



# Creating life long relationships.

Our Network Components keep your cable systems intact.



A brand of the

**Prysmian**  
Group

# Our Network Components keep your cable systems intact.

To link the cable systems and provide communities with a continuous flow of power, you not only need reliable cables, you need dependable components to keep it all together, too. Built on decades of experience we develop state-of-the-art joints, terminations and connectors that'll give your MV network long-lived stability – and you peace of mind.

## Medium Voltage Accessories to link electrical infrastructures

Accessories play a vital role in a power system. Prysmian has gained expertise in the design, manufacture and testing of products across all voltages during many years of partnership with customers.

We can offer you a comprehensive range of accessories for glanding, jointing, connecting and terminating MV systems. The range includes joints (also transition, trifurcating and branch joints), terminations (both for indoor and outdoor use) and separable connectors.

In addition we can provide you with engineering services capable of fulfilling any power system specifications or requirements and of delivering customised solutions.

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# Prysmian Group

Prysmian Group is world leader in the energy and telecom cable systems industry. With almost 140 years of experience, sales exceeding €11 billion (pro-forma as of 31.12.2017), about 30,000 employees in over 50 countries and 112 plants, the Group is strongly positioned in high-tech markets and offers the widest possible range of products, services, technologies and know-how.



The Prysmian Group corporate brand operates in the market through three distinct commercial brands – Prysmian, Draka and General Cable. These are three of the global cable industry's strongest brands, characterised by highly complementary products and services. We use our three commercial brands when talking about products and solutions, and each represents a specific part of the overall offering that Prysmian Group presents to its customers.



# Network Components Locations

Seven plants in Europe and two state-of-art plants in China.

## MILAN - ITALY

Headquarter and R&D Laboratories

## QUATTORDIO - ITALY

MV solutions & Compounds

## LIVORNO - ITALY

EPR, Click-Fit & Speed range

## WREXHAM - UK

Components

## BISHOPSTOKE - UK

HV & Subsea

## SENS - FRANCE

MV joints and terminations

## CORNIMONT - FRANCE

MV terminations

## DELFT - THE NETHERLANDS

HV Click-fit

## SUZHOU - CHINA

HV solutions

## YIXING - CHINA

MV solution

## MV Joints

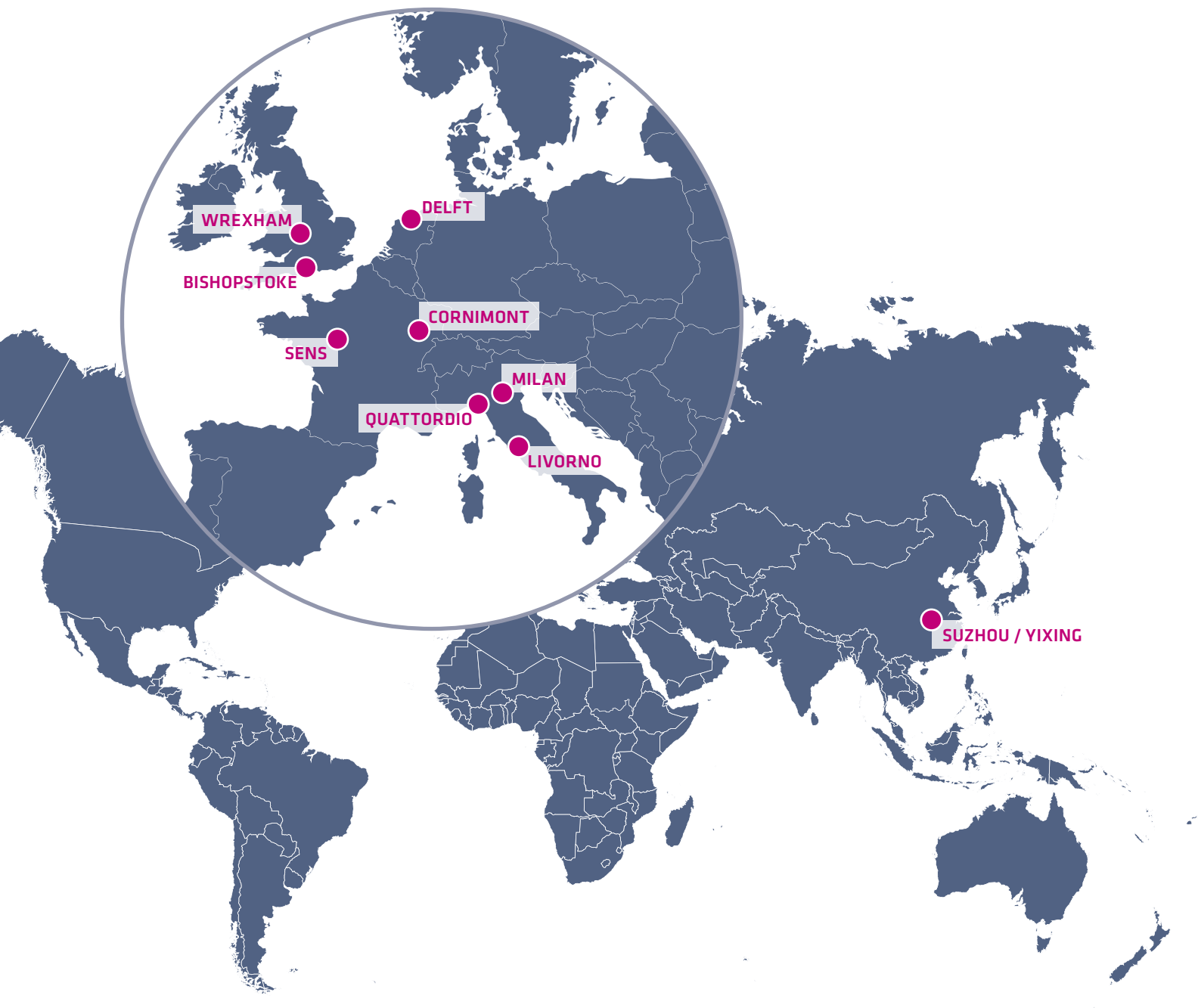
Production of the Compound and of the main body in Quattordio (IT).

Expansion, kitting & distribution in the APAC region in Yixing (CN).

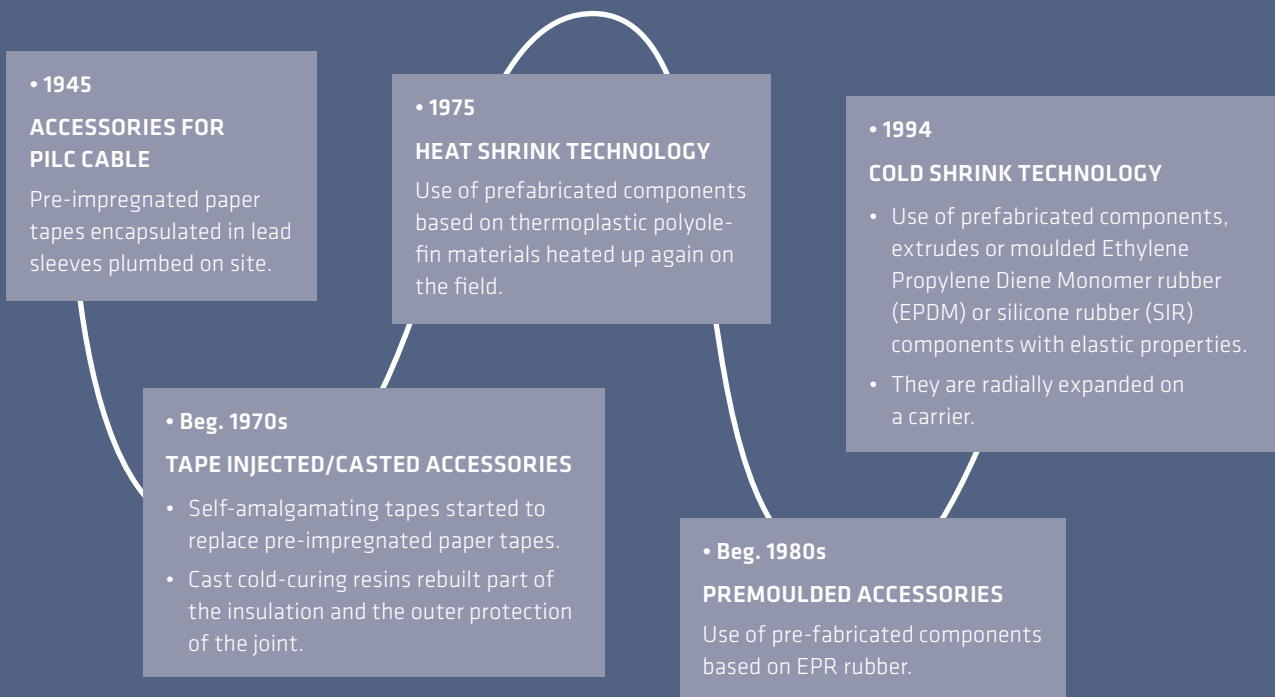
## MV Terminations

Engineering in Milan and France.

Production and Kitting in Yixing (CN).



# Evolution of the Technology & Design



Cold Shrink Technology	Heat Shrink Technology
All components rebuilding the cable layers are assembled in the factory on the same carrier.	Different sleeves and tapes rebuilding the cable layers are supplied in a kit.
It is 100% electrically tested in the factory like cables.	These individual components cannot be pre-tested in factory.
Reduced parking length, it can be used in congested and tight trenches.	Long parking length needed in the trench to pre-position the different components on the cable.
Compact design embedded on a single carrier which can reduce installation errors and external contamination.	Requires multiple sleeves which can increase the risk of external contamination during installation.
Torch and hot work permit not required. No Fire Hazard. Overall safe installation process	Requires torch and hot work permit which can lead to fire hazard and HSE Risk
Ease & Reliability of installation. Integrity of the Joint installation will be uniform thanks to the elastic properties of material used.	Integrity of the Joint installation highly dependant on the Skill level of Joiner
Elastic material creates a dynamic seal, exerts a permanent pressure on the cable which ensures the accessory performances during service.	Non elastic layers can create static interfaces with the cable layers. Successive mechanical stresses (thermomechanical forces, manhole maintenance...) can lead to Leakage and watertightness issues; Voids development.

Save up to  
**60%**  
installation  
time.

**Up to 60 % installation time savings can be achieved using Cold Shrink in comparison with other technologies.**





## CABLE JOINTS

### ECOSPEED™ – COLD SHRINK JOINT

#### Description

ECOSPEED™ cold shrink joint for Um up to 36 kV polymeric cables. For armoured cable, please contact us for further information.

#### Utilisation

- Joining polymeric insulated cables of different specifications.
- Conductor sizes equal or unequal.
- May be directly buried.
- Joining cables laid underground, in tunnels on horizontal, racks, or aerial.
- Transition joint between extruded and paper insulated cables.

#### Cables

- Single core polymeric insulation.
- Insulation voltage up to 36 kV ( $U_m$ ).
- Copper or aluminum conductor.
- Conductor sizes: 35 to 400 mm<sup>2</sup>.
- Tape, wire or polylam metallic screen.
- Non-armoured or Airbag™ armoured.
- Semi-conducting screen extruded.

#### Standards

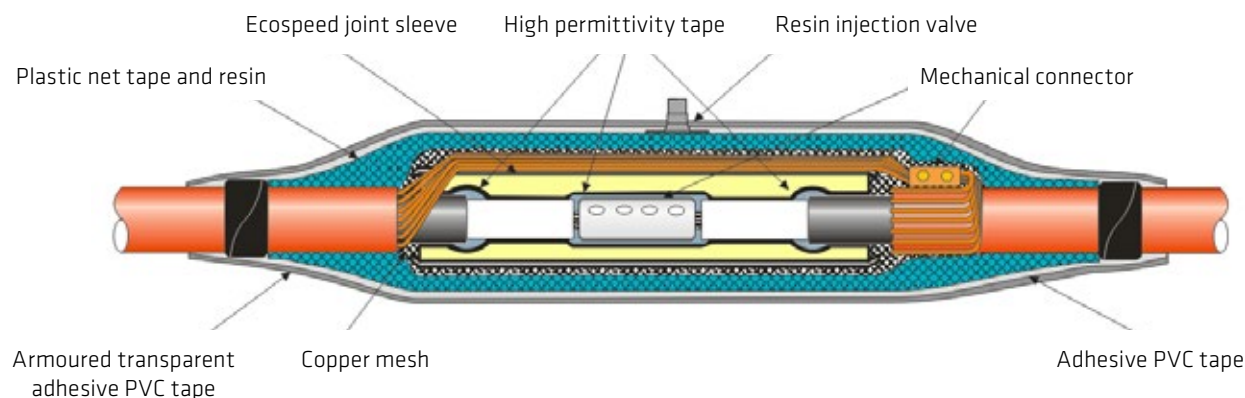
Generally meets the requirements of IEC60502-4, ENEL, CENELEC HD 629-1-2, AS/NZS 4805.1, AS/NZS 4325.1.

#### Quality assurance

The company has been assessed by third party and found in conformity with the requirements of the standard ISO 9001 – EN 29001.

#### Installation features

- 100% electrically tested in the factory.
- No special skills or long experience required.
- Easy assembling.
- No need for special tools or heating.
- Wide cables size range taking.
- Immediate energizing after completion of the joint.
- Great flexibility.
- Suitable and qualified for compact insulated cables.





## CABLE JOINTS

### SELECTION GUIDE – ECOSPEED™

#### PEOTJ – sealing tape

12 kV	Product code	
	Single core	Three core
95-150	PEOTJ-1C-12-A-T3	PEOTJ-3C-12-A-T3
185-240	PEOTJ-1C-12-B-T3	PEOTJ-3C-12-B-T3
300-400	PEOTJ-1C-12-C-T3	PEOTJ-3C-12-C-T3

24 kV	Single core	Three core
35-70	PEOTJ-1C-24-A-T3	PEOTJ-3C-24-A-T3
95-240	PEOTJ-1C-24-B-T3	PEOTJ-3C-24-B-T3
300-400	PEOTJ-1C-24-C-T3	PEOTJ-3C-24-C-T3

36 kV	Single core	Three core
95-300	PEOTJ-1C-36-C-T3	PEOTJ-3C-36-C-T3

#### PEOIJ – resin filled

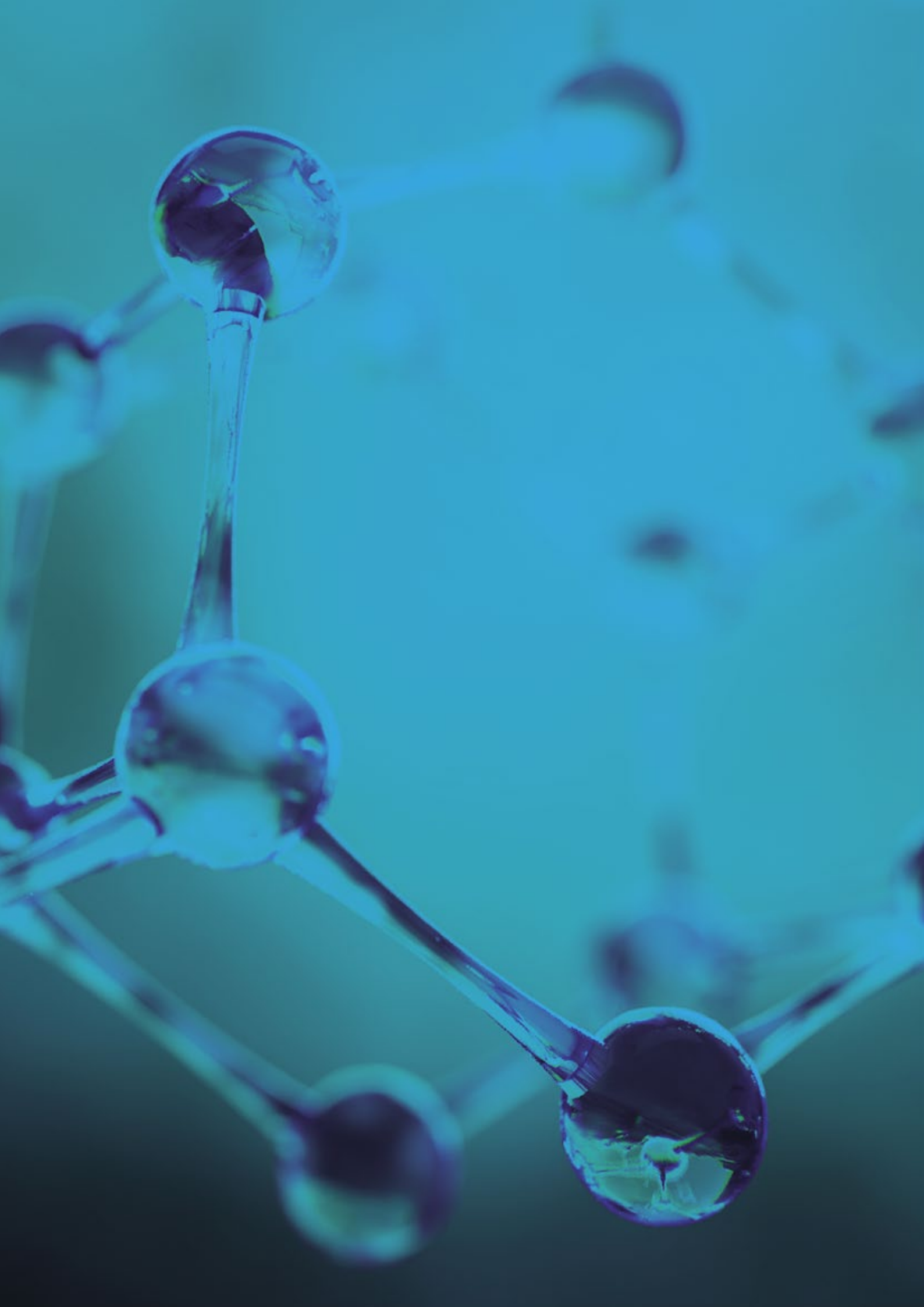
12 kV	Product code	
	Single core	Three core
95-150	PEOIJ-1C-12-A-T3	PEOIJ-3C-12-A-T3
185-240	PEOIJ-1C-12-B-T3	PEOIJ-3C-12-B-T3
300-400	PEOIJ-1C-12-C-T3	PEOIJ-3C-12-C-T3

24 kV	Single core	Three core
35-70	PEOIJ-1C-24-A-T3	PEOIJ-3C-24-A-T3
95-240	PEOIJ-1C-24-B-T3	PEOIJ-3C-24-B-T3
300-400	PEOIJ-1C-24-C-T3	PEOIJ-3C-24-C-T3

36 kV	Single core	Three core
95-300	PEOIJ-1C-36-C-T3	PEOIJ-3C-36-C-T3





## CABLE TERMINATIONS

### TERMFIT™ – COLD SHRINK TERMINATION

#### Description

Indoor/outdoor cold shrink termination for polymeric cables up to 36 kV.

#### Utilisation

- For connection of polymeric MV cables to overhead link, air insulated switchgear and transformers, etc.

#### Cables

- Single core or three core polymeric insulation (PE, XLPE, EPR).
- Copper or aluminium conductors, solid or stranded.
- Semi-conducting screen either extruded or taped.
- Metallic screen of tape, wire or polylam type.
- Insulation voltage up to 36 kV.
- Conductor sizes: 35 to 630 mm<sup>2</sup>.
- With armour layer or without armour layer.

#### Standards

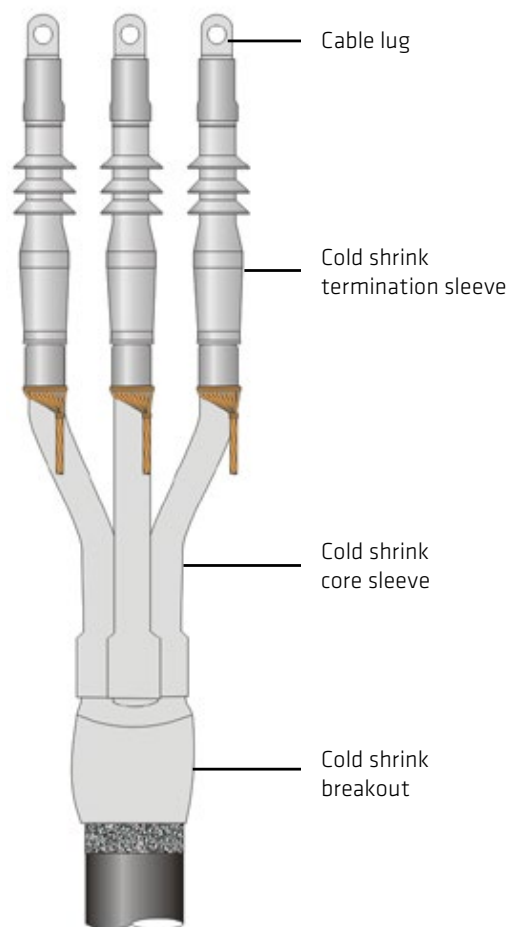
Generally meets the requirements of IEC60502-4, GB/T12076.4, AS/NZS 4805.1, AS/NZS 4325.1

#### Quality assurance

The company has been assessed by third party and found in conformity with the requirements of the standard ISO 9001 – EN 29001.

#### Installation features

- No need for special tools, no heating or filling.
- Vertical, angled or inverted position.
- Energizing may take place immediately after completion of termination.



## CABLE TERMINATIONS

### SELECTION GUIDE – TERMFIT™

#### PCTI – Indoor termination

12 kV	Product code	
	Single core	Three core
35-50	PCTI-1C-12-A-T3	PCTI-3C-12-A-T3
70-120	PCTI-1C-12-B-T3	PCTI-3C-12-B-T3
150-185	PCTI-1C-12-C-T3	PCTI-3C-12-C-T3
240-300	PCTI-1C-12-D-T3	PCTI-3C-12-D-T3
400-630	PCTI-1C-12-E-T3	PCTI-3C-12-E-T3

24 kV	Single core	Three core
35-50	PCTI-1C-24-G-T3	PCTI-3C-24-G-T3
70-150	PCTI-1C-24-H-T3	PCTI-3C-24-H-T3
185-300	PCTI-1C-24-I-T3	PCTI-3C-24-I-T3
400-500	PCTI-1C-24-J-T3	PCTI-3C-24-J-T3
630	PCTI-1C-24-K-T3	PCTI-3C-24-K-T3

36 kV	Single core	Three core
35-150	PCTI-1C-36-L-T3	PCTI-3C-36-L-T3
185-300	PCTI-1C-36-M-T3	PCTI-3C-36-M-T3
400-630	PCTI-1C-36-N-T3	PCTI-3C-36-N-T3

#### PCTO – Outdoor termination

12 kV	Product code	
	Single core	Three core
35-50	PCTO-1C-12-A-T3	PCTO-3C-12-A-T3
70-120	PCTO-1C-12-B-T3	PCTO-3C-12-B-T3
150-185	PCTO-1C-12-C-T3	PCTO-3C-12-C-T3
240-300	PCTO-1C-12-D-T3	PCTO-3C-12-D-T3
400-630	PCTO-1C-12-E-T3	PCTO-3C-12-E-T3

24 kV	Single core	Three core
35-50	PCTO-1C-24-G-T3	PCTO-3C-24-G-T3
70-150	PCTO-1C-24-H-T3	PCTO-3C-24-H-T3
185-300	PCTO-1C-24-I-T3	PCTO-3C-24-I-T3
400-500	PCTO-1C-24-J-T3	PCTO-3C-24-J-T3
630	PCTO-1C-24-K-T3	PCTO-3C-24-K-T3

36 kV	Single core	Three core
35-150	PCTO-1C-36-L-T3	PCTO-3C-36-L-T3
185-300	PCTO-1C-36-M-T3	PCTO-3C-36-M-T3
400-630	PCTO-1C-36-N-T3	PCTO-3C-36-N-T3





## DEADBREAK SEPARABLE CONNECTORS

### STRAIGHT CONNECTOR – MSCS/EC-250-A



#### Description

Separable straight connector with mechanical conductor contact. For polymeric medium voltage (MV) cables up to 12.7/22 (24) kV. Rating 250 A – Interface A.

#### Utilisation

- For connection to transformers, switch gear units, motors, etc.
- Indoor and outdoor installation. The connector is entirely protected by a watertight conductive envelope connected to earth.
- Continuous 250 A rms
- Overload 300 A rms (8 hours per 24-hour period).
- Dead-break operated.
- Voltage detection through an integrated capacitive voltage divider.

#### Cables

- Single core polymeric insulation (PE, XLPE, EPR).
- Copper or aluminium conductor, solid or stranded.
- Semi-conducting screen either extruded or taped.
- Metallic screen of copper tape, copper wires or polylam type.
- Insulation voltage up to 12.7/22 (24) kV.
- Conductor sizes: 25 to 95 mm<sup>2</sup>.  
For cables with other sizes, please contact us.

#### Standards

Generally meets the requirements of CENELEC HD 629.1 S2, IEC 60502-4, C 33-051, C 33-001.

Interfaces: CENELEC EN 50180 & EN 50181.

Mechanical conductor contact: IEC 61238-1 class A.

#### Packing

Supplied as a kit of three single connectors containing all the necessary components. Shipping weight and volume (approx.) of kit: 3 kg/0.006 m<sup>3</sup>.



#### Other products

- Associated products such as bushing FMBOm-250, FMBOh-250 for separable connectors 250 A and accessories interface A.
- Separable elbow connector MSCE/EC-250-A.

#### Installation features

- For voltage class 24 kV, one product reference only allows to cover cross from 25 mm<sup>2</sup> to 95 mm<sup>2</sup>, copper or aluminium conductor.
- No need for special tools, no heating, taping or filling.
- Vertical, angled or inverted position.
- No minimum distance between phases.
- Individual clamping by stainless steel brace.
- The three phases may also be locked together and to the equipment by use of metallic rings (supplied on request, separately or already fitted onto the molded groove).
- Energizing may take place immediately after the connector is plugged on its mating bushing, dead-end plug.
- An unplugged connector must never be energized.



## DEADBREAK SEPARABLE CONNECTORS

### SELECTION GUIDE - MSCS/EC-250-A

Voltage $U_m$	Diameter over insulation (mm)		Conductor size (mm <sup>2</sup> )* <sup>1</sup>		Kit reference
	Min.	Max.	Min.	Max.	
12 kV	11.8	23.2	25	95	MSCS/EC-250-A-12-25/95* <sup>2</sup>
17 kV	11.8	23.2	25	95	MSCS/EC-250-A-17-25/95* <sup>2</sup>
24 kV	17.2	25.0	25	95	MSCS/EC-250-A-24-25/95

\*<sup>1</sup> For guidance only. \*<sup>2</sup> Models with adapters.

1. Select the kit corresponding to the insulation voltage  $U_m$  in kV and to the diameter over cable insulation.
2. Select suitable earthing device.

#### Example:

1x50 mm<sup>2</sup>, 22 kV polymeric cable, diameter over insulation 21.5 mm, with copper wire screen, aluminium conductor:  
*MSCS/EC-250-A-24-T3-25/95.*

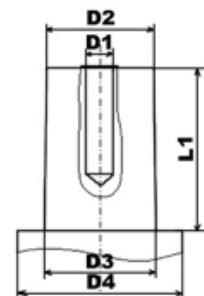
### EARTHING DEVICE

Type of metallic screen of cable	Reference
Polyam	T1
Copper tape	T2
Copper wires	T3

### INTERFACE FOR SEPARABLE CONNECTORS - TYPE A

According to CENELEC EN 50180 & EN 50181. Medium Voltage (MV)

Insulator voltage:	24 kV
Continuous current:	250 A
D1	Bore: Ø 7.9 mm, depth 32 mm
D2	Ø 31 mm
D3	Ø 32.5 mm
D4	Ø 48.5 mm
L1	48 mm
Utilisation	250 A Sliding contact 12 & 24 kV



## DEADBREAK SEPARABLE CONNECTORS

### STRAIGHT CONNECTOR - MSCS/EC-400-B



#### Description

Separable straight connector with mechanical conductor contact. For polymeric medium voltage (MV) cables up to 19/33 (36) kV. Rating 400 A - Interface B.

#### Utilisation

- For connection to transformers, switch gear units, motors, etc.
- Indoor and outdoor installation. The connector is entirely protected by a watertight conductive envelope connected to earth.
- Continuous 400 A rms.
- Overload 600 A rms (8 hours per 24-hour period).
- Dead-break operated.
- Voltage detection through an integrated capacitive voltage divider.

#### Cables

- Single core polymeric insulation (PE, XLPE, EPR).
- Copper or aluminium conductor, solid or stranded.
- Semi-conducting screen either extruded or taped.
- Metallic screen of copper tape, copper wires or polylam type.
- Insulation voltage up to 19/33 (36) kV.
- Conductor sizes: 25 to 240 mm<sup>2</sup>.  
For cables with other sizes, please contact us.

#### Standards

Generally meets the requirements of CENELEC HD 629.1 S2, IEC 60502-4, IEEE 386, C 33-051.

Interfaces: CENELEC EN 50180 & EN 50181.

Mechanical conductor contact: IEC 61238-1 class A.

#### Packing

Supplied as a kit of three single connectors containing all the necessary components. Shipping weight and volume (approx.) of kit: 4.5 kg/0.01 m<sup>3</sup>.



#### Other products

- Associated products such as bushing FMB0m-400 and accessories for separable connectors 400 A, interface B.
- Separable elbow connector MSCE/EC-400-B.

#### Installation features

- The screen break design enables cable outer sheath testing without removing or dismantling the connector.
- No need for special tools, no heating, taping or filling.
- No minimum distance between phases.
- Individual clamping by stainless steel brace.
- Energizing may take place immediately after the connector is plugged on its mating bushing, dead-end plug.
- An unplugged connector must never be energized.

## DEADBREAK SEPARABLE CONNECTORS

### SELECTION GUIDE – MSCS/EC-400-B

Voltage $U_m$	Diameter over insulation (mm)		Conductor size (mm <sup>2</sup> )*		Kit reference
	Min.	Max.	Min.	Max.	
12 kV	13.0	22.3	25	120	MSCS/EC-400-B-12-rA-25/120
	16.1	26.3	95	240	MSCS/EC-400-B-12-rB-95/240
17 kV	13.0	22.3	25	70	MSCS/EC-400-B-17-rA-25/70
	16.1	26.3	35	120	MSCS/EC-400-B-17-rB-35/120
	20.2	30.8	95	240	MSCS/EC-400-B-17-rC-95/240
24 kV	16.1	26.3	25	150	MSCS/EC-400-B-24-rB-25/150
	16.1	26.3	70	185	MSCS/EC-400-B-24-rB-70/185
	20.2	30.8	95	240	MSCS/EC-400-B-24-rC-95/240
	22.7	33.0	95	240	MSCS/EC-400-B-24-rD-95/240
36 kV	20.2	30.8	25	95	MSCS/EC-400-B-36-rC-25/95
	22.7	33.0	35	120	MSCS/EC-400-B-36-rD-35/120
	25.6	35.3	70	240	MSCS/EC-400-B-36-rE-70/240

\* For guidance only.

1. Select the kit corresponding to the insulation voltage  $U_m$  in kV and to the diameter over cable insulation.
2. Select suitable earthing device.

#### Example:

1x50 mm<sup>2</sup>, 20 kV polymeric cable, diameter over insulation 21.5 mm, with copper wire screen, aluminium conductor:  
 MSCS/EC-400-B-24-rB-T3-25/150.

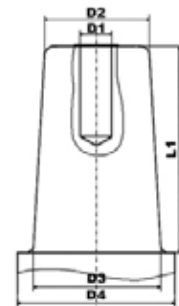
#### EARTHING DEVICE

Type of metallic screen of cable	Reference
Polyam	T1
Copper tape	T2
Copper wires	T3

### INTERFACE FOR SEPARABLE CONNECTORS – TYPE B2

According to CENELEC EN 50180 & EN 50181. Medium Voltage (MV)

Insulator voltage:	36 kV
Continuous current:	400 A
D1	Bore: Ø 14 mm, depth 40 mm
D2	Ø 46 mm
D3	Ø 56 mm
D4	Ø 70 mm
L1	90 mm
Utilisation	400 A Sliding contact 12, 24 & 36 kV



## DEADBREAK SEPARABLE CONNECTORS

### STRAIGHT CONNECTOR - FMCS-400



#### Description

Separable straight connector. For polymeric medium voltage (MV) cables up to 19/33 (36) kV. Rating 400 A - Interface B.

#### Utilisation

- For connection to transformers, switch gear units, motors, etc.
- Indoor and outdoor installation. The connector is entirely protected by a watertight conductive envelope connected to earth.
- Continuous 400 A rms.
- Overload 600 A rms (8 hours per 24-hour period).
- Dead-break operated.
- Voltage detection through an integrated capacitive voltage divider.

#### Cables

- Single core polymeric insulation (XLPE).
- Copper or aluminium conductor, solid or stranded.
- Semi-conducting screen either extruded or taped.
- Metallic screen of copper tape, copper wires or polylam type.
- Insulation voltage up to 19/33 (36) kV.
- Conductor sizes: 25 to 300 mm<sup>2</sup>.  
For cables with other sizes, please contact us.

#### Standards

Generally meets the requirements of CENELEC HD 629.1 S2, IEC 60502-4, C 33-051.

Interfaces: CENELEC EN 50180 & EN 50181.

#### Packing

Supplied as a kit of three single connectors containing all the necessary components. Shipping weight and volume (approx) of kit: 4.5 kg/0.01 m<sup>3</sup>.



#### Other products

- Associated products such as bushing FMB0m-400 and accessories for separable connectors 400 A, interface B.

#### Installation features

- No need for special tools, no heating, taping or filling.
- Vertical, angled or inverted position.
- No minimum distance between phases.
- Energizing may take place immediately after the connector is plugged on its mating bushing, dead-end plug.
- Individual clamping by stainless steel brace.
- An unplugged connector must never be energized.

## DEADBREAK SEPARABLE CONNECTORS

### SELECTION GUIDE – FMCS-400

Kit reference	Diameter over insulation (mm)		Voltage $U_m$							
			12 kV		17.5 kV		24 kV		36 kV	
	Min.	Max.	Conductor size (mm <sup>2</sup> )* <sup>1</sup>							
			Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
FMCS-400-Z	18.5	20.5	70	95	50	70	35	50	-	-
FMCS-400-A	19.9	21.9	95	120	70	95	50	70	-	25
FMCS-400-B	21.4	23.5	120	150	95	120	70	95	25	35
FMCS-400-C	22.9	25.1	150	185	120	150	95	120	35	50
FMCS-400-D	24.4	26.6	185	240	150	185	120	150	50	70
FMCS-400-E	26.0	28.3	240	300*	185	240	150	185	70	95
FMCS-400-F	27.8	30.4	300* <sup>2</sup>	-	240	300*	185	-	95	120
FMCS-400-G	29.8	32.7	-	-	300* <sup>2</sup>	-	240	240	120/150	150
FMCS-400-H	31.8	35.3	-	-	-	-	300* <sup>2</sup>	300* <sup>2</sup>	185	240
FMCS-400-J	34.1	38.3	-	-	-	-	-	-	240	300* <sup>2</sup>

\*<sup>1</sup> For guidance only. \*<sup>2</sup> For 300 sqmm, please contact us.

**Note!** For cables with bonded outer semi-conducting layer: carefully check the diameter over insulation after removal of the outer semi-conducting layer.

1. Select the kit corresponding to the diameter over cable insulation.
2. Specify the insulation voltage  $U_m$  in kV.
3. Select suitable earthing device.
4. Select suitable lug.

#### Example:

1x95 mm<sup>2</sup>, 33 kV polymeric cable, diameter over insulation 29.3 mm, with copper wire screen, aluminium conductor:  
**FMCS-400-F-36-T3-A95.**

EARTHING DEVICE	
Type of metallic screen of cable	Reference
Polyam	T1
Copper tape	T2
Copper wires	T3

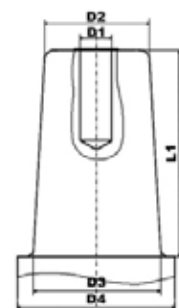
LUG	
Type of conductor	Reference
Copper	C + conductor size in mm <sup>2</sup>
Aluminium	A + conductor size in mm <sup>2</sup>
Aluminium* + lug for hexagonal crimping required	A + conductor size in mm <sup>2</sup> + DIN

\*available for deep indenting a hexagonal crimping. Unless other wise stated, standard delivery will be with deep indenting. Suitable tooling to be used.

### INTERFACE FOR SEPARABLE CONNECTORS – TYPE B2

According to CENELEC EN 50180 & EN 50181. Medium Voltage (MV)

Insulator voltage:	36 kV
Continuous current:	400 A
D1	Bore: Ø 14 mm, depth 40 mm
D2	Ø 46 mm
D3	Ø 56 mm
D4	Ø 70 mm
L1	90 mm
Utilisation	400 A Sliding contact 12, 24 & 36 kV



## DEADBREAK SEPARABLE CONNECTORS

### ELBOW CONNECTOR – MSCE/EC-250-A



#### Description

Separable elbow connector with mechanical conductor contact. For polymeric medium voltage (MV) cables up to 12.7/22 (24) kV. Rating 250 A – Interface A.

#### Utilisation

- For connection to transformers, switch gear units, motors, etc.
- Indoor and outdoor installation. The connector is entirely protected by a watertight conductive envelope connected to earth.
- Continuous 250 A rms
- Overload 300 A rms (8 hours per 24-hour period).
- Dead-break operated.
- Voltage detection through an integrated capacitive voltage divider.

#### Cables

- Single core polymeric insulation (PE, XLPE, EPR).
- Copper or aluminium conductor, solid or stranded.
- Semi-conducting screen either extruded or taped.
- Metallic screen of copper tape, copper wires or polylam type.
- Insulation voltage up to 12.7/22 (24) kV.
- Conductor sizes: 25 to 95 mm<sup>2</sup>.  
For cables with other sizes, please contact us.

#### Standards

Generally meets the requirements of CENELEC HD 629.1 S2, IEC 60502-4, C 33-051, C 33-001.

Interfaces: CENELEC EN 50180 & EN 50181.

Mechanical conductor contact: IEC 61238-1 class A.

#### Packing

Supplied as a kit of three single connectors containing all the necessary components. Shipping weight and volume (approx) of kit: 3 kg/0.006 m<sup>3</sup>.



#### Other products

- Associated products such as bushing FMBOm-250, FMBOh-250 and accessories for separable connectors 250A, interface A.
- Separable straight connector MSCS/EC-250-A.

#### Installation features

- For voltage class 24 kV, one product reference only allows to cover cross from 25 mm<sup>2</sup> to 95 mm<sup>2</sup>, copper or aluminium conductor.
- No need for special tools, no heating, taping or filling.
- Vertical, angled or inverted position.
- No minimum distance between phases.
- Individual clamping by stainless steel brace.
- The three phases may also be locked together and to the equipment by use of metallic rings (supplied on request, separately or already fitted onto the molded groove).
- Energizing may take place immediately after the connector is plugged on its mating bushing, dead-end plug.
- An unplugged connector must never be energized.

## DEADBREAK SEPARABLE CONNECTORS

### SELECTION GUIDE - MSCE/EC-250-A

Voltage $U_m$	Diameter over insulation (mm)		Conductor size (mm <sup>2</sup> )* <sup>1</sup>		Kit reference
	Min.	Max.	Min.	Max.	
12 kV	11.8	23.2	25	95	MSCE/EC-250-A-12-25/95* <sup>2</sup>
17 kV	11.8	23.2	25	95	MSCE/EC-250-A-17-25/95* <sup>2</sup>
24 kV	17.2	25.0	25	95	MSCE/EC-250-A-24-25/95

\*<sup>1</sup> For guidance only. \*<sup>2</sup> Models with adapters.

1. Select the kit corresponding to the insulation voltage  $U_m$  in kV and to the diameter over cable insulation.
2. Select suitable earthing device.

#### Example:

1x50 mm<sup>2</sup>, 22 kV polymeric cable, diameter over insulation 21.5 mm, with copper wire screen, aluminium conductor:  
MSCE/EC-250-A-24-T3-25/95.

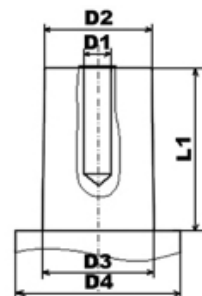
### EARTHING DEVICE

Type of metallic screen of cable	Reference
Polyam	T1
Copper tape	T2
Copper wires	T3

### INTERFACE FOR SEPARABLE CONNECTORS - TYPE A

According to CENELEC EN 50180 & EN 50181. Medium Voltage (MV)

Insulator voltage:	24 kV
Continuous current:	250 A
D1	Bore: Ø 7.9 mm, depth 32 mm
D2	Ø 31 mm
D3	Ø 32.5 mm
D4	Ø 48.5 mm
L1	48 mm
Utilisation	250 A Sliding contact 12 & 24 kV



## DEADBREAK SEPARABLE CONNECTORS

### ELBOW CONNECTOR – FMCE-400



#### Description

Separable elbow connector. For polymeric medium voltage (MV) cables up to 19/33 (36) kV. Rating 400 A – Interface B.

#### Utilisation

- For connection to transformers, switch gear units, motors, etc.
- Indoor and outdoor installation. The connector is entirely protected by a watertight conductive envelope connected to earth.
- Continuous 400 A rms.
- Overload 600 A rms (8 hours per 24-hour period).
- Dead-break operated.
- Voltage detection through an integrated capacitive voltage divider.

#### Cables

- Single core polymeric insulation (XLPE).
- Copper or aluminium conductor, solid or stranded.
- Semi-conducting screen either extruded or taped.
- Metallic screen of copper tape, copper wires or polylam type.
- Insulation voltage up to 19/33 (36) kV.
- Conductor sizes: 25 to 240 mm<sup>2</sup>.  
For cables with other sizes, please contact us.

#### Standards

Generally meets the requirements of CENELEC HD 629.1 S2, IEC 60502-4, C 33-051, C 33-001.

Interfaces: CENELEC EN 50180 & EN 50181.

#### Packing

Supplied as a kit of three single connectors containing all the necessary components. Shipping weight and volume (approx) of kit: 6 kg/0.013 m<sup>3</sup>.



#### Other products

- Associated products such as bushing FMB0m-400 and accessories for separable connectors 400 A, interface B.

#### Installation features

- No need for special tools, no heating, taping or filling.
- Vertical, angled or inverted position.
- No minimum distance between phases.
- Energizing may take place immediately after the connector is plugged on its mating bushing, dead-end plug.
- Individual clamping by stainless steel brace.
- An unplugged connector must never be energized.



## DEADBREAK SEPARABLE CONNECTORS

### SELECTION GUIDE – FMCE-400

Kit reference	Diameter over insulation (mm)		Voltage $U_m$							
			12 kV		17.5 kV		24 kV		36 kV	
	Min. Max.		Conductor size (mm <sup>2</sup> )* <sup>1</sup>							
			Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
FMCE-400-Z	18.5	20.5	70	95	50	70	35	50	-	-
FMCE-400-A	19.9	21.9	95	120	70	95	50	70	-	25
FMCE-400-B	21.4	23.5	120	150	95	120	70	95	25	35
FMCE-400-C	22.9	25.1	150	185	120	150	95	120	35	50
FMCE-400-D	24.4	26.6	185	240	150	185	120	150	50	70
FMCE-400-E	26.0	28.3	240	300*	185	240	150	185	70	95
FMCE-400-F	27.8	30.4	300* <sup>2</sup>	-	240	300* <sup>2</sup>	185	-	95	120
FMCE-400-G	29.8	32.7	-	-	-	-	240	240	120/150	150
FMCE-400-H	31.8	35.3	-	-	-	-	300* <sup>2</sup>	300* <sup>2</sup>	185	240
FMCE-400-J	34.1	38.3	-	-	-	-	-	-	240	300* <sup>2</sup>

\*<sup>1</sup> For guidance only. \*<sup>2</sup> For 300 sqmm, please contact us.

**Note!** For cables with bonded outer semi-conducting layer: carefully check the diameter over insulation after removal of the outer semi-conducting layer.

1. Select the kit corresponding to the diameter over cable insulation.
2. Specify the insulation voltage  $U_m$  in kV.
3. Select suitable earthing device.
4. Select suitable lug.

#### Example:

1x95 mm<sup>2</sup>, 33 kV polymeric cable, diameter over insulation 29.5 mm, with copper wire screen, aluminium conductor:  
*FMCE-400-F-36-T3-A95.*

EARTHING DEVICE	
Type of metallic screen of cable	Reference
Polyam	T1
Copper tape	T2
Copper wires	T3

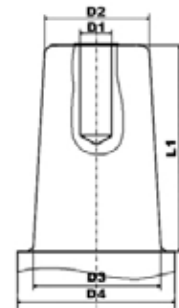
LUG	
Type of conductor	Reference
Copper	C + conductor size in mm <sup>2</sup>
Aluminium	A + conductor size in mm <sup>2</sup>
Aluminium* + lug for hexagonal crimping required	A + conductor size in mm <sup>2</sup> + DIN

\*available for deep indenting a hexagonal crimping. Unless other wise stated, standard delivery will be with deep indenting. Suitable tooling to be used.

### INTERFACE FOR SEPARABLE CONNECTORS – TYPE B2

According to CENELEC EN 50180 & EN 50181. Medium Voltage (MV)

Insulator voltage:	36 kV
Continuous current:	400 A
D1	Bore: Ø 14 mm, depth 40 mm
D2	Ø 46 mm
D3	Ø 56 mm
D4	Ø 70 mm
L1	90 mm
Utilisation	400 A Sliding contact 12, 24 & 36 kV



## DEADBREAK SEPARABLE CONNECTORS

### TEE CONNECTOR – MSCT/EC-630-C



#### Description

Separable tee connector with mechanical conductor contact. For polymeric medium voltage (MV) cables up to 19/33 (36) kV. Rating 630 A – Interface C.

#### Utilisation

- For connection to transformers, switch gear units, motors, etc.
- Indoor and outdoor installation. The connector is entirely protected by a watertight conductive envelope connected to earth.
- Continuous 630 A rms.
- Overload 900 A rms (8 hours per 24-hour period).
- Dead-break operated.
- Voltage detection through an integrated capacitive voltage divider.

#### Cables

- Single core polymeric insulation (PE, XLPE, EPR).
- Copper or aluminium conductor, solid or stranded.
- Semi-conducting screen either extruded or taped.
- Metallic screen of copper tape, copper wires or polylam type.
- Insulation voltage up to 19/33 (36) kV.
- Conductor sizes: 25 to 300 mm<sup>2</sup>.  
For cables with other sizes, please contact us.

#### Standards

Generally meets the requirements of CENELEC HD 629.1 S2, IEC 60502-4, C 33-051.

Interfaces: CENELEC EN 50180 & EN 50181.

Mechanical conductor contact: IEC 61238-1 class A.

#### Packing

Supplied as a kit of three single connectors containing all the necessary components. Shipping weight and volume (approx) of kit: 6 kg/0.013 m<sup>3</sup>.



#### Other products

- Associated products such as bushing FMB0m-400 and accessories for separable connectors 630 A, interface C.

#### Installation features

- The screen break design enables cable outer sheath testing without removing or dismantling the connector.
- No need for special tools, no heating, taping or filling.
- Vertical, angled or inverted position.
- No minimum distance between phases.
- Energizing may take place immediately after the connector is plugged on its mating bushing, dead-end plug.
- An unplugged connector must never be energized.

## DEADBREAK SEPARABLE CONNECTORS

### SELECTION GUIDE - MSCT/EC-630-C

Voltage $U_m$	Diameter over insulation (mm)		Conductor size (mm <sup>2</sup> )*		Kit reference
	Min.	Max.	Min.	Max.	
12 kV	13.0	22.3	25	120	MSCT/EC-630-C-12-rA-25/120
	16.1	26.3	95	240	MSCT/EC-630-C-12-rB-95/240
	22.7	33.0	185	300	MSCT/EC-630-C-12-rD-185/300
17 kV	13.0	22.3	25	70	MSCT/EC-630-C-17-rA-25/70
	16.1	26.3	35	120	MSCT/EC-630-C-17-rB-35/120
	20.2	30.8	95	240	MSCT/EC-630-C-17-rC-95/240
	25.6	35.3	185	300	MSCT/EC-630-C-17-rE-185/300
24 kV	16.1	26.3	25	150	MSCT/EC-630-C-24-rB-25/150
	16.1	26.3	70	150	MSCT/EC-630-C-24-rB-70/150
	20.2	30.8	95	240	MSCT/EC-630-C-24-rC-95/240
	22.7	33.0	95	240	MSCT/EC-630-C-24-rD-95/240
	25.6	35.3	185	300	MSCT/EC-630-C-24-rE-185/300
36 kV	20.2	30.8	25	95	MSCT/EC-630-C-36-rC-25/95
	22.7	33.1	35	120	MSCT/EC-630-C-36-rD-35/120
	25.6	35.3	70	240	MSCT/EC-630-C-36-rE-70/240
	30.5	40.6	150	300	MSCT/EC-630-C-36-rF-150/300

\* For guidance only.

1. Select the kit corresponding to the insulation voltage  $U_m$  in kV and to the diameter over cable insulation.
2. Select suitable earthing device.

#### Example:

1x95 mm<sup>2</sup>, 20 kV polymeric cable, diameter over insulation 21.5 mm, with copper wire screen, aluminium conductor:  
*MSCT/EC-630-C-24-rC-T3-95/240.*

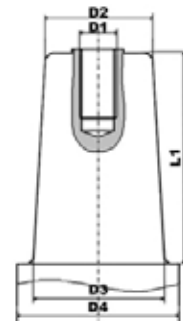
#### EARTHING DEVICE

Type of metallic screen of cable	Reference
Polyam	T1
Copper tape	T2
Copper wires	T3

### INTERFACE FOR SEPARABLE CONNECTORS - TYPE C1

According to CENELEC EN 50180 & EN 50181. Medium Voltage (MV)

Insulator voltage:	36 kV
Continuous current:	630 A
D1	Thread: M16, depth 29 mm
D2	Ø 46 mm
D3	Ø 56 mm
D4	Ø 70 mm
L1	90 mm
Utilisation	630 A Bolted contact 12, 24 & 36 kV



## SEPARABLE CONNECTORS

### ACCESSORIES FOR SERIES 400



#### Description

Accessories for medium voltage separable connectors for series 400, rating 400 A and 630 A. Interfaces B and C.

**Note!** Before using these products, you must check if it is suitable for your intended application. You assume all risks and liability associated with such use. If any doubt, please consult us.

#### DEAD-END RECEPTACLE - FMR-400 / FMRs-400

- EPDM moulding with semi-conducting EPDM jacket. Provides a dead-end facility for insulating bushings.
- Operated when de-energized.
- Watertight, slipped on with silicone grease.
- Supplied with locking brace.
- Packing: per piece.



#### INSULATING PLUG - FMPI-400

- Epoxy resin moulding which provides a dead-end facility for separable tee connectors type FMCT-400 or FMCTs-400.
- Operated when de-energized.
- Includes a capacitive voltage divider that is protected by a cap of semi-conducting EPDM during normal use.
- Packing: per piece.



#### SELECTION GUIDE - FMR-400 / FMRs-400

Voltage $U_m$	Reference	
	Interface B	Interface C
12 kV	FMR-400-12	FMRs-400-12*
24 kV	FMR-400-24	FMRs-400-24*
36 kV	FMR-400-36	FMRs-400-36*

\*Suffix "s" = screw type (for bushings with interface type C).

#### SELECTION GUIDE - FMPI-400

Voltage $U_m$	Reference
12 kV	FMPI-400-12
24 kV	FMPI-400-24
36 kV	FMPI-400-36

#### STRAIGHT CONNECTING PLUG - FMPCs-400

- Epoxy resin moulded over a copper rod. For connection of two tee connectors FMCT-400, FMCTs-400 or FMCTXs-630/C in combinations such as disconnectable joint, tee off or dual cable supply.
- Connection to rod by the clamping screws of the connectors. Integral reconstitution of insulation. Protection through screen continuity of connected items.
- Operated when de-energized.
- Packing: per piece.



#### SELECTION GUIDE - FMPCs-400

Voltage $U_m$	Reference		
	Interface C/C	Interface B/B	Interface B/C
12 kV	FMPCs-400-C/C-12	FMPCs-400-B/B-12	FMPCs-400-C/C-12
24 kV	FMPCs-400-C/C-24	FMPCs-400-B/B-24	FMPCs-400-C/C-24
36 kV	FMPCs-400-C/C-36	-	-

## SEPARABLE CONNECTORS



### STAND-OFF PLUG - FMPS-400 / FMPSs-400

- EPDM moulding designed to support and dead-end separable connectors when removed from the equipment.
- The stand-off plug is equipped with a metallic bracket. The part in semi-conducting EPDM provides the electrical continuity with the outer envelope of the separable connector.
- Operated when de-energized.
- Packing: per piece.



#### SELECTION GUIDE - FMPS-400 / FMPSs-400

Voltage $U_m$	Reference	
	Interface B	Interface C
12 kV	FMPS-400-12	FMPSs-400-12*
24 kV	FMPS-400-24	FMPSs-400-24*
36 kV	FMPS-400-36	FMPSs-400-36*

\*Suffix "s" = screw type (for interface type C).

### EARTHING PLUG - FMPE-400 / FMPEs-400

- EPDM moulding designed to support and earth separable connectors when removed from the equipment
- The earthing-plug is equipped with a metallic bracket.
- Packing: per piece.



#### SELECTION GUIDE - FMPE-400 / FMPEs-400

Reference	
Interface B	Interface C
FMPE-400	FMPEs-400*

\*Suffix "s" = screw type (for interface type C).

### TEST ROD - FMTR-400

- For testing or earthing of cables equipped with separable tee connectors.
- Screwed onto threaded part of contact pin or on clamping screw of tee connectors.
- Packing: per piece.



#### SELECTION GUIDE - FMTR-400

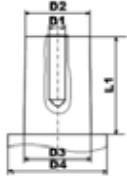
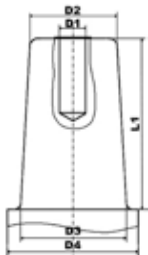
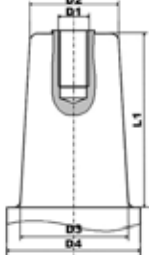
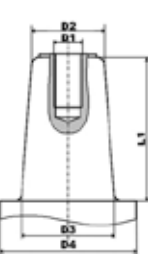
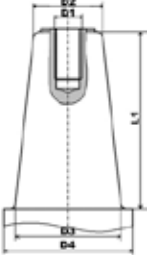
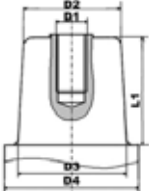
Voltage $U_m$	Reference
12 and 24 kV	FMTR-400

## SEPARABLE CONNECTORS

### INTERFACES

#### Description

Interfaces for separable connectors.  
Medium voltage (MV).  
Up to 36 kV.

INTERFACE FOR SEPARABLE CONNECTORS						
According to CENELEC EN 50180 & EN 50181						Prysmian specific
Type:	A	B2	C1	D1 / D2	E1 / E2	Z
Drawings:						
Insulator voltage:	24 kV	36 kV	36 kV	24 kV	36 kV	36 kV
Continuous current:	250 A	400 A	630 A	1250 A	1250 A	630 A
D1	Bore: Ø 7.9 mm, depth 32 mm	Bore: Ø 14 mm, depth 40 mm	Thread: M16, depth 29 mm	Thread: M16, depth 29 mm	Thread: M16, depth 29 mm	Thread: M16, depth 29 mm
D2	Ø 31 mm	Ø 46 mm	Ø 46 mm	Ø 39.9 mm	Ø 39.9 mm	Ø 49.9 mm
D3	Ø 32.5 mm	Ø 56 mm	Ø 56 mm	Ø 52.1 mm	Ø 61.5 mm	Ø 56 mm
D4	Ø 48.5 mm	Ø 70 mm	Ø 70 mm	Ø 76.2 mm	Ø 76.2 mm	Ø 70 mm
L1	48 mm	90 mm	90 mm	81 mm	103.7 mm	55 mm
Utilisation:	250 A Sliding contact 12 & 24 kV	400 A Sliding contact 12, 24 & 36 kV	630 A Bolted contact 12, 24 & 36 kV	1250 A Bolted contact 12 & 24 kV	1250 A Bolted contact 36 kV	630 A Bolted contact 12, 24 & 36 kV Special interface
Remarks:	-	Same dimensions as interface C.	Same dimensions as Interface B.	-	N.A in Prysmian product range.	Profile identical to the interface C, but shortened (the angle is the same).



# Linking the future

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