



COLD SHRINK TERMINATION (CSTI/CSTO)

For Polymeric Insulated Cables
up to 42 kV

COLD SHRINK TERMINATION (CSTI/CSTO)

For Polymeric Insulated Cables up to 42 kV



Raychem terminations CSTI/O cold shrink terminations are made from a high performance, liquid silicone material which is specially formulated for excellent tracking and split resistance. The extra-long, silicone stress cone is integrated within the termination which ensures correct positioning. Moisture sealing at the lug is integrated into the termination body, eliminating the need for additional sealing tapes.

They offer a reliable, fast and easy-to-install system to ensure trouble free service and maintain high network reliability. All key components are pre-expanded on one holdout system, allowing neat installation in compact environment on the prepared cable.

Raychem terminations CSTI/O are designed to cover a wide range of applications and to accommodate the variety of cable and conductor types used in the networks. Range-taking, mechanical lugs ensuring reliable installation and service can be supplied with the kit.

Product Features

- Easy to install spiral holdout
- Integrated sealing mastic
- Outstanding weathering, UV and Ozone Resistance
- Chemically resistant
- Resistant to fungi
- Excellent electrical properties, including good tracking resistance and high dielectric strength
- Electrical stress control of the screen cut area using integrated conductive geometrical stress cones
- Hydrophobic (water-repellent)
- Non-flammable
- Self-extinguishing
- Retains performance over wide temperature range -45 to +150°C
- Excellent resistance to splitting and permanent set
- Mechanical shear bolt lug and compression lug to IEC 61238-1 can be supplied
- CENELEC HD 629.1.S2, requirements which include IEC, BS, VDE and other international specifications, IEEE-48
- Manufacturing site ISO 9001 & ISO 14001 qualified

Benefits

- Pre-expanded termination body with integrated stress control deflector and sealing mastic
- Single piece silicone termination body with optimal mechanical expansion ratio allows a wide application range
- The extra-long silicone stress cone is integrated with the termination and reduces positioning
- Moisture sealing at the lug is integrated
- Well-known and easy-to-install holdout system, rip cord pulling direction towards the lug not the bottom of the termination
- Easy to install in tight switchgear compartments
- Accommodates mechanical shear bolt lug and compression lug

COLD SHRINK TERMINATION (CSTI/CSTO)

For Polymeric Insulated Cables up to 42 kV

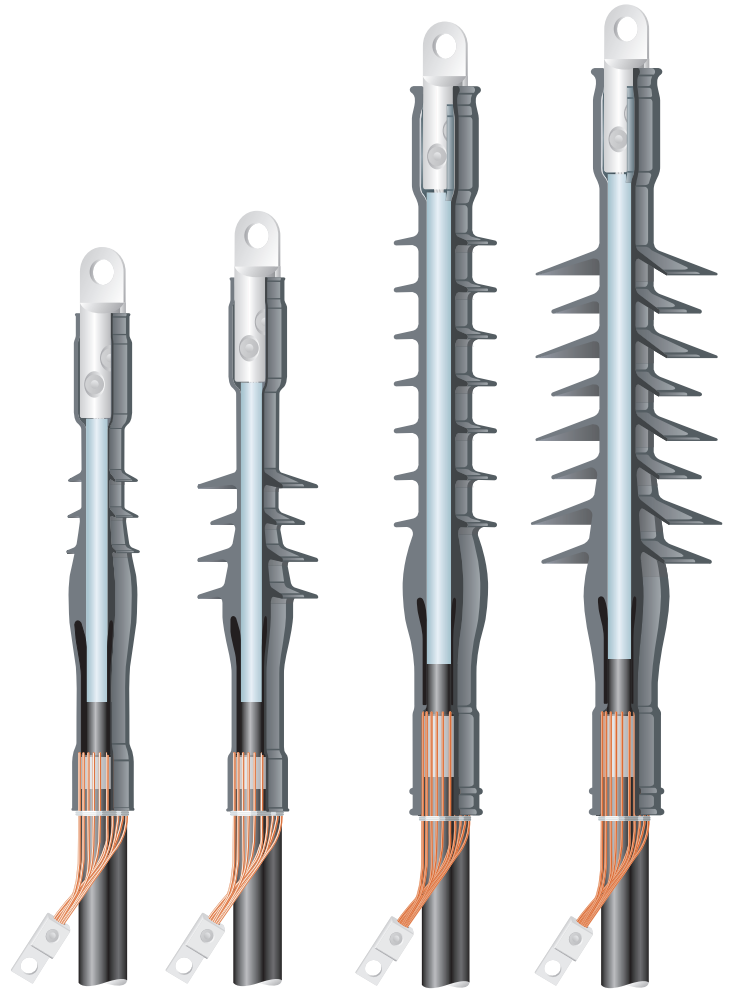
Mechanical shear bolt connectors

Raychem terminations CSTI/O can be provided with TE BLMT mechanical shear bolt lugs to ensure a reliable connection for different conductor materials, shapes and types used in today's network. The pre-set shear torque of the bolts ensures that the correct contact pressure is always achieved. The specially designed contact surface on the inside of the lug breaks up any oxide layer and ensures reliable service over the entire service life of the termination. Different sizes of mechanical lugs with wide application ranges are available. They have been tested in accordance with IEC-61238-1 class A.

The installation shear-head bolts can be ruptured manually by usage of ring spanner and or facilitated by the usage of a cordless impact wrench supplied (IT-1000-023).

Pre-expanded silicone termination body

The silicone termination body is delivered in a pre-expanded condition on a spiral holdout system. Silicone materials with excellent mechanical properties allow high expansion forces and therefore guarantee a wide application range. Integrated stress control deflector and sealing mastic on the top end of the termination provide exceptional electrical performance. The termination body can be easily removed from the spiral holdout with low release forces, particularly designed for termination applications.



Electrical stress control

Electrical stress control deflector is fully integrated within the silicone termination body. Conductive cone with an exactly defined geometrical design over the screen cut area provide excellent electrical stress control.

Technical data

| VOLTAGE CLASS | (kV) | 6.35/11(12) | 8.7/15(17.5) | 12.7/22(24) | 19/33(36) | 20.8/36(42) |
|------------------------------|--------------------|-------------|--------------|-------------|-------------|-------------|
| Cable Insulation Diameter | (mm) | 13.7 - 40.0 | 15.7 - 50.0 | 17.9 - 52.0 | 24.5 - 58.8 | 24.5 - 60.8 |
| Cross Section Range | (mm ²) | 25 - 630 | 25 - 630 | 25 - 630 | 50 - 1000 | 50 - 1000 |
| Max System Voltage U_m | (kV) | 12 | 17.5 | 24 | 36 | 42 |
| Basic Impulse Level | (kV) | 95 | 95 | 125 | 195 | 200 |
| Partial Discharge at $2 U_0$ | (pC) | <2 | <2 | <2 | <2 | <2 |
| AC Voltage Withstand, 5 min | (kV) | 28.5 | 39 | 57 | 86 | 94 |
| DC Voltage Withstand, 15 min | (kV) | 38 | 52 | 76 | 114 | 114 |

COLD SHRINK TERMINATION (CSTI/CSTO)

For Polymeric Insulated Cables up to 42 kV

ORDERING INFORMATION

| VOLTAGE CLASS | KIT DESCRIPTION | APPLICATION RANGE (mm ²) | DIAMETER OVER INSULATION MIN (mm) | DIAMETER OVER INSULATION MAX (mm) | DIAMETER OVER SHEATH MAX (mm) |
|-----------------------|-------------------|--------------------------------------|-----------------------------------|-----------------------------------|-------------------------------|
| 6.35/11(12)kV | | | | | |
| Indoor | CSTI-3122-ML-1-13 | 25 - 95 | 13.7 | 20.8 | 22 |
| | CSTI-3132-ML-4-13 | 95 - 240 | 20.8 | 28.4 | 34 |
| | CSTI-3142-ML-6-17 | 300 - 400 | 28.4 | 33.6 | 50 |
| | CSTI-3152-ML-7-17 | 500 - 630 | 34.0 | 40.0 | 58 |
| Outdoor | CSTO-3122-ML-1-13 | 25 - 95 | 13.7 | 20.8 | 22 |
| | CSTO-3132-ML-4-13 | 95 - 240 | 20.8 | 28.4 | 34 |
| | CSTO-3142-ML-6-17 | 300 - 400 | 28.4 | 33.6 | 50 |
| | CSTO-3152-ML-7-17 | 500 - 630 | 34.0 | 40.0 | 58 |
| 8.7/15(17.5)kV | | (mm ²) | (mm) | (mm) | (mm) |
| Indoor | CSTI-4122 | 25 - 95 | 15.7 | 22.8 | 22 |
| | CSTI-4132 | 95 - 240 | 20.7 | 30.4 | 34 |
| | CSTI-4142 | 300 - 400 | 29.9 | 35.6 | 50 |
| | CSTI-4152 | 500 - 630 | 35.9 | 41.9 | 58 |
| Outdoor | CSTO-4122 | 25 - 95 | 15.7 | 22.8 | 22 |
| | CSTO-4132 | 95 - 240 | 20.7 | 30.4 | 34 |
| | CSTO-4142 | 300 - 400 | 29.9 | 35.6 | 50 |
| | CSTO-4152 | 500 - 630 | 35.9 | 41.9 | 58 |
| 12.7/22(24)kV | | (mm ²) | (mm) | (mm) | (mm) |
| Indoor | CSTI-5122-ML-1-13 | 25 - 95 | 17.9 | 25.0 | 34 |
| | CSTI-5132-ML-4-13 | 95 - 240 | 25.0 | 32.0 | 50 |
| | CSTI-5142-ML-6-17 | 300 - 400 | 32.6 | 37.8 | 58 |
| | CSTI-5152-ML-7-17 | 500 - 630 | 42.6 | 49.2 | 58 |
| Outdoor | CSTO-5122-ML-1-13 | 25 - 95 | 17.9 | 25.0 | 34 |
| | CSTO-5132-ML-4-13 | 95 - 240 | 25.0 | 32.0 | 50 |
| | CSTO-5142-ML-6-17 | 300 - 400 | 32.6 | 37.8 | 58 |
| | CSTO-5152-ML-7-17 | 500 - 630 | 42.6 | 49.2 | 58 |
| 19/33(36)kV | | (mm ²) | (mm) | (mm) | (mm) |
| Indoor | CSTI-6122-ML-1-13 | 50 - 70 | 24.5 | 28.4 | 42 |
| | CSTI-6132-ML-4-13 | 95 - 150 | 27.8 | 33.5 | 46 |
| | CSTI-6142-ML-6-17 | 185 - 400 | 32.4 | 42.8 | 56 |
| | CSTI-6152-ML-7-17 | 500 - 630 | 42.6 | 49.2 | 63 |
| | CSTI-6162-ML-8-21 | 800 - 1000 | 49.2 | 58.8 | 75 |
| Outdoor | CSTO-6122-ML-1-13 | 50 - 70 | 24.5 | 28.4 | 42 |
| | CSTO-6132-ML-4-13 | 95 - 150 | 27.8 | 33.5 | 46 |
| | CSTO-6142-ML-6-17 | 185 - 400 | 32.4 | 42.8 | 56 |
| | CSTO-6152-ML-7-17 | 500 - 630 | 42.6 | 49.2 | 63 |
| | CSTO-6162-ML-8-21 | 800 - 1000 | 49.2 | 58.8 | 75 |
| 20.8/36(42)kV | | (mm ²) | (mm) | (mm) | (mm) |
| Indoor | CSTI-7122-ML-1-13 | 50 - 70 | 27.4 | 31.4 | 42 |
| | CSTI-7132-ML-4-13 | 95 - 150 | 29.9 | 36.5 | 48 |
| | CSTI-7142-ML-6-17 | 185 - 400 | 34.5 | 46.6 | 59 |
| | CSTI-7152-ML-7-17 | 500 - 630 | 44.8 | 51.2 | 65 |
| | CSTI-7162-ML-8-21 | 800 - 1000 | 50.6 | 60.8 | 73 |
| Outdoor | CSTO-7122-ML-1-13 | 50 - 70 | 27.4 | 31.4 | 42 |
| | CSTO-7132-ML-4-13 | 95 - 150 | 29.9 | 36.5 | 48 |
| | CSTO-7142-ML-6-17 | 185 - 400 | 34.5 | 46.6 | 59 |
| | CSTO-7152-ML-7-17 | 500 - 630 | 44.8 | 51.2 | 65 |
| | CSTO-7162-ML-8-21 | 800 - 1000 | 50.6 | 60.8 | 73 |

The application range given in the table is based on polymeric insulated cable according to CENELEC HD 620 A2 (2004) standard with stranded circular conductors. Trifurcation system available. Please contact your sales representative

Test reports

The products are type tested in accordance with CENELEC HD629.1.S2:2009 and CENELEC HD629.1.S3.draft:2015 specifications.

te.com/energy

©2017 TE Connectivity Ltd. family of companies. All Rights Reserved. EPP-2154-1/17

Raychem, TE Connectivity and TE connectivity (logo) are trademarks. Other logos, product and/or company names might be trademarks of their respective owners. While TE has made every reasonable effort to ensure the accuracy of the information in this brochure, TE does not guarantee that it is error-free, nor does TE make any other representation, warranty or guarantee that the information is accurate, correct, reliable or current. TE reserves the right to make any adjustments to the information contained herein at any time without notice. TE expressly disclaims all implied warranties regarding the information contained herein, including, but not limited to, any implied warranties of merchantability or fitness for a particular purpose. The dimensions in this catalog are for reference purposes only and are subject to change without notice. Specifications are subject to change without notice. Consult TE for the latest dimensions and design specifications.

FOR MORE INFORMATION:

TE Technical Support Centers

| | |
|-------------------|-----------------------|
| USA: | + 1 800 327 6996 |
| Canada: | + 1 (905) 475-6222 |
| Mexico: | + 52 (0) 55-1106-0800 |
| Latin/S. America: | + 54 (0) 11-4733-2200 |
| France: | + 33 380 583 200 |
| UK: | + 44 0870 870 7500 |
| Germany: | + 49 896 089 903 |
| Spain: | + 34 916 630 400 |
| Italy: | + 39 333 250 0915 |
| Benelux: | + 32 16 351 731 |
| Russia: | +7 495-790 790 2-200 |
| China: | + 86 (0) 400-820-6015 |