

Premolded cable joint with cold shrink outer jacket

SOJ 12–24 kV

Use

Premolded cable joint for XLPE- and EPR-insulated 1- or 3-core cables with Al or Cu conductor, 12–24 kV.

Standards

- CENELEC, HD 629.1 S1
- SS 424 14 45 Edition 1
- VDE 0278
- KEMA S8
- IEEE 404 1993

Design

The joint body is made of rubber in three layers: a conductive outer layer, an insulating layer and a conductive inner layer. The kit contains all mounting material.

The joint body is pre-expanded on plastic inserts before installation. When the cables have been connected and the joint is centred, the inserts are pulled out. This way the joint body will provide an active pressure on the cable insulation and will follow variations in the cable during load.

Always select products by Insulation diameter.



SOJ CSS

The kits are selected as follows:

SOJ CSS

Contains cold-shrink outer jacket and connectors with shear-off bolts for conductor and screen.

SOJ CS

Contains cold-shrink outer jacket. Connectors are not included.

Note:

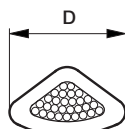
- For 16–35 mm² cables ADAPTER must be ordered separately, see following pages.
- WIM 3 to be used as complement when jointing 3-core watertightened cable, see following pages.

Insulation diameter mm	Cable cross section mm ²		Designation	CSS	CS	Designation	CSS	CS
	12 kV	24 kV	1-core	Weight kg/kit	Weight kg/kit	3-core	Weight kg/kit	Weight kg/kit
15–19.5	50–70	–	SOJ 121-1	2.5	2.4	SOJ 121-3	5.0	4.7
18.5–24	95–150	–	SOJ 122-1	2.6	2.5	SOJ 122-3	5.5	5.2
23–28	185–240	–	SOJ 123-1	3.4	3.2	SOJ 123-3	7.0	6.2
27–34	300–400	–	SOJ 124-1	4.7	4.2	SOJ 124-3	–	7.3
33.5–46	500–630	–	SOJ 125-1	5.5	4.8	–	–	–
19–23.5	–	50–70	SOJ 241-1	3.3	3.2	SOJ 241-3	5.8	5.5
22.5–28	–	95–150	SOJ 242-1	3.6	3.5	SOJ 242-3	6.9	6.5
27–35	–	185–240	SOJ 243-1	4.3	4.0	SOJ 243-3	8.8	8.0
27–35	–	300	SOJ 244-1	4.5	4.0	–	–	–
33.5–46	–	400		5.3	4.8	–	–	–
33.5–46	–	500–630		5.5	4.8	–	–	–

Accessories, to be ordered separately



ADAPTER



TS



WIM



SH-SKRM

Accessories	Use	SOJ CSS	SOJ CS	See page
ADAPTER	Cables with different dimensions	X	X	2/10
TS	Additional kit for sector shaped 3-core cables	X	X	2/10
WIM 3	Diffusion seal	X	X	2/11
SH-SKRM	Bolt connector	–	X	2/53
JSA 10–13	Cables with Cu-tape screen	X	X	2/50
JSA 14–16	Cables with Al-foil screen	X	X	2/50

Premolded cable joint for radially watertightened cable

SOJ 12–24 kV

Use

Premolded cable joint for XLPE- and EPR-insulated 1- or 3-core cables with Al- or Cu-conductor and radially water-tightened aluminium foil for 12–24 kV.

Standards

Meets the requirements of:

- CENELEC, HD 629.1 S1
- SS 424 14 45 edition 1
- VDE 0278
- KEMA S8
- IEEE 404 1993

Design

The joint body is made of rubber in three layers: a conductive outer layer, an insulating layer and a conductive inner layer. The kit contains all mounting material.

The joint body is pre-expanded on plastic inserts before installation. When the cables have been connected and the joint is centred, the inserts are pulled out. This way the joint body will provide an active pressure on the cable insulation and will follow variations in the cable during load.

The kits are selected as follows:

SOJ CSWS

Used for jointing watertightened 1-core cables with Cu-wire screen. Contains cold-shrink outer jacket, Al-foil tube and connectors for conductor and screen.



SOJ CSWS



SOJ RWI



SOJ RWIT

SOJ RWI

Used for jointing three 1-core cables, Prysmian type WISKI™ or similar. Contains copper braids to connect screens, Al foil tubes for radially watertightness and also outer jacket RULLE. Connectors and items for jointing of separate earth wire are not included.

SOJ RWIT

Used for jointing three 1-core cables Prysmian type WISKI™ or similar, to a standard 3-core cable. Contains copper braids to connect screens, STOP longitudinal watertightness and outer jacket RULLE. Connectors and articles for jointing a separate earth wire are not included.

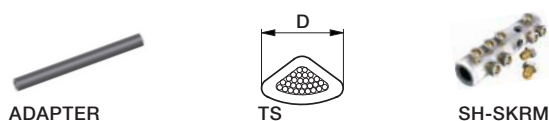
Note:

- For 16–35 mm² cables, ADAPTER must be ordered separately, see the table below.

Always select products by Insulation diameter.

Insulation diameter	Cable cross section		Designation	CSWS	Designation	RWI	RWIT
	12 kV	24 kV		Weight		Weight	Weight
mm	mm ²		1-core	kg/kit	3 x 1-core	kg/kit	kg/kit
15–19.5	50–70	–	SOJ 121-1 50	3.0	SOJ 121-31	7.3	5.0
18.5–24	95–150	–	SOJ 122-1 95 150	3.2	SOJ 122-31	7.9	5.5
23–28	185–240	–	SOJ 123-1 240	4.0	SOJ 123-31	10.3	7.0
27–34	300–400	–	SOJ 124-1 400	5.3	–	–	–
33.5–46	500–630	–	SOJ 125-1 630	6.1	–	–	–
19–23.5	–	50–70	SOJ 241-1 50	3.9	SOJ 241-31	10.0	5.5
22.5–28	–	95–150	SOJ 242-1 95 150	4.2	SOJ 242-31	10.9	6.5
27–35	–	185–240	SOJ 243-1 240	4.9	SOJ 243-31	13.0	8.0
33.5–46	–	300–400	SOJ 244-1 400	5.9	–	–	–
33.5–46	–	500–630	SOJ 244-1 630	6.1	–	–	–

Accessories, to be ordered separately



Accessories	Use	SOJ CSWS	SOJ RWI	SOJ RWIT	See page
Adapter	Adapter kit for cables with different dimensions	X	X	X	2/10
TS	Additional kit for sector shaped cables	–	X	X	2/10
SH-SKRM	Bolt connector	–	X	X	2/53

Premolded cable joint with or without outer jacket, RULLE SOJ 12–24 kV

Use

Premolded cable joint for XLPE- and EPR-insulated 1- or 3-core cables with Al or Cu conductor for 12–24 kV.

Standards

Meets the requirements of:

- CENELEC, HD 629.1 S1
- SS 424 14 45 edition1
- VDE 0278
- KEMA S8
- IEEE 404 1993

Design

The joint body is made of rubber in three layers: a conductive outer layer, an insulating layer and a conductive inner layer.

The joint body is pre-expanded on plastic inserts before installation. When the cables have been connected and the joint is centred, the inserts are pulled out. This way the joint body will provide an active pressure on the cable insulation and will follow variations in the cable during load.



SOJ R

The kits are selected as follows:

SOJ R

- Contains outer jacket RULLE; a two-layer tape of EPDM-rubber and mastic, which is wrapped around the joint.
- Connectors are not included.

SOJ SL

- Supplied without outer jacket. An outer jacket approved by ABB must be added, for example type ARM.
- Connectors are not included.

Note:

- For 16–35 mm² cables ADAPTER must be ordered separately, see the table below.
- WIM 3 / WIM 4 – used as complement when jointing 3-core watertightened cable, see the table below.

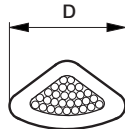
Always select products by Insulation diameter.

Insulation diameter	Cable cross section		Designation	R	Designation	SL	Designation	R	Designation	SL
	12 kV	24 kV	1-core	Weight	1-core	Weight	3-core	Weight	3-core	Weight
mm	mm ²			kg/kit		kg/kit		kg/kit		kg/kit
15–19.5	50–70	–	SOJ 121-1 R	2.6	SOJ 121-1 SL	1.0	SOJ 121-3 R	4.7	SOJ 121-3 SL	2.0
18.5–24	95–150	–	SOJ 122-1 R	3.0	SOJ 122-1 SL	1.1	SOJ 122-3 R	5.6	SOJ 122-3 SL	2.3
23–28	185–240	–	SOJ 123-1 R	3.1	SOJ 123-1 SL	1.2	SOJ 123-3 R	6.4	SOJ 123-3 SL	2.7
27–34	300–400	–	SOJ 124-1 R	4.3	SOJ 124-1 SL	1.6	SOJ 124-3 R	8.9	SOJ 124-3 SL	4.2
33.5–46	500–630	–	SOJ 125-1 R	5.9	SOJ 125-1 SL	2.2	–	–	–	–
19–23.5	–	50–70	SOJ 241-1 R	3.2	SOJ 241-1 SL	1.3	SOJ 241-3 R	6.2	SOJ 241-3 SL	2.8
22.5–28	–	95–150	SOJ 242-1 R	3.9	SOJ 242-1 SL	1.5	SOJ 242-3 R	7.0	SOJ 242-3 SL	3.4
27–35	–	185–300	SOJ 243-1 R	4.5	SOJ 243-1 SL	1.8	SOJ 243-3 R	9.1	SOJ 243-3 SL	4.5
33.5–46	–	400	SOJ 244-1 R	6.4	SOJ 244-1 SL	2.2	–	–	–	–

Accessories, to be ordered separately



ADAPTER



TS



WIM



STOP



SH-SKRM

Accessories	Use	SOJ R	SOJ SL	See page
Adapter	Cables with different dimensions	X	X	2/10
JSA 10–13	Cables with Cu-tape screen	X	X	2/50
JSA 14–16	Cables with Al-foil screen	X	X	2/50
TS	Additional kit for sector shaped 3-core cables	X	X	2/10
WIM	Diffusion seal	X	X	2/11
ARM	Armouring kit	–	X	2/51
STOP	Crutch seal when 3 x 1-core cables are jointed to a 3-core	X	–	2/10
SH-SKRM	Bolt connector	X	X	2/53

Premolded cable joint with heat-shrink outer jacket

SOJ HSTS 12–24 kV

Use

Premolded cable joint with heat-shrink outer jacket and bolt connector. For jointing 12–24 kV XLPE- and EPR-insulated 1- or 3-core cables with Al- or Cu-conductors.

Standard

Meets the requirements of:

- SS 424 14 45 edition 1
- VDE 0278
- CENELEC, HD 629.1 S1
- KEMA S8
- IEEE 404 1993

Design

The joint body is made of rubber in three layers: a conductive inner layer, an insulating layer and a conductive outer layer. The joint kit is complete and restores all the parts of the cable.

The joint body is pre-expanded on plastic inserts before installation. When the cables have been connected and the joint is centred, the inserts are pulled out. This way the joint body will provide an active pressure on the cable insulation and will follow variations in the cable during load.

Always select products by Insulation diameter.

Voltage	Insulation diameter	Conductor cross section	Designation	Weight
kV	mm	mm ²		kg/kit
Cable joint for 1-core				
12	15–19.5	50–70	SOJ 121-1 70 HSTS	2.5
12	18.5–24	95–150	SOJ 122-1 150 HSTS	2.6
12	23–28	185–240	SOJ 123-1 240 HSTS	3.4
12	27–34	300–400	SOJ 124-1 400 HSTS	4.7
12	33.5–46	500–630	SOJ 125-1 630 HSTS	5.5
Cable joint for 3-core				
12	15–19.5	50–70	SOJ 121-3 70 HSTS	5.0
12	18.5–24	95–150	SOJ 122-3 150 HSTS	5.5
12	23–28	185–240	SOJ 123-3 240 HSTS	7.0
12	27–34	300–400	SOJ 124-3 400 HSTS	9.1
Cable joint for 1-core				
24	19–23.5	50–70	SOJ 241-1 70 HSTS	3.3
24	22.5–28	95–150	SOJ 242-1 150 HSTS	3.6
24	27–35	185–240	SOJ 243-1 240 HSTS	4.3
24	27–35	300	SOJ 243-1 300 HSTS	4.5
24	33.5–46	400	SOJ 244-1 400 HSTS	5.3
24	33.5–46	500–630	SOJ 245-1 630 HSTS	5.5
Cable joint for 3-core				
24	19–23.5	50–70	SOJ 241-3 70 HSTS	5.8
24	22.5–28	95–150	SOJ 242-3 150 HSTS	6.9
24	27–35	185–240	SOJ 243-3 240 HSTS	8.8



SOJ HSTS 3-core kit

The kits include:

- Heat-shrink outer jacket, vulcanizing tape and connectors with shear-off bolts for conductor and screen.

Note:

- Branch seal kit CSK 2, CSK 3 for transition between 3- or 1-core cables. Kits include a branch seal in heat-shrink material, tapes and an installation instructure. CSK is to be ordered separately according to the table.
- For 16–35 mm² cables ADAPTER must be ordered separately, see the table below.
- WIM 3 – used as complement when jointing watertightened cable, see the table below.

Accessories, to be ordered separately



CSK



ADAPTER



WIM

Accessories	Use	See page
CSK	Branch seal for transition between 3- and 1-core cables	2/11
Adapter	Cables with different dimensions	2/10
WIM 3	Diffusion seal	2/11
JSA 10–13	Cables with Cu-tape screen	2/50
JSA 14–16	Cables with Al-foil screen	2/50

Premolded cable joint with heat-shrink outer jacket

SOJ HSTS 36 kV

Use

Premolded cable joint with heat-shrink outer jacket and bolt connector. For jointing 36 kV XLPE- and EPR-insulated 1- or 3-core cables with Al or Cu conductors.

Design

The joint body is made of rubber in three layers: a conductive inner layer, an insulating layer and a conductive outer layer. The joint kit is complete and restores all the parts of the cable.

The joint body is pre-expanded on plastic inserts before installation. When the cables have been connected and the joint is centred, the inserts are pulled out. This way the joint body will provide an active pressure on the cable insulation and will follow variations in the cable during load.



SOJ HSTS 3-core kit

The kits are included:

- Heat-shrink outer jacket, vulcanizing tape and connectors with shear-off bolts for conductor and screen.

Note:

- Branch seal kit CSK 2, CSK 3 for transition between 3- or 1-core cables. Kits include a branch seal in heat-shrink material, tapes and an installation instructure. CSK is to be ordered separately according to the table.
- For 16–35 mm² cables ADAPTER must be ordered separately, see the table below.
- WIM 3 – used as complement when jointing watertightened cable, see the table below.

Always select products by Insulation diameter.

Voltage	Insulation diameter	Conductor cross section	Designation	Weight
kV	mm	mm ²		kg/kit
Cable joint for 1-core				
36	19–23.5	50–70	SOJ 361-1 70 HSTS	3.3
36	22.5–28	50–70	SOJ 362-1 70 HSTS	3.6
36	22.5–28	95	SOJ 362-1 95 HSTS	3.6
36	27–35	95–150	SOJ 363-1 150 HSTS	4.3
36	27–35	185–240	SOJ 363-1 240 HSTS	4.3
36	33.5–46.5	185–240	SOJ 364-1 240 HSTS	5.2
36	33.5–46.5	300–400	SOJ 364-1 400 HSTS	5.3
36	33.5–46.5	500–630	SOJ 365-1 500 HSTS*	5.5
Cable joint for 3-core				
36	19–23.5	50–70	SOJ 361-3 70 HSTS	5.8
36	22.5–28	50–70	SOJ 362-3 70 HSTS	6.9
36	22.5–28	95	SOJ 362-3 95 HSTS	6.9
36	27–35	95–150	SOJ 363-3 150 HSTS	8.8
36	27–35	185–240	SOJ 363-3 240 HSTS	8.8
36	33.5–46.5	185–240	SOJ 364-3 240 HSTS	10.6
36	33.5–46.5	300–400	SOJ 364-3 400 HSTS	10.7
36	33.5–46.5	500–630	SOJ 365-3 500 HSTS*	10.9

Fits to 630 mm² if insulation diameter is 33.5–46.5.

Accessories, to be ordered separately



CSK



ADAPTER



WIM

Accessories	Use	See page
CSK	Branch seal for transition between 3- and 1-core cables	2/11
Adapter	Cables with different dimensions	2/10
WIM 3	Diffusion seal	2/11
JSA 10–13	Cables with Cu-tape screen	2/50
JSA 14–16	Cables with Al-foil screen	2/50

Premolded cable joint, for cables with Cu-tape screen SOJ EA 12–24 kV

2

Use

Premolded cable joint for XLPE- and EPR-insulated 1- or 3-core cable with Al or Cu conductors and Cu-tape screen for 12–24 kV.

Standards

Meets the requirements of:

- SS 424 14 45 edition 1
- VDE 0278
- CENELEC, HD 629.1 S1
- KEMA S8
- IEEE 404 1993

Design

The joint body is made of rubber in three layers: a conductive inner layer, an insulating layer and a conductive outer layer.

The joint body is pre-expanded on plastic inserts before installation. When the cables have been connected and the joint is centred, the inserts are pulled out. This way the joint body will provide an active pressure on the cable insulation and will follow variations in the cable during load.



The kits are selected as follows: SOJ EA

- Contains copper stockings and constant force springs to restore the Cu-tape screen and cast resin armouring kit to restore the outer jacket.

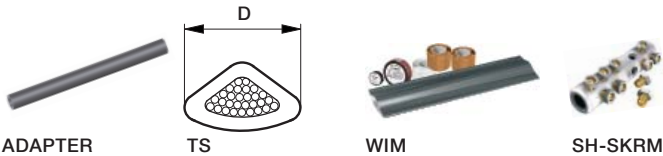
Note:

- Connectors for the cable conductors must be ordered separately.

Always select products by Insulation diameter.

Insulation diameter	Cable cross section		Designation
	12 kV	24 kV	
mm	mm ²		
15–19.5	50–70	–	SOJ 121–3 EA
18.5–24	95–150	–	SOJ 122–3 EA
23–28	185–240	–	SOJ 123–3 EA
27–34	300–400	–	SOJ 124–3 EA
19–23.5	–	50–70	SOJ 241–3 EA
22.5–28	–	95–150	SOJ 242–3 EA
27–35	–	185–300	SOJ 243–3 EA

Accessories, to be ordered separately



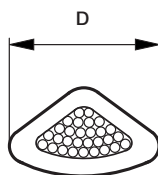
Accessories	Use	See page
Adapter	Cables with different dimensions	2/10
TS	Additional kit for sector shaped 3-core cables	2/10
WIM	Diffusion seal	2/11
ARM	Armouring kit	2/51
SH-SKRM	Bolt connector	2/53

Accessories, to be ordered separately

Premolded cable joint, SOJ 12–24 kV

Additional kit TS

Additional kit for sector shaped 3-core cables, for use when the D-dimension over the insulation is above the value as below.



Designation	Fitting joint	D	Weight
		mm	kg/item
TS 121	SOJ 121-3	20	0.1
TS 242	SOJ 242-3	29	0.1
TS 243	SOJ 243-3	39	0.1

Adapter kit, ADAPTER

Adapter for cables from 10 mm² and for jointing cables with a smaller cross section. Manufactured and tested to take one step down to the nearest joint size (each kit contains one adapter).



Designation	Fitting joint	Minimum conductor cross section	Insulation diameter	Weight
		mm ²	mm	kg/item
ADAPTER 1*	SOJ 121, 241, 361	10	Minimum 10	0.1

* Minimum diameter over connector is 12 mm.

Crutch seal, STOP

For sealing when three 1-core cables are jointed to a 3-core cable. Used only for SOJ R (see page 2/6).



Designation	Voltage	Suitable for 1-core cables with conductor cross section	Weight
	kV	mm ²	kg/item
STOP 1	12	50–185	0.2
	24–36	50–95	0.2
STOP 2	12	> 240	0.2
	24–36	> 120	0.2

Accessories, to be ordered separately

Premolded cable joint, SOJ 12–36 kV

2

Diffusion seal, WIM

Used as complement to SOJ CS, SOJ CSS or SOJ R when jointing 1- or 3-core watertightened cables with diffusion barrier of aluminium.



WIM 3

Designation	Fitting joint	Type of cable	Weight
			kg/kit
WIM 3	SOJ 121-3, 122-3, 123-3 SOJ 241-3, 242-3, 243-3 SOJ 361-3, 362-3, 364-3	3-core with Al foil in direct contact with screen	0.5
WIM 5	SOJ 121-1, SOJ 122-1	1-core with Al-foil in direct contact with screen	0.4
WIM 6	SOJ 123-1, SOJ 124-1, SOJ 125-1 SOJ 241-1, SOJ 242-1, SOJ 243-1 SOJ 244-1, SOJ 245-1, SOJ 361-1 SOJ 362-1, SOJ 363-1, SOJ 364-1, SOJ 365-1	1-core with Al-foil in direct contact with screen	0.4

Accessories, to be ordered separately



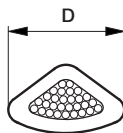
CSK

Branch seal kit for , SOJ HSTS when transition between 3- and 1-core cables.

Accessories	Conductor cross section		
	12 kV	24 kV	36 kV
	mm ²		
CSK 2	95–300	50–300	50–95
CSK 3	–	–	150–300



ADAPTER



TS



WIM



STOP



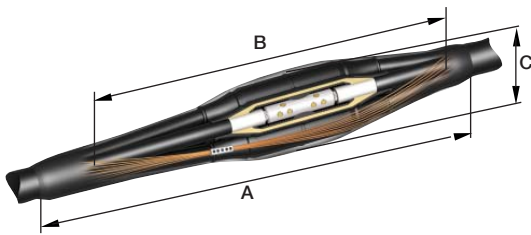
SH-SKRM

Accessories	Description	CSS	CS	R	SL	RWI	RWIT	HSTS	See page
ADAPTER	Cables with different dimensions	X	X	X	X	X	X	X	2/10
TS	Additional kit for sector shaped 3-core cables	X	X	X	X	–	X	X	2/10
WIM	Diffusion seal	X	X	X	–	–	–	X	2/11
STOP	Crutch seal when 3 x 1-core cables are jointed to a 3-core	–	–	X	–	–	–	–	2/10
CSK	Branch seal for transition between 3- and 1-core cables	–	–	–	–	–	–	X	2/11
SH-SKRM	Bolt connector	X	X	X	X	X		X	2/53
JSA 10–13	Earthing kit for cable with Cu-tape screen	X	X	X	–	–	–	X	2/50
JSA 14–16	Earthing kit for cable with Al-foil screen only	X	X	X	–	–	–	X	2/50
ARM	Armoured cable or when extra mechanical protection is required	–	–	–	X	–	–	–	2/51

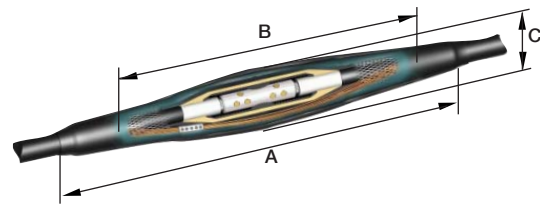
Dimensional drawings

Premolded cable joint, SOJ 12–36 kV

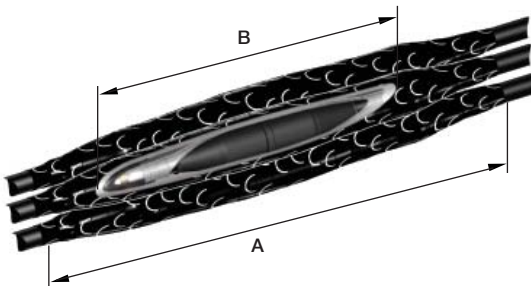
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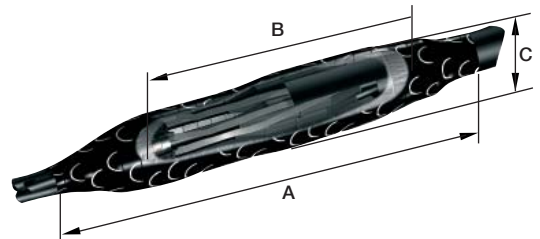
SOJ with cold-shrink outer jacket.



SOJ with cold-shrink outer jacket for watertightened 1-core cables.



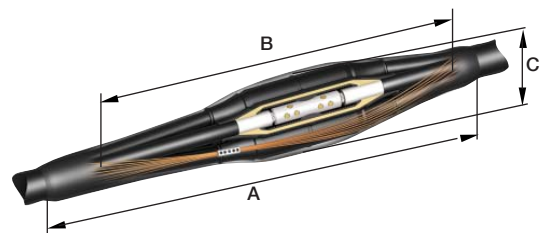
SOJ with RULLE outer jacket on 3 x 1-core WISKI™ cables.



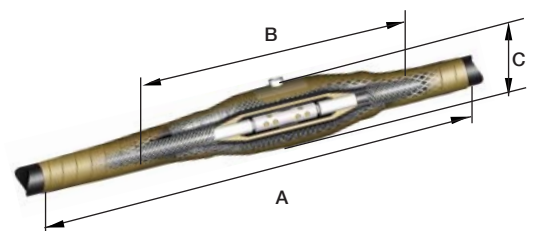
SOJ with RULLE outer jacket on 3 x 1-core WISKI™ cables to a 3-core XLPE-insulated cable.

Designation	Dimensions		
	A*	B*	C*
	mm		
1-core			
SOJ 121-1	970–1050	740–850	60
SOJ 122-1	980–1090	780–890	65
SOJ 123-1	1070–1150	820–950	75
SOJ 124-1	1190–1270	970–1070	75
SOJ 125-1	1280–1400	980–1200	90
SOJ 241-1	1010–1090	770–890	75
SOJ 242-1	1070–1150	810–950	80
SOJ 243-1	1190–1270	940–1070	85
SOJ 244-1	1280–1400	980–1200	90
SOJ 361-1	1070	770	75
SOJ 362-1	1110	810	80
SOJ 363-1	1240	940	85
SOJ 364-1	1280	980	90
SOJ 365-1	1280	980	90
3-core			
SOJ 121-3	1120–1150	850–1000	120
SOJ 122-3	1170–1270	970–1150	125
SOJ 123-3	1310	1010–1190	140
SOJ 124-3	1350–1470	1170–1310	165
SOJ 241-3	1210–1240	940–1090	145
SOJ 242-3	1260–1310	1010–1140	160
SOJ 243-3	1330–1450	1150–1310	180
SOJ 361-3	1240	940	145
SOJ 362-3	1310	1010	160
SOJ 363-3	1450	1150	180
SOJ 364-3	1600	1300	200
SOJ 365-3	1600	1300	200

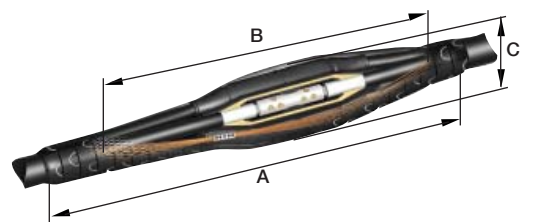
*Estimated dimensions depending on installation and type of outer jacket.



SOJ with heat-shrink outer jacket.



SOJ with cast resin as armouring outer jacket.



SOJ with RULLE outer jacket.