HV Inline Joint 98-AD xxx-1/x

Cold Shrink Inline Joint with Heat Shrink or Resin Re-jacketing

1. Product Description

The 3M High Voltage Cold Shrink Inline Joints have been designed for polymeric insulated cables up to 145kV U_{max} according to IEC 60840. The silicone joint body is supplied in Cold Shrink Technology. The outer re-jacketing is made by heat shrinkable tube or polyurethane 2-component resin. Kits are available with or without shield break for cross bonding. All inline joint kits are based on the SC/SS 145-II joint body family.

2. Applications

Inline joint for underground application up to 145kV U_{max} including Cold Shrink joint body for safe and quick installation.
Application range from 240mm² up to 1600mm².
The cold shrink joint body can be used for cross section transition inside the application range.
Solutions for optical fibre connections are available on request.

3. Typical Properties

3.1 Rated Voltage U_0/U

64/110kV and 76/132kV

3.2 Max. System Voltage U_{max}

145kV

3.3 Application Range Primary Insulation

98-AD xxx-1/1	57.0 – 67.0mm
98-AD xxx-1/2	67.0 – 79.0mm
98-AD xxx-1/3	71.0 – 86.0mm

3.4 Application Range Cross Section

240mm² - 1600mm²
The application range can change depending on the cable insulation diameter.

3.5 Earth Screen

The Jointing kits are available with a copper meshed earth screen or with copper housing.

3.6 Type Test

Type Test according to ICE 60840 completed successfully.

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4. User Information

4.1 Selection Guide

Inline jointing kits without shield break and heat shrink re-jacketing

Kit Reference	Cable Dimensions for Polymeric Cable					Connector Dimensions	
	Type of metal screen	Diameter over Primary Insulation (mm)	Cross Section[1] 123kV U_{max} (mm^2)	Cross Section[1] 145kV U_{max} (mm^2)	Diameter over Cable Jacket[2] Max. (mm)	Maximum Diameter (mm)	Maximum Length (mm)
98-AD 210-1/1	Cu-Wire Screen	57.0 – 67.0	300 - 630	240 - 630	80	67.0	230
98-AD 210-1/2	Cu-Wire Screen	67.0 – 79.0	630 - 1200	630 - 1200	89	79.0	230
98-AD 210-1/3	Cu-Wire Screen	71.0 – 86.0	1000 - 1600	1000 - 1600	100	86.0	230
98-AD 211-1/1	Metal screen	57.0 – 67.0	300 - 630	240 - 630	80	67.0	230
98-AD 211-1/2	Metal screen	67.0 – 79.0	630 - 1200	630 - 1200	89	79.0	230
98-AD 211-1/3	Metal screen	71.0 – 86.0	1000 - 1600	1000 - 1600	105	86.0	230

Inline jointing kits with shield break and heat shrink re-jacketing

Kit Reference	Cable Dimensions for Polymeric Cable					Connector Dimensions	
	Type of metal screen	Diameter over Primary Insulation (mm)	Cross Section[1] 123kV U_{max} (mm^2)	Cross Section[1] 145kV U_{max} (mm^2)	Diameter over Cable Jacket[2] Max. (mm)	Maximum Diameter (mm)	Maximum Length (mm)
98-AD 230-1/1	Cu-Wire Screen	57.0 – 67.0	300 - 630	240 - 630	80	67.0	230
98-AD 230-1/2	Cu-Wire Screen	67.0 – 79.0	630 - 1200	630 - 1200	89	79.0	230
98-AD 230-1/3	Cu-Wire Screen	71.0 – 86.0	1000 - 1600	1000 - 1600	100	86.0	230
98-AD 231-1/1	Metal screen	57.0 – 67.0	300 - 630	240 - 630	80	67.0	230
98-AD 231-1/2	Metal screen	67.0 – 79.0	630 - 1200	630 - 1200	89	79.0	230
98-AD 231-1/3	Metal screen	71.0 – 86.0	1000 - 1600	1000 - 1600	105	86.0	230

Inline jointing kits without shield break, Cu-casing and heat shrink re-jacketing

Kit Reference	Cable Dimensions for Polymeric Cable					Connector Dimensions	
	Type of metal screen	Diameter over Primary Insulation (mm)	Cross Section[1] 123kV U_{max} (mm^2)	Cross Section[1] 145kV U_{max} (mm^2)	Diameter over Cable Jacket[2] Max. (mm)	Maximum Diameter (mm)	Maximum Length (mm)
98-AD 241-1/1	Metal screen	57.0 – 67.0	300 - 630	240 - 630	80	67.0	230
98-AD 241-1/2	Metal screen	67.0 – 79.0	630 - 1200	630 - 1200	89	79.0	230
98-AD 241-1/3	Metal screen	71.0 – 86.0	1000 - 1600	1000 - 1600	105	86.0	230

Inline jointing kits with shield break, Cu-casing and heat shrink re-jacketing

Kit Reference	Cable Dimensions for Polymeric Cable					Connector Dimensions	
	Type of metal screen	Diameter over Primary Insulation (mm)	Cross Section[1] 123kV U_{max} (mm^2)	Cross Section[1] 145kV U_{max} (mm^2)	Diameter over Cable Jacket[2] Max. (mm)	Maximum Diameter (mm)	Maximum Length (mm)
98-AD 251-1/1	Metal screen	57.0 – 67.0	300 - 630	240 - 630	80	67.0	230
98-AD 251-1/2	Metal screen	67.0 – 79.0	630 - 1200	630 - 1200	89	79.0	230
98-AD 251-1/3	Metal screen	71.0 – 86.0	1000 - 1600	1000 - 1600	105	86.0	230

[1] The application range can change depending on the primary insulation diameter.
[2] Maximum cable jacket diameter can change depending on the screen cross section.

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Inline jointing kits without shield break and resin re-jacketing

Kit Reference	Cable Dimensions for Polymeric Cable					Connector Dimensions	
	Type of metal screen	Diameter over Primary Insulation (mm)	Cross Section[1] 123kV U_{max} (mm^2)	Cross Section[1] 145kV U_{max} (mm^2)	Diameter over Cable Jacket[2] Max. (mm)	Maximum Diameter (mm)	Maximum Length (mm)
98-AD 410-1/1	Cu-Wire Screen	57.0 – 67.0	300 - 630	240 - 630	80	67.0	230
98-AD 410-1/2	Cu-Wire Screen	67.0 – 79.0	630 - 1200	630 - 1200	89	79.0	230
98-AD 410-1/3	Cu-Wire Screen	71.0 – 86.0	1000 - 1600	1000 - 1600	100	86.0	230
98-AD 411-1/1	Metal screen	57.0 – 67.0	300 - 630	240 - 630	80	67.0	230
98-AD 411-1/2	Metal screen	67.0 – 79.0	630 - 1200	630 - 1200	89	79.0	230
98-AD 411-1/3	Metal screen	71.0 – 86.0	1000 - 1600	1000 - 1600	105	86.0	230

Inline jointing kits with shield break and resin re-jacketing

Kit Reference	Cable Dimensions for Polymeric Cable					Connector Dimensions	
	Type of metal screen	Diameter over Primary Insulation* (mm)	Cross Section[1] 64/110kV 123kV U_{max} (mm^2)	Cross Section[1] 76/132kV 145kV U_{max} (mm^2)	Diameter over Cable Jacket[2] Max. (mm)	Diameter Min. – Max. (mm)	Length Max. (mm
98-AD 430-1/1	Cu-Wire Screen	57.0 – 67.0	300 - 630	240 - 630	80	67.0	230
98-AD 430-1/2	Cu-Wire Screen	67.0 – 79.0	630 - 1200	630 - 1200	89	79.0	230
98-AD 430-1/3	Cu-Wire Screen	71.0 – 86.0	1000 - 1600	1000 - 1600	100	86.0	230
98-AD 431-1/1	Metal screen	57.0 – 67.0	300 - 630	240 - 630	80	67.0	230
98-AD 431-1/2	Metal screen	67.0 – 79.0	630 - 1200	630 - 1200	89	79.0	230
98-AD 431-1/3	Metal screen	71.0 – 86.0	1000 - 1600	1000 - 1600	105	86.0	230

Inline jointing kits without shield break, Cu-casing and outer polymeric housing with resin

Kit Reference	Cable Dimensions for Polymeric Cable					Connector Dimensions	
	Type of metal screen	Diameter over Primary Insulation* (mm)	Cross Section[1] 64/110kV 123kV U_{max} (mm^2)	Cross Section[1] 76/132kV 145kV U_{max} (mm^2)	Diameter over Cable Jacket[2] Max. (mm)	Diameter Min. – Max. (mm)	Length Max. (mm
98-AD 440-1/1	Cu-Wire Screen	57.0 – 67.0	300 - 630	240 - 630	80	67.0	230
98-AD 440-1/2	Cu-Wire Screen	67.0 – 79.0	630 - 1200	630 - 1200	89	79.0	230
98-AD 440-1/3	Cu-Wire Screen	71.0 – 86.0	1000 - 1600	1000 - 1600	100	86.0	230
98-AD 441-1/1	Metal screen	57.0 – 67.0	300 - 630	240 - 630	80	67.0	230
98-AD 441-1/2	Metal screen	67.0 – 79.0	630 - 1200	630 - 1200	89	79.0	230
98-AD 441-1/3	Metal screen	71.0 – 86.0	1000 - 1600	1000 - 1600	105	86.0	230

Inline jointing kits with shield break, Cu-casing and outer polymeric housing with resin

Kit Reference	Cable Dimensions for Polymeric Cable					Connector Dimensions	
	Type of metal screen	Diameter over Primary Insulation* (mm)	Cross Section[1] 64/110kV 123kV U_{max} (mm^2)	Cross Section[1] 76/132kV 145kV U_{max} (mm^2)	Diameter over Cable Jacket[2] Max. (mm)	Diameter Min. – Max. (mm)	Length Max. (mm
98-AD 450-1/1	Cu-Wire Screen	57.0 – 67.0	300 - 630	240 - 630	80	67.0	230
98-AD 450-1/2	Cu-Wire Screen	67.0 – 79.0	630 - 1200	630 - 1200	89	79.0	230
98-AD 450-1/3	Cu-Wire Screen	71.0 – 86.0	1000 - 1600	1000 - 1600	100	86.0	230
98-AD 451-1/1	Metal screen	57.0 – 67.0	300 - 630	240 - 630	80	67.0	230
98-AD 451-1/2	Metal screen	67.0 – 79.0	630 - 1200	630 - 1200	89	79.0	230
98-AD 451-1/3	Metal screen	71.0 – 86.0	1000 - 1600	1000 - 1600	105	86.0	230

* The application range can change depending on the primary insulation diameter.
[2] Maximum cable jacket diameter can change depending on the screen cross section.

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4.2 Regulatory

The HV inline joints 98-AD xxx-1/x are in compliance to EU regulation 1907/2007/EC (REACH).

4.2 Storage

All components of the 98-AD xxx-1/x are recommended to storage and stock rotation under temperature condition of -40℃ up to 50℃.

4.3 Shelf Life

The shelf life of the loaded inline joint body is specified as 18 month. All other components are specified to 36 month.

5. Additional Information

To request additional product information see address below.

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