



# IEC Separable Connectors 17.5 kV/24 kV, 630A

Front T-Body / Coupling (Rear) T-Body Connector



### **APPLICATION**

The Chardon T-Body Connectors terminate polymeric cable to dead front apparatus such as transformers, switchgear, and other equipment. Suitable for both indoor and outdoor use, they can be utilized with all polymeric cable types (XLPE, EPR, etc.) and conductors of either copper or aluminum at voltages of 17.5 kV or 24 kV.

# **KEY FEATURES**

- Provides a fully shielded and submersible connection when mated with the proper bushing or plug.
- / Type "C" 630A Interface.

- Mounting can be vertical, horizontal, or any angle in between.
- **/** No minimum phase clearance requirements.
- 100% electrical tested at factory.

## **PRODUCT RATINGS**

Rated Voltage Class (U <sub>m</sub> )	24 kV
AC 5 Minute Withstand	54 kV
Partial Discharge	20 kV < 3pC
BIL and Full Wave Crest (Impulse)	125 kV
Thermal Short Circuit (Conductor, 2 sec.)	23 kA / 2s
Dynamic Short Circuit (Conductor, 10 sec.)	82 kA / 10ms
Continuous Current	630 A
Overload Current (8 hours maximum)	900 A

### **PRODUCTION TESTS**

#### Tests conducted in accordance with IEC 60502-4.

- Partial Discharge 20 kV < 3pC</p>
- AC 5 Minute Withstand 54 kV

#### Tests conducted in accordance with Chardon manufacturing process requirements:

- Physical Inspection
- Periodic Dissection
- Periodic X-ray Analysis

·24FDT630-24RDT630-071025-REV06

# **DETAILED COMPOSITION OF THE CHARDON 17.5 KV/24 KV FRONT T-BODY CONNECTOR**

#### **/** CONDUCTING INSERT

Precision molded peroxide cured conducting insert provides coronafree electrostatic shielding of the compression connector.

#### **INSULATION LAYER**

High quality peroxide cured EPDM insulation is mixed and formulated inhouse for complete control of rubber characteristics.

#### **I** CONDUCTING SHIELD

Precision molded peroxide cured conducting shield provides ground shield continuity.

#### **I** CABLE ADAPTER

#### **I** RUBBER END CAP

Molded EPDM conducting rubber end cap protects and grounds the insulating plug test point.

#### **/** STUD

Stainless steel studs.

#### **I** INSULATING PLUG

Molded epoxy insulating plug provides excellent electrical, thermal and mechanical reliability.

#### **I** DRAIN WIRE TAB

Drain wire table provide a convenient point to connect drain wire to ensure grounding of the connector shield.

#### **I** COMPRESSION CONNECTOR/ SHEARBOLT CONNECTOR

Compression connector/shearbolt connector made of aluminum, copper, or bimetal (aluminum/copper).

### DETAILED COMPOSITION OF THE CHARDON 17.5 KV/24 KV FRONT T-BODY CONNECTOR

# DETAILED COMPOSITION OF THE CHARDON 17.5 KV/24 KV, COUPLING (REAR) T-BODY CONNECTOR





#### **I** CONTACT ROD

Copper made contact rod provides a consistent current transfer path.

#### **/** STUD

Stainless steel studs.

#### **I** RUBBER-END CAP

Molded EPDM conducting rubber end cap protects and grounds the insulating plug test point.

#### COMPRESSION CONNECTOR/ SHEARBOLT CONNECTOR

Compression connector/ shearbolt connector made of aluminum, copper, or bimetal (aluminum/copper).

### DETAILED COMPOSITION OF THE CHARDON 17.5 KV/24 KV, COUPLING (REAR) T-BODY CONNECTOR





#### **Selection of Conductor Size**

Conductor Code	Conductor Size (mm <sup>2</sup> )
25	25
35	35
50	50
70	70
95	95
120	120
150	150
185	185
240	240
300	300
400	400

#### **Ordering Example:**

For a CHARDON 24kV Front T-body with cable insulation outer dimension of 26.4mm and a conductor size of 185mm<sup>2</sup> with copper compression connector, the part number would be as follows.

24- FDT 630 C 185 C
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If a shear bolt connector is selected in this kit, the part number would be as follows:

24- FDT	630	С	SBC-B-25-50/1
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STEP2	STEP3	STEP4

### STEP2

#### **Selection of Cable Insulation Dimension**

Range Code	mm
А	15.5 - 19.0
В	18.0 - 23.0
С	22.0 - 27.0
D	26.0 - 32.0
E	31.0 - 37.0

**STEP4** 

#### **Selection of Compression Connector Material**

Code	
В	Bi-metal (Al & Cu)
С	Copper

Note :

When ordering a shear bolt connector in a kit, use the chart below and add code in the end of the part number, for example, SBC-B-25-50/1.

#### Selection of Shear Bolt Connector Material

Catalog No.	Conductor Range (mm <sup>2</sup> )
SBC-B-25-50/1	25 - 50
SBC-B-70-95/1	70 - 95
SBC-B-70-120/2	70 - 120
SBC-B-150-240/2	150 - 240



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