



# 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

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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

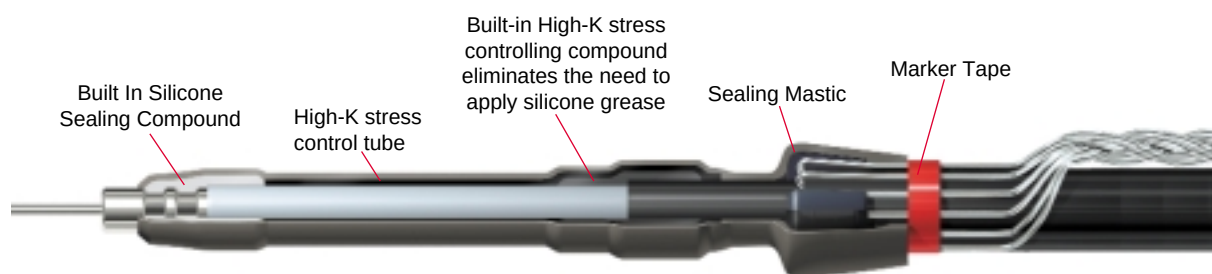
### Cold Shrink Benefits

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

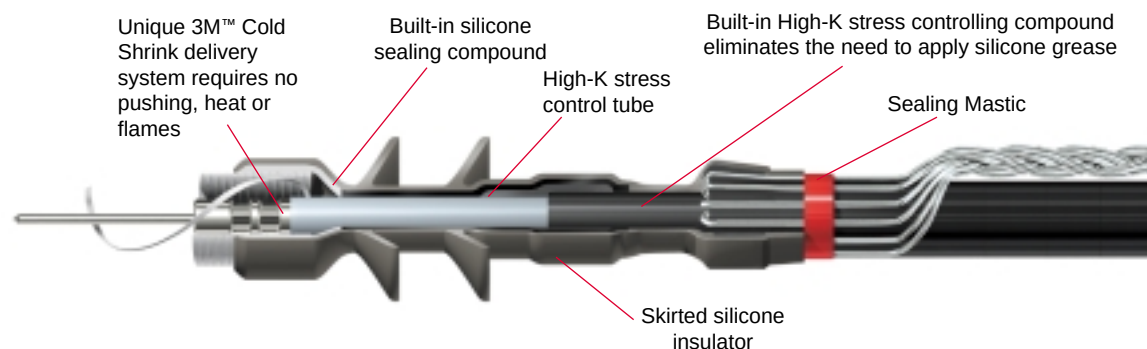


## Cold Shrink QT-III Indoor Termination

| Kit number                                                                                                                      | Cable insulation |                       | Conductor size range AWG and kcmil (mm²) |           |                      |                    |                    |
|---------------------------------------------------------------------------------------------------------------------------------|------------------|-----------------------|------------------------------------------|-----------|----------------------|--------------------|--------------------|
|                                                                                                                                 | 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      | Conductor size range AWG and kcmil (mm²) |           |                      |                    |                    |
|---------------------------------------------------------------------------------------------------------------------------------|-------|-----------------------|------------------------------------------|-----------|----------------------|--------------------|--------------------|
|                                                                                                                                 |       | O.D. range in. (mm)   | 5kV                                      | 8.7kV     | 15kV                 | 25/28kV            | 35kV               |
| Shielded Cable Kits (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) |
| Concentric and Jacketed Concentric Cable Kits (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) |
| High Fault Current Cable Kits (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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