



IEC Separable Connectors 17.5 kV/24 kV, 630A

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



APPLICATION

The Chardon T-Body Connectors are used to terminate polymeric cable to dead front apparatus such as transformers, switchgear, and other equipment. They can be used at 17.5 kV and 24 kV. They can be used for indoor or outdoor applications, and can be used for all polymeric cable types (XLPE, EPR, etc.) with copper or aluminum conductors.

KEY FEATURES

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

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

PRODUCT RATINGS

| Maximum Voltage Class (U _m) | 24 kV |
|--|--------------|
| AC 5 Minute Withstand | 54 kV |
| Minimum Corona Voltage Level | 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.

- Minimum Corona Voltage Level 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

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

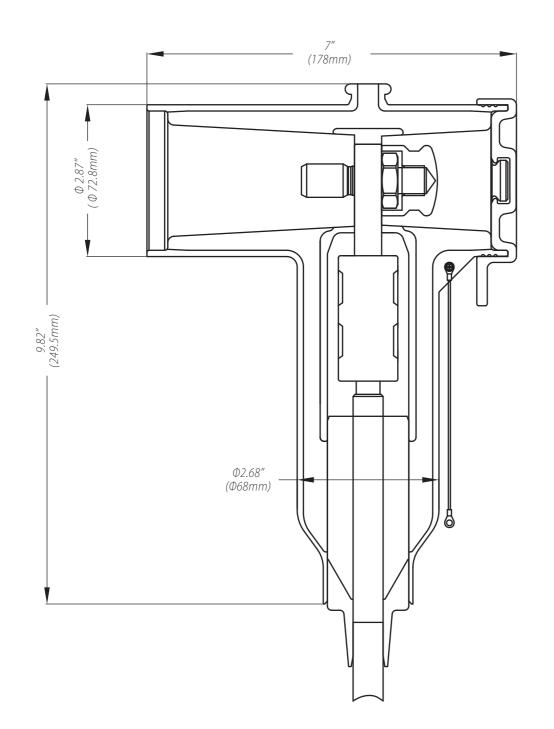
Drain wire table provide a convenient point to connect drain wire to ensure grounding of the connector shield.

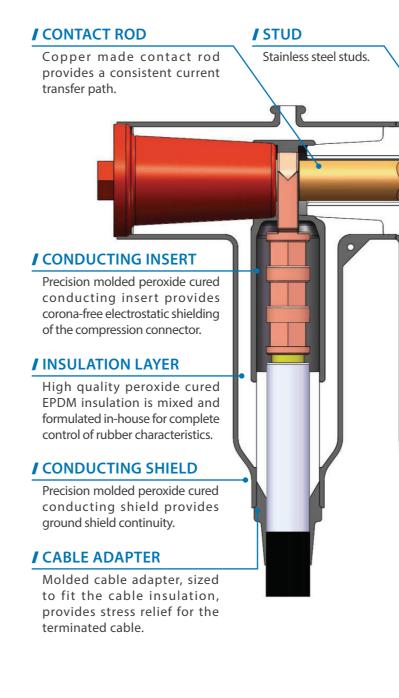
COMPRESSION CONNECTOR/ SHEARBOLT CONNECTOR

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 INSULATING PLUG

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

I RUBBER END CAP

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

DRAIN WIRE TAB

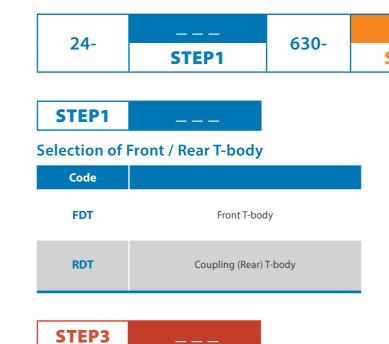
Drain wire table provide a convenient point to connect drain wire to ensure grounding of the connector shield.

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 ²) |
|----------------|-----------------------------------|
| 25 | 25 |
| 35 | 35 |
| 50 | 50 |
| 70 | 70 |
| 95 | 95 |
| 120 | 120 |
| 150 | 150 |
| 185 | 185 |
| 240 | 240 |
| 300 | 300 |
| 400 | 400 |

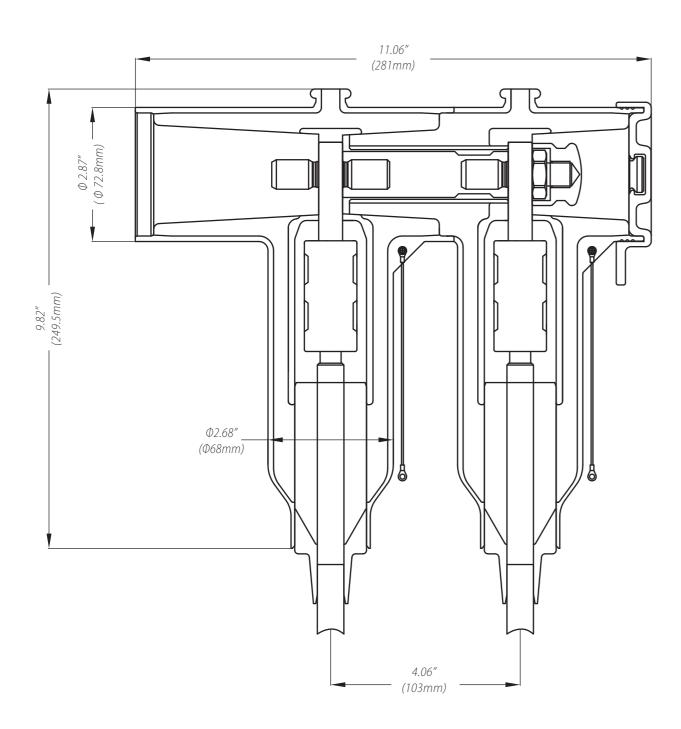
Ordering Example:

For a CHARDON 24kV Front T-body with cable insulation outer dimension of 26.4mm and a conductor size of 185mm² with copper compression connector, the part number would be as follows.

| 24- FDT 630 C 185 C |
|---------------------|
|---------------------|

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 |
|---------|-----|---|---------------|
|---------|-----|---|---------------|



| | | — |
|-------|-------|-------|
| 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 ²) |
|-----------------|------------------------------------|
| 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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