

Separable straight connector FMCS-400 (Interface B / 400A)

For polymeric cables - Deadbreak - Operation

Generally meets the requirement C 33-051 - HD 629.1.S2 - IEC 60502-4

Interface: CENELEC EN50180 - EN50181

formfit[®]



Medium Voltage (MV)

Up to 19/33 (36) kV

MV Separable Connectors rating 400A (Interface B)

Reference: FMCS-400



**INTERFACE
B / 400 A**

Product Application and Design

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).
- Dead break operation.
- Voltage detection through an integrated capacitive voltage divider.

Cables

- Single core polymeric insulation (XLPE).
- Copper or aluminum conductor.
- Semi-conducting screen either extruded or taped.
- Metallic screen of copper tape, copper wires or polylam type.
- Insulation voltage up to 36 kV.
- Conductor sizes: 25 mm² to 300) mm².

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 m³

Other products

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

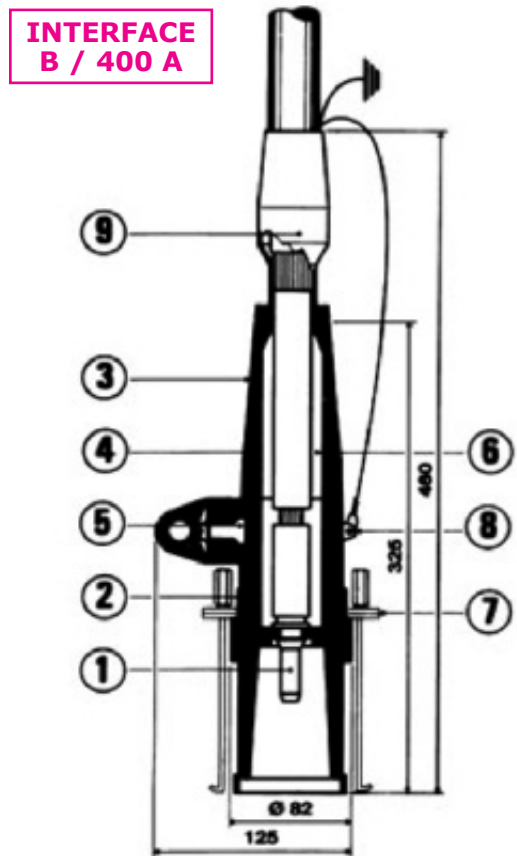
Installation features

- 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

Description

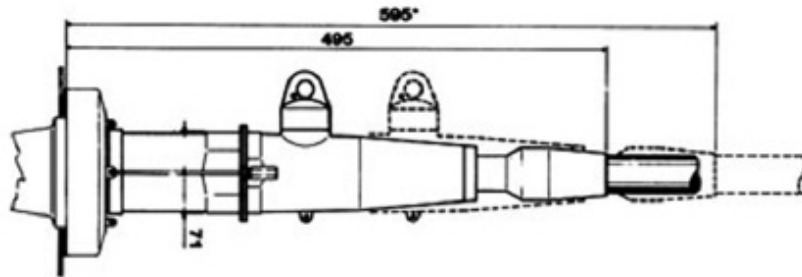
- ① **Contact piece**
 Crimped or indented lug* with copper contact pin; designed with locking ring.
- ② **Semi-conducting inner screen**
 Insert of molded semi-conducting EPDM enclosing the metallic contact piece so that the air inside is prevented.
- ③ **Semi-conducting outer envelope(thickness 3 mm)**
 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.
- ④ **Insulating body**
 Molded 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.
- ⑤ **Test point**
 Electrically protected by a cap made of semi-conducting EPDM. A capacitive voltage divider enables to check the absence of voltage before disconnecting the connector.
- ⑥ **Adapter**
 Composite EPDM molding. To adapt the connector body to the different cable sizes (cross sections).
- ⑦ **Locking brace**
 Stainless steel brace fastening the connector on its mating bushing or other accessories.
- ⑧ **Earthing eye**
 For connection of the outer envelope to the metallic screen of the cable.
- ⑨ **Earth cover**
 Molded semi-conducting EPDM. Ensures watertight protection of the earthing device.

*the lug depends on conductor cross section and material (copper or aluminum)



100% of the separable connector bodies are individually tested in factory (Industrial Power Frequency and partial discharges)

Overall dimensions (installed on bushing)



Dimensions in mm

* Minimum dimension necessary to disconnect

Selection guide

1- Select in the table below the kit size corresponding to the diameter over cable insulation of cable.

| Ø over insulation in mm | | Kit Reference | Conductor size in mm ² (for guidance only) | | | | | | | |
|-------------------------|------|-------------------|--|---------|-------|-------|-------|---------|-------|-------|
| | | | Highest voltage in Um | | | | | | | |
| Min | Max | | 12 kV | 17,5 kV | 24 kV | 36 kV | 12 kV | 17,5 kV | 24 kV | 36 kV |
| 18,5 | 20,5 | FMCS-400-Z | 70 | 95 | 50 | 70 | 35 | 50 | | |
| 19,9 | 21,9 | FMCS-400-A | 95 | 120 | 70 | 95 | 50 | 70 | | 25 |
| 21,4 | 23,5 | FMCS-400-B | 120 | 150 | 95 | 120 | 70 | 95 | 25 | 35 |
| 22,9 | 25,1 | FMCS-400-C | 150 | 185 | 120 | 150 | 95 | 120 | 35 | 50 |
| 24,4 | 26,6 | FMCS-400-D | 185 | 240 | 150 | 185 | 120 | 150 | 50 | 70 |
| 26,0 | 28,3 | FMCS-400-E | 240 | 300* | 185 | 240 | 150 | 185 | 70 | 95 |
| 27,8 | 30,4 | FMCS-400-F | 300* | | 240 | 300* | 185 | | 95 | 120 |
| 29,8 | 32,7 | FMCS-400-G | | | 300* | | 240 | 240 | 120 | 150 |
| 31,8 | 35,3 | FMCS-400-H | | | | | 300* | 300* | 185 | 240 |
| 34,1 | 38,3 | FMCS-400-J | | | | | | | 240 | 300* |

* For 300 sqmm, please contact us.

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

2- Specify insulation voltage Um in kV:

12 - 17.5 - 24 - 36

3- Select suitable earthing device in the table below:

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

4- Select suitable lug:

4.1- indicate "C" for copper conductor

"A" for aluminium conductor (**)

4.2- indicate conducteur size in sqmm

4.3- for aluminum conductor, add "DIN" if lug for hexagonal crimping required

Example of order

1x95 mm², 33 kV cable with 29,3 mm insulation diameter and copper wire screen : **FMCS-400-F-36-T3-A95.**

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