

Cold Shrink Medium Voltage Cable Accessories

For extruded dielectric power cable from 8.7kV through 35kV and up to 630mm²

G&W Electric cable accessories are designed to accommodate cables from all manufacturers and can be created to accommodate any customer cable system

Pre-Molded (PM) Series Cold Shrink Accessories

As a cable accessories manufacturer with more than 100 years of history, G&W Electric offers a range of cable accessories to meet medium voltage, high voltage, ultra high voltage and extra high voltage requirements.

The G&W Electric Pre-Molded (PM) series of cold shrink medium voltage cable accessories are high-end products available for extruded dielectric power cables from 8.7kV through 35kV and up to 630mm².

State-of-the-art software is employed to perform electric stress analysis and optimization which ensures the electric stress of these cable accessories is distributed in the most rational way. Liquid silicone rubber is used as the raw material, which greatly improves the mechanical and electrical properties of this product. This allows installation in various kinds of complicated environments, resulting in simple, reliable installation and excellent product performance.

Features and Benefits

- Liquid silicone rubber (LSR) is used for outstanding electrical conductivity and insulation
- Employs design concepts used for high voltage stress control
- Hydrophobic and highly UV resistant for excellent performance in outdoor applications
- Superior flexibility ensures that the product holds the cable firmly, eliminating air gaps produced by thermal expansion and contraction during operation
- With 300% expansion allowance, a single product can be used with a variety of cable sizes
- Does not require special skills when installing
- Eliminates uneven heating that may occur when installing heat shrink accessories
- Single piece pre-molded design eliminates errors that could occur with multiple piece accessories

Applications and Standards

- Standard and non-standard cables with extruded solid insulation (XLPE and EPR)
- Copper and aluminum conductors
- Metal shielding (Copper Wire, Copper Tape, Aluminum Foil, etc.)
- Armored or non-armored jackets (Steel wire armor, etc.)
- GB/T 12706
- GB/T 18889
- IEC 60502

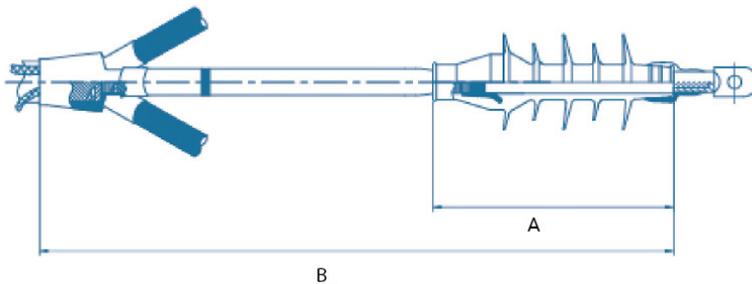


Three-core Power Cable with Extruded Insulation

Indoor/Outdoor Terminations

Voltage Class, kV	Outdoor	Indoor
15kV	A 330 B 850 Creepage 470	A 190 B 760 Creepage 240
20kV	A 290 B 850 Creepage 580	A 220 B 800 Creepage 280
35kV	A 460 B 1050 Creepage 950	A 380 B 1000 Creepage 700

Main Parameters	8.7/15kV	12/20kV	26/35kV
AC power frequency withstand voltage (5 min.)	39kV	54kV	117kV
Power frequency withstand voltage (1 min., wet, outdoor terminals only)	35kV	48kV	104kV
DC withstand voltage (15 min.)	35kV	48kV	104kV
Impulse voltage test (+/-10 times)	95kV	125kV	200kV
Partial discharge test	≤10 pC at 15kV	≤10 pC at 20kV	≤10 pC at 45kV
Combined cycling test with AC voltage, 60 cycles (In air)	23kV	30kV	65kV
Salt spray test (Outdoor)	11kV	15kV	33kV
Wet aging test (Indoor)	11kV	15kV	33kV



Three-core power cable



Three-core Power Cable with Extruded Insulation

Three-core Power Cable with Extruded Insulation

Indoor/Outdoor Termination Kits

Voltage Class, kV	Conductor Cross Section, mm ²	Indoor Termination Type Chart		Outdoor Termination Type Chart	
		Single-Core Kits	Three-Core Kits	Single-Core Kits	Three-Core Kits
8.7/15kV	25-50	PMN15-1.1	PMN15-3.1	PMT15-1.1	PMT15-3.1
	70-120	PMN15-1.2	PMN15-3.2	PMT15-1.2	PMT15-3.2
	150-240	PMN15-1.3	PMN15-3.3	PMT15-1.3	PMT15-3.3
	300-400	PMN15-1.4	PMN15-3.4	PMT15-1.4	PMT15-3.4
	500-630	PMN15-1.5	PMN15-3.5	PMT15-1.5	PMT15-3.5
12/20kV	30-50	PMN20-1.1	PMN20-3.1	PMT20-1.1	PMT20-3.1
	70-150	PMN20-1.2	PMN20-3.2	PMT20-1.2	PMT20-3.2
	185-400	PMN20-1.3	PMN20-3.3	PMT20-1.3	PMT20-3.3
	500-630	PMN20-1.4	PMN20-3.4	PMT20-1.4	PMT20-3.4
26/35kV	50-95	PMN35-1.1	PMN35-3.1	PMT35-1.1	PMT35-3.1
	120-185	PMN35-1.2	PMN35-3.2	PMT35-1.2	PMT35-3.2
	240-400	PMN35-1.3	PMN35-3.3	PMT35-1.3	PMT35-3.3
	500-630	PMN35-1.4	PMN35-3.4	PMT35-1.4	PMT35-3.4



Three-core indoor kits



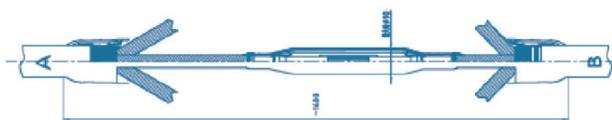
Three-core outdoor kits

Three-core Power Cable with Extruded Insulation

Straight Joint Kits

Voltage Class, kV	Conductor Cross Section, mm ²	Straight Through Joint Type Chart	
		Single-Core Kits	Three-Core Kits
8.7/15kV	25-50	PMJ15-1.1	PMJ15-3.1
	70-120	PMJ15-1.2	PMJ15-3.2
	150-240	PMJ15-1.3	PMJ15-3.3
	300-400	PMJ15-1.4	PMJ15-3.4
	500-630	PMJ15-1.5	PMJ15-4.5
12/20kV	30-50	PMJ20-1.1	PMJ20-3.1
	70-150	PMJ20-1.2	PMJ20-3.2
	185-400	PMJ20-1.3	PMJ20-3.3
	185-400	PMJ20-1.4	PMJ20-3.4
26/35kV	50-95	PMJ35-1.1	PMJ35-3.1
	120-185	PMJ35-1.2	PMJ35-3.2
	240-400	PMJ35-1.3	PMJ35-3.3
	500-630	PMJ35-1.4	PMJ35-3.4

Main Parameters	8.7/15kV	12/20kV	26/35kV
AC power frequency withstand voltage (5 min.)	39kV	54kV	117kV
DC withstand voltage (15 min.)	35kV	48kV	104kV
Impulse voltage test (+/- 10 times)	95kV	125kV	200kV
Partial discharge test	≤10 pC at 15kV	≤10 pC at 20kV	≤10 pC at 45kV
Combined cycling test with AC voltage (30 cycles in air and 30 cycles in water)	23kV	30kV	65kV



Straight Through Joint



Straight Through Joint Kits

Three-core Power Cable with Extruded Insulation

Applications*



Outdoor terminations



Indoor terminations

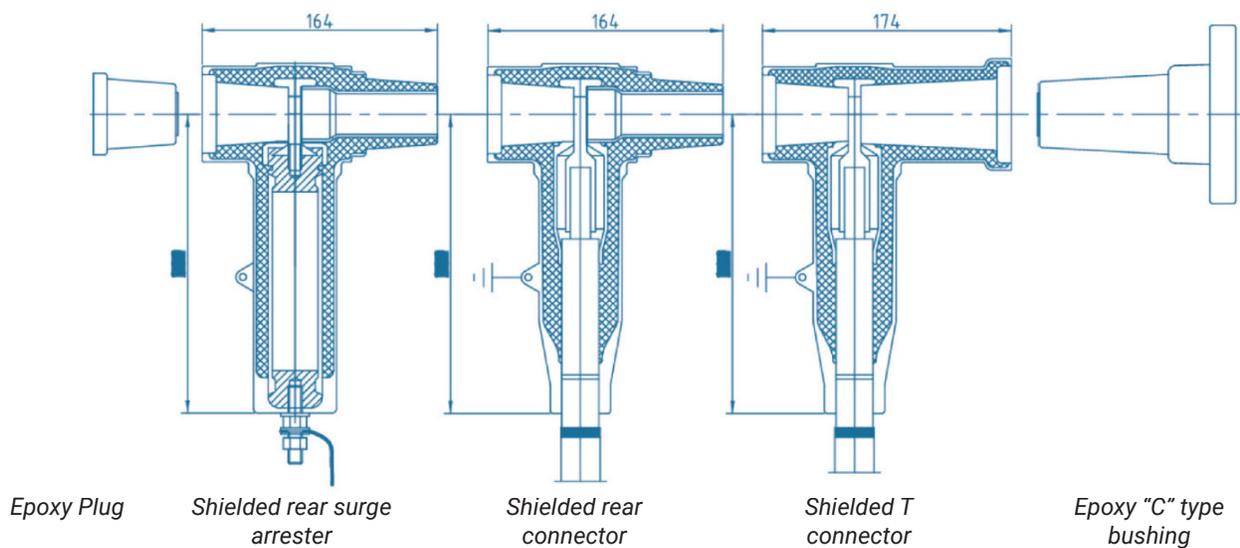


Connection to equipment



Straight thru joint

Shielded Separable Connectors



*The application photos listed in this document are for general information purposes only. Please contact G&W Electric for additional information.

Shielded T and Shielded Rear Connectors Kits

Main Parameters	8.7/15kV	12/20kV	26/35kV
AC power frequency withstand voltage (5 min.)	35kV	54kV	117kV
DC withstand voltage (15 min.)	39kV	48kV	104kV
Impulse voltage test (+/- 10 times)	95kV	125kV	200kV
Partial discharge test	≤10 pC at 15kV	≤10 pC at 20kV	≤10 pC at 45kV
Combined cycling test with AC voltage, 63 cycles (33 in air + 30 in water)	23kV	30kV	65kV
Shield resistance	≤5 k Ω	≤5 k Ω	≤5 k Ω
Leakage current (at U _m)	≤0.5mA	≤0.5mA	≤0.5mA



Shielded T connectors



Shielded rear connectors

Shielded Separable Connectors

Main Features

- High temperature vulcanized liquid silicone rubber is used for:
 - Outstanding electrical performance
 - Superior flexibility
 - High weather resistance
 - High aging resistance
 - Flame retardant
- Prefabricated integrated design with built-in stress cone
- Extruded outer shield with a considerable thickness
- Attractive and lightweight, easy to install
- Insulation plug with built-in voltage detector
- Scalable connections allowing combinations

Applicable Standards

- GB/T 12706
- GB/T 18889
- IEC 60502
- EN 50180
- EN 50181

Shielded Separable Connectors



Three-core T connectors



Three-core rear connectors

Application*



Voltage Class, kV	Conductor Cross Section, mm ²	Shielded T Connector Type Chart		Shielded Rear Connector Type Chart	
		Single-core Models	Three-Ccre Models	Single-core Models	Three-Ccre Models
8.7/15kV	25-50	PMTC15-1.1	PMTC15-3.1	PMBC15-1.1	PMBC15-3.1
	70-120	PMTC15-1.2	PMTC15-3.2	PMBC15-1.2	PMBC15-3.2
	150-240	PMTC15-1.3	PMTC15-3.3	PMBC15-1.3	PMBC15-3.3
	300-400	PMTC15-1.4	PMTC15-3.4	PMBC15-1.4	PMBC15-3.4
	500-630	PMTC15-1.5	PMTC15-3.5	PMBC15-1.5	PMBC15-3.5
12/20kV	25-35	PMTC20-1.1	PMTC20-3.1	PMBC20-1.1	PMBC20-3.1
	50-70	PMTC20-1.2	PMTC20-3.2	PMBC20-1.2	PMBC20-3.2
	95-185	PMTC20-1.3	PMTC20-3.3	PMBC20-1.3	PMBC20-3.3
	240-300	PMTC20-1.4	PMTC20-3.4	PMBC20-1.4	PMBC20-3.4
	400-500	PMTC20-1.5	PMTC20-3.5	PMBC20-1.5	PMBC20-3.5
26/35kV	50-95	PMN35-1.1	PMTC35-3.1	PMBC35-1.1	PMBC35-3.1
	120-185	PMN35-1.2	PMTC35-3.2	PMBC35-1.2	PMBC35-3.2
	240-300	PMN35-1.3	PMTC35-3.3	PMBC35-1.3	PMBC35-3.3
	400-500	PMN35-1.4	PMTC35-3.4	PMBC35-1.4	PMBC35-3.4

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Shielded Rear Surge Arrester

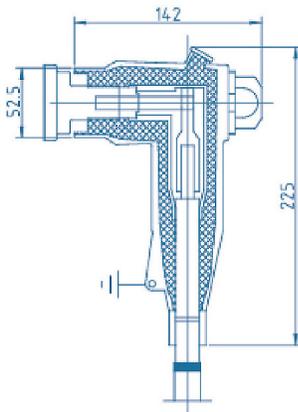
Name	Units	Parameters	
Product Model	-	PMBA15 (17/45)	PMBA20 (34/85)
System nominal voltage	kV	10	20
Surge protector rated voltage	kV	17	34
Continuous operating voltage	kV	13.6	27.2
Nominal discharge current, I _n	kA	5	5
Reference voltage, DC, 1 mA	kV	≥24	≥48
Leakage current, 0.75U, 1 mA	μ A	≤10	≤10
Steep current impulse residual voltage	kV	≤51.8	≤95
Lightning impulse residual voltage	kV	≤45	≤85
Switching impulse residual voltage	kV	≤35	≤75
Resistive current (Peak value)	μ A	≤200	≤200
Full current (Peak value)	μ A	≤700	≤200
Partial discharge at 14.3 kV	pC	≤10	≤10
2ms square wave current impulse withstand	A	200	200
High current impulse withstand	kA	65	80



Shielded Rear Surge Arrester

250 A Euro Style Shielded Elbow Connector

Voltage Class, kV	Conductor Cross Section mm ²	Shielded Elbow Connector	
		Single-Core Models	Three-Core Models
8.7/1.5kV	25-50	PMEC15250-1.1	PMEC 152003.1
	70-95	PMEC15250-1.2	PMEC 152003.2
	120	PMEC15250-1.3	PMEC 152003.3



250 A Euro Style Shielded Elbow Connector



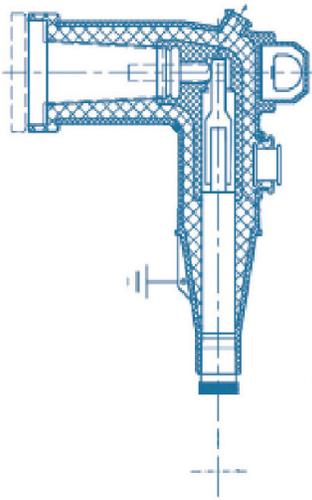
Applications*



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200 A American Style Shielded Elbow Connector

Voltage Class, kV	Conductor Cross Section mm ²	Shielded Elbow Connector	
		Single-Core Models	Three-Core Models
8.3/14.4kV	35-50	PMEC15200-1.1	PMEC 152003.1
	70	PMEC15250-1.2	PMEC 152003.2
	95-120	PMEC15250-1.3	PMEC 152003.3
	150	PMEC15200-1.4	PMEC 152003.4



200 A American Style Shielded Elbow Connector



Applications*



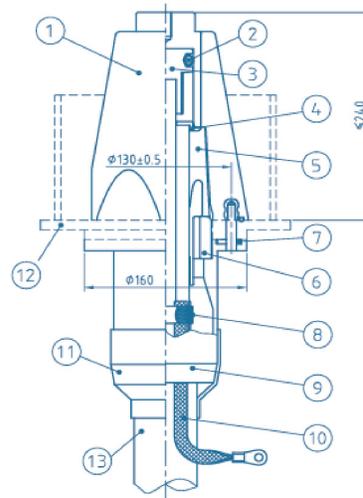
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Inner Cone Plug-in

Separable Connectors

Main Parameters	12/20kV	26/35kV
AC power frequency withstand voltage (5 min.)	54kV	117kV
DC withstand voltage (15 min.)	48kV	104kV
Impulse voltage test (+/- 10 times)	125kV	200kV
Partial discharge test	≤10 pC at 20kV	≤10 pC at 45 kV
Combined cycling test at constant pressure, 63 cycles (33 in air + 30 in water)	30kV	65kV

1. Epoxy insulator
2. Spring contact
3. Conductor connector
4. Stress cone stop ring
5. Stress cone
6. Stress cone support ring
7. Sealing gasket
8. Roll spring
9. Entrance housing
10. Grounding braid
11. Heat shrink tube
12. Housing flange
13. Cable



Inner Cone Plug-in Separable

Connector Type Chart

Voltage Class, kV	Conductor Cross Section, mm	Single-Core Models	Three-Core Models
26/35kV	25	GIS 35-1.1	GIS 35-3.1
	35	GIS 35-1.2	GIS 35-3.2
	50	GIS 35-1.3	GIS 35-3.3
	70	GIS 35-1.4	GIS 35-3.4
	95	GIS 35-1.5	GIS 35-3.5
	120	GIS 35-1.6	GIS 35-3.6
	150	GIS 35-1.7	GIS 35-3.7
	185	GIS 35-1.8	GIS 35-3.8
	240	GIS 35-1.9	GIS 35-3.19
	300	GIS 35-1.10	GIS 35-3.10
	400	GIS 35-1.11	GIS 35-3.11
	500	GIS 35-1.12	GIS 35-3.12
	630	GIS 35-1.13	GIS 35-3.13

Contact us today
708.388.5010 or info@gwelec.com



Since 1905, G&W Electric has been a leading provider of innovative power grid solutions, including the latest in load and fault interrupting switches, reclosers, system protection equipment, power grid automation and transmission and distribution cable terminations, joints and other cable accessories. G&W is headquartered in Bolingbrook, Illinois, U.S.A., with manufacturing facilities and sales support in more than 100 countries, including China, Mexico, Canada, UAE, India, Singapore, Brazil and Italy. We help our customers meet their challenges and gain a competitive edge through a suite of advanced products and technical services.

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