# SEPARABLE STRAIGHT CONNECTOR (INTERFACE B/400A)

**For polymeric cables – Deadbreak operation – with mechanical conductor contact**

elascon EC

REFERENCE: **MSCS/EC-400-B**

## UTILISATION

- For connection of polymeric MV cables to transformers, switchgear 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).
- Operated when de-energized.

INTERFACE **B/400A**

## CABLES

- Single 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 18/30 (36) kV.
- Conductor sizes: up to 24 kV ➡ 35 to 300 mm²
  36 kV ➡ 35 to 240 mm²

## STANDARDS

- Generally meets the requirements of CENELEC HD 629.1 S2 – IEC 60502-4 – NF C 33-051 – NF C 33-001.
- Interfaces: CENELEC EN 50180 – EN 50181.
- Mechanical conductor contact: IEC 61238-1 class A, HN 68-S-91.

## QUALITY ASSURANCE

- The company has been assessed by third party to be in conformity with the requirements of the standard ISO 9001-EN 29001 version 2000.

## PACKING

- Supplied as a kit of 3 single connectors containing all the necessary components.
- Shipping weight and volume (approx) of kit : 4.5 kg / 0.01 $m^3$

## 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 into its bushing, dead-end plug ....
- An unplugged connector must not be energized.

## OTHER PRODUCTS

- Associated products such as bushing FMBOs-400 and accessories.

THORNE & DERRICK INTERNATIONAL
Thorne & Derrick
+44 (0) 191 410 4292
www.powerandcables.com

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## DESCRIPTION

**Rep 1** **Multi-section mechanical contact piece Al/Cu.**

Mechanical lug with tinned copper contact pin; designed with locking ring.
Cover the section from 35 mm² to 300 mm².
Copper or aluminium core.
No need for special tools.

**Rep 2** **Semi-conducting inner screen.**

Insert of semi-conducting **EPDM** enclosing the mechanical contact piece so that ionization of the air remaining trapped inside is prevented.

**Rep 3** **Semi-conducting outer envelope (thickness 3mm).**

Jacket made of semi-conducting **EPDM**. Its design provides relief of electrical stress as does a cable screen. Its connection to the cable screen ensures that the assembly is maintained at earth potential.
It allows to evacuate the short-circuit currents.

**Rep 4** **Insulating body.**

Moulded from insulating **EPDM**, for integral reconstitution of insulation. It maintains a uniform contact pressure on the cable insulation and on the bushing interface, providing an excellent moisture seal.

**Rep 5** **Test point.**

Electrically protected by a cap made of semi-conducting **EPDM**. A capacitive voltage divider allows the checking of absence of voltage before removing the connector.

**Rep 6** **Cap**

Moulded semi-conducting **EPDM**. Protects and earthes the test point during normal use.

**Rep 7** **Locking brace.**

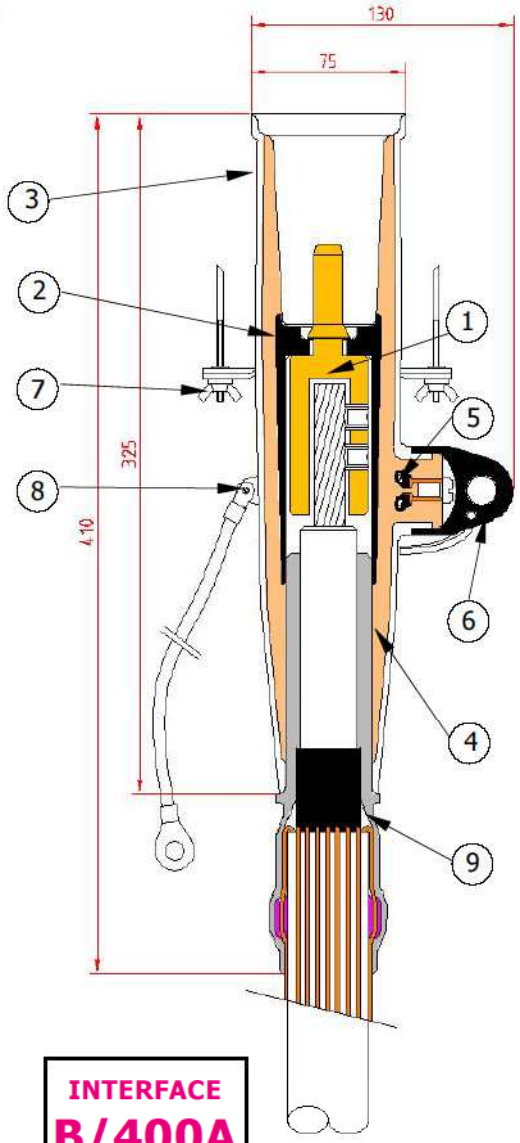
Stainless steel brace fastening the connector onto its mating bushing or other mating accessories.

**Rep 8** **Earthing eye.**

For connection of the outer envelope to the metallic cable screen.

**Rep 9** **Moulded high permittivity reducer.**

Adapt the connector body to the different cables insulations diameters.
Ensures watertight protection of the earthing device and enables the cable screen test.




**INTERFACE B/400A**

**100% of the separable connectors bodies are individually tested in factory - Industrial power frequency and partial discharges -**

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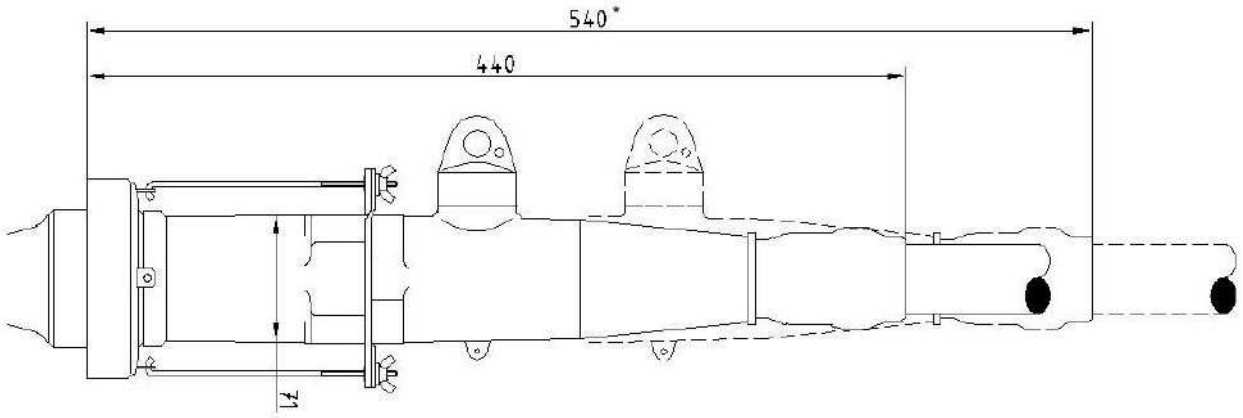
## SELECTION GUIDE

**Overall dimensions (installed on bushing) in mm**




(*) Minimum dimension required for disconnection

**1.** Select in the table below the kit model corresponding to the diameter over cable insulation and to the insulation voltage Um in kV.
**For cables with reduced insulation thickness or other cross-sections, please contact us.**

| Voltage | Diam. Over insulation in mm | | Conductor size in mm² (for guidance only) | | Kit reference |
|---|---|---|---|---|---|
| | Min. | Max. | | | |
| 12 kV | 13 | 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 | 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 | 33,1 | 35 | 120 | MSCS/EC-400-B-36-rD-35/120 |
| | 25,6 | 35,3 | 70 | 240 | MSCS/EC-400-B-36-rE-70/240 |

**2.** Select suitable earthing device in the table below.

| Earthing Device Reference | Type of Metallic Screen of Cable |
|---|---|
| T1 | polylam |
| T2 | Copper tape |
| T3 | Copper wires |

## EXAMPLE OF ORDER

20 kV polymeric cable, 1x 50 mm², diameter over insulation 21.5 mm, with copper wire screen, aluminium conductor:
**MSCS/EC-400-B-24-rB-T3-25/150.**