

## SEPARABLE STRAIGHT CONNECTOR FMCS-400

for polymeric cables - Deadbreak - Serie 400 rating 400 A (with pin contact)

**formfit**

### APPLICATION

#### 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. Test by voltage detector through an inbuilt capacitive voltage divider.

#### Cables

- single core polymeric insulation (PE, XLPE, EPR...).
- copper or aluminium conductors.
- semi-conducting screen either extruded or taped.
- metallic screen of tape, wire or polylam type.
- insulation voltage up to 36 kV ( $U_m$ ).
- conductor sizes : 25 to 240 (or 300) sqmm.

### STANDARDS

Generally meets the requirements of VDE 0278 - C 33-051 - C 33-001 - HD 629-1 - IEC 60502-4.

Interfaces : CENELEC EN 50180 - EN 50181.

### QUALITY ASSURANCE

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

### 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<sup>3</sup>

### 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...
- individual clamping by stainless steel brace.



**INTERFACE  
B**

### OTHER PRODUCTS

- Associated products such as bushing FMBOm-400, and accessories.
- Additional metallic cover.

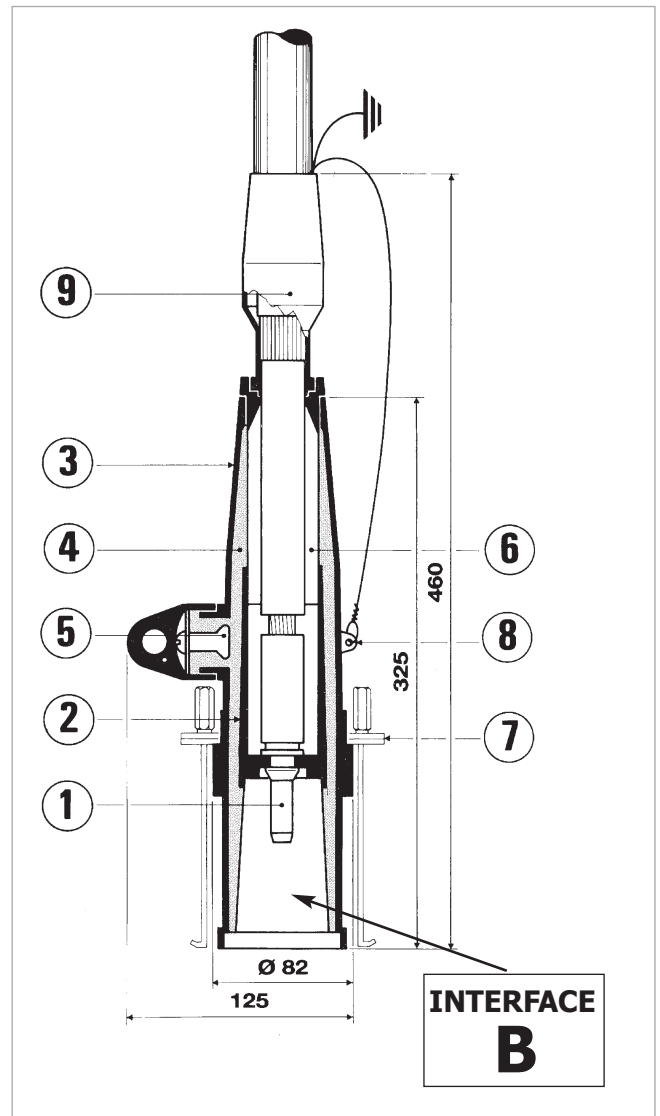
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### DESCRIPTION

- ① **Contact piece**  
Crimped or indented lug with copper contact pin; designed with locking ring.
- ② **Semi-conducting inner screen**  
Insert of moulded semi-conducting EPDM enclosing the metallic contact piece so that ionization of the air remaining trapped inside is prevented.
- ③ **Semi-conducting outer envelope**  
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**  
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.
- 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 removing the connector.
- ⑥ **Adapter**  
Composite EPDM moulding. To adapt the connector body to the different cable sizes (cross sections).
- ⑦ **Locking brace**  
Stainless steel brace fastening the connector onto 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**  
Moulded semi-conducting EPDM. Ensures watertight protection of the earthing device.



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### SELECTION GUIDE

- Select in the table below the kit model corresponding to the diameter over insulation of cable.  
**For cables with reduced insulation thickness, please contact us.**

Diam. over insulation in mm		Kit Reference	Conductor size in mm <sup>2</sup> (for guidance only)							
Min.	Max.		Highest voltage in Um							
			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 consult us.

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

- Specify insulation voltage  $U_m$  in kV :

**12 - 17.5 - 24 - 36**

- Select suitable earthing device in the table below :

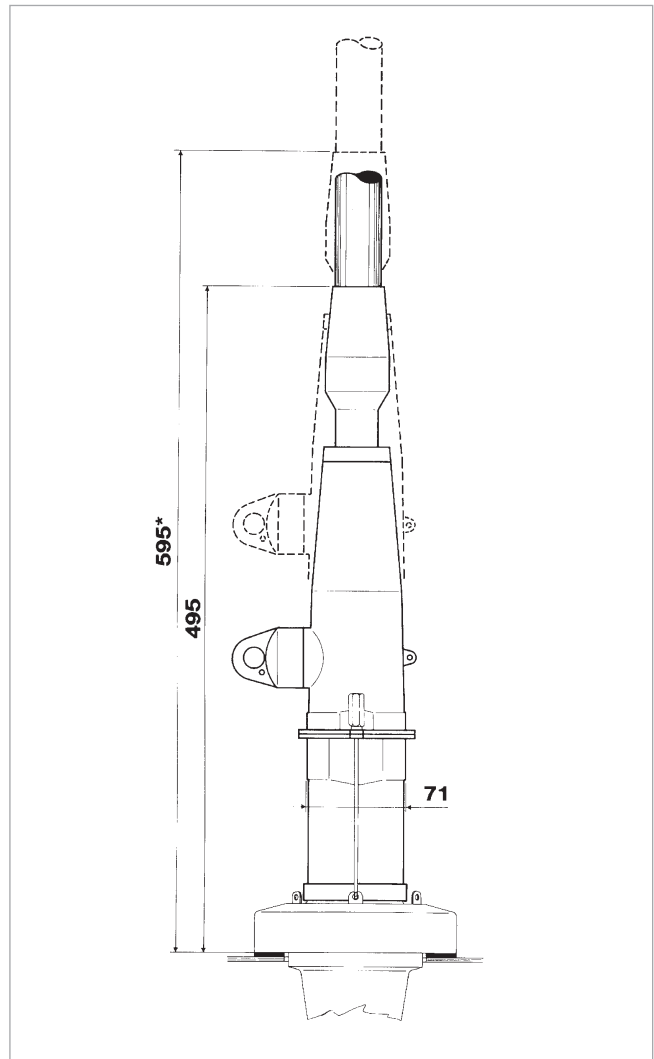
Earthing Device Reference	Type of Metallic Screen of cable
T1	polylam
T2	copper tape
T3	copper wires

- Select suitable lug :

- indicate "C" for copper conductor  
- indicate "A" for aluminium conductor
  - indicate conductor size in sqmm
  - for aluminium conductor, add "DIN" if suitable (see table below) :

Types of lugs	Aluminium	Copper	Add to Kit Ref.
Deep indenting according HN	available	N.A.	---
Hexag. crimping according DIN	available	available	for alu, add "DIN"

### OVERALL DIMENSIONS (installed on bushing)



Dimensions in mm

\* Minimum dimension required for disconnection.

### EXAMPLE OF ORDER

33 kV polymeric cable, 1 x 95 sqmm, diameter over insulation 29,3 mm, with copper wire screen, aluminium conductor, lug suitable for deep indenting :  
**FMCS-400-F-36-T3-A95.**