tyco
Electronics

Energy Division

HVT
High Voltage Termination

The HVT high voltage termination system features a nontracking, insulating surface that can withstand long-term electrical stress and surface pollution.

The need for proven stress control is even more important at higher voltages. The materials used in Tyco Electronic's HVT terminations are suitable for severely polluted areas and for all installation conditions, including top feed installation. The material is designed to be resistant to impact damage from transportation or vandalism, a typical problem for heavy, inflexible porcelain products. The HVT terminations also require no compound filling which can leak over time.

Reliable, field proven performance:
Independent testing and field experience have repeatedly proven the long-term stability, durability and reliability of the HVT system, even in highly polluted environments. The non-tracking, insulating outer jacket can withstand the rigors of long-term electrical stress and surface pollution without loss of performance. The nontracking material offers the additional benefit of being maintenance free, with no need for periodic cleaning. Extensive load cycle testing verifies the long-term thermomechanical compatibility between the termination system and the cable.

Flexible and versatile:
An HVT termination system may be installed upright or inverted and can bend to the same bending radius as the cable. Slim and lightweight, the system can also be mounted directly to fuse cutouts or other devices, eliminating the cost of additional supporting brackets.

Advantages:
- Broad range of standard indoor and outdoor kits for all plastic cable types, including armored cable.
- Easy installation with a single technique, which eliminates retraining – even on armored cable.
- Flexible to fit all cable types, so precise cable dimensions are not necessary when ordering.

Testing:
Tyco Electronic's high-voltage terminations are fully qualified per IEEE-48 as Class I terminations to provide a long, trouble-free service life. Independent testing and field experience have repeatedly proven the long-term durability, reliability, and stability of the HVT termination system.

Ease of installation:
The HVT termination kits can be installed on all cable types without special adapters or accessories. No special tooling or connectors are required since the HVT termination kits accept all common compression or terminal lugs. This method also provides generous cable cutback and component positioning tolerances, further reducing installation variability.

Raychem

Testing Chart

Product and voltage class[1] Test description	HVT-80 (5–8 kV)	HVT-150 (15 kV)	HVT-250 (25 kV[2])	HVT-350 (35 kV)
AC withstand, 1 minute, (kV)	35	50	65	90
DC withstand, 15 minutes, (kV)	65	75	105	140
Partial discharge (min. kV) for 3 pC or less	9	15.6	25.8	36
Impulse withstand 1.2 x 50 µs, crest kV (outdoor)[3]	95	110	150	200
Impulse withstand 1.2 x 50 µs, crest kV (indoor)[3]	80	95	125	150
Continuous current rating	Equal to cable ampacity			
Wet withstand, 10 seconds, kV rms	30	45	60	80
Dry withstand, 6 hours, kV rms	25	35	55	75

Note: For PILC terminations, please refer to page 4-23 of Ready Reference Guide 2000.
1 URD and LC kits are rated for 15–35 kV only; HVT-M kits for 5/8–25 kV only.
2 HVT-250 meets requirements of 25/28 kV systems.
3 Outdoor kits (-SJ, -SG, or -SLC designation) were tested with skirts (rain sheds). Indoor kits (-J, -G, -LC designation) do not contain skirts.

Selection Information

Catalog number Indoor	Outdoor	5 kV conductor size (AWG/kcmil)	8 kV conductor size (AWG/kcmil)	Insulation diameter (min.–max.)	Jacket O.D. (max.)
5–8 kV					
HVT-80-G	HVT-80-SG	#4–#1*	#6–#2	0.35–0.60 (9–15)	0.95 (24)
HVT-81-G	HVT-81-SG	1/0–250*	#1–4/0	0.60–0.95 (15–24)	1.20 (30)
HVT-82-G	HVT-82-SG	300–500*	250–500	0.80–1.25 (20–32)	1.50 (38)
HVT-83-G	HVT-83-SG	600–1750*	600–1750	1.10–1.75 (28–44)	2.10 (53)
HVT-84-G	HVT-84-SG	1500–2500*	2000–2500	1.60–2.45 (41–62)	2.75 (70)
Installed length: 10.5" (267mm)					
		Conductor size (AWG/kcmil)			
15 kV					
HVT-151-G	HVT-151-SG	#4–1/0		0.60–0.95 (15–24)	1.20 (30)
HVT-152-G	HVT-152-SG	2/0–350		0.80–1.25 (20–32)	1.50 (38)
HVT-153-G	HVT-153-SG	400–1000		1.10–1.65 (28–42)	2.10 (53)
HVT-154-G	HVT-154-SG	1250–2500		1.60–2.45 (41–62)	2.75 (70)
Installed length: 15" (381mm)					
25 kV					
HVT-252-G	HVT-252-SG	#2–250		0.80–1.25 (20–32)	1.50 (38)
HVT-253-G	HVT-253-SG	300–750		1.10–1.70 (28–43)	2.10 (53)
HVT-254-G	HVT-254-SG	1000–1750		1.60–2.45 (41–62)	2.75 (70)
HVT-255-G	HVT-255-SG	2000–2500		2.05–3.00 (52–76)	3.45 (88)
Installed length: 28" (711mm)					
35 kV					
HVT-352-G	HVT-352-SG	#1–1/0		0.80–1.25 (20–32)	1.50 (38)
HVT-353-G	HVT-353-SG	2/0–500		1.10–1.85 (28–47)	2.10 (53)
HVT-354-G	HVT-354-SG	750–1750		1.60–2.45 (41–62)	2.75 (70)
HVT-355-G	HVT-355-SG	2000–2500		2.05–3.00 (52–76)	3.45 (88)
Installed length: 33" (838mm)					

·Wedge technology products·Electrical connectors·Cable accessories·Overhead conductor hardware·Asset protection·Surge arresters·Insulators·Fittings·Associated tooling

tyco Electronics

Energy Division
AMP
Dulmison
Raychem
SIMEL

Tyco Electronics
Raychem
Energy Division
8000 Purfoy Road
Fuquay-Varina, NC 27526-9349
Phone: 1-800-327-6996
Fax: 1-800-527-8350