

SEPARABLE TEE CONNECTORS (FMCTs-400)

CHARACTERISTICS

For polymeric cable up to 36kV
non-loadbreak operation
400 series for 630A (with clamping screw)

The Prysmian range of FORMFIT® Separable Connectors has a wide range of applications including connection to transformers, switchgear units, motors etc.

Suitable for indoor and outdoor installations, the connector is entirely protected by a watertight conductive envelope connected to earth. The connectors are rated for continuous operation at 630 Amp rms, with 900 Amp rms overload (8 hours per 24 hours).

FORMFIT® 400 series of separable connectors are suitable for use with a wide range of polymeric medium voltage cables, including:

- Single core polymeric insulation (PE, XLPE, EPR etc.)
- Copper or aluminium conductors (25-300mm²)
- Semi-conducting screen either extruded or taped
- Metallic screen, wire or polylam type
- Insulation voltage up to 36kV (Um)

FEATURES & BENEFITS

- No need for special tools, heating, taping or filling
- Vertical, angled or inverted position
- No minimum distance between phases
- Energising may take place immediately after the connector is plugged to its individual bushing, dead end plug etc.
- Connectors packed separately



DESCRIPTION

1. Clamping screw

Steel silver-plated component, threaded at both ends, for attachment of the mating items: bushing, insulating plug, accessories. A uniform contact pressure is maintained for any combination.

2. Conductor contact

The barrel side, sized for the conductor, is of a compression type. Contact with the clamping screw is through the spade

3. Semi-conducting inner screen

Insert of moulded semi-conducting EPDM, enclosing the connecting components, so that ionisation of any air remaining trapped is prevented.

4. 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.

5. Insulating body

Moulded from insulating EPDM for integral reconstitution of insulation. It maintains a uniform contact pressure on the cable insulation and the interface of the mating items.

6. Reducer

Composite EPDM moulding allowing connector adaptation to cables of different cross-sections and voltages.

7. Insulating plug

Epoxy component which has a threaded metal insert to accept the clamping screw.

8. Test point

Metallic insert with a hexagonal head. A capacitive voltage divider provides a means of checking that the item is not live before disconnection.

9. Cap

Moulded semi-conducting EPDM part, protects and earths the test point during normal use.

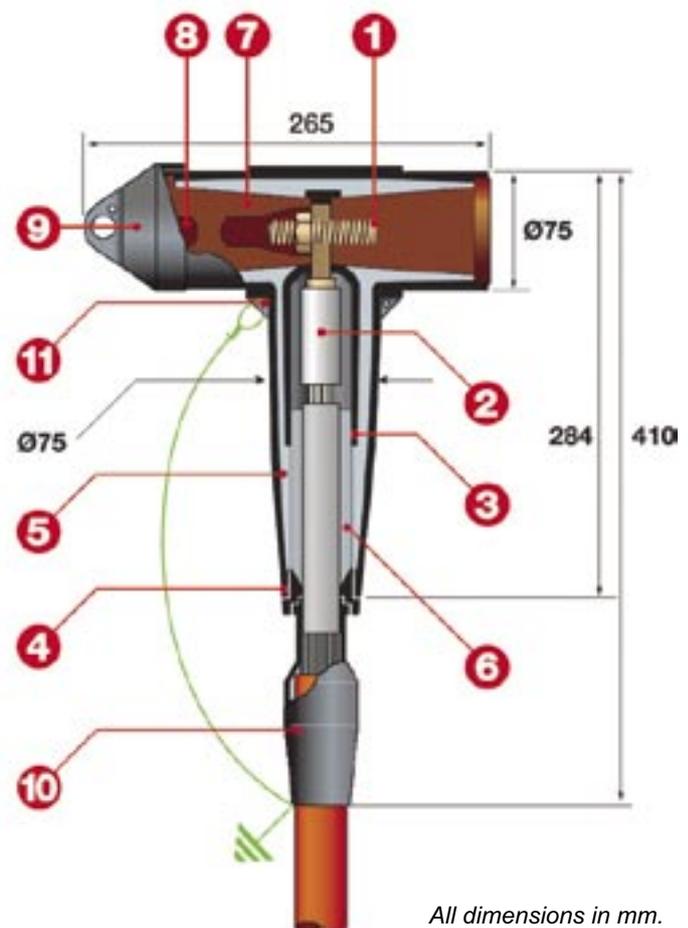
10. Earth cover

Made of moulded EPDM, ensures water tight protection of the earthing device.

11. Earthing Eye

Eye provided for connection of the outer envelope to the cable screen.

FMCTs-400 Separable Tee Connector



All dimensions in mm.

SELECTION GUIDE

1. Select from **TABLE A** on the right the kit model corresponding to the diameter over the insulation table.

2. Specify insulation voltage U_m in kV:
12 - 17.5 - 24 -36

3. Select from the **TABLE B** (bottom right) the earthing device to suit the cable

4. Select the model of connection end-fitting⁽¹⁾ according to:

■ Conductor material **C: Copper**
A: Aluminium

■ Conductor Size **In mm²**

⁽¹⁾Can be crimped or indented by usual tools

EXAMPLE ORDER

Example #1

Cable 20kV, 95mm², insulation diameter 23.2mm, aluminium conductor, copper tape screen. Assembly on bushing with threaded contact:

FMCTs-400-C-24-T2-A95

TABLE A

| Separable Tee Connector | | | | | | |
|-----------------------------|------|---------------|--|--------|------|---------|
| Diameter over insulation mm | | Kit Reference | Conductor size mm ² (for guidance only) Highest Voltage | | | |
| MIN | MAX | | 12kV | 17.5kV | 24kV | 36kV |
| 18.5 | 20.5 | FMCTs-400-Z | 70 | 50 | 35 | |
| 19.9 | 21.9 | FMCTs-400-A | 95 | 70 | 50 | |
| 21.4 | 23.5 | FMCTs-400-B | 120 | 95 | 70 | 25 |
| 22.9 | 25.1 | FMCTs-400-C | 150 | 120 | 95 | 35 |
| 24.4 | 26.6 | FMCTs-400-D | 185 | 150 | 120 | 50 |
| 26.0 | 28.3 | FMCTs-400-E | 240 | 185 | 150 | 70 |
| 27.8 | 30.4 | FMCTs-400-F | 300* | 240 | 185 | 95 |
| 29.8 | 32.7 | FMCTs-400-G | | 300* | 240 | 120/150 |
| 31.8 | 35.3 | FMCTs-400-H | | | 300* | 185 |
| 34.1 | 38.3 | FMCTs-400-J | | | | 240 |

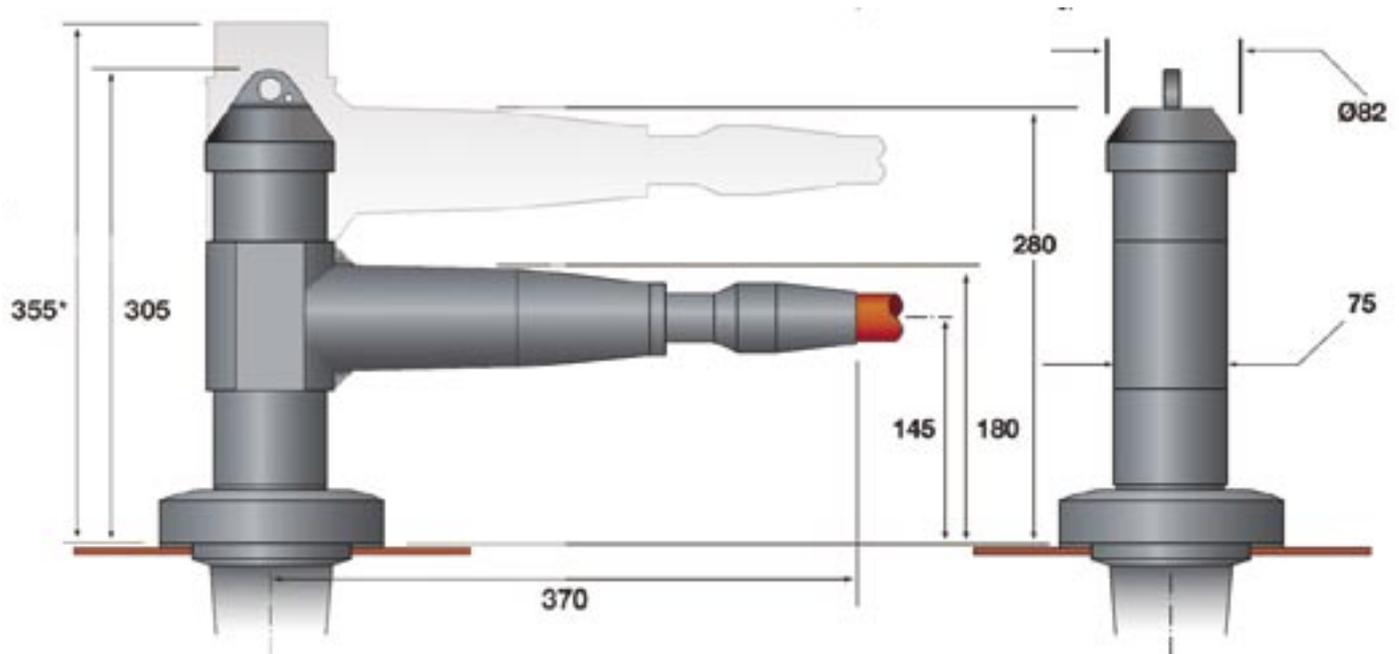
* Consult us

TABLE B

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

FMCTs-400 Tee Connector

Overall dimensions (mounted on bushing)



All dimensions in mm. * Minimum dimensions necessary to disconnect.

ACCESSORIES FOR 400A SEPARABLE CONNECTORS**FMPS-400** Stand-Off Plug

- EPDM moulding designed to support and dead-end separable connectors when removed from the equipment.
- The stand-off plug is fitted with a metallic mounting. A part moulded-in, semi-conducting EPDM provides electrical continuity with the connector jacket.
- Operated when de-energised.
- References: **12kV - FMPS-400-12**
 24kV - FMPS-400-24
 36kV - FMPS-400-36
- Packing: Single Unit

FMPE-400 Earthing Plug

- EPDM moulding designed to support and earth separable connectors when removed from the equipment
- The earthing plug is equipped with a metallic mounting
- References: **FMPE-400**
- Packing: Single Unit

FMPCs-400 Straight Connecting Plug

- Epoxy moulding over a copper rod for connecting two separable tee connectors (FMCTs-400), in combinations such as disconnectable cable joint and tee off, dual cable supply.
- Connection to rod by the clamping screws of the connectors. Screening of the connecting components. Integral reconstitution of insulation and protection continuity.
- References: **12kV - FMPCs-400-12**
 24kV - FMPCs-400-24
 36kV - FMPCs -400-36
- Packing: Single Unit

STANDARDS

Master specification Prysmian SP.5
Generally meet the requirements of
DIN 52 278 - ANSI/IEEE 386 - CEI 20/24 -
NF C 33-001 - IEC 540 - EDF HN 52-S-61 -
NF C 33-051.

QUALITY ASSURANCE

Certified to ISO 9001



Formerly Pirelli Cables

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OTHER PRODUCTS

We also supply other accessories from the 400 series
Details available on request

www.prysmian.co.uk
sepsFMCTs-400uk/02/05

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