



# Cold Shrink

## QT-III Indoor and Outdoor Terminations

3M™ Cold Shrink Silicone Rubber QT-III terminations are designed for faster installation and higher reliability.



Cold Shrink QT-III Indoor Termination

1



Cold Shrink QT-III Outdoor Termination

2

3M Cold Shrink QT-III terminations offer easy installation and reliable performance when terminating indoor and outdoor medium voltage cable. The built-in Hi-K stress controlling compound along with the built in sealing compound means simpler installation on all types of cables. These factory applied compounds make field installation easier and reduce installation errors. Plus its high-K stress design delivers excellent BIL performance and lower surface stress resulting in a more compact termination. Through superior engineering, 3M Cold Shrink QT-III terminations deliver maximum performance.

### QT-III Inverted applications

Terminations that are inverted inside of equipment (switchgear, transformers, etc.) can be made using the QT-III indoor tubular design. However, for outdoor applications skirted terminations are recommended. The standard skirts of most terminations are oriented to shed water when installed in the upright direction. The skirts could collect moisture and contamination when inverted. This could lead to tracking problems. 3M has designed the 7600-S-INV series inverted kits to eliminate this problem. These inverted kits are recommended for all outdoor inverted applications.

### Cold Shrink technology; over 30 years of field-proven reliability

Over thirty years ago, 3M pioneered Cold Shrink technology. Since then, field use and laboratory analysis have repeatedly proven its merits and reliability. Through constant innovation, we have refined Cold Shrink products making them better than ever. They're easier to apply and built to withstand even the most punishing environmental conditions. Enhanced performance at a lower installed cost continue to make 3M the preferred choice for Cold Shrink solutions.

### QT-III Termination Features

Improved long term reliability

- Hydrophobic silicone body
- Superior track and erosion resistance
- Optimum high-K stress control
- Built-in sealing and stress controlling compounds
- Outstanding UV stability
- Designed to meet IEEE 48, CENELEC 0278 and IEC 502 standards
- Easier installation
- Installation requires no silicone tape or grease
- Shorter installed length

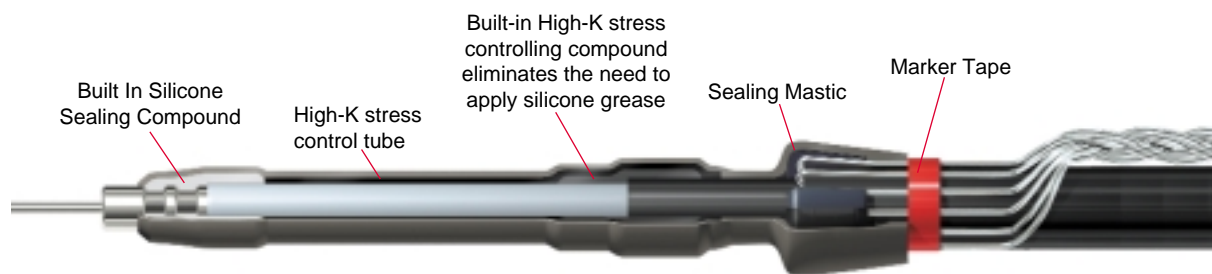
### Cold Shrink Benefits

Lower Installed Cost

- Minimal training required
- All materials included in the kit
- Easy cable preparation
- Compact to fit into smaller equipment

High Reliability

- No heat, flames or special tools needed
- Simple, straight forward installation
- Built-in stress relief
- 30 years of proven field experience

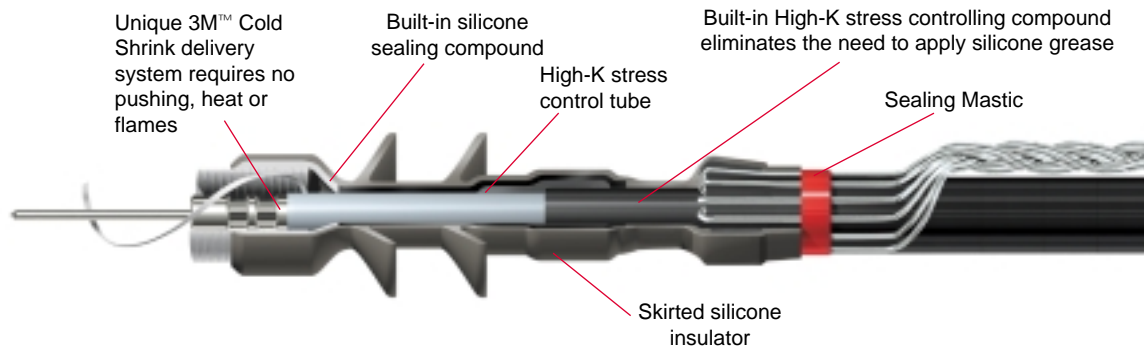


## Cold Shrink QT-III Indoor Termination

Kit number	Cable insulation		Conductor size range AWG and kcmil (mm <sup>2</sup> )				
	Bil	O.D. range in. (mm)	5kV	8.7kV	15kV	25/28kV	★35kV
<b>Shielded Cable Kits</b> (Each Shielded Cable Kit makes three terminations.)							
7620-T-95	95kV	0.32-0.59 (8,2-15,0)	8-4	8-6	—	—	—
7621-T-95	95kV	0.44-0.89 (11,2-22,7)	2-3/0	4-2/0	—	—	—
7622-T-110	110kV	0.64-1.08 (16,3-27,4)	4/0-400	3/0-300	2-4/0 (35-120)	—	—
7624-T-110	110kV	0.83-1.53 (21,1-38,9)	500-750	350-700	4/0-500 (120-240)	—	—
7625-T-110	110kV	1.05-1.80 (26,7-45,7)	700-1500	600-1250	500-1000 (240-500)	—	—
7626-T-110	110kV	1.53-2.32 (38,9-58,9)	1750-2000	1500-2000	1250-2000 (500-1000)	—	—
7693-T-150	150kV	0.72-1.29 (18,3-32,8)	300-500	250-500	2/0-300 (70-150)	2-4/0 (35-120)	2-2/0 (35-70)
7695-T-150	150kV	1.05-1.80 (26,7-45,7)	700-1500	600-1250	500-1000 (240-500)	250-800 (150-400)	3/0-600 (95-325)
7696-T-150	150kV	1.53-2.32 (38,9-58,9)	1750-2000	1500-2000	1250-2000 (500-1000)	900-1750 (500-800)	700-1500 (400-725)
<b>Concentric and Jacketed Concentric Cable Kits</b> (Each Concentric and Jacketed Concentric Cable Kit makes one termination.)							
7642-T-110	110kV	0.64-1.08 (16,3-27,4)	4/0-400	3/0-300	2-4/0 (35-120)	—	—
7644-T-110	110kV	0.83-1.53 (21,1-38,9)	500-750	350-700	4/0-500 (120-240)	—	—
7645-T-110	110kV	1.05-1.80 (26,7-45,7)	700-1500	600-1250	500-1000 (240-500)	—	—
7646-T-110	110kV	1.53-2.32 (38,9-58,9)	1750-2000	1500-2000	1250-2000 (500-1000)	—	—
7653-T-150	150kV	0.72-1.29 (18,3-32,8)	300-500	250-500	2/0-300 (70-150)	2-4/0 (35-120)	2-2/0 (35-70)
7655-T-150	150kV	1.05-1.80 (26,7-45,7)	700-1500	600-1250	500-1000 (240-500)	250-800 (150-400)	3/0-600 (95-325)
7656-T-150	150kV	1.53-2.32 (38,9-58,9)	1750-2000	1500-2000	1250-2000 (500-1000)	900-1750 (500-800)	700-1500 (400-725)
<b>High Fault Current Cable Kits</b> (Each High Fault Current Cable Kit makes one termination.)							
7642-T-HSG-110	110kV	0.64-1.08 (16,3-27,4)	4/0-400	3/0-300	2-4/0 (35-120)	—	—
7644-T-HSG-110	110kV	0.83-1.53 (21,1-38,9)	500-750	350-700	4/0-500 (120-240)	—	—
7645-T-HSG-110	110kV	1.05-1.80 (26,7-45,7)	700-1500	600-1250	500-1000 (240-500)	—	—
7646-T-HSG-110	110kV	1.53-2.32 (38,9-58,9)	1750-2000	1500-2000	1250-2000 (500-1000)	—	—
7653-T-HSG-150	150kV	0.72-1.29 (18,3-32,8)	300-500	250-500	2/0-300 (70-150)	2-4/0 (35-120)	2-2/0 (35-70)
7655-T-HSG-150	150kV	1.05-1.80 (26,7-45,7)	700-1500	600-1250	500-1000 (240-500)	250-800 (150-400)	3/0-600 (95-325)
7656-T-HSG-150	150kV	1.53-2.32 (38,9-58,9)	1750-2000	1500-2000	1250-2000 (500-1000)	900-1750 (500-800)	700-1500 (400-725)

★ 150kV impulse level meets the impulse requirements for 35.0kV class equipment where indoor terminations are used.

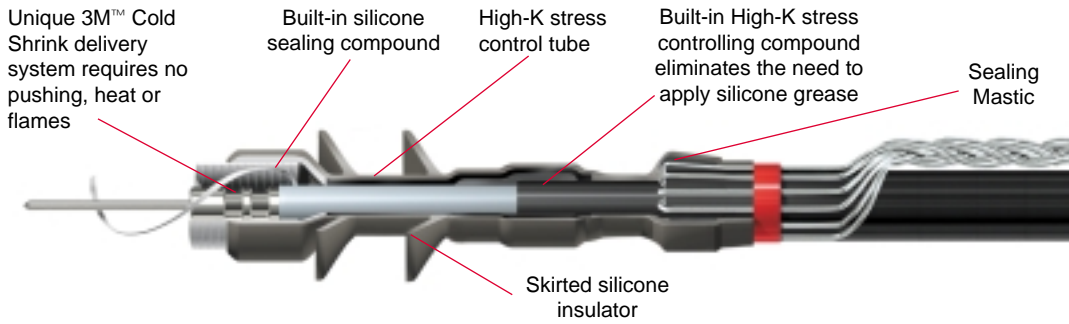
Please contact your local 3M representative for more information.



## Cold Shrink QT-III Outdoor Termination

Kit number	Bil	Cable insulation O.D. range in. (mm)	Conductor size range AWG and komil (mm <sup>2</sup> )				
			5kV	8.7kV	15kV	25/28kV	35kV
<b>Shielded Cable Kits</b> (Each Shielded Cable Kit makes three terminations. Each inverted termination kit makes three terminations.)							
7620-S-2	95kV	0.32-0.59 (8,2-15,0)	8-4	8-6	-	-	-
7621-S-2	95kV	0.44-0.89 (11,2-22,7)	2-3/0	4-2/0	-	-	-
7622-S-2	110kV	0.64-1.08 (16,3-27,4)	4/0-400	3/0-300	2-4/0 (35-120)	-	-
7692-S-4	150kV	0.64-1.08 (16,3-27,4)	4/0-400	3/0-300	2-4/0 (35-120)	2-1/0 (35-50)	-
7693-S-4	150kV	0.72-1.29 (18,3-32,8)	300-500	250-500	2/0-300 (70-150)	2-4/0 (35-120)	-
7694-S-4	150kV	0.83-1.53 (21,1-38,9)	500-750	350-700	4/0-500 (120-240)	2/0-250 (70-150)	-
7695-S-4	150kV	1.05-1.80 (26,7-45,7)	700-1500	600-1250	500-1000 (240-500)	250-800 (125-400)	-
7696-S-4	150kV	1.53-2.32 (38,9-58,9)	1750-2000	1500-2000	1250-2000 (625-1000)	900-1750 (500-800)	-
7683-S-8	200kV	0.72-1.29 (18,3-32,8)	300-500	250-500	2/0-300 (70-150)	2-4/0 (35-120)	2-2/0 (35-70)
7684-S-8	200kV	0.83-1.53 (21,1-38,9)	500-750	350-700	4/0-500 (120-240)	2/0-250 (70-150)	2-4/0 (35-120)
7685-S-8	200kV	1.05-1.80 (26,7-45,7)	700-1500	600-1250	500-1000 (240-500)	250-800 (125-400)	3/0-600 (95-325)
7686-S-8	200kV	1.53-2.32 (38,9-58,9)	1750-2000	1500-2000	1250-2000 (625-1000)	900-1750 (500-800)	700-1500 (400-725)
<b>Concentric and Jacketed Concentric Cable Kits</b> (Each Concentric and Jacketed Concentric Cable Kit makes one termination.)							
7642-S-2	110kV	0.64-1.08 (16,3-27,4)	4/0-400	3/0-300	2-4/0 (35-120)	-	-
7652-S-4	150kV	0.64-1.08 (16,3-27,4)	4/0-400	3/0-300	2-4/0 (35-120)	2-1/0 (35-50)	-
7653-S-4	150kV	0.72-1.29 (18,3-32,8)	300-500	250-500	2/0-300 (70-150)	2-4/0 (35-120)	-
7654-S-4	150kV	0.83-1.53 (21,1-38,9)	500-750	350-700	4/0-500 (120-240)	2/0-250 (70-150)	-
7655-S-4	150kV	1.05-1.80 (26,7-45,7)	700-1500	600-1250	500-1000 (240-500)	250-800 (125-400)	-
7656-S-4	150kV	1.53-2.32 (38,9-58,9)	1750-2000	1500-2000	1250-2000 (625-1000)	900-1750 (500-800)	-
7663-S-8	200kV	0.72-1.29 (18,3-32,8)	300-500	250-500	2/0-300 (70-150)	2-4/0 (35-120)	2-2/0 (35-70)
7664-S-8	200kV	0.83-1.53 (21,1-38,9)	500-750	350-700	4/0-500 (120-240)	2/0-250 (70-150)	2-4/0 (35-120)
7665-S-8	200kV	1.05-1.80 (26,7-45,7)	700-1500	600-1250	500-1000 (240-500)	250-800 (125-400)	3/0-600 (95-325)
7666-S-8	200kV	1.53-2.32 (38,9-58,9)	1750-2000	1500-2000	1250-2000 (625-1000)	900-1750 (500-800)	700-1500 (400-725)
<b>High Fault Current Cable Kits</b> (Each High Fault Current Cable Kit makes one termination.)							
7652-S-HSG-4	150kV	0.64-1.08 (16,3-27,4)	4/0-400	3/0-300	2-4/0 (35-120)	2-1/0 (35-50)	-
7653-S-HSG-4	150kV	0.72-1.29 (18,3-32,8)	300-500	250-500	2/0-300 (70-150)	2-4/0 (35-120)	-
7654-S-HSG-4	150kV	0.83-1.53 (21,1-38,9)	500-750	350-700	4/0-500 (120-240)	2/0-250 (70-150)	-
7655-S-HSG-4	150kV	1.05-1.80 (26,7-45,7)	700-1500	600-1250	500-1000 (240-500)	250-800 (125-400)	-
7656-S-HSG-4	150kV	1.53-2.32 (38,9-58,9)	1750-2000	1500-2000	1250-2000 (625-1000)	900-1750 (500-800)	-
7663-S-HSG-8	200kV	0.72-1.29 (18,3-32,8)	300-500	250-500	2/0-300 (70-150)	2-4/0 (35-120)	2-2/0 (35-70)
7664-S-HSG-8	200kV	0.83-1.53 (21,1-38,9)	500-750	350-700	4/0-500 (120-240)	2/0-250 (70-150)	2-4/0 (35-120)
7665-S-HSG-8	200kV	1.05-1.80 (26,7-45,7)	700-1500	600-1250	500-1000 (240-500)	250-800 (125-400)	3/0-600 (95-325)
7666-S-HSG-8	200kV	1.53-2.32 (38,9-58,9)	1750-2000	1500-2000	1250-2000 (625-1000)	900-1750 (500-800)	700-1500 (400-725)

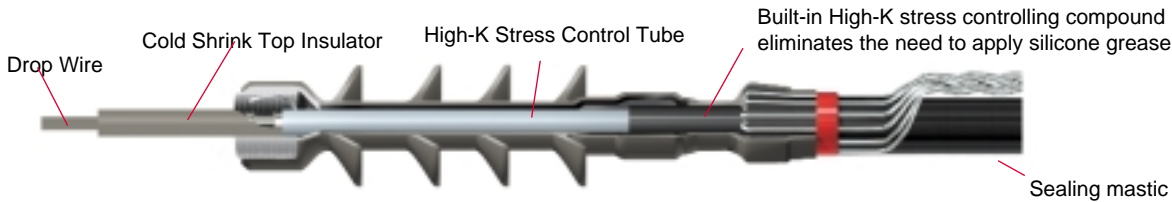
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## Cold Shrink QT-III Inverted Outdoor Termination

Kit number	Bil	Cable insulation		Conductor size range AWG and kcmil (mm <sup>2</sup> )			
		O.D. range in. (mm)	5kV	8.7kV	15kV	25/28kV	★35kV
<b>Inverted Kits</b> (Each inverted termination kit makes three terminations.)							
7622-S-INV-2	110kV	0.64-1.08 (16,3-27,4)	4/0-400	3/0-300	2-4/0 (35-120)	—	—
7693-S-INV-4	150kV	0.72-1.29 (18,3-32,8)	300-500	250-500	2/0-300 (70-150)	2-4/0	2-2/0 (35-70)
7695-S-INV-4	150kV	1.05-1.80 (26,7-45,7)	700-1500	600-1250	350-1000 (185-500)	250-800 (150-400)	3/0-600 (95-325)
7696-S-INV-4	150kV	1.53-2.32 (38,9-58,9)	1750-2000	1500-2000	1250-2000 (500-1000)	900-1750 (500-800)	700-1500 (400-725)

★ 35kV weather protected applications only



## Cold Shrink QT-III Silicone Rubber Termination with Top Insulator

Kit number	Bil	Cable insulation O.D. range	Connector & Drop Wire O.D. Range	Conductor Size Range AWG & kcmil 15kV	25/28kV
7652-S-4-TI	150kV	0.64 - 1.08 (16,3 - 27,4 mm)	0.51" - 0.82" (12,9 - 20,8 mm)	2 - 4/0 (35 - 120 mm <sup>2</sup> )	2 - 1/0 (35 - 50 mm <sup>2</sup> )
7653-S-4-TI	150kV	0.72 - 1.29 (18,3 - 32,8 mm)	0.62" - 1.00" (15,7 - 25,4 mm)	2 - 300 (70 - 150 mm <sup>2</sup> )	2 - 4/0 (35 - 120 mm <sup>2</sup> )
7654-S-4-TI	150kV	0.83 - 1.53 (21,1 - 38,9 mm)	0.66" - 1.18" (16,7 - 30,0 mm)	4/0 - 500 (120 - 240 mm <sup>2</sup> )	2/0 - 250 (70 - 150 mm <sup>2</sup> )
7655-S-4-TI	150kV	1.05 - 1.80 (26,7 - 45,7 mm)	0.69" - 1.30" (17,5 - 33,0 mm)	500 - 1000 (240 - 500 mm <sup>2</sup> )	250 - 800 (150 - 400 mm <sup>2</sup> )
7656-S-4-TI	150kV	1.53 - 2.32 (38,9 - 58,9 mm)	1/05" - 1.94" (26,6 - 49,3 mm)	1250 - 2000 (500 - 1000 mm <sup>2</sup> )	900 - 1750 (500 - 800 mm <sup>2</sup> )

Please contact your local 3M representative for more information.

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### Important Notice

Before using this product, you must evaluate it and determine if it is suitable for your intended application. You assume all risks and liability associated with such use.

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3M's product warranty is stated in its Product Literature available upon request. **3M MAKES NO OTHER WARRANTIES INCLUDING,**

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