


3M Science.
Applied to Life.™

3M Electrical Market Solution

Professional Electrical Products





3M for Electronic & Energy

Enabling Tomorrow's Lifestyle Today with
Electrical Power, Communications,
Electronic & Energy

Enabling global telecommunications
Supporting high-tech electronic devices
Connecting the world's power grid
Enabling opportunities for energy conservation and generation
Intregating with customers to create innovative solutions

3M Electrical Markets Division

3M berhasil mencapai kesuksesan dengan cara memahami kebutuhan konsumen dan mengaplikasikan teknologi tinggi dalam memberikan solusi yang tepat. Dengan ratusan platform teknologi yang dimilikinya, 3M berkomitmen untuk terus melakukan penelitian dan pengembangan produk.

Komitmen yang dipilih 3M tersebut telah menghasilkan pengembangan produk isolasi vinyl pertama kali yang pernah ada yang mampu menjawab kebutuhan konsumen. Tidak hanya berhenti diproduksi isolasi vinyl, 3M juga menemukan konsep Cold Shrink lebih dari 45 tahun yang lalu. Teknologi Cold Shrink 3M terbukti lebih aman, lebih handal, dan lebih mudah untuk dipasang untuk kebutuhan jointing dan terminasi Tegangan Menengah dan Tegangan Tinggi dibanding dengan metode Heat Shrink yang konvensional. Teknologi Cold Shrink ini sangat sesuai diaplikasikan pada Power Utilities, Private Power Plant, dan kebutuhan listrik lainnya.

3M selalu berusaha untuk menjadi supplier yang dikenal akan inovasi dan produk-produknya yang efisien, yang dikombinasikan dengan komitmennya untuk melayani dan mendukung kegiatan bisnis konsumen.

3M™ Scotchcast™ Resin Joint Kits

3M™ Resin Splices

3M Scotchcast resin joint di desain untuk aplikasi kabel tegangan rendah, baik single core maupun multicore, tanpa pelindung (armoured) maupun dengan pelindung polimer. Teknologi ini memberikan perlindungan secara elektrik dan mekanikal terhadap sambungan (joint), sehingga dapat di aplikasikan untuk di dalam maupun di luar ruangan, di bawah tanah, ataupun di dalam air.

Jointing Resin 82-A Series

3M Scotchcast sambungan lurus dengan teknologi resin digunakan untuk aplikasi penyambungan kabel multi core.

Seri produk	Diameter Luar Kabel	Ukuran Penampang Kabel	Rating Tegangan	Case / Qty
82-A1-IN	16mm, 0.625"	30mm ² (up to 2AWG)	1kV,1/c	10
82-A2-IN	25mm, 1.00"	35-95 mm ² (2-3/0 AWG)	1kV,1/c	10
82-A3-IN	40mm, 1.563"	95-200 mm ² (3/0- 400kcmil)	1kV,1/c	10



Jointing Resin 92-A Series

Jointing Resin 3M™ Scotchcast™ for multi core cable.

Seri produk	Diameter Luar Kabel	Ukuran Penampang Kabel	Rating Tegangan
92-A1	8-22mm	up to 10mm ²	0.6/1kV
92-A2	14-30mm	16-25mm ²	0.6/1kV
92-A3	23-35mm	25-50mm ²	0.6/1kV
92-A4	28-47mm	50-95mm ²	0.6/1kV

RoHS
2002/95/EC
REACH
1907/2007/EC



3M™ Scotchcast™

Power Cable Joint Ranges

Premium Jointing and Hydro-Carbon Resistant Range

3M Scotchcast Resin Kabel Joint di desain untuk membuat proses instalasi lebih cepat, lebih aman dan lebih dapat diandalkan. 3M Scotchcast Hydro-Carbon Resistant khusus dikembangkan untuk industri minyak dan gas, serta penggunaan khusus sesuai jenis kabel lapis baja umumnya yang dipergunakan di pertambangan dan lingkungan industri.

Premium Range

Armoured Cable					Un-Armoured Cable				
Cable Cross Section (mm²)	1 Core	2 Cores	3 Cores	4 Cores	Cable Cross Section (mm²)	1 Core	2 Cores	3 Cores	4 Cores
1,5	N/A	LVI-2/2-C	LVI-2/2-C	LVI-2/2-C	1,5	92-NBAO	92-NBAO	92-NBAO	92-NBAO
2,5	N/A	LVI-2/2-C	LVI-2/2-C	LVI-2/2-C	2,5	92-NBAO	92-NBAO	92-NBAO	92-NBAO
4	N/A	LVI-2/2-C	LVI-2/2-C	LVI-2/2-C	4	92-NBAO	92-NBAO	92-NBAO	92-NBAO
6	N/A	LVI-2/2-C	LVI-2/2-C	LVI-2/2-C	6	92-NBAO	92-NBAO	92-NBAO	92-NBA1
10	N/A	LVI-2/3-C	LVI-2/3-C	LVI-2/3-C	10	92-NBAO	92-NBA1	92-NBA1	92-NBA3
16	N/A	LVI-2/3-C	LVI-2/4	LVI-2/4	16	92-NBAO	92-NBA1	92-NBA1	92-NBA3
25	N/A	LVI-2/3-C	LVI-2/4	LVI-2/4	25	92-NBAO	92-NBA3	92-NBA3	92-NBA3
35	N/A	LVI-2/4	LVI-2/5	LVI-2/5	35	92-NBAO	92-NBA3	92-NBA3	92-NBA4
50	LVI-2/3	LVI-2/5	LVI-2/5	LVI-2/5	50	92-NBAO	N/A	92-NBA3	92-NBA5
70	LVI-2/3	LVI-2/5	LVI-2/6	LVI-2/6	70	92-NBA1	N/A	92-NBA4	92-NBA5
95	LVI-2/4	LVI-2/6	LVI-2/6	LVI-2/7	95	92-NBA1	N/A	92-NBA5	92-NBA5
120	LVI-2/4	LVI-2/6	LVI-2/7	LVI-2/7	120	92-NBA1	N/A	92-NBA5	92-NBA6
150	LVI-2/4	LVI-2/6	LVI-2/6	LVI-2/7	150	92-NBA3	N/A	92-NBA6	92-NBA6
185	LVI-2/5	LVI-2/7	LVI-2/7	LVI-2/8	185	92-NBA3	N/A	92-NBA7	92-NBA7
240	LVI-2/5	LVI-2/7	LVI-2/8	LVI-2/8	240	92-NBA3	N/A	92-NBA7	92-NBA7
300	LVI-2/6	LVI-2/8	LVI-2/8	LVI-2/8	300	92-NBA4	N/A	N/A	N/A
400	LVI-2/6	LVI-2/8	LVI-2/8	N/A	400	92-NBA4	N/A	N/A	N/A
500	LVI-2/7	N/A	N/A	N/A	500	92-NBA5	N/A	N/A	N/A
630	LVI-2/7	N/A	N/A	N/A	630	92-NBA5	N/A	N/A	N/A
800	LVI-2/7	N/A	N/A	N/A	800	N/A	N/A	N/A	N/A
1000	LVI-2/7	N/A	N/A	N/A	1000	N/A	N/A	N/A	N/A

Hydro-Carbon Resistant Range

Armoured Cable					Un-Armoured Cable				
Cable Cross Section (mm²)	1 Core	2 Cores	3 Cores	4 Cores	Cable Cross Section (mm²)	1 Core	2 Cores	3 Cores	4 Cores
1,5	N/A	LVI-3/2-C	LVI-3/2-C	LVI-3/2-C	1,5	N/A	92-NA-1U	92-NA-1U	92-NA-1U
2,5	N/A	LVI-3/2-C	LVI-3/2-C	LVI-3/2-C	2,5	N/A	92-NA-1U	92-NA-1U	92-NA-1U
4	N/A	LVI-3/2-C	LVI-3/2-C	LVI-3/2-C	4	N/A	92-NA-1U	92-NA-1U	92-NA-1U
6	N/A	LVI-3/2-C	LVI-3/2-C	LVI-3/2-C	6	N/A	92-NA-1U	92-NA-1U	92-NA-1U
10	N/A	LVI-3/3-C	LVI-3/3-C	LVI-3/3-C	10	N/A	92-NA-1U	92-NA-1U	92-NA-1U
16	N/A	LVI-3/3-C	LVI-3/3-C	LVI-3/3-C	16	92-NA-2U	92-NA-2U	92-NA-2U	92-NA-2U
25	N/A	LVI-3/3-C	LVI-3/4	LVI-3/4	25	92-NA-2U	92-NA-2U	92-NA-2U	92-NA-2U
35	N/A	LVI-3/4	LVI-3/4	LVI-3/4	35	92-NA-2U	92-NA-3U	92-NA-3U	92-NA-3U
50	LVI-3/3	LVI-3/4	LVI-3/4	LVI-2/5	50	92-NA-2U	92-NA-4U	92-NA-4U	92-NA-4U
70	LVI-3/3	LVI-3/4	LVI-3/5	LVI-3/5	70	92-NA-2U	92-NA-4U	92-NA-4U	92-NA-4U
95	LVI-3/3	LVI-3/5	LVI-3/5	LVI-3/6	95	92-NA-2U	92-NA-5U	92-NA-5U	92-NBA5-U
120	LVI-3/4	LVI-3/5	LVI-3/6	LVI-3/6	120	92-NA-3U	92-NA	92-NA-5U	92-NBA6-U
150	LVI-3/4	LVI-3/6	LVI-3/7	LVI-3/7	150	92-NA-3U	92-NA-6U	92-NA-6U	92-NA-5U
185	LVI-3/4	LVI-3/6	LVI-3/7	LVI-3/7	185	92-NA-3U	92-NA-6U	92-NA-6U	92-NA-6U
240	LVI-3/5	LVI-3/7	LVI-3/7	LVI-3/8	240	92-NA-4U	92-NA-6U	92-NA-6U	92-NA-6U
300	LVI-3/5	LVI-3/7	LVI-3/7	LVI-3/8	300	92-NA-4U	N/A	N/A	N/A
400	LVI-3/5	LVI-3/7	LVI-3/8	LVI-3/8	400	92-NA-4U	N/A	N/A	N/A
500	LVI-3/5	N/A	N/A	N/A	500	N/A	N/A	N/A	N/A
630	LVI-3/6	N/A	N/A	N/A	630	N/A	N/A	N/A	N/A
800	LVI-3/6	N/A	N/A	N/A	800	N/A	N/A	N/A	N/A
1000	LVI-3/7	N/A	N/A	N/A	1000	N/A	N/A	N/A	N/A

■ No connectors included

■ Connectors included

■ Product coming soon, call for more details

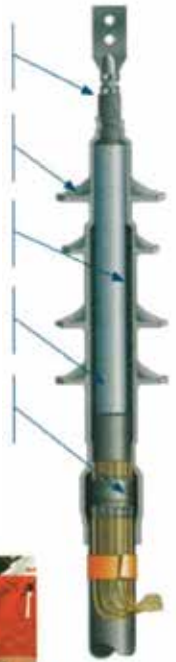
3M™ Coldshrink Termination

Termination Kits & Accessories

Sejak pemasangan produk Terminasi Cold Shrink 3M yang pertama kali pada tahun 1972, 3M telah mengembangkan jenis produk ini sehingga dapat menghasilkan suatu produk yang paling efisien dan memiliki daya tahan yang tinggi. Produk Terminasi Cold Shrink 3M mengurangi kemungkinan timbulnya biaya tambahan yang tinggi bagi kontraktor/ pengguna akibat kegagalan fungsi terminasi di dalam jaringan tenaga listriknya.

Terminasi Cold Shrink 3M mampu menghilangkan stress tegangan dan mendistribusikan medan listrik dengan baik. Insulasi yang digunakan sangat mengurangi stress tegangan pada ujung kabel, sehingga terminasi dapat bertahan lama dengan kinerja yang tinggi. Insulasi berbahan silikon pada Terminasi Cold Shrink 3M, baik Indoor & Outdoor tidak akan mengeras atau retak meskipun berada dibawah kondisi ekstrim. Terminasi 3MQT-II (X) H-series didesain untuk aplikasi kabel single core dan three core dengan pelapis metal, dengan atau tanpa pelindung (armour). Terminasi QT-II (X) H-series tersedia dalam 3 jenis untuk aplikasi berikut: - 4 - Skirt insulator 06/10(12)kV-Outdoor/Indoor - 4-Skirt insulator 12/20(24)kV -Indoor - 6- Skirt insulator 12/20(24)kV- Outdoor

QTIII	QTII
Moisture Blocking Mastic	
Integrated into termination	Applied separately
Quoter Insulator	
Very good track resistance	Good track resistance
Stress control tube	
Integrated into termination	Integrated into termination
Silicone Grease-stress Relief	
No- Integrated mastic is enough	Yes- Supplements stress mastic
Stress Control Mastic	
Integrated into termination	Integrated into termination



Proses Instalasi Terminasi Cold Shrink 3M



1
Persiapkan dan bersihkan kabel



2
Tempatkan body terminasi 3M Coldshrink pada ujung kabel dengan tepat

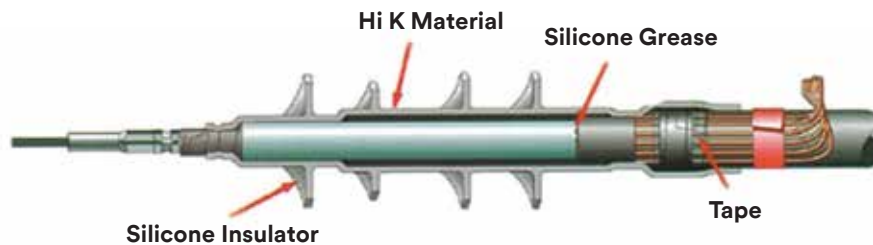


3
Tarik tali inti terminasi sehingga badan terminasi dapat menyelimuti badan kabel dengan erat



4
Proses instalasi terminasi sudah selesai

Anatomi Badan Terminasi Cold Shrink



3M™ Coldshrink Termination

Cold Shrink Termination 3M

Terminasi 3M QT-II dirancang untuk tegangan menengah pada kabel 3-core maupun 3-single core.

QT-II Hybrid 3 Core

Tipe Kit	Dia Isolasi kabel (mm)	Dia luar kabel (mm)	Penampang kabel		
			6-10 kV	15-24 kV	hingga 35 kV
4 Skirt					
QT-II (J) 4S-32H	16- 28	36 - 68	35 - 185 mm ²	35 - 95 mm ² indoor	
QT-II (K) 4S-32H	21 - 35	55 - 85	185 - 300 mm ²	120 - 185 mm ² indoor	
QT-II (L) 4S-32H	27 - 45	65 - 90	400 mm ²	240 - 400 mm ² indoor	
6 Skirt					
QT-II (J) 6S-32H	16- 28	36 - 68		35 - 95 mm ² outdoor	
QT-II (K) 6S-32H	21 - 35	55 - 85		120 - 185 mm ² outdoor	50 - 95 mm ² indoor
QT-II (L) 6S-32H	27 - 45	65 - 90		240 - 400 mm ² outdoor	120 - 185 mm ² indoor
QT-II (M) 6S-32H	33 - 53	75 - 110			240 - 400 mm ² indoor
8 Skirt					
QT-II (K) 8S-33H	21 - 35	55 - 85			50 - 95 mm ² outdoor
QT-II (L) 8S-33H	27 - 45	65 - 90			120 - 185 mm ² outdoor
QT-II (M) 8S-33H	33 - 53	75 - 105			240 - 400 mm ² outdoor

QT-II Hybrid 1 Core

Tipe Kit	Dia Isolasi kabel (mm)	Dia luar kabel (mm)	Penampang kabel		
			6-10 kV	15-24 kV	hingga 35 kV
4 Skirt					
QT-II (J) 4S-12	16- 28	26 - 34		35 - 95 mm ² indoor	
QT-II (K) 4S-12	21 - 35	36 - 40		120 - 185 mm ² indoor	
QT-II (L) 4S-12	27 - 45	44		240 - 400 mm ² indoor	
QT-II (M) 4S-12	33-53	47 - 58		500 - 800 mm ² indoor	
6 Skirt					
QT-II (J) 6S-12	16- 28	26 - 34		35 - 95 mm ² outdoor	
QT-II (K) 6S-12	21 - 35	36 - 40		120 - 185 mm ² outdoor	
QT-II (L) 6S-12	27 - 45	44		240 - 400 mm ² outdoor	
QT-II (M) 6S-12	33 - 53	47 - 58		500 - 800 mm ² outdoor	
8 Skirt					
QT-II (K) 8S-13	21 - 35	32 - 37			50 - 95 mm ² indoor/outdoor
QT-II (L) 8S-13	27 - 45	37 - 43			120 - 185 mm ² indoor/outdoor
QT-II (M) 8S-13	33 - 53	46 - 52			240 - 400 mm ² indoor/outdoor
QT-II (N) 8S-13	46 - 60	52 - 62			400 - 800 mm ² indoor/outdoor

3M™ Full Coldshrink Termination and Splicing with Shearbolt Connector/Lugs

3M Cold Shrink Termination and Splicing – Konektor Shearbolt

3M Terminasi QT-II S series dan jointing S series adalah tipe full coldshrink dengan konektor / lugs shearbolt (baut patah) dirancang untuk tegangan menengah pada kabel 3-core maupun 3-single core.

QT-II 3 Core

Tipe Kit	Diameter Isolasi kabel	Diameter Luar Kabel	Penampang Kabel		
			6-10kV	15-24kV	hingga 35kV
4 skirt					
QT-II (J) 4S-32S	16 - 25mm	36 - 68 mm	35 - 185mm ²	35 - 95mm ² indoor	
QT-II (K) 4S-32S	21 - 32mm	55 - 85mm	185 - 300mm ²	120 - 185mm ² indoor	
QT-II (L) 4S-32S	27 - 41mm	65 - 90mm	400 mm ²	240 - 400mm ² indoor	
6 skirt					
QT-II (J) 6S-32S	18 - 25mm	38 - 70mm		35 - 95mm ² outdoor	
QT-II (K) 6S-32S	23 - 32mm	55 - 85mm		120 - 185mm ² outdoor	50 - 95mm ² indoor
QT-II (L) 6S-32S	28 - 38mm	65 - 90mm		240 - 400mm ² outdoor	120 - 185mm ² indoor
QT-II (M) 6S-32S	35 - 45mm	75 - 105mm			240 - 400mm ² indoor
8 skirt					
QT-II (K) 8S-33S	23 - 32mm	55 - 85mm			50 - 95mm ² outdoor
QT-II (L) 8S-33S	28 - 38mm	65 - 90mm			120-185mm ² outdoor
QT-II (M) 8S-33S	35 - 45mm	75 - 110mm			240 - 400mm ² outdoor

QT-II 1 Core

Tipe Kit	Diameter Isolasi kabel	Diameter Luar	Penampang Kabel	Rating Tegangan (kV)
4 skirt				
QT-II (J) 4S-12S	16-28	26-34	35 - 150 mm ²	15 - 24 Indoor
QT-II (K) 4S-12S	21-35	36-40	185-300 mm ²	15 - 24 Indoor
QT-II (L) 4S-12S	27-45	44	400 mm ²	15 - 24 Indoor
QT-II (M) 4S-12S	33-53	47-58	500 - 800 mm ²	15 - 24 Indoor
6 skirt				
QT-II (J) 6S-12S	16-28	26-34	35- 150 mm ²	15 - 24 Outdoor
QT-II (K) 6S-12S	21-35	36-40	185 - 300mm ²	15 - 24 Outdoor
QT-II (L) 6S-12S	27-45	44	400 mm ²	15 - 24 Outdoor
QT-II (M) 6S-12S	33-53	47-58	500 - 800 mm ²	15 - 24 Outdoor
8 skirt				
QT-II (K) 8S-13S	21-35	32-37	50- 120 mm ²	Up to 35 kV Indoor/Outdoor
QT-II (L) 8S-13S	27-46	37-43	120-240 mm ²	Up to 35 kV Indoor/Outdoor
QT-II (M) 8S-13S	33-53	46-52	300 - 500 mm ²	Up to 35 kV Indoor/Outdoor
QT-II (N) 8S-13S	46-70	52-62	500 - 800 mm ²	Up to 35 kV Indoor/Outdoor

Jointing 3 core

Tipe Kit	Diameter Isolasi kabel	Diameter Luar Kabel	Penampang Kabel	Rating Tegangan (kV)
93-AS700S-X-RPM series				
	19-38	60-91	50 - 300 mm ²	15 - 24 Indoor

Jointing 3-Single Core

Kit	Dimensi Kabel			Dimensi Konektor	
	Diameter Luar Kabel	Diameter Isolasi Kabel	Luas Penampang Kabel (mm ²)	Diameter Max	Panjang Max
			12/20 (24) kV		
93-AS620S-1	46.00	19,1-36,8	95-300 mm ²	38	170
93-AS630S-1	74.00	33, 4-67, 6	300-630 mm ²	60	270

3M™ Separable Connector

Asesoris Kabel Tegangan Menengah

Separable connector adalah terminasi kabel separasi yang memungkinkan untuk dilakukan proses plug in ataupun plug out. Produk separable connector dan terminasi coldshrink memiliki fungsi yang sama, yaitu untuk pemasangan terminasi pada kabel, baik pada trafo, motor, switch gear, maupun pada persimpangan kabel. Aplikasi dari produk-produk ini dapat dibagi menjadi 2, yaitu:

- Kabel bawah tanah yang disambungkan ke jaringan kabel udara, aplikasi ini menggunakan produk terminasi
- Kabel yang dihubungkan ke peralatan listrik seperti trafo, motor, switch gear, aplikasi ini menggunakan produk separable connector ataupun produk terminasi



Elbow Connector (250A-24kV)

Insulasi: EPDM Rubber

Ukuran Konduktor:

8.7/15kV (17.5kV) 25-120 mm²

12/20kV (24kV) 35-120 mm²

Seri Produk	Penampang Kabel	Diameter Over Primary Insulation (mm)
93-EE815-2-X-IN-B	35	180.0-20.5
93-EE825-2-X-IN-B	50	20.0-22.5
93-EE835-2-X-IN-B	70	22.5-25.5
93-EE845-2-X-IN-B	95	22.5-25.5
93-EE855-2-X-IN-B	120	25.0-27.5



Straight Connector (250A-24kV)

Insulasi: EPDM Rubber

Ukuran Konduktor:

8.7/15kV (17.5kV) 25-120 mm²

12/20kV (24kV) 35-120 mm²

Seri Produk	Penampang Kabel	Diameter Over Primary Insulation (mm)
93-EE810-2-X-IN-B	35	17.5-20.0
93-EE820-2-X-IN-B	50	19.5-22.0
93-EE830-2-X-IN-B	70	21.5-23.5
93-EE840-2-X-IN-B	95	23.0-25.5
93-EE850-2-X-IN-B	120	25.7-27.5



Screened Fore Connector (630A-24kV)

Insulasi: EPDM Rubber

Ukuran Konduktor:

8.7/15kV (17.5kV) 25-400 mm²

12/20kV (24kV) 35-400 mm²

Seri Produk	Penampang Kabel	Diameter Over Primary Insulation (mm)
93-EE905-4/35-X-IN-B	35	18.0-20.0
93-EE905-4-X-IN-B	50	20.0-22.5
93-EE915-4-X-IN-B	70	22.0-24.5
93-EE925-4-X-IN-B	95	24.0-27.0
93-EE935-4-X-IN-B	120	24.5-27.0
93-EE945-4-X-IN-B	150	26.5-30.5
93-EE955-4-X-IN-B	180	26.5-30.5
93-EE965-4-X-IN-B	240	30.0-35.5
93-EE975-4-X-IN-B	300	35.0-40.5
93-EE985-4-X-IN-B	400	35.0-40.5

3M™ Coldshrink Termination

3M™ Full Coldshrink QT-III Indoor and Outdoor Terminations

Faster, Simpler Installation

Teknologi coldshrink telah digunakan sejak diperkenalkan oleh 3M lebih dari 45 tahun yang lalu. Produk Coldshrink 3M telah terbukti dapat diandalkan, instalasi singkat, mudah, dan terbukti dapat bertahan hingga bertahun-tahun.

3M™ Coldshrink QT-III memiliki kinerja yang handal untuk kebutuhan terminasi kabel tegangan menengah indoor dan outdoor. Terminasi QT-III memiliki fitur electrical stress-control yang terintegrasi dan sealing compound untuk memudahkan instalasi yang dapat membantu mengurangi terjadinya kesalahan pada saat pemasangan. Desain electrical stress-control QT-III yang unik mampu menurunkan tegangan listrik pada permukaan, sehingga ukuran terminasi lebih kecil dibanding terminasi yang menggunakan electrical stress-control geometris dengan performa BIL yang baik.



3M™ Coldshrink QT-III Indoor Terminations



3M™ Coldshrink QT-III Outdoor Terminations

3M pioneered Coldshrink Technology

QT-III Termination Features	What this Means for you	
Hydrophobic, track and erosion resistant silicone	Long term performance	High reliability Suitable for contaminated areas reduced rework costs
Built-in stress and sealing compounds	Reduced chance for errors Simplier Installation Lower surface stress	High reliability Lower installed costs Shorter installed length
Meets global industry standards: IEEE 48, Cenelec 0278, IEC 502 and GB	Tested Design	High reliability
Coldshrink delivery Step core design	Constant radial pressure Lower installed costs	High reliability

**3M will custom kit to your application and needs!
Ask your 3M sales representative for more information.**

3M™ Coldshrink Termination

Termination Type Selection Guide for 3M™ Three Conductor Cable 7600 Series

Kit Series	Insulator Configuration	Installation Environment	Orientation	For Cable Type(s) (With or Without Ground Wires)
7600-S-3G	Skirted	Outdoor	Normal	With Ground Wires
7600-T-3G	Tubular	Indoor	Normal	With Ground Wires
7600-S-INV-3G	Skirted	Outdoor	Inverted	With Ground Wires
7600-S-3-RJS	Skirted	Indoor-Cabinet Mount (No Breakout Boot)	Normal	With or without Ground Wires
7600-T-3-RJS	Tubular	Indoor-Cabinet Mount (No Breakout Boot)	Normal	With or without Ground Wires
7600-S-INV-3-RJS	Skirted	Indoor-Cabinet Mount (No Breakout Boot)	Inverted	With or without Ground Wires
7600-S-3W	Skirted	Outdoor	Normal	With Ground Wires
7600-T-3W	Tubular	Indoor	Normal	With Ground Wires
7600-S-INV-3W	Skirted	Outdoor	Inverted	With Ground Wires



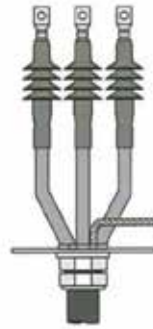
7600-S-3G



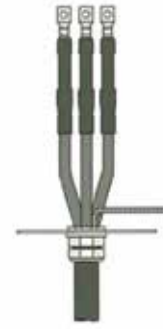
7600-T-3G



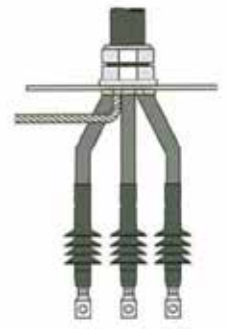
7690-S-INV-3G



7600-S-3-RJS



7600-T-3-RJS



7690-S-INV-3-RJS



7600-S-3W



7600-T-3W



7690-S-INV-3W

3M™ Coldshrink Termination

3M Coldshrink Terminating Tubular, untuk 5-15 kV

Terminasi Coldshrink 5620K series dibuat untuk Rating Tegangan hingga 15kV. Terminasi 5620K-series tidak memerlukan keahlian khusus dalam melakukan pemasangan dan aplikasinya.

- Terminasi Metode Coldshrink
- Berbahan Silicone Rubber Insulator
- 1 piece design
- Proses instalasi sederhana
- Tersedia kit untuk Single Core
- Memenuhi Standar IEC, IEE, VDE dan CENCELEC



Terminasi	Diameter Isolasi (mm)	Ukuran Penampang Kabel (mm ²)			
		1.8/3(3.6)kV	3.6/6(7.2)kV	6/10(12)kV	8.7/15(17.5)kV
5622K	12 - 16	50 - 95	25 - 50	25 - 35	-
5623K	15 - 22	120 - 185	70 - 150	50 - 120	25 - 70
5624K	20 - 33	240 - 500	185 - 400	150 - 400	95 - 300
5625K	28 - 45	630 - 800	500 - 800	500 - 800	400 - 800

3M™ Jointing

3M Coldshrink Jointing

Produk 3M QS 2000E Cold Shrink didesain untuk aplikasi sambungan kabel tegangan menengah hingga tegangan 24kV (Umax). Produk ini dapat diaplikasikan ke dalam berbagai kebutuhan, seperti sambungan kabel untuk kabel jenis single dan three core berinsulasi polimer (XLPE, EPR, PE, PVC) atau sambungan kabel transisi antara kabel berinsulasi kertas minyak (PILC) dengan kabel berinsulasi polimer

Produk QS 2000E Cold Shrink memiliki konstruksi 3 lapis silicon elastometric yang terintegrasi. Lapisan pengontrol stress tegangan dan lapisan insulasi silikonnya ditekan (co-extruded) secara bersamaan pada saat proses pabrikasinya, kemudian dilapisi oleh lapisan konduktif yang mengalami proses vulkanisir untuk menghasilkan fungsi pelindung dari medan elektromagnetik. Konstruksi dari produk ini didesain untuk memenuhi berbagai kebutuhan industrial.

Coldshrink Resin 93AS 700

Coldshrink Jointing with Resin Jacket

Description	Volt	Size
93-AS-700-X-IN-RPM	12/20(24)kVUmax	50-300mm2



Cold Shrink Single Core Inline Joint with Cold shrink re-jacketing for both compression and shearbolt connector

3M 93 AS 6x0-1 Series adalah produk jointing yang dirancang untuk tegangan hingga 24kV (tegangan kelas Umax) pada sistem kabel listrik polimer overhead line single core dengan konduktor Al/Cu sesuai dengan standar HD 620 (IEC 60502-4). Produk ini mendukung penyambungan kabel listrik tegangan menengah dengan menggunakan konektor compression atau shearbolt.



Kit	Dimensi Kabel				Dimensi Konektor	
	Diameter Luar Kabel	Diameter Isolasi Kabel	Luas Penampang Kabel (mm²)		Diameter Max	Panjang Max
			8,7/15(17,5)kV	12/20 (24) kV		
93-AS620-1	46	19,1 - 36,8	95 - 300	50 - 300	36	170
93-AS630-1	74	33,4 - 67,6	500 - 1000	400 - 1000	60	270

3M Tape Resin Jointing

Produk Jointing Tape Resin adalah produk jointing dengan isolasi Scotch untuk insulasi dan Scotchcast Resin untuk jaket kabel. Kombinasi tersebut terbukti memiliki performa yang tinggi pada kabel dengan tegangan hingga 24kV, serta sangat sesuai untuk kabel jenis Three-Conductor Armored dengan insulasi Tape Shielded XLPE

Tape Resin 93A43C

Tape Jointing with Resin Jacket

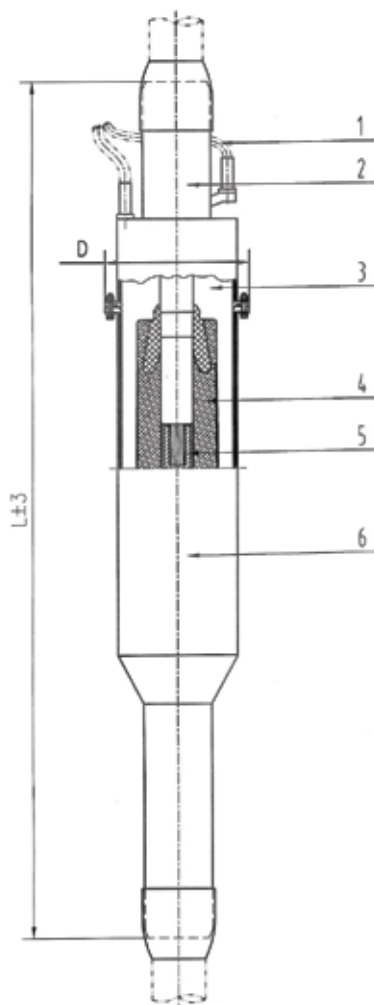
Description	Volt	Size
93-A43C-X-IN	12/20(24)kV	240-400



3M High Voltage Cable Accessories



3M High Voltage Cable Joint



Data Sheet

Rated voltage U_0 / U	87 / 150 (170) kV
Permissible short-circuit current I_s	As per cable capacity
Pollution level class	IV according to IEC60815
Environmental temperature	- 30 ~ 45°C
Altitude	1000 m
Wind speed	< 35 m/s
Lightning impulse withstand voltage 1,2/50 μ s	750 kV
Test standard	E C60840
Conductor connection technique	Compression
Filling compound	Epoxy resin
Weight	Approx. 230 kg excluding cable
Stress cone	P r e - moulded push-on

Main parts

1. Coaxial cable
2. Short insulating case
3. insulated waterproof glue
4. one-piece slip-over rubber
5. copper connector and conductor of a cable
6. long insulating case

3M High Voltage Cable Joint

3M - SC 170 (Crossbond)



- Pre-moulded stress relief cone, dengan pengoperasian yang lama
- Casing yang terbuat dari metal yang antikorosif dan tahan terhadap mechanical impact
- FRP dapat di aplikasikan untuk di tanam di tanah yang terdapat genangan air
- Aplikasi untuk sambungan kabel lebih dari 1km dan di aplikasikan dengan Link box type cross bond

Cross Bonding Joint

Type Kit	Dia. Isolasi kabel	Dia. Luar kabel	Penampang Kabel
SC 170-300	64 mm	72-89 mm	300mm ²
SC 170-500	70 mm	80-95 mm	400-500mm ²
SC 170-630	74 mm	84-99 mm	630mm ²
SC 170-800	79 mm	88-104 mm	800mm ²
SC 170-1000	83 mm	93-108 mm	1000mm ²
SC 170-1200	88 mm	98-112 mm	1200mm ²

3M - SS 170 (Inline)



- Pre-moulded stress relief cone, dengan pengoperasian yang lama
- Casing yang terbuat dari metal yang antikorosif dan tahan terhadap mechanical impact
- FRP dapat di aplikasikan untuk di tanam di tanah yang terdapat genangan air
- Aplikasi untuk sambungan kabel kurang dari 1km

Inline Joint

Type Kit	Dia. Isolasi kabel	Dia. Luar kabel	Penampang Kabel
SC 170-300	64 mm	72-89 mm	300mm ²
SC 170-500	70 mm	80-95 mm	400-500mm ²
SC 170-630	74 mm	84-99 mm	630mm ²
SC 170-800	79 mm	88-104 mm	800mm ²
SC 170-1000	83 mm	93-108 mm	1000mm ²
SC 170-1200	88 mm	98-112 mm	1200mm ²

3M High Info Termination Voltage Cable Accessories Outdoor Cable Termination



Data Sheet Polymeric

Rated voltage U_o / U	87 / 150 (170) kV
Permissible short-circuit current I_s	As Per Cable Capacity
Pollution level class	IV according to IEC60815
Environmental temperature	- 30 ~ 45 °C
Altitude	1000 m
Wind speed	< 35 m/s
Lightning impulse withstand voltage 1,2/50 μ s	750 kV
Test standard	IEC 60840
Conductor connection technique	Compression
Filling compound	Polyisobutylene
Weight	approx. 140 kg excluding cable
Stress cone	Liquid silicone rubber, push-on

3M - TS 170 (Polymer)

- Epoxy bushing dibuat dari silicon cair
- Produk ini pollution Resistant, tahan ledakan, UV resistant dan tahan lama digunakan di outdoor atau tempat dengan polusi yang tinggi



Polymer Outdoor Wet Termination

Type Kit	Dia. Isolasi kabel	Dia. Luar kabel	Penampang Kabel
TS 170-300	64 mm	72-89 mm	300mm ²
TS 170-500	70 mm	80-95 mm	400-500mm ²
TS 170-630	74 mm	84-99 mm	630mm ²
TS 170-800	79 mm	88-104 mm	800mm ²
TS 170-1000	83 mm	93-108 mm	1000mm ²
TS 170-1200	86 mm	98-112 mm	1200mm ²

3M High Voltage Cable Accessories

Outdoor Cable Termination



Data Sheet Porcelain

Rated voltage U_0 / U	87 / 150 (170) kV
Permissible short-circuit current I_s	As Per Cable Capacity
Pollution level class	IV according to IEC60815
Environmental temperature	- 30 ~ 45 °C
Altitude	1000 m
Wind speed	< 35 m/s
Lightning impulse withstand voltage 1,2/50 μ s	750 kV
Test standard	IEC 60840
Conductor connection technique	Compression
Filling compound	Polyisobutylene
Weight	approx. 230 kg excluding cable
Stress cone	Liquid silicone rubber, push-on

3M - TP 170 (Porcelain)

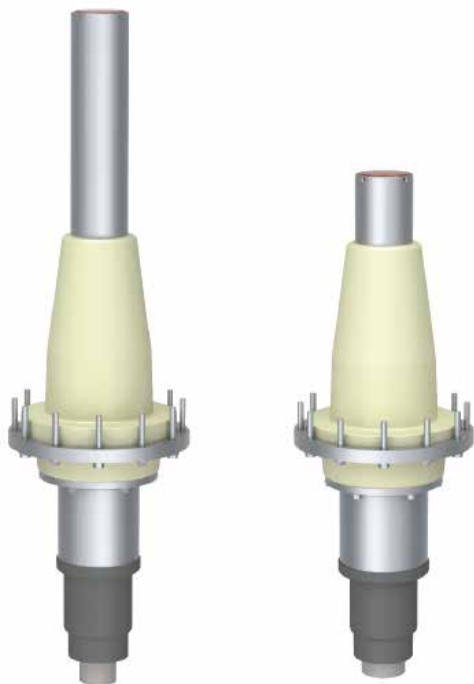
- Dengan desain Sheds dan jarak creepage sesuai dengan aplikasi tegangan
- Konstruksi dengan sealing menahan air dari luar dan kebocoran oil



Porcelain Outdoor Wet Termination

Type Kit	Dia. Isolasi kabel	Dia. Luar kabel	Penampang Kabel
TP 170-300	64 mm	72-89 mm	300mm ²
TP 170-500	70 mm	80-95 mm	400-500mm ²
TP 170-630	74 mm	84-99 mm	630mm ²
TP 170-800	79 mm	88-104 mm	800mm ²
TP 170-1000	83 mm	93-108 mm	1000mm ²
TP 170-1200	86 mm	98-112 mm	1200mm ²

3M High Voltage Cable Accessories GIS and Transformer Termination



Data Sheet

Rated voltage U ₀ / U	87 / 150 (170) kV
Permissible short-circuit current I _s	As Per Cable Capacity
Epoxy insulator Material	Epoxyresin
Max. inner pressure Stress cone compression	3.5 Mpa Spring by non-magnetic alloy
Interfacial requirements	According to IEC62271-209
Lightning impulse withstand voltage 1,2/50µs	750 kV
Test standard	IEC60840
Connection armature type	Compression/plug-in
Connecting with cable conductor method	Crimping
Stress cone	Liquid silicone rubber, push-on
Weight	approx.70kg excluding cable

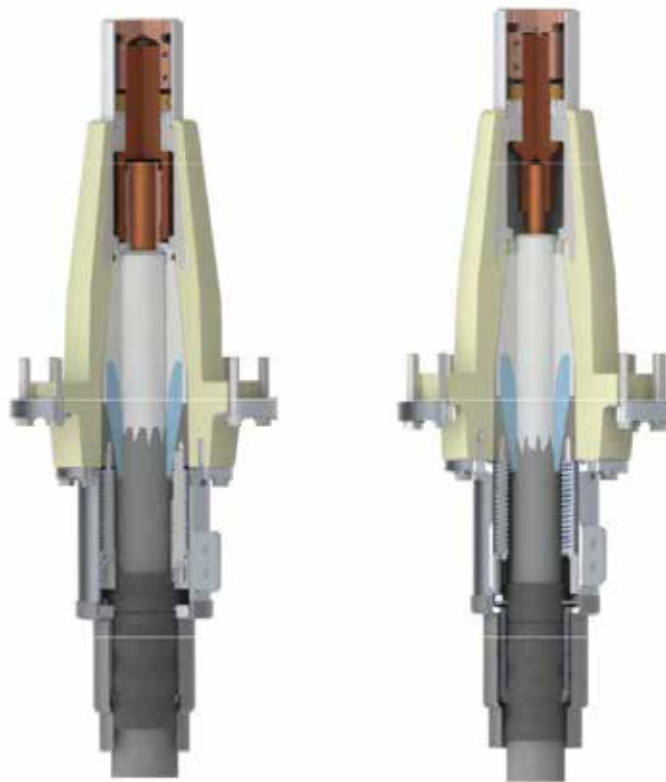
GIS Termination Long with Compress

Type Kit	Dia. Isolasi kabel	Dia. Luar kabel	Penampang Kabel
TG170D/L-C-300	64 mm	72-89 mm	300mm ²
TG170D/L-C-500	70 mm	80-95 mm	400-500mm ²
TG170D/L-C-630	74 mm	84-99 mm	630mm ²
TG170D/L-C-800	79 mm	88-104 mm	800mm ²
TG170D/L-C-1000	83 mm	93-108 mm	1000mm ²
TG170D/L-C-1200	88 mm	98-112 mm	1200mm ²

GIS Termination Short with Compress

Type Kit	Dia. Isolasi kabel	Dia. Luar kabel	Penampang Kabel
TG170D/S-C-300	64 mm	72-89 mm	300mm ²
TG170D/S-C-500	70 mm	80-95 mm	400-500mm ²
TG170D/S-C-630	74 mm	84-99 mm	630mm ²
TG170D/S-C-800	79 mm	88-104 mm	800mm ²
TG170D/S-C-1000	83 mm	93-108 mm	1000mm ²
TG170D/S-C-1200	88 mm	98-112 mm	1200mm ²

3M High Voltage Cable Accessories GIS and Transformer Termination



GIS Termination Long with Plug-in

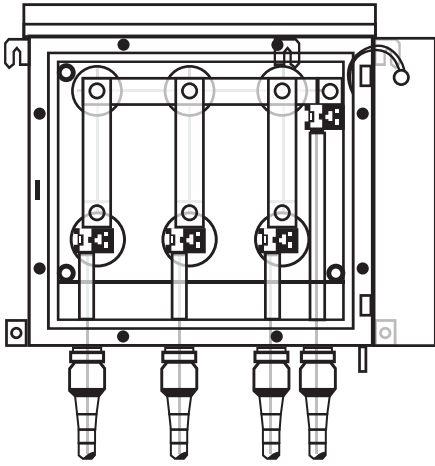
Type Kit	Dia. Isolasi kabel	Dia. Luar kabel	Penampang Kabel
TG170D/L-P-300	64 mm	72-89 mm	300mm ²
TG170D/L-P-500	70 mm	80-95 mm	400-500mm ²
TG170D/L-P-630	74 mm	84-99 mm	630mm ²
TG170D/L-P-800	79 mm	88-104 mm	800mm ²
TG170D/L-P-1000	83 mm	93-108 mm	1000mm ²
TG170D/L-P-1200	88 mm	98-112 mm	1200mm ²

GIS Termination Short with Plug-in

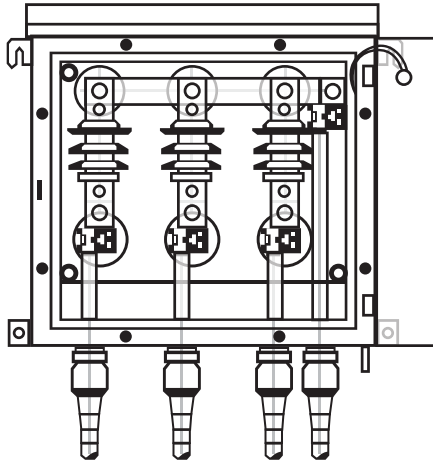
Type Kit	Dia. Isolasi kabel	Dia. Luar kabel	Penampang Kabel
TG170D/S-P-300	64 mm	72-89 mm	300mm ²
TG170D/S-P-500	70 mm	80-95 mm	400-500mm ²
TG170D/S-P-630	74 mm	84-99 mm	630mm ²
TG170D/S-P-800	79 mm	88-104 mm	800mm ²
TG170D/S-P-1000	83 mm	93-108 mm	1000mm ²
TG170D/S-P-1200	88 mm	98-112 mm	1200mm ²

3M High Voltage Cable Accessories

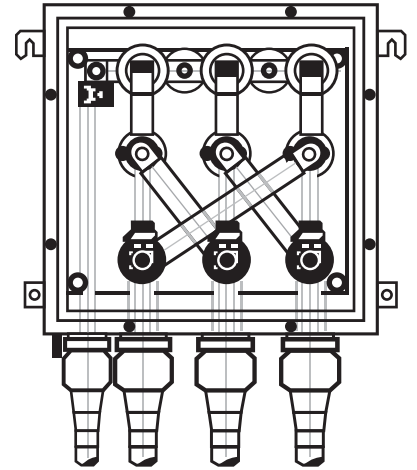
Link Box Grounding Cable Screen



Direct Grounding box



Cable Sheath Protection Grounding Box



Cross Linking Protection Grounding Box

Data Sheet











Rated voltage	10 kV
Permissible short circuit current I	40 kA / 1 sec
Protection Class	IP68
AC Impulse test	40 kV Phase to Earth 60 kV Phase to Phase
Material	Stainless steel (AISI 304)
	LB-ANPS-01 & LB-ANCS-01
Conductor Fixing	Coaxial

Link Box

Type Kit	Function
LB-ANE-01	Direct Grounding box
LB-ANPS-01	Cable Sheath Protection Grounding Box
LB-ANCS-01	Cross Linking Protection Grounding Box













3M™ Electrical Tape Chart

3M Electrical Tape Chart













Vinyl Electrical Tapes		Product Description/Applications	Tape Thickness	Temp Range	Roll Size
Scotch® Super 33™ Professional Grade Vinyl Electrical Tape ²⁶		Insulates splices up to 600V. Repairs cable jacketing. Resists UV rays, abrasion, corrosion, alkalis and acids. Flame retardant. UL Listed and CSA Certified.	7 mil	105°C 221°F	3/4" x 66' (19 mm x 20,1 m) 3/4" x 44' (19 mm x 13,4 m) 3/4" x 20' (19 mm x 6,0 m) 3/4" x 36 yd (19 mm x 32,9 m) 1" x 36 yd (25,4 mm x 32,9 m) 1-1/2" x 36 yd (38 mm x 32,9 m)
Scotch® Heavy Duty Grade Vinyl Electrical Tape Super 88 ²⁶		Thick, heavy duty vinyl protects cable and provides faster build-up. Insulates splices up to 600V. Repairs cable jacketing. Resists UV rays, abrasion, corrosion, alkalis and acids. Flame retardant. UL Listed and CSA Certified.	8.5 mil	105°C 221°F	3/4" x 66' (19 mm x 20,1 m) 3/4" x 44' (19 mm x 13,4 m) 3/4" x 36 yd (19 mm x 32,9 m) 1" x 36 yd (25,4 mm x 32,9 m) 1-1/2" x 36 yd (38 mm x 32,9 m) 1-1/2" x 44' (38 mm x 13,4 m) 2" x 36 yd (51 mm x 32,9 m)
Scotch® Professional Grade Color Coding Vinyl Electrical Tape 35 ²⁶		9 fade-resistant colors identify and mark phases/cables. Insulate splices up to 600V. Repair cable jacketing. Resists UV rays, abrasion, corrosion, alkalis and acids. Flame retardant. UL Listed and CSA Certified.	7 mil	105°C 221°F	3/4" x 60' (19 mm x 18,2 m) 1/2" x 20' (12 mm x 6,1 m) 3/4" x 66' (19 mm x 20,1 m) 1/2" x 20' (12 mm x 6,1 m)
Scotch® Extra Heavy Duty Grade Vinyl Electrical Tape 22 ²⁶		Extra-thick, heavy duty vinyl protects cable and provides faster build-up. Insulates splices up to 600V. Repairs cable jacketing. Resists UV rays, abrasion, corrosion, alkalis and acids. Flame retardant. UL Listed and CSA Certified.	10 mil	80°C 176°F	1/2" x 36 yd (13 mm x 32,9 m) 3/4" x 36 yd (19 mm x 32,9 m) 1" x 36 yd (25,4 mm x 32,9 m) 1-1/2" x 36 yd (38 mm x 32,9 m) 2" x 36 yd (51 mm x 32,9 m)
Scotch 790 Commercial Grade Vinyl Electrical Tape		Bundles cable and pull wire. Insulate splices up to 600V. Flame retardant. UL Listed and CSA Certified.	7 mil	80°C 176°F	3/4" x 60' (19 mm x 20,1 m) 3/4" x 66' (19 mm x 20,1 m)
3M® GU 1500 Vinyl Electrical Tape with color coding		Bundles cable, wire pull and repair cable jacketing. Flame retardant.	5 mil	80°C 176°F	3/4" x 26' (19 mm x 8 m) 3/4" x 66' (19 mm x 20 m)
3M® Temflex™ Mining Grade Vinyl Electrical Tape 1700P		Insulate and repair mining cable jacketing. Flame retardant. Printed for use in MSHA-approved splicing kits.	7 mil	80°C 176°F	3/4" x 66' (19 mm x 20,1 m) 1-1/2" x 44' (38 mm x 13,4 m) 1-1/2" x 66' (38 mm x 20,1 m) 3/4" x 66' (19 mm x 20,1 m) 1-1/2" x 44' (38 mm x 13,4 m) 1-1/2" x 66' (38 mm x 20,1 m)
Insulating and Sealing Tapes		Product Description/Applications	Tape Thickness	Temp Range	Roll Size
Scotch® Professional Grade Linerless Rubber Splicing Tape 130C ²⁷		Insulate and splice solid dielectric cables through 69kV. Linerless, high-voltage insulating, thermally conductive, self-bonding rubber.	30 mil	continuous: 90°C / 194°F short-term: 130°C / 266°F	1" x 30' (25 mm x 9,1 m) 3/4" x 30' (19 mm x 9,1 m) 1-1/2" x 30' (38 mm x 9,1 m) 2" x 30' (50 mm x 9,1 m) 1" x 10' (25 mm x 3,05 m) 1" x 15' (25 mm x 4,6 m)
Scotch® Professional Grade Lined Rubber Splicing Tape 23		Insulate and splice solid dielectric cables through 69kV. Lined, insulating, thermally conductive, self-bonding rubber.	30 mil	continuous: 90°C / 194°F short term: 130°C / 266°F	3/4" x 30' (19 mm x 9,1 m) 1" x 20' (19 mm x 25 m) 1" x 30' (25 mm x 9,1 m) 1-1/2" x 30' (38 mm x 9,1 m) 2" x 30' (50 mm x 9,1 m)
Scotch® Medium Grade Linerless Rubber Splicing Compound 2242		Splice and insulate cables and connections. General purpose, linerless rubber insulating tape.	30 mil	continuous: 90°C / 194°F short-term: 130°C / 266°F	3/4" x 15' (19 mm x 4,57 m) 1-1/2" x 15' (38 mm x 4,57 m) 2" x 15' (51 mm x 4,6 m)

Many 3M Electrical Products including electrical tapes, are ROHS Compliant
To check the compliance status of a 3M Electrical Product, go to www.3m.com/electrical
Please check availability with 3M authorized distributors.

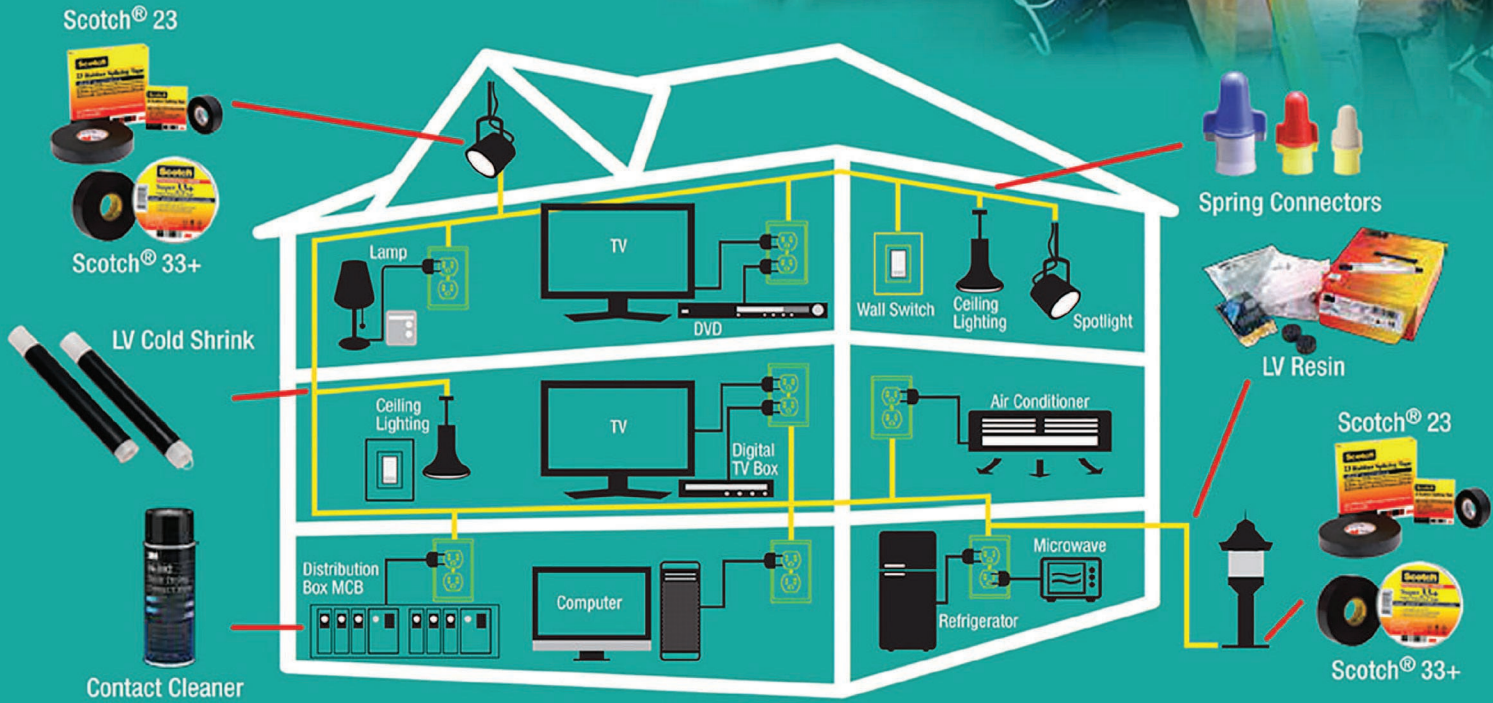
3M™ Electrical Tape Chart

Insulating and Sealing Tapes		Product Description/Applications	Tape Thickness	Temp Range	Roll Size
3M™ Temflex™ Lined Rubber Splicing Tape 2150		Economical, low-voltage, lined rubber insulating tape. Up to 600 volts.	30 mil	80°C 176°F	3/4" x 22' (19 mm x 6,7 m) 1-1/2" x 22' (38 mm x 6,7 m)
Scotch® Professional Grade Semi-Conducting Tape 13		Rubber tape, semi-conductive. Compatible with cable semi-conducting jackets. Electrically ground high-voltage connections. Provides cable shield continuation.	30 mil	continuous: 90°C /194°F short term: 130°C / 266°F	3/4" x 15' (19 mm x 4,5 m) 1-1/2" x 66' (38 mm x 20,1 m)
Scotch® Professional Grade Silicone Rubber Tape 70		Protects and overwraps high-voltage cable terminations and serves as base layer to provide clean reentry into connections. Arc and track resistant. Self-fusing, long-lasting, silicone rubber.	12 mil	180°C 356°F	1" x 30' (25 mm x 9,14 m)
Scotch® Professional Grade Heavy Duty Triangular Silicone Rubber Tape 70HDT		Protects and overwraps high-voltage cable terminations, and serves as base layer to provide clean reentry into connections. Arc and track resistant. Self-fusing, long-lasting, thick silicone rubber, with a triangular tapered edge profile and a blue guideline for half-lapping.	20 mil center, 8 mil edge	180°C 356°F	1" x 30' (25 mm x 9,14 m)
Scotch® Professional Grade Shielding Tape 24		All-metal open-weave shielding braid, conformable, temperature stable. Continue electrostatic shielding across splice.	—	—	1" x 15' (25 mm x 4,5 m) 1" x 100' (25 mm x 30,4 m)
Scotch® Professional Grade Grounding Tape 25		All-metal woven braid; high current-carrying capacity of 6AWG wire. Solderable. Conformable ground braid for splices and terminations.	—	—	1/2" x 15' (12 mm x 4,57 m)
Mastics		Product Description/Applications	Tape Thickness	Temp Range	Roll Size
Scotch-Seal™ Professional Grade Mastic Sealing Tape 2229*		Provides excellent environmental and moisture seal. Conformable and durable mastic for sealing high-voltage cables and accessories. Overwrap with vinyl.	125 mil	80°C 176°F	3-3/4" x 10' (95 mm x 3,0 m) 1" x 10' (25 mm x 3,05 m)
Scotch® Professional Grade Rubber Mastic Sealing Tape 2228*		Provides excellent environmental and moisture seal. Extra-conformable and durable rubber-backed mastic for sealing high-voltage cables and accessories. "Built-in" rubber backing for added conformability. Overwrap with vinyl.	65 mil	90°C / 194°F emergency overload of 130°C / 266°F	2" x 3' (50 mm x 0,9 m) 1" x 10' (25 mm x 3,0 m) 2" x 10' (51 mm x 3,05 m)
3M Scotchfil™ Electrical Insulation Putty		Black, self-fusing, insulating putty in tape form.	125 mil	80°C 176°F	1-1/2" x 60" (38 mm x 1,53 m)
Scotch® Professional Grade Vinyl Mastic Sealing Tapes 2200, 2210, 06147, and 06149*		Provides excellent environmental and moisture seal. Conformable and durable mastic for sealing high-voltage cables and accessories. "Built-in" vinyl backing for fast application and abrasion resistance.	2200 is 125 mil 2210 is 90 mil 6147 is 45 mil 6149 is 45 mil	80°C 176°F	6-1/2" x 4-1/2" (165 mm x 144 m) pads 3-1/4" x 4-1/2" (82 mm x 144 m) pads 4" x 10' (101 mm x 3,04 m) 2-1/2" x 10' (63 mm x 3,04 m) 2-1/2" x 2-1/2" (63 mm x 63 m) pads
Corrosion Protection Tapes		Product Description/Applications	Tape Thickness	Temp Range	Roll Size
3M™ Scotchrap™ Professional Grade Corrosion Protection Tapes 50 and 51*		Protect pipe, conduits and fittings from corrosion. All-weather performance and corrosion resistance. Abrasion and impact-resistant.	50 is 10 mil 51 is 20 mil	176°F 80°C	1" x 100' (25 mm x 30,5 m) 2" x 100' (51 mm x 30,5 m) 3" x 100' (76 mm x 30,5 m) 4" x 100' (102 mm x 30,5 m) 6" x 100' (152 mm x 30,5 m)
3M™ Scotchrap™ Professional Grade Pipe Primer		Quick-dry, non-sag rubber base primer that prepares metal surfaces for tape application. For use with Scotchrap Tapes 50 & 51, Temflex Tapes 1100 & 1200.	na	80°C 176°F	1 gallon can (3,79 liters)

3M™ Electrical Tape Chart

Corrosion Protection Tapes		Product Description/Applications	Tape Thickness	Temp Range	Roll Size
3M™ Temflex™ Economy Grade Corrosion Tape 1100 and 1100P		General purpose corrosion tape.	10 mil	80°C 176°F	2" x 100' (51 mm x 30, 5 m)
3M™ Temflex™ Economy Grade Corrosion Tape 1200 and 1200P		General purpose corrosion tape.	20 mil	80°C 176°F	2" x 100' (51 mm x 30, 5 m)
Special Use Tapes		Product Description/Applications	Tape Thickness	Temp Range	Roll Size
Scotch® Thread Sealant and Lubricant Tape 48*		Pipe thread sealant that provides a leakproof seal. Leakproof seal helps prevent cross threading on pipe threads.	3 mil	260°C 500°F	1/4" x 260" (6,3 mm x 7 m) 1/2" x 260" (13 mm x 7 m) 1/2" x 520" (13 mm x 13 m) 1/2" x 1296" (13 mm x 33 m)
Scotch® Glass Cloth Tape 27 and 69*		Woven insulating glass cloth; high temperature resistance. High mechanical strength. Heat stable insulation for furnace and oven controls, motor leads & switches.	27 is 7 mil 69 is 7.5 mil	27 is Class B temp (130°C / 266°F) 69 is class H temp (180°C / 356°F)	1/2" x 66' (12 mm x 20,1 m) 3/4" x 66' (19 mm x 20,1 m) 3/4" x 60 yd (19 mm x 54,8 m) 1" x 60 yd (25 mm x 54,8 m) 1-1/2" x 60 yd (38 mm x 54,8 m) 1/2" x 36 yd (13 mm x 33 m) 3/4" x 36 yd (19 mm x 33 m) 1" x 36 yd (25 mm x 33 m)
3M™ Fire and Electric Arc Proofing Tape 77		Protects cable until limiting device can interrupt faulted current.	30 mil	N/A	RoHS
Scotch® Varnished Cambric Tape 2510 and 2520		Yellow, varnish coated cotton cloth 2510: no adhesive; 2520: adhesive.	7 mil 8 mil	105°C 220°F	Insulate bus bars, motor leads 9for re-entry), service drop connections.
Scotch® Barricade Tape 300		Durable polyethylene plastic, bold 2" letters, long roll length, will not tear easily, attracts attention. Barricade applicable in both large and small areas.	3 mil	N/A	3" x 300' 3" x 1000'
3M™ Outdoor Masking and Stucco Tape 5959*		Construction, marine and maintenance, 90 day UV resistant waterproof backing	12 mil	93°C 200°F	1-7/8" x 45 yd (48 mm x 41.1 m)
3M™ Performance Plus Duct Tape 8979		High performance tape that removes cleanly up to six months after exposure to sunlight and temperature extremes. Aggressive adhesive and high tensile strength for demanding applications	12.6 mil	93°C 200°F	1" x 60 yd. (24 mm x 54,8 m) 2" x 60 yd. (51 mm x 54,8 m)
3M™ Temflex™ Cotton Friction Tape 1755		Provides extra abrasion resistance for splices and connections.	15 mil	80°C 176°F	3/4" x 60' (19 mm x 18,28 m) 3/4" x 82-1/2' (19 mm x 25 m) 1-1/2" x 82-1/2' (38 mm x 25 m)
3M™ Performance Plus Wire Connectors (R/Y+, T/Y+, B/G+)		Flexible skirt w/square wire	600 V (1000V in sign, lighting fixtures and luminaries)	105°C 221°F	2#18-2#8 5#12 (2,0 mm ² -16,0 mm ²) 2#22-3#12 3#14 (1,0 mm ² -5,0 mm ²) 4#14-2#6-3#8 (10,0 mm ² -31,6 mm ²)
3M™ Comfort Grip Gloves		Nitrile Foam Coated Gloves Exceptional Comfort & Breathability	Excellent durability Excellent grip and dexterity Human and environment friendly Chemical and oil resistance		M, L, XL

3M Electrical Solutions

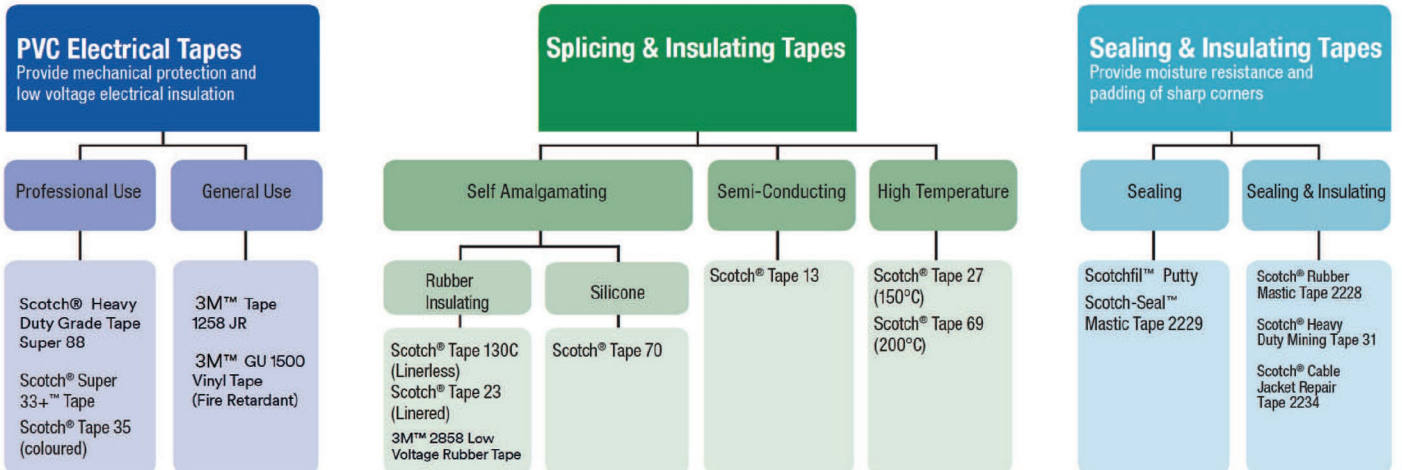


*Product packaging maybe different in each country.

3M™ & Scotch® Electrical Tapes

High performance, easy handling electrical tapes for:

- Low and medium voltage insulating
- Moisture sealing
- Protective jacketing
- Colour coding
- Padding, shaping
- Bundling and harnessing



Electrical Market Division

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