

## 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 (25-300mm<sup>2</sup>)
- 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.

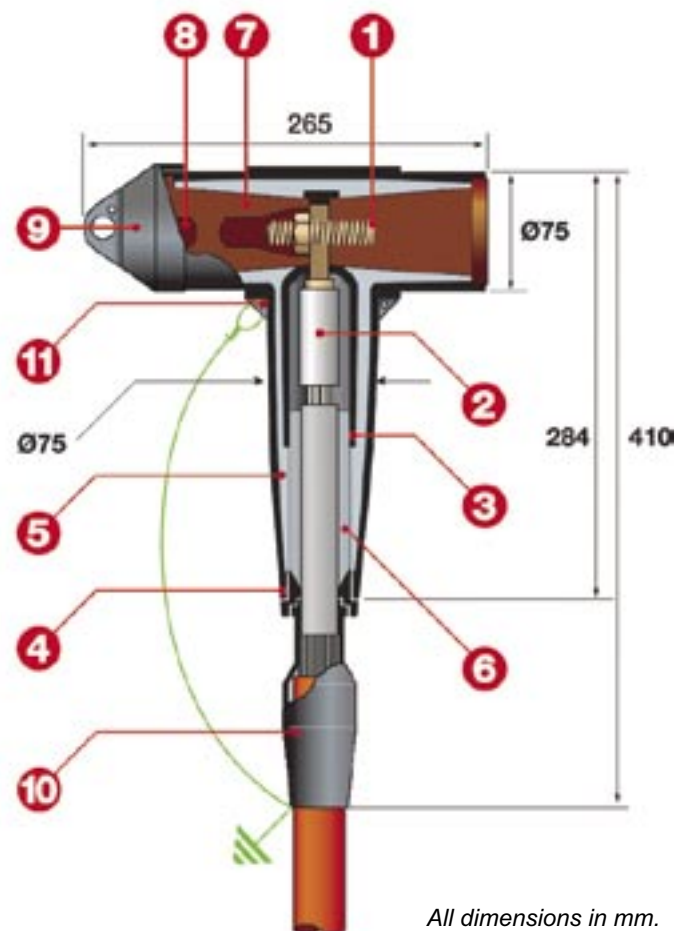
### 10. Earth cover

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



**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<sup>(1)</sup> according to:

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

■ Conductor Size **In mm<sup>2</sup>**

<sup>(1)</sup>Can be crimped or indented by usual tools

**TABLE A**

Separable Tee Connector						
Diameter over insulation mm		Kit Reference	Conductor size mm <sup>2</sup> (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

**EXAMPLE ORDER**

**Example #1**

Cable 20kV, 95mm<sup>2</sup>, insulation diameter 23.2mm, aluminium conductor, copper tape screen. Assembly on bushing with threaded contact:

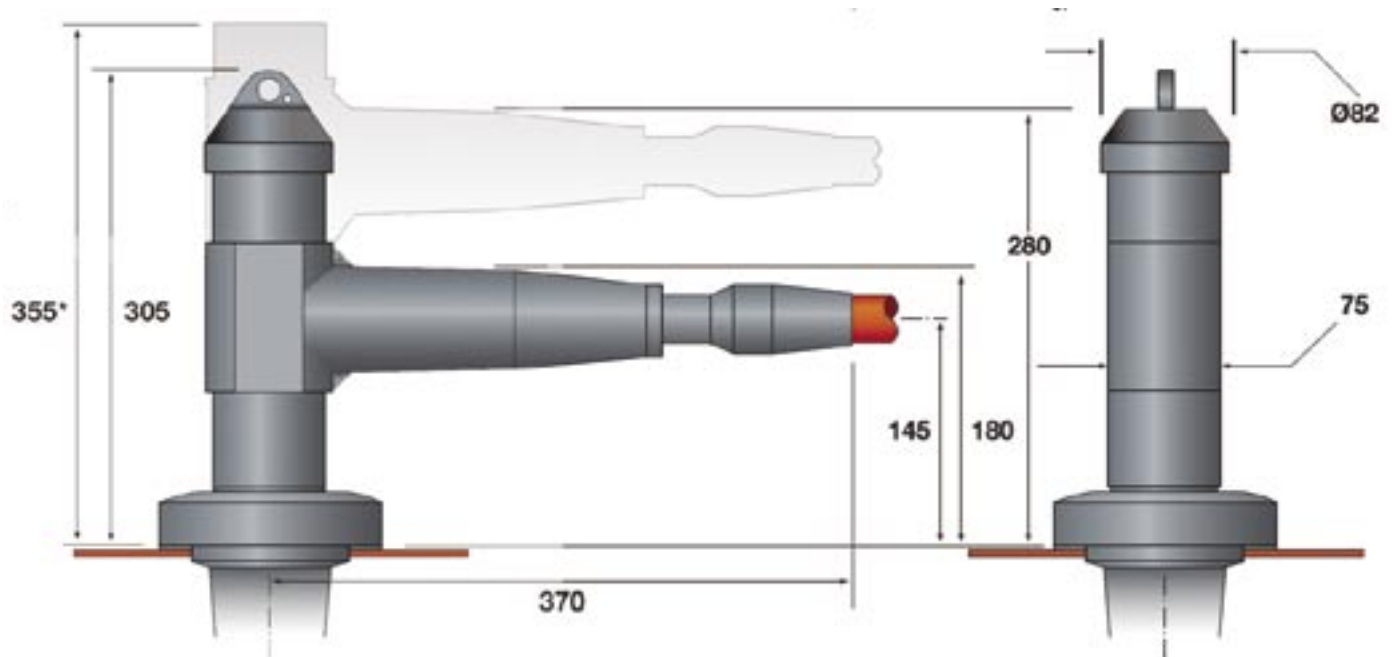
**FMCTs-400-C-24-T2-A95**

**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

**Commercial Enquiries**

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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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