

# 3M Separable Connectors

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## 1. PRODUCT

### 3M 36kV Dead Break EPDM Separable Connectors

#### Fore-Tee Connector



#### Sub-Tee Connector



## 2. PRODUCT DESCRIPTION

3M 94-EE Tee Plug-In Full-Shield Series consists of a T-type terminal body made of EPDM rubber and a stress control adapter. The main body of the T-type terminal is composed of an inner semi-conducting layer, an insulating layer and an outer shielding semi-conducting layer. The adapter consists of an outer insulation layer and a stress cone.

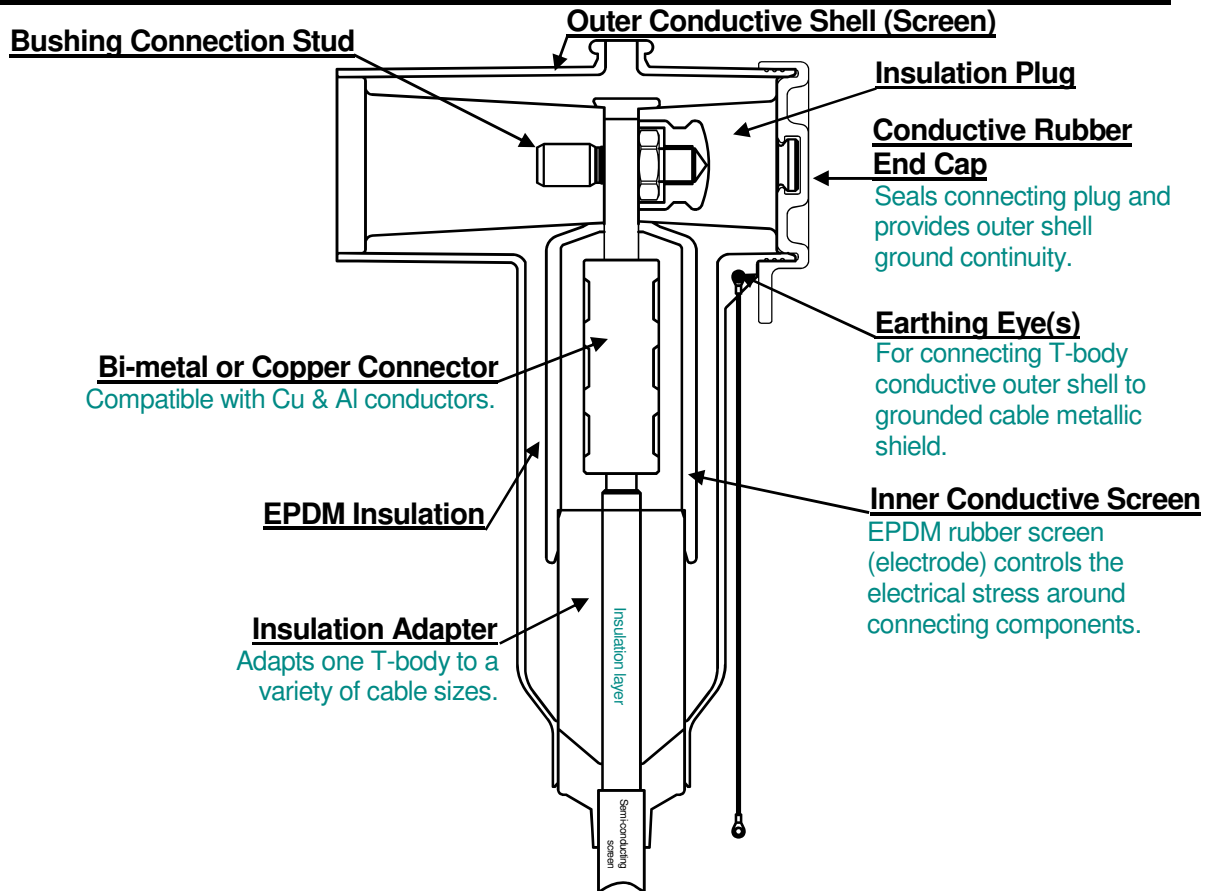
3M 94-EE Tee Plug is designed for connection of a power cable rated at 36kV and below to an insulated bushing interface type C follows EN50180 & 50181.

The total shielded body makes 94-EE suitable for compact, short distance phase-phase connection, temporarily submerge in hash condition off-shore or wind farm environment, increase safety & maintenance free during its operation time.

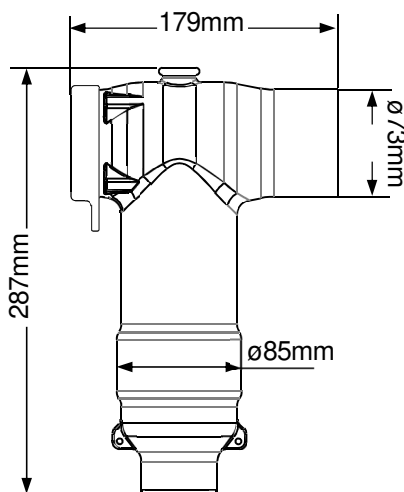
Each kit consists of a complete package to make one Separable Connector including the compatible connecting devices, such as a bi-metallic cable lug (for Al-Cu conductor) or a Copper cable lug (for Cu conductor). A Cold shrink breakout boot is also provided for 3C cable system. Economic heat shrink breakout could be ordered upon request.

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## 3. TEE PLUG DESIGN



## 4. ELECTRICAL RATING



**630A Series (Tee Configuration) follow IEC 60502-4**  
**Connection Interface C follows EN50180 & 50181**

### Electrical Ratings

### Values

Maximum System Voltage ( $U_m$ )	36 kV
AC Withstand (5 min)	81 kV
Partial Discharge at 30kV	< 10pC
Impulse	170 kV
Heating 30 cycles in air under 45kV	Passed
Heating 30 cycles in water under 45kV	Passed
AC 15 Minute Withstand	45kV
Short Circuit Withstand, 2 sec	25kA
Dynamic Short Circuit, 80ms	86kA
Screen resistance <5000Ω	Passed
Screen leakage <0.5mA at 36kV	Passed

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## 5. KIT CONTENT AND PACKAGING INFORMATION

The 3M kits consist all specific parts such as connector, pin and screws to install one complete phase of Dead Break Separable Connector.

630 A Tee Series
1 x Tee Plug Connector c/w grounding wire
1 x Cable Adapter
1 x Copper or Bi-metallic cable compression lug
1 x Thread Stud
1 x Washer + Hex Nut
1 x Insulation Plug
1 x Conductive Cap
0.3 x Mechanical Wrench
12 x Silicone Grease Pack (1)
1 x Mastic Strip (2)
1 x PVC Temflex Tape
1 x Tinned Copper Braid
1 x Constant Force Spring (3)
0.3 x Rubber Tape
1 x Cable Cleaning kit
0.3 x Comfort Grip Gloves
Drawing Instructions

(1): quantity is 15 for cable size 185mm<sup>2</sup> and above

(2): quantity is 2 for cable size 185mm<sup>2</sup> and above

(3): quantity is 2 if single core cable having armor, but only 1 in case of 3-cores cable

For 3-cores cable, we have Cold Shrink as default option & also Economic Heat Shrink option upon ordered request:



Cold Shrink Breakout Boot
1 x Cold Shrink Breakout Boot
1 x Silicone Cable Sleeve
1 x Polyester Braid
1 x Constant Force Spring
Drawing Instructions

Heat Shrink Breakout Boot
1 x Heat Shrink Breakout Boot
1 x Heat Shrink Sleeve
1 x Constant Force Spring
Drawing Instructions

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## 6. PRODUCT STOCKNUMBERS AND APPLICATION RANGE

The below mentioned product portfolio is suitable for: 3-core Cu conductor, polymeric insulated; copper wire or tape screened; armored or non-armored cable. Instructions for copper wire screened & tape screened are only different at the cable breakout position.

The kit for Al conductor uses a special bimetallic cable lug instead of copper lug.

Please kindly consult us if your cable size and desirable kit is not in the list. More detail information can be found at: [goo.gl/hptWJc](http://goo.gl/hptWJc)

### 18/30(36) kV Voltage Class

#### 630 A - F-Tee (Cold Shrink breakout boot) configuration for Cu conductor

Kit Reference	Stock Number	Cross Section (mm <sup>2</sup> )	Adapter Size	Diameter over Primary Insulation (mm)
94-EE915-36KV F-TEE 3x35	TBD	35	D	22.0 – 25.0
94-EE925-36KV F-TEE 3x50	XA010912088	50	D	22.0 – 25.0
94-EE935-36KV F-TEE 3x70	XA010912096	70	E	24.0 – 27.0
94-EE945-36KV F-TEE 3x95	XA010912104	95	F	26.0 – 29.0
94-EE955-36KV F-TEE 3x120	XA010912112	120	G	28.0 – 32.0
93-EE965-36KV F-TEE 3x150	XA010912120	150	G	28.0 – 32.0
93-EE975-36KV F-TEE 3x185	XA010912138	185	H	31.0 – 34.0
93-EE985-36KV F-TEE 3x240	XA010912146	240	I	33.0 – 37.0
93-EE995-36KV F-TEE 3x300	TBD	300	J	36.0 – 39.0

#### 630 A - F-Tee (Cold Shrink breakout boot) configuration for Al conductor

Kit Reference	Stock Number	Cross Section (mm <sup>2</sup> )	Adapter Size	Diameter over Primary Insulation (mm)
94-EE925-36KV F-TEE 3x50 bi	TBD	50	D	22.0 – 25.0
94-EE935-36KV F-TEE 3x70 bi	TBD	70	E	24.0 – 27.0
94-EE945-36KV F-TEE 3x95 bi	TBD	95	F	26.0 – 29.0
93-EE965-36KV F-TEE 3x150 bi	TBD	150	G	28.0 – 32.0
93-EE975-36KV F-TEE 3x185 bi	TBD	185	H	31.0 – 34.0
93-EE985-36KV F-TEE 3x240 bi	TBD	240	I	33.0 – 37.0
93-EE995-36KV F-TEE 3x300 bi	TBD	300	J	36.0 – 39.0
93-EE9X5-36KV F-TEE 3x400 bi	TBD	400	K	38.0 – 42.0