

2. Applications

Designed for:

- 5, 8, and 15 kV voltage classes.
- Tape-shielded, wire-shielded, and UniShield® cables.
- Solid dielectric insulations, such as polyethylene, XLP, and EPR.
- Contaminated and non-contaminated indoor (weather-protected) locations.
- Free-hanging or bracket-mounting arrangements.
- Upright or inverted installations.
- Switchgear, transformer, motor lead, bus, and similar connections.

3. Environmental Classification Note

Indoor terminations, such as the 3M™ Cold Shrink Termination Kit QT-II 5620K/6020K series products, can be specified for most outdoor, pad-mounted switchgear and transformer applications, since these enclosure interiors are protected from direct exposure to the elements. The user is reminded, however, that many of these cabinets are vented and that their interiors can be subjected to the effects of condensation and wind-blown contaminants. When conditions of this nature are suspected for a given installation, skirted QT-II terminations should be selected in order to provide greater leakage current and flashover protection.

4. Physical and Electrical Properties

QT-II 5620K series terminations can be used on cables with a rated maximum operating temperature of 90 C and an emergency overload rating of 130° C. QT-II 5620K series terminations meet all requirements of IEEE Standard 48, “IEEE Standard Test Procedures and Requirements for High-Voltage Alternating-Current Cable Terminations” and are designated Class I for indoor or weather-protected locations. The current rating of these terminations meets or exceeds the current rating of the cables on which they are installed.

Typical Dimensions

Kit No.	Dimension A Maximum	Wet Creepage Distance (Maximum)
5621K	9.5 (241 mm)	9.5 (241 mm)
5622K	9.5 (241 mm)	9.5 (241 mm)
5623K	11.0 (279 mm)	11.0 (279 mm)
5624K	11.0 (279 mm)	11.0 (279 mm)
5625K	11.0 (279 mm)	11.0 (279 mm)

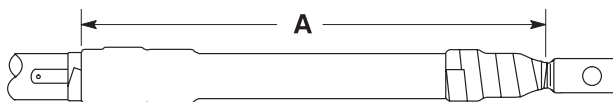


Figure 2

EPDM Rubber Hi-K Stress Control Tube

Physical Properties		
Test Method	Typical Value*	
Permanent Set (3M Test Method) 22 hours @ 212° F (100° C) 100% elongation 5 minute recovery	20%	
Ultimate Tensile Strength (ASTM D-42)	1394 psi (9.6 MPa)	
Electrical Properties		
Test Method	Typical Value*	
Dielectric Constant (K) (ASTM-D-150) 60 Hz; @ 60% strain 73° F (23° C) 149° F (65° C) 194° F (90° C) vs. frequency @ 73° F (23° C)	@ 400 V	@ 3 kV
	25.7	28.8
	24.5	27.2
	25.2	27.7
150 Hz	35	
1,000 Hz	29	
10,000 Hz	24	
100,000 Hz	20	
Dissipation Factor (ASTM-D-150) 60 Hz; @ 60% strain 73° F (23° C) 149° F (65° C) 194° F (90° C) vs. frequency @ 73° F (23° C)	@ 400 V	@ 3 kV
	0.096	0.166
	0.093	0.165
	0.132	0.161
150 Hz	0.16	
1,000 Hz	0.15	
10,000 Hz	0.14	
100,000 Hz	0.12	

*Average values. Not intended for specification purposes.

Silicone Rubber Insulator

Physical Properties	
Test Method	Typical Value*
Color	Munsell Gray
Permanent Set (3M Test Method) 22 hours @ 212° F (100° C) 100% elongation 5 minute recovery	8%
Ultimate Tensile Strength (ASTM D42)	1200 psi (8.28 MPa)
Electrical Properties	
Test Method	Typical Value*
Dielectric Constant (S.I.C.) (ASTM-D-150) 73° F (23° C) 194° F (90° C) 266° F (130° C)	3.4
	3.0
	2.7
Dissipation Factor (ASTM-D-150) 73° F (23° C) 194° F (90° C) 266° F (130° C)	0.4%
	1.3%
	1.2%
Dielectric Strength (ASTM-D-149) 75 mil (1.90 mm) gap	507 V/mil (20 kV/mm)
Track Resistance (ASTM-2303) 2.5 kV, 10 k Ohms	10 hrs