630 A deadbreak bolted tee connector - interface C

DTS624 – 24 kV applications
DTS636 – 36 kV applications

Related products
• DRC400/436 Receptacle Cap
• DPC400/436 Connecting Plug

Installation
• No special tools or heating are required
• Connector may be energized immediately after installation on its mating part
• Mates with bushings, plugs, and junction devices complying with interface C per CENELEC 50180 and 50181

Application
• For connection of extruded polymeric cable to transformers, switchgear, motors and other equipment with a premoulded separable connector
• For indoor and outdoor installations
• System voltage up to 36 kV
• Continuous current 630 A (900 A overload for 8 hours)
• Cable particulars:
  • Extruded polymeric cable (XLPE, EPR, etc.)
  • Copper or aluminum conductors
  • Semiconducting or metallic screens
• Conductor size: 12 kV 25-300 mm²
  24 kV 25-300 mm²
  36 kV 25-240 mm²

Features
• Provides a fully screened and fully submersible separable connection when mated with the proper bushing or plug
• Built-in capacitive test point allows for an easy check of the circuit status or installation of a fault indicator
• No minimum phase clearance requirements
• Mounting can be vertical, horizontal, or any angle in between
• 100% factory tested
  • AC Withstand
  • Partial Discharge

Standards
• Meets the requirements of IEC 60502-4 and CENELEC HD 629.1 S2
**Quality assurance**

- Our manufacturing facility is registered to ISO 9001 by third party audit
- Required Production Tests
- Periodic X-Ray Analysis

**Packaging**

- Supplied in a kit with all necessary parts, approximate weight 3 kg

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**Features and detailed description**

1. **Clamping Screw**
   - Tin-plated brass screw secures the conductor contact to the bushing

2. **Insulation**
   - Moulded EPDM insulating rubber is formulated and mixed in-house to ensure high quality

3. **Basic Insulating Plug**
   - Moulded epoxy part has a threaded metal insert to accept the clamping screw

4. **Capacitive Test Point**
   - Capacitive test point provides means to check circuit status

5. **Rubber Cap**
   - Moulded EPDM conducting rubber cap protects and earths the test point during normal operation, includes pulling eye

6. **Internal Screen**
   - Moulded EPDM conducting rubber screen controls electrical stress

7. **Capacitive Test Point (Optional)**
   - Provides a means to mount a fault indicator. A moulded EPDM conducting rubber cap provides a watertight seal.

8. **Stress Relief**
   - The configuration of the outer screen and the cable adapter provide cable stress relief

9. **Cable Adapter**
   - The sized opening provides an interference fit to maintain a watertight seal and provides the initial cable stress relief

10. **Earthing Eyes**
    - Moulded into the external screen for connection of an earthing wire

11. **External Screen**
    - Moulded EPDM conducting rubber provides an external screen at earth potential for operator safety

12. **Conductor Contact**
    - Inertia welded bimetallic compression connector accepts copper or aluminum conductors

13. **Screen Break**
    - Insulation added to the outer screen to provide a screen break for cable screen testing. Also available without screen break.

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**Table 1. Electrical Ratings**

<table>
<thead>
<tr>
<th></th>
<th>DTS624</th>
<th>DTS636</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum System Voltage ($U_{m}$)</td>
<td>24 kV</td>
<td>36 kV</td>
</tr>
<tr>
<td>Impulse</td>
<td>125 kV</td>
<td>170 kV</td>
</tr>
<tr>
<td>AC Withstand (5 min.)</td>
<td>54 kV</td>
<td>81 kV</td>
</tr>
<tr>
<td>Continuous Current</td>
<td>630 A</td>
<td>630 A</td>
</tr>
<tr>
<td>Overload (8 hrs. Max.)</td>
<td>900 A</td>
<td>900 A</td>
</tr>
<tr>
<td>Short Circuit Withstand, 1 sec. (rms sym)</td>
<td>35 kA</td>
<td>35 kA</td>
</tr>
</tbody>
</table>

**Notes:** Ratings are based on IEC Standards and do not reflect maximum capability.
Kit contents
The complete kit includes 1 each moulded tee housing, cable adapter, conductor contact, insulating plug, rubber cap, clamping screw, silicone lubricant, and installation instructions.

Ordering Information
To order a 24kV or a 36kV bolted tee connector, see the following Steps 1-3.

Step 1
Determine the required voltage rating for the tee connector and whether a test point is required or not. Pick the basic catalog number from the list below:

- 24 kV with test point: DTS624R2C3TSB*
- 24 kV without test point: DTS624R2C3SB*
- 36 kV with test point: DTS636R2C3TSB*
- 36 kV without test point: DTS636R2C3SB*

* Remove "SB" for non-screen break option.

Step 2
Determine the cable’s diameter over insulation. Then identify a cable range from Table R2 that covers the minimum and maximum insulation diameters. Select the correct cable range code from table R2 and insert into the catalog number determined in Step 1.

Step 3
Identify the conductor size and type in Table C3 and select the conductor code from the appropriate column (DIN style, EDF style or Mechanical Connector style). Insert the selected code in the catalog number determined in Step 1.

Ordering Examples:
For 20 kV cable, 240 mm² copper conductor, 31.0 mm core insulation diameter, DIN connector, and without a test point, specify DTS624F240SB.

Cable seal adaptors are sold separately

Table R2. Cable Insulation Range

<table>
<thead>
<tr>
<th>Insulation Range Designation</th>
<th>Cable Insulation Range Ø (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AA</td>
<td>Min. 13.5, Max. 17.2</td>
</tr>
<tr>
<td>A</td>
<td>Min. 16.3, Max. 19.3</td>
</tr>
<tr>
<td>B</td>
<td>Min. 18.3, Max. 21.0</td>
</tr>
<tr>
<td>C</td>
<td>Min. 20.0, Max. 24.1</td>
</tr>
<tr>
<td>D</td>
<td>Min. 23.1, Max. 27.0</td>
</tr>
<tr>
<td>E</td>
<td>Min. 25.6, Max. 29.0</td>
</tr>
<tr>
<td>F</td>
<td>Min. 27.7, Max. 32.6</td>
</tr>
<tr>
<td>G</td>
<td>Min. 30.9, Max. 36.2</td>
</tr>
<tr>
<td>H</td>
<td>Min. 34.0, Max. 39.5</td>
</tr>
</tbody>
</table>

Table C3. Conductor Code

<table>
<thead>
<tr>
<th>Stranded Conductor Size (mm²)</th>
<th>DIN Type</th>
<th>EDF Type</th>
<th>Mechanical Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>25</td>
<td>E25</td>
<td>S150</td>
</tr>
<tr>
<td>35</td>
<td>35</td>
<td>E35</td>
<td>S150</td>
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<td>240</td>
<td>E240</td>
<td>S300</td>
</tr>
<tr>
<td>300</td>
<td>300</td>
<td>E300</td>
<td>-</td>
</tr>
</tbody>
</table>

Notes: Bimetallic connectors can be used with aluminum or copper conductors.

Figure 2. DTS624 deadbreak tee connector dimensional information.
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