexible protectors SP31.3. Made of weather and UV resistant plastic.

PRODUCT CODE	GTIN	WEIGHT, G	PACK., PCS
SP46.3	6418677405334	226	One set consists of 3 units



Bird protector sets

The products are manufactured of weather and UV-resistance thermo plastic. The bird protectors prevent failures created by birds or other animals.

PRODUCT CODE	GTIN	FOR CLAMP	WEIGHT, G	PACK., PCS
SP62.3	6438100301163	SO181.6	390	3 covers
SP63.3	6438100305826	SO255	891	3 covers
SP67.3	6438100322946	SO256	1392	3 covers



Medium Voltage Overhead Line Solutions

Spiral wire markers

The devices are designed to enhance visual indication and reduce the frequency of collisions of birds with wires of overhead lines. Made of modified weather-resistant PVC with UV protection. During installation, it is recommended to place the devices at intervals of 5 m for SPM1 and 10 m for SPM2. Suitable for all types of wires and cables of the appropriate diameter.

Spiral wire markers SPM1

SPM1 type devices are designed to protect small birds.

PRODUCT CODE	GTIN	CONDUCTOR DIAMETER, MM	LENGTH, MM	DIAMETER, MM	COVERED CONDUCTOR, MM ²	WEIGHT, G
SPM1.1R	4610016592152	4.45-6.34	180	90		0.044
SPM1.2R	4610016592169	6.35-8.88	220	90		0.050
SPM1.3R	4610016592176	8.89-11.42	240	90	35	0.055
SPM1.4R	4610016592183	11.43-15.23	280	90	50, 70, 95	0.063
SPM1.5R	4610016592206	15.24-19.57	330	90	120, 150, 185	0.147
SPM1.6R	4610016592213	19.58-21.81	380	90	240	0.172
SPM1.7R	4610016592220	21.82-25.37	440	90		0.200
SPM1.8R	4610016592237	25.38-31.50	470	90		0.230



Spiral wire markers SPM2

SPM2 type devices are designed to protect big birds.

PRODUCT CODE	GTIN	CONDUCTOR DIAMETER, MM	LENGTH, MM	DIAMETER, MM	COVERED CONDUCTOR, MM ²	WEIGHT, G
SPM2.1R	4610016592244	7.00-9.50	1000	350		0.600
SPM2.2R	4610016592251	9.51-13.40	1000	350	35, 50, 70	0.600
SPM2.3R	4610016592268	13.41-17.50	1000	350	95, 120	0.600
SPM2.4R	4610016592275	17.51-21.81	1000	350	150, 185, 240	0.600



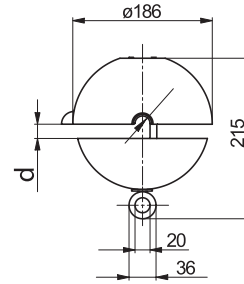
Medium Voltage Overhead Line Solutions

Wire markers

Wire markers SP43

Wire markers are used for marking overhead lines and wires. They can be used at crossing of water courses and roadways, bird migration routes and near airports. It also prevents conductors from clashing together. The installation is easy with any standard operating rod, like CT48.64. Wire markers SP43 have a diameter of 200 mm.

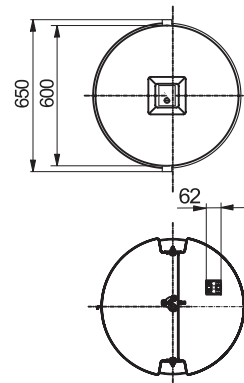
PRODUCT CODE	GTIN	COLOUR	DIAMETER, MM	CABLE DIAMETER, MM	WEIGHT, G	PACK., PCS
SP43	6418677405303	orange	200	4.4-21	0.4	10
SP43.1	6418677408205	orange+reflectors	200	4.4-21	0.4	10
SP43.3	6418677408229	orange-white	200	4.4-21	0.4	10



Warning balls SP48R

The aviation warning ball SP48R is a visual eye catcher in the overhead line span.

PRODUCT CODE	GTIN	COLOUR	DIAMETER, MM	CABLE DIAMETER, MM	WEIGHT, G	PACK., POS
SP48.1R	6418677405341	red-white	600	8-20	6.1	1
SP48.2R	6418677413667	white	600	8-20	6.1	1
SP48.3R	6418677413674	red	600	8-20	6.1	1



Obstruction lighting system for high voltage lines

Obstruction lighting system SPAL

The device is attached to wires. Power is supplied by taking power from the phase wire. Switching on and off is carried out autonomously.

PARAMETER	SPAL-110	SPAL-220	SPAL-330	SPAL-500
Intensity	> 10 cd			
Glow color	Red			
Power consumption	35 W			
Operating temperature	from -60°C to +40°C			
Rated voltage, kV	110	220	330	500
Operating current	5 — 15 mA			
Rated frequency, Hz	50			
Weight, kg	13,3			12,1



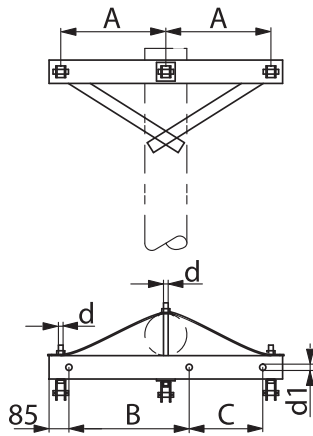
CROSSARMS AND POLE ACCESSORIES

Crossarms for wooden poles 6–20 kV

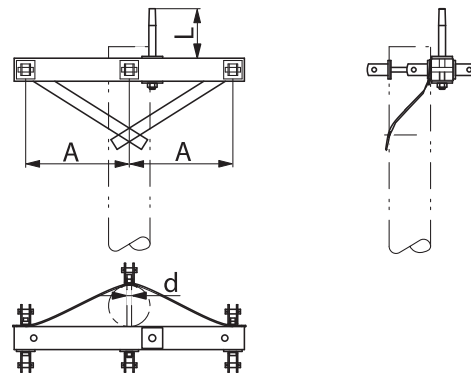
CC terminal crossarm SH155R and CC tension crossarm SH188R

For intermediate tensioning of single, three phase covered conductor line. Allowed loads for the crossarm at conductor fixing points are: $F_z = 16.5$ kN horizontally along conductor.

PRODUCT CODE	GTIN	d	D, MM	d1, MM	A, MM	B, MM	C, MM	L, MM	WEIGHT, KG
SH155R	4610016592725	M20	240	27	450	515	315	219	20.5
SH188R	4610016592732	M20	240	27	450	515	315	219	24.1



SH155R

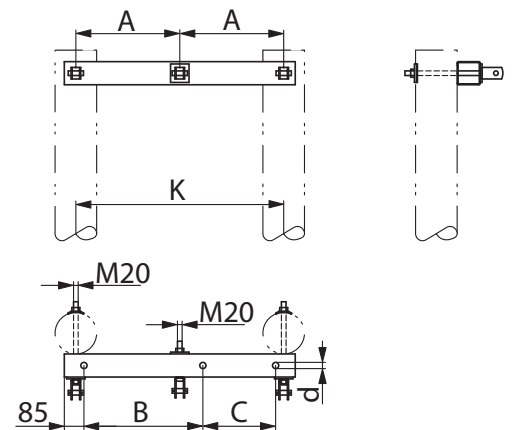


SH188R

CC terminal crossarm SH156R

For terminating single, three phase covered conductor line. Allowed loads for the crossarm at conductor fixing points are: $F_z = 26.0$ kN horizontally along conductors.

PRODUCT CODE	GTIN	d	D, MM	A, MM	B, MM	C, MM	K, MM	WEIGHT, KG
SH156R	4610016592749	M20	240	450	515	315	900	19.5



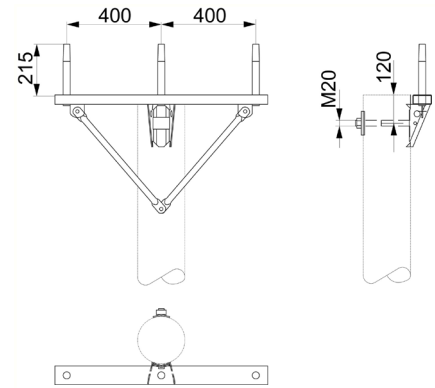
SH156R

CROSSARMS AND POLE ACCESSORIES

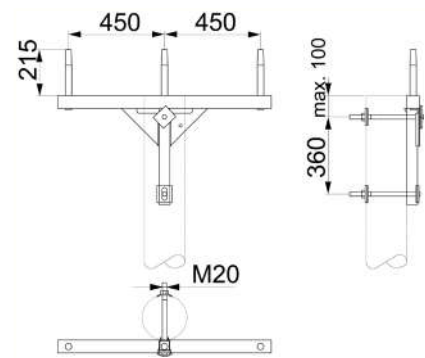
CC horizontal crossarm SH151R

For suspending single, three phase covered conductor lines. Allowed loads for the crossarm at conductor fixing points: $F_x = 3.0$ kN angle load, $F_z = 3.6$ kN horizontally along conductor, $F_y = 3.5$ kN vertically downwards.

PRODUCT CODE	GTIN	MAX POLE DIAMETER, MM	WEIGHT, KG
SH151R	4610016592756	240	12.5
SH151.OR	4610016592763	240	15.2



SH151R

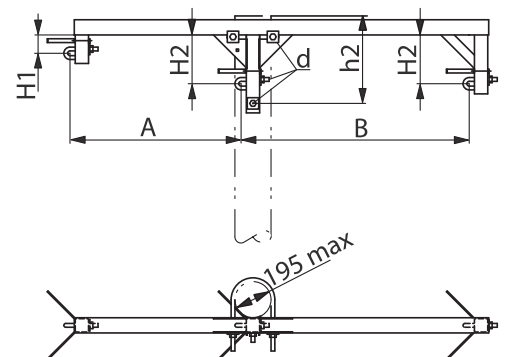


SH151.OR

CC horizontal angle crossarm SH153.10R

For suspending single, three phase covered conductor line. Allowed loads for the crossarm at conductor fixing points are: $F_x = 14.0$ kN angle load, $F_z = 4.5$ kN horizontally along conductor, $F_y = 4.0$ kN vertically downwards.

PRODUCT CODE	GTIN	d	D, MM	A, MM	B, MM	H1, MM	H2, MM	h2, MM	WEIGHT, KG
SH153.10R	4610016592770	M20	195	900	1200	96,5	256,5	500	29.6



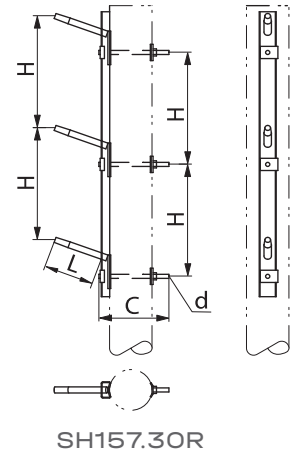
SH153.10R

CROSSARMS AND POLE ACCESSORIES

CC horizontal angle crossarm SH157.30R

For suspending single, three phase covered conductor line. Allowed loads for the crossarm at conductor fixing points are: $F_x=14.0$ kN angle load, $F_z=4.5$ kN horizontally along conductor, $F_y=4.0$ kN vertically downwards.

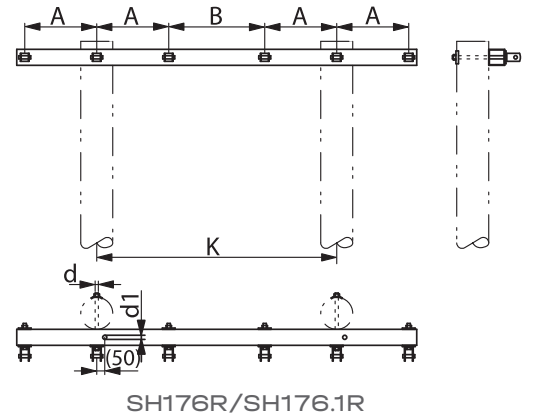
PRODUCT CODE	GTIN	d	D, MM	H, MM	C, MM		WEIGHT, KG
SH157.30R	4610016592787	M20	250	550	390	237	14.3



CC terminal crossarm SH176R

For terminating double, three phase covered conductor line. Allowed loads for the crossarm at conductor fixing points are: $F_z=16.5$ kN horizontally along conductors.

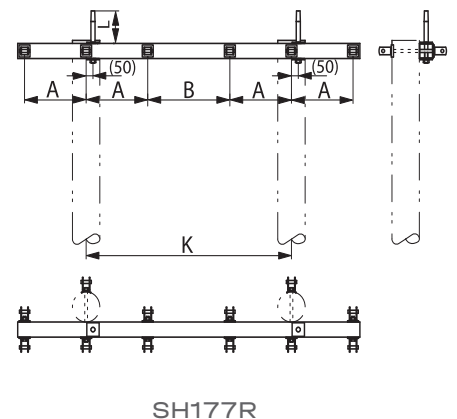
PRODUCT CODE	GTIN	NOMINAL LINE VOLTAGE, KV	d	D, MM	A, MM	B, MM	K, MM	d1, MM	WEIGHT, KG
SH176R	4610016592794	6-20	M20	240	450	600	1500	26	41.0
SH176.1R	4610016592800	6-20	M20	240	580	580	26	48.8	



CC tension crossarm II-wire SH177R

For intermediate tensioning of double, three phase covered conductor lines. Allowed loads for the crossarm at conductor fixing points are: $F_z=21.3$ kN horizontally along conductor.

PRODUCT CODE	GTIN	NOMINAL LINE VOLTAGE, KV	d	D, MM	A, MM	B, MM	K, MM	L, MM	WEIGHT, KG
SH177R	4610016592817	6-20	M20	240	450	600	1500	215	49.0

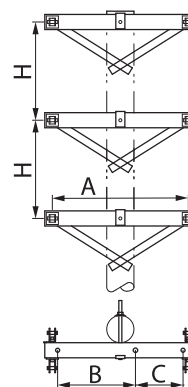


CROSSARMS AND POLE ACCESSORIES

CC vertical crossarm SH183R

For intermediate tensioning of double, three phase covered conductor line. Allowed loads for the crossarm at conductor fixing points are: $F_z = 16.5$ kN horizontally along conductor.

PRODUCT CODE	GTIN	NOMINAL LINE VOLTAGE, KV	d	D, MM	A, MM	H, MM	B, MM	C, MM	WEIGHT, KG
SH183R	4610016592824	6-20	M20	250	900	650	515	315	48.8

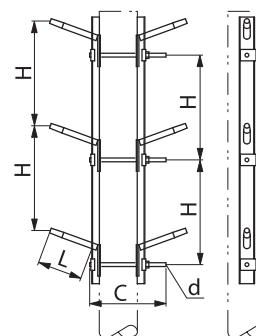


SH183R

CC vertical crossarm SH157.10R

For suspending double, three phase covered conductor line. Allowed loads for the crossarm at conductor fixing points are: $F_x = 3.0$ kN angle load, $F_z = 3.3$ kN horizontally along conductor, $F_y = 3.2$ kN vertically downwards.

PRODUCT CODE	GTIN	d	D, MM	H, MM	C, MM	L, MM	WEIGHT, KG
SH157.10R	4610016592831	M20	270	550	390	237	30.6

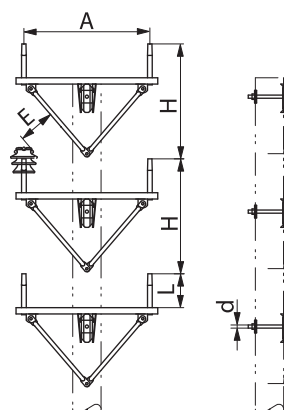


SH157.10R

CC vertical crossarm SH181R

For suspending double, three phase covered conductor lines. Set includes three 2 phase horizontal crossarms which will be installed vertically to the same pole. Allowed loads for the crossarm at conductor fixing points are: $F_x = 3.0$ kN angle load, $F_z = 3.6$ kN horizontally along conductor, $F_y = 3.5$ kN vertically downwards. To fulfil the minimum distance requirement between conductor and brace 220 mm, the minimum distance is 730 mm.

PRODUCT CODE	GTIN	d	D, MM	A, MM	E, MM	L, MM	H _{min} , MM	WEIGHT, KG
SH181R	4610016592848	M20	220	800	220	215	730	33



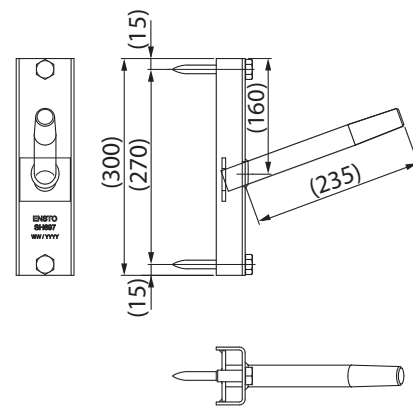
SH181R

CROSSARMS AND POLE ACCESSORIES

Insulator pin bracket SH697R

Insulator pin bracket is used for the installation of 24 kV porcelain pin insulator (e.g. SDI37R). The pin is made of hot dip galvanized steel.

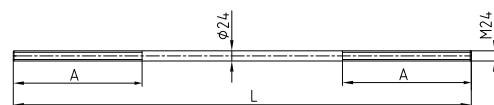
PRODUCT CODE	GTIN	PIN TYPE	WEIGHT, KG
SH697R	4610016592855	SOT24R	3.16



SH697R

Brace set PPS346R and PPS347R

PRODUCT CODE	L, MM	A, MM	WEIGHT, KG	SET
PPS346R	1600	450	4.64	pin PPS347 + 4 nuts and 4 washers M24
PPS347R	1600	450	4.64	pin only
PPS347.1R	2000	370	6.06	pin only

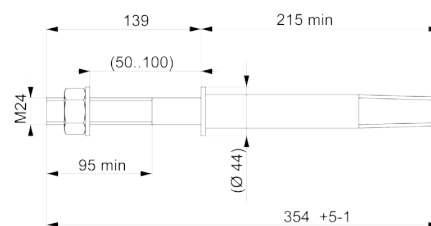


PPS346R, PPS347R

Insulator pin SOT24R

Insulator pin is used for the installation of 24 kV porcelain pin insulator (e.g. SDI37R) onto a crossarm balk. The pin is made of hot dip galvanized steel.

PRODUCT CODE	GTIN	DIAMETER, MM	TOP DIAMETER, MM	WEIGHT, KG	PACK., PCS
SOT24R	4610016592862	30	26	1.7	10



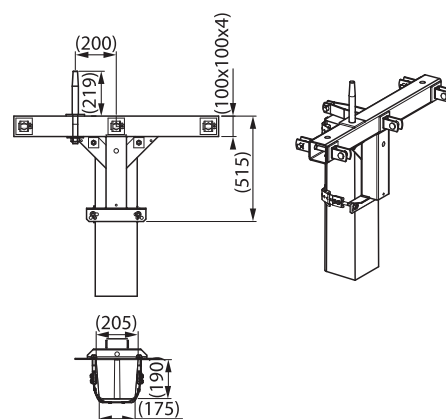
CROSSARMS AND POLE ACCESSORIES

Crossarms for concrete poles 6–20 kV

CC tension crossarm SH188.1R

For intermediate tensioning of single, three phase covered conductor line. Allowed loads for the crossarm at conductor fixing points are: $F_z = 16.5$ kN horizontally along conductor. Includes pole band set for a square concrete pole.

PRODUCT CODE	GTIN	PHASE SPACING, MM	WEIGHT, KG
SH188.1R	4610016592886	450	29

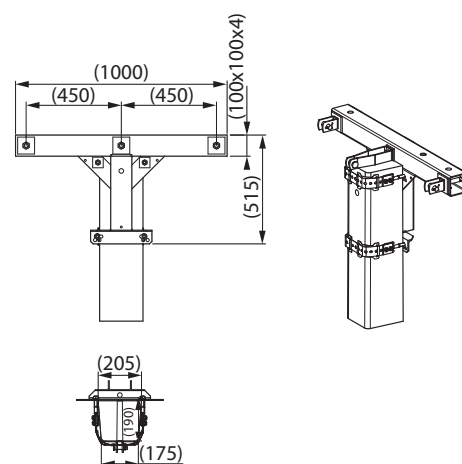


SH188.1R

CC terminal crossarm SH188.3R

For terminating single, three phase covered conductor line. Includes pole band set for a square concrete pole.

PRODUCT CODE	GTIN	WEIGHT, KG
SH188.3R	4610016592893	26

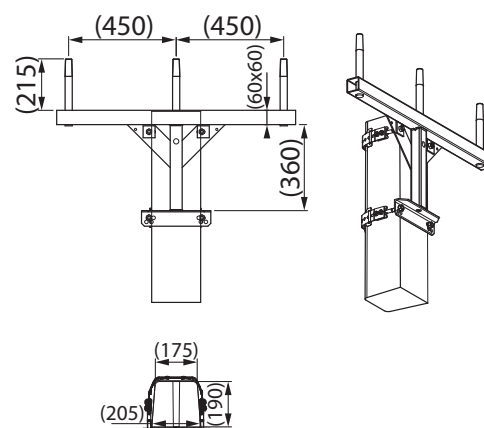


SH188.3R

CC horizontal crossarm SH151.1R

For suspending single, three phase covered conductor lines. Includes pole band set for a square concrete pole.

PRODUCT CODE	GTIN	WIDTH, MM	WEIGHT, KG
SH151.1R	4610016592909	1000	15.2



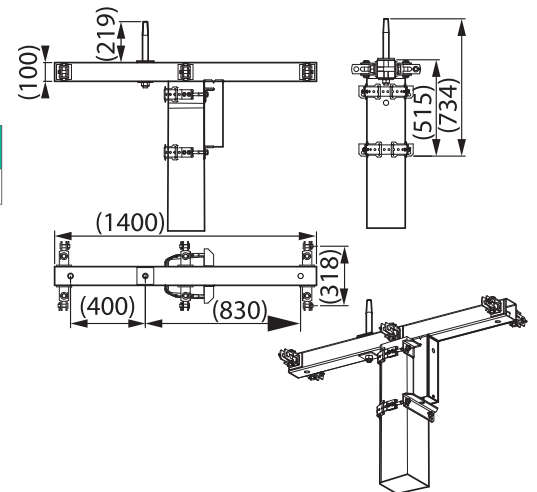
SH151.1R

CROSSARMS AND POLE ACCESSORIES

CC angle crossarm SH188.2R

For intermediate tensioning of single, three phase covered conductor line. Allowed loads for the crossarm at conductor fixing points are: $F_z = 16.5$ kN horizontally along conductor. Includes pole band set for a square concrete pole.

PRODUCT CODE	GTIN	WEIGHT, KG
SH188.2R	4610016592916	37



SH188.2R

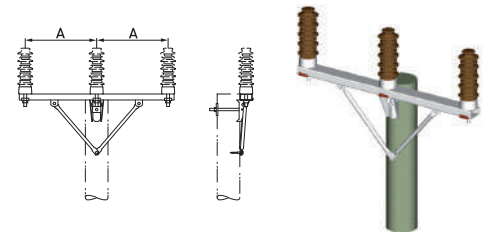
CROSSARMS AND POLE ACCESSORIES

Crossarms for wooden poles 35 kV

CC suspension crossarm SH248R

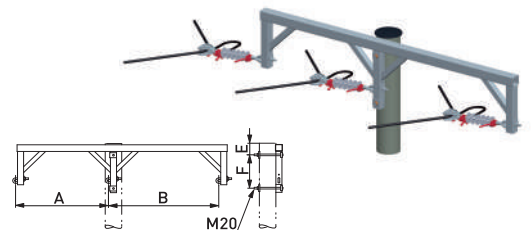
Suspension crossarm for single three phase covered conductor lines.

PRODUCT CODE	GTIN	d	D	A	WEIGHT, KG
SH248R	4610016592923	M20	220	600	12.9



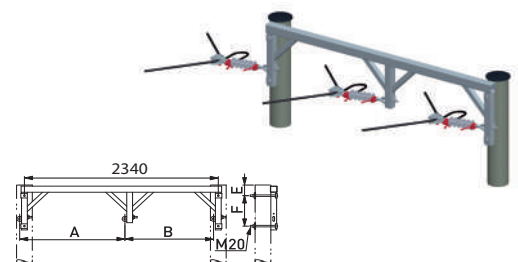
CC angle crossarm SH250R

PRODUCT CODE	GTIN	d	D	A	B	E	F	WEIGHT, KG
SH250R	4610016592930	M20	220	1070	1270	140	400	35.0



CC angle crossarm SH251R

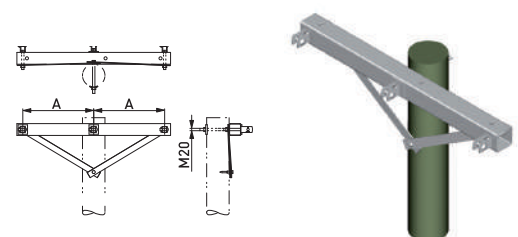
PRODUCT CODE	GTIN	d	D	A	B	E	F	WEIGHT, KG
SH251R	4610016592947	M20	220	1270	1070	140	400	38.0



CC terminal crossarm SH252R

Terminal crossarm for single three phase covered conductor lines. Note: nominal line voltage is 30 kV, highest system voltage is 36 kV.

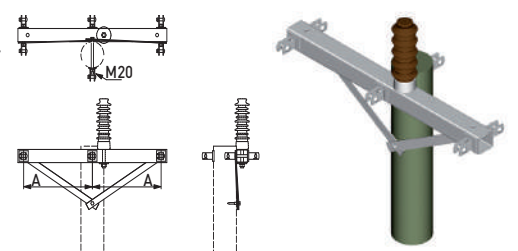
PRODUCT CODE	GTIN	d	D	A	WEIGHT, KG
SH252R	4610016592954	M20	240	600	22.0



CC tension crossarm II-wire SH253R

Intermediate tension crossarm for single three phase covered conductor lines. Note: nominal line voltage is 30 kV, highest system voltage is 36 kV.

PRODUCT CODE	GTIN	d	D	A	WEIGHT, KG
SH253R	4610016592961	M20	240	600	25.0



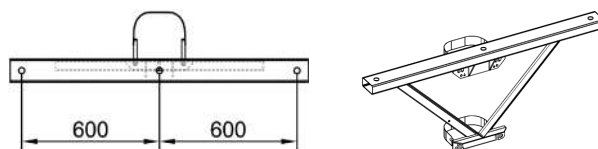
CROSSARMS AND POLE ACCESSORIES

Crossarms for concrete poles 35 kV

CC horizontal crossarm SH248.110R

Suitable for CB110-5, CB105-5. Includes pole band set for a square concrete pole.

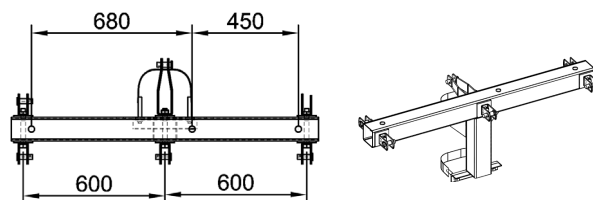
PRODUCT CODE	GTIN	WEIGHT, KG
SH248.110R	4610016591964	27



CC tension crossarm SH253.110R

Suitable for CB110-5, CB105-5. Includes pole band set for a square concrete pole.

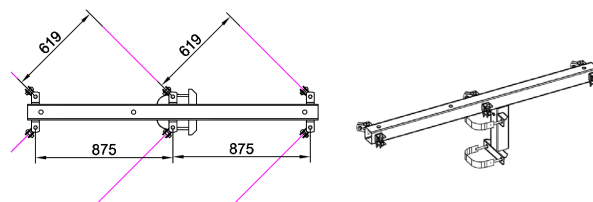
PRODUCT CODE	GTIN	WEIGHT, KG
SH253.110R	4610016591988	31



CC tension angle crossarm SH254.110R

Suitable for CB110-5, CB105-5. Includes pole band set for a square concrete pole. Подходит для стоек CB110-5, CB105-5.

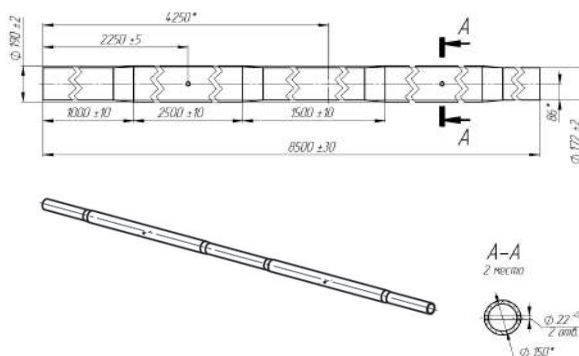
PRODUCT CODE	GTIN	WEIGHT, KG
SH254.110R	4610016591995	40.5



Crossarms for wooden poles 110 kV

CC horizontal crossarm CSH110R

PRODUCT CODE	LENGTH M	WEIGHT, KG
CSH110R	8.5	150



CROSSARMS AND POLE ACCESSORIES

Stay wire set

Stay wire set SHS

An uninsulated set for low voltage lines. The wire gauge is 25, 50, 68 mm² steel wire. All steel parts are hot-dip galvanized and plastic marking tubes are of weather and UV-resistant material.

PRODUCT CODE	GTIN	U, kV	STAY WIRE, MM ²	LENGTH, M	TOP FITTINGS	BASE FITTINGS	INSULATOR	F, kN	WEIGHT, KG
SHS25P.110LR	4610016592015	0.4	25	11.0	CHLK25 - 1 pcs. SH187 - 2 pcs.	CHK25.1	-	17.5	4.3
SHS25P.110SR	4610016592282	0.4	25	11.0	spiral clamp - 1 pcs.	spiral clamp - 1 pcs.	-	17.5	4.3
SHS25P.135LR	4610016592107	0.4	25	13.5	CHLK25 - 1 pcs. SH187 - 2 pcs.	CHK25.1	-	17.5	4.9
SHS25P.135SR	4610016592299	0.4	25	13.5	spiral clamp - 1 pcs.	spiral clamp - 1 pcs.	-	17.5	4.9
SHS25K.165LR	4610016591063	6-20	25	16.5	CHLK25 - 1 pcs. SH187 - 2 pcs.	CHK25.1	SDI4.5	17.5	9.6
SHS25K.165SR	4610016592305	6-20	25	16.5	spiral clamp - 1 pcs.	spiral clamp - 1 pcs.	SDI4.5	17.5	9.6
SHS5.0600052R	6418677403019	6-35	68	22.0	SH517 - 1 pcs. Bracket - 3 pcs.	SH49	SDI70.72	44.5	16.2
SHS5.0600052SR	4610016592312	6-35	68	22.0	spiral clamp - 1 pcs.	spiral clamp - 1 pcs.	SDI70.72	44.5	16.2

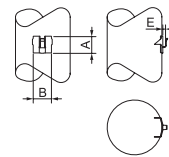


Stay wire set

Fixing plate SH187R

Stay wire attachment fittings are used for the attachment of stay wires onto wooden poles. Their purpose is to prevent stay wire from cutting into the pole and to keep the stay wire securely in position on the pole. The curved design guarantees easy fitting, even in the case of small pole diameters.

PRODUCT CODE	GTIN	STAY WIRE CROSS SECTION, MM ²	STAY WIRE DIAMETER, MM	A, MM	B, MM	E, MM	WEIGHT, G
SH187R	4610016590080	25-68	6.36-10.60	100	82	11	200

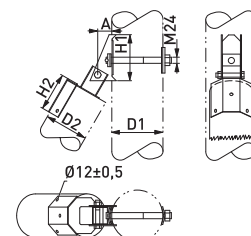


CROSSARMS AND POLE ACCESSORIES

Strut pole bracket

To fasten the top of strut pole to pole. Supplied without deck screws.

PRODUCT CODE	GTIN	D1, MM	D2, MM	A, MM	H1, MM	H2, MM	REQUIRED FASTENERS	WEIGHT, KG
SH167.30R	4610016592978	200	170	55	180	150	DIN571 10x100 - 3 pcs.	4.1

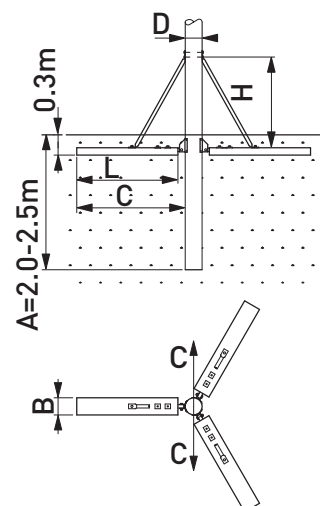


Marsh pole foundation

Marsh pole foundation SH184R

The pole base support with a large surface in the earth is used to support the pole in bogs or marshy grounds. The installation is quick and easy, as well as, economical. Made of hot-dip galvanized steel.

PRODUCT CODE	GTIN	POLE'S DIAMETER, MM	H, MM	B, MM	C, MM	L, MM	WEIGHT, KG
SH184R	4610016592985	up to 260	1345	255	1733	1500	89,5
SH184.3R	4610016592992	up to 325	1600	340	2234	2000	137

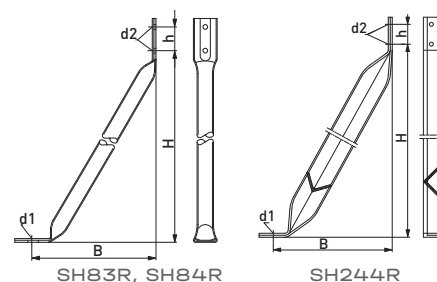


Anchoring of the pole to a rock

Brace for rock pole

Used for supporting the pole to a rock. The brace is fixed in the rock by means of rock screws and to the pole by deck screws. The material is hot-dip galvanized steel.

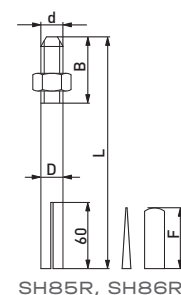
PRODUCT CODE	GTIN	PROFILE	B, MM	H, MM	h, MM	D1, MM	D2, MM	WEIGHT, KG
SH244.1R	4610016593005	L-angle	790	1345	70	22	14	10.1
SH244.2R	4610016593012	L-angle	945	1600	70	22	14	15.25
SH244.3R	4610016593029	L-angle	1200	2040	70	22	14	19.1
SH83R	4610016593036	pipe	790	1345	70	23	14	6
SH84R	4610016593043	pipe	945	1600	70	23	14	7.4



Rock screws SH85R, SH86R

Used for the attachment of the brace to a rock. A hole is drilled in the rock at a depth of 170 mm. The rock screws are made of steel round bar and hot-dip galvanized steel.

PRODUCT CODE	GTIN	d, MM	B, MM	D, MM	L, MM	F, MM	WEIGHT, KG
SH85R	4610016593050	M20	60	20	210	55	0.61
SH86R	4610016593067	M22	60	22	210	55	0.72

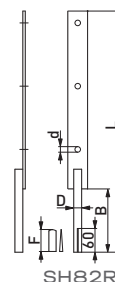


CROSSARMS AND POLE ACCESSORIES

Blade dowel for rock pole SH82R

Used for attaching and supporting the base of the pole to a rock. A hole of diameter 22 mm is drilled into the rock at a depth of 170 mm. The blade dowel is attached to the pole by means of deck screws (12x100). The material is hot-dip galvanized steel.

PRODUCT CODE	GTIN	d, MM	B, MM	D, MM	L, MM	F, MM	WEIGHT, KG
SH82R	4610016593074	14	160	20	610	65	1.62

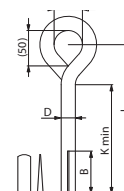


SH82R

Rock eye bolt

Used for the anchoring of the stay wire to a rock. A hole is drilled in the rock. The eyebolts are made of hot-dip galvanized steel.

PRODUCT CODE	GTIN	D, MM	B, MM	K, MM	L, MM	WEIGHT, KG
SH78R	4610016593081	20	60	150	210	0.95
SH78.1R	4610016593098	20	60	250	310	1.20



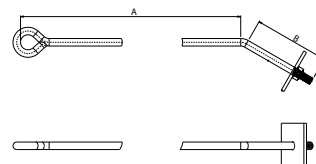
SH78R

Anchoring of the pole to an anchor plate

Anchor pin-bolt SH700R

Used for the anchoring of the base of the pole to an anchor plate.

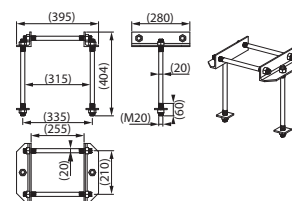
PRODUCT CODE	GTIN	A, MM	B, MM	WEIGHT, KG
SH700R	4610016593104	3500	200	11



Buckle SH702R

For attaching an anchor plate to concrete pole CB95, CB110, CB112. Hot dip galvanized steel.

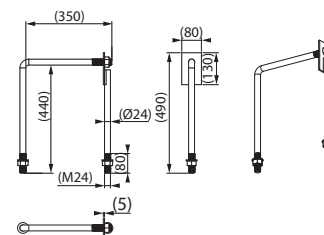
PRODUCT CODE	GTIN	TYPE	WEIGHT, KG
SH702R	4610016593111	Г1	8



Buckle SH703R

For attaching an anchor plate П-3и to concrete pole CB105 or wooden poles up to 300 mm. Hot dip galvanized steel.

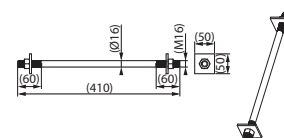
PRODUCT CODE	GTIN	TYPE	WEIGHT, KG
SH703R	4610016593128	Г1	5



Fastening pin SH704R

A pin for fastening wooden pole to the concrete tie plate.

PRODUCT CODE	GTIN	WEIGHT, KG
SH704R	4610016593135	0.87



CROSSARMS AND POLE ACCESSORIES

Additional products

Pole hats SP20, SP18, SP19

Used for the protection of the tops of wooden poles. Fixed with hot-dip galvanized nails (provided in the package). Made of weather and UV-radiation resistant plastic.

PRODUCT CODE	GTIN	DIAMETER, MM	WEIGHT, KG	PACK., PCS
SP20	6418677405242	170	0.05	100
SP18	4610016591643	190	0.06	100
SP19	4610016591650	230	0.08	100
SP21	6418677452208	270	0.13	20

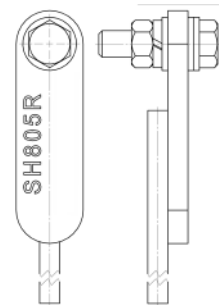


Earthing

Earthing conductor SH805R

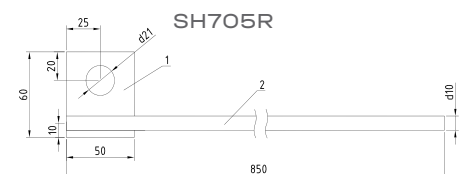
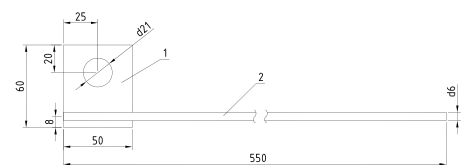
Protective earth conductor for band hooks and brackets (SOT29.10R, SOT39R, SO253R). Hot dip galvanized steel. Bolt kit M8 included.

PRODUCT CODE	GTIN	CONDUCTOR DIAMETER MM	LENGTH, MM	WEIGHT, KG	PACK., PCS
SH805R	4610016593142	6	530	200	50



Earthing device SH705R

PRODUCT CODE	GTIN	CONDUCTOR DIAMETER MM	HOLE DIAMETER, MM	WEIGHT, KG	PACK., PCS
SH705R	4610016593159	6	21	226	1
SH705.1R	4610016593166	10	21	625	1



SH705.1R

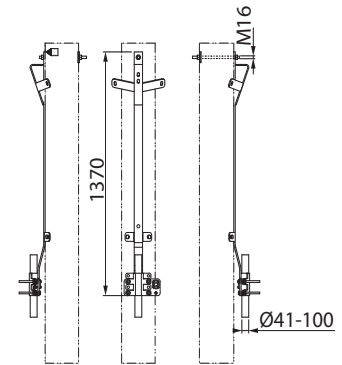
CROSSARMS AND POLE ACCESSORIES

Surge arrester rack

Surge arrester rack SH536R.

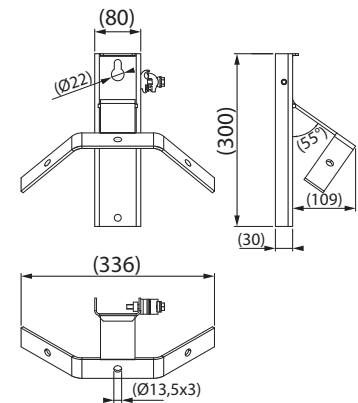
The cable fastening is flexible and no extra filling is needed. Over voltage protection brackets include all the required fixing material, a KG20 earthing connector and bolts for the cable lug.

PRODUCT CODE	GTIN	CONDUCTOR DIAMETER, MM	PACK., PCS
SH536R	4610016592428	41-100	10.7



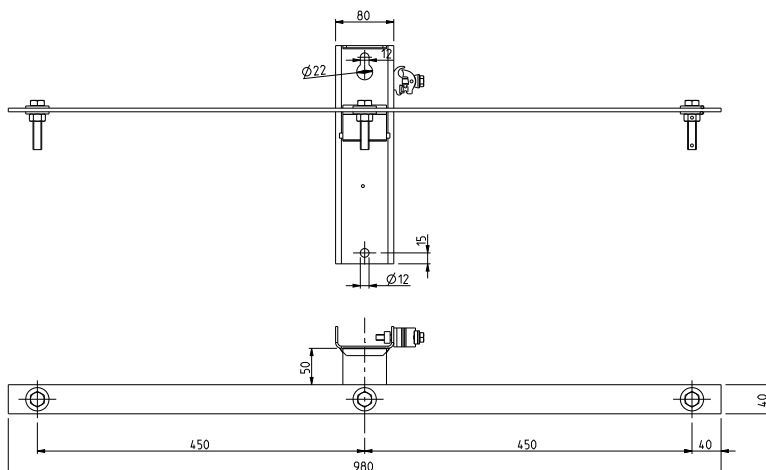
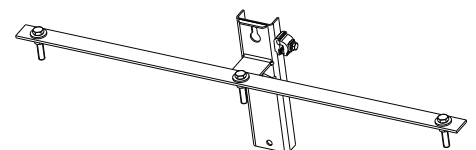
Surge arrester rack SH701R

PRODUCT CODE	GTIN	WEIGHT, KG
SH701R	4610016593173	1.9



Surge arrester rack SH600.9R

PRODUCT CODE	GTIN	WEIGHT, KG
SH600.9R	4610016593180	3.083



Tools

Wire brush ST18

In aluminium connections it is important to remove the Al-oxide from the aluminium surfaces by using a wire brush.

PRODUCT CODE	GTIN	WEIGHT, KG	PACK., PCS.
ST18	6418677405440	72	150



Ratchet wrench CT164

For installation of connectors and suspension fittings. The wrench body is made of steel and the grip of oil resistant rubber. The wrench is double-sided 13 and 17 mm.

PRODUCT CODE	GTIN	BOLT SIZE, MM	LENGTH, MM	WEIGHT, KG	PACK., PCS.
CT164	6418677414213	13 и 17	280	254	20



Torque wrench ST30

For tightening connectors and fittings with standard sockets. With aluminium connectors, it is essential that the bolts are tightened by using the correct torque. ST30 is a high quality adjustable wrench with a wide torque range. The read-outs are given in Nm and lbs.-ft.

PRODUCT CODE	GTIN	TIGHTENING TORQUE, NM	WEIGHT, KG	SOCKET ADAPTOR MOUNT, INCHES	PACK., PCS.
ST30	6418677408755	12-60	890	1/2	10



Sockets for torque wrench ST30

PRODUCT CODE	GTIN	SOCKET SIZE, MM	FORM	WEIGHT, KG	PACK., PCS.
ST12	6418677411557	17	hexagonal	66	20
ST13	6418677411564	13	hexagonal	56	20
ST115	6418677414138	19	hexagonal	75	1
CT113	6418677412141	6	hexagonal inner	74	1



Fork wrench ST34

The ST34 is for holding the connector while tightening the bolts. Approved also for insulation piercing connectors with live conductors.

PRODUCT CODE	GTIN	WEIGHT, KG	PACK., PCS.
ST34	6418677405549	337	25



Wedges ST31

During the installation of connectors the phase conductors of an insulated overhead cable can be separated by using wedges. The wedge can also be used when installing suspension clamps.

PRODUCT CODE	GTIN	DESCRIPTION	WEIGHT, KG	PACK., PCS.
ST31	6418677405518	Two plastic wedges	109	10



Cable hoist ST116

Ratchet puller for line tensioning.

PRODUCT CODE	GTIN	LIFT HEIGHT M, SINGLE/DOUBLE WIRE	CAPACITY KG, SINGLE/DOUBLE WIRE	WEIGHT, KG	PACK., PCS.
ST116	6418677414183	3.0/1.5	750/1500	4.1	1



Tools

Wire stringing wheels

Used for pulling in overhead cables. ST26.1, ST26.33 and ST26.11 are used for straight lines and small angles up to 30 degrees. Double pulley ST26.22 is used for larger angles up to 90 degrees.

PRODUCT CODE	GTIN	DESCRIPTION / FASTENING TYPE	MAX ANGLE	CABLE GROOVE DIAMETER, MM	DISK MATERIAL	WEIGHT, KG	PACK., PCS
ST26.1	6418677408625	single / hook	30°	50	nylon	1.46	10
ST26.11	6418677410116	single / chain attachment	30°	50	nylon	3.90	1
ST26.22	6418677410123	double pulley / chain attachment	90°	50	nylon	6.25	1
ST26.33	6418677410130	single / hook	30°	77	aluminium	2.17	1



Tightening tool CT42

CT42 is a special tool which is used for tightening the steel band COT37.

PRODUCT CODE	GTIN	WEIGHT, KG	PACK., PCS
CT42	6418677412332	2000	1



Come along clamps ST102 for four core cables

For tensioning overhead line spans of four core cables. The grips cover a wide range of diameters and can apply high-tension force. ST102 uses an articulated construction. It is easy to mount and change on the line.

PRODUCT CODE	GTIN	CONDUCTOR SIZE, MM ²	WEIGHT, KG	PACK., PCS
ST102.50	6418677430770	4x(25-50)	2300	1
ST102.95	6418677430787	4x(70-95)	4300	1
ST102.120	6418677430794	4x(120)	4300	1



Come along clamps CT102

For tensioning both bare and covered conductors overhead line spans. The grips cover a wide range of diameters and make a good fixing and high tension force.

PRODUCT CODE	GTIN	DIAMETER, MM	IMWS MESSENGER, MM ²	COVERED CONDUCTOR, MM ²	MAX. CONTINUOUS LOAD, KN	WEIGHT,KG	PACK., PCS
CT102.501	6418677409196	7.87-13.46	50-120	35-50	20	1700	1
CT102.1201	6418677409189	13.46-18.80	120-185	70-120	36	3800	1



Come along clamp CT105

For tensioning overhead line spans of single wires.

PRODUCT CODE	GTIN	DIAMETER, MM	CONDUCTOR SIZE, MM ²	MAX. CONTINUOUS LOAD, KN	WEIGHT,KG	PACK., PCS
CT105.20	6418677416132	4-22	16-185	20	2750	1
CT105.35	6418677416149	3-8	6-35	10	1000	1
CT105.70	6418677416156	5-10	16-70	17	1160	1



CT105.35

Tools

Cable pulling grips CT103, ST103

Pulling grips are made of high-grade galvanized steel wire, in a double weave construction for safe and secure cable pulling. ST103.502R are manufactured of high strength, parallel stranded fibers and they have a polyethylene sheath. The plastic material is non-conductive, non-corrosive and abrasion resistant.

PRODUCT CODE	GTIN	DIAMETER, MM	CONDUCTOR (FOR REFERENCE) SIZE, MM ²	GRIP LENGTH, MM	MAX. TENSILE FORCE, KN	WEIGHT, KG
CT103.35	6418677412073	20-30	4x(25-50)	600	22	232
CT103.50	6418677412080	30-40	4x(70-120)	600	36	303
CT103.95	6418677412097	40-50	4x(150-185)	600	54	586
CT103.106-50		50-65	4x240	600	54	
ST103.501	6418677408236	10-20	1x(35-150)	1000	18	144
ST103.502	6418677408243	10-20	1x(35-150)	1000	11	62



Dynamometer ST112

Used for setting the correct tension on all kinds of overhead line conductors. The dynamometers are lightweight and compact. They have a built-in measuring dial with scales according to the maximum load.

PRODUCT CODE	GTIN	MAXIMUM LOAD,KG	STEP, KG	WEIGHT, KG	PACK., PCS
ST112.1	6418677414152	1000	20	1180	1



Swivel for conductor linking CT104

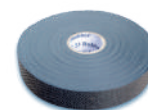
Swivels are essential for effective pulling operation of underground cables and overhead conductors. The swivels are fitted with bearings to prevent build up of twist and loops in the cable or pulling rope.

PRODUCT CODE	GTIN	LENGTH, MM	ROPE DIA., MM	HIGHEST PERMITTED LOAD IN USE, kN	WEIGHT, KG	PACK., PCS
CT104	6418677412103	125	10	12	450	1



Insulation recovery tape NO72

PRODUCT CODE	LENGTH, M	WIDTH, MM	THICKNESS, MM
NO72	9,15	19	0,76



Tool for cable ties ST214.2

Suitable for PER15 ties.



Knife CT187

Conductor insulation stripping tool.





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