



Heat Shrink

Product Catalogue

Also available:

- Low Voltage ABC Accessories Product Catalogue
- Cable Lugs and Connectors Product Catalogue

ABOUT MELEC

Shanghai Jiameng Electrical Equipment Co.,Ltd. also known as MELEC, was founded in 1992. In 2011, both of our subsidiaries, Jiangsu Jiameng Electrical Equipment Co.,Ltd. and Shanghai Jiameng International Trading Co.,Ltd. were formed. We are specialized in production of high quality cable accessories. Our company has expanded to more than 450 employees with a factory compound of more than 50,000 square meters. Our products include cable lugs & connectors, aerial bundle cable accessories, and heat shrink accessories.

OUR PROGRESS

Directed by a group of experienced professionals and certified by ISO 9001:2015 Quality Management Systems, most of our products have met IEC, NFC and EN international standard. By matching up with the highest requirements along with our ever advancing technology, MELEC is gradually gaining reputation in both quality and reliability.

Our in-house laboratory has been established for over a decade, and our rich experiences and advanced equipments enable us to bring more value to our customers. Our laboratory passed CNAS Accreditation (ISO17025) in 2016. And we have offered 1000 different products and are sold to over 100 countries across the globe. We will continue our dedicated effort to improve product performance and reliability with our expertise and resources.

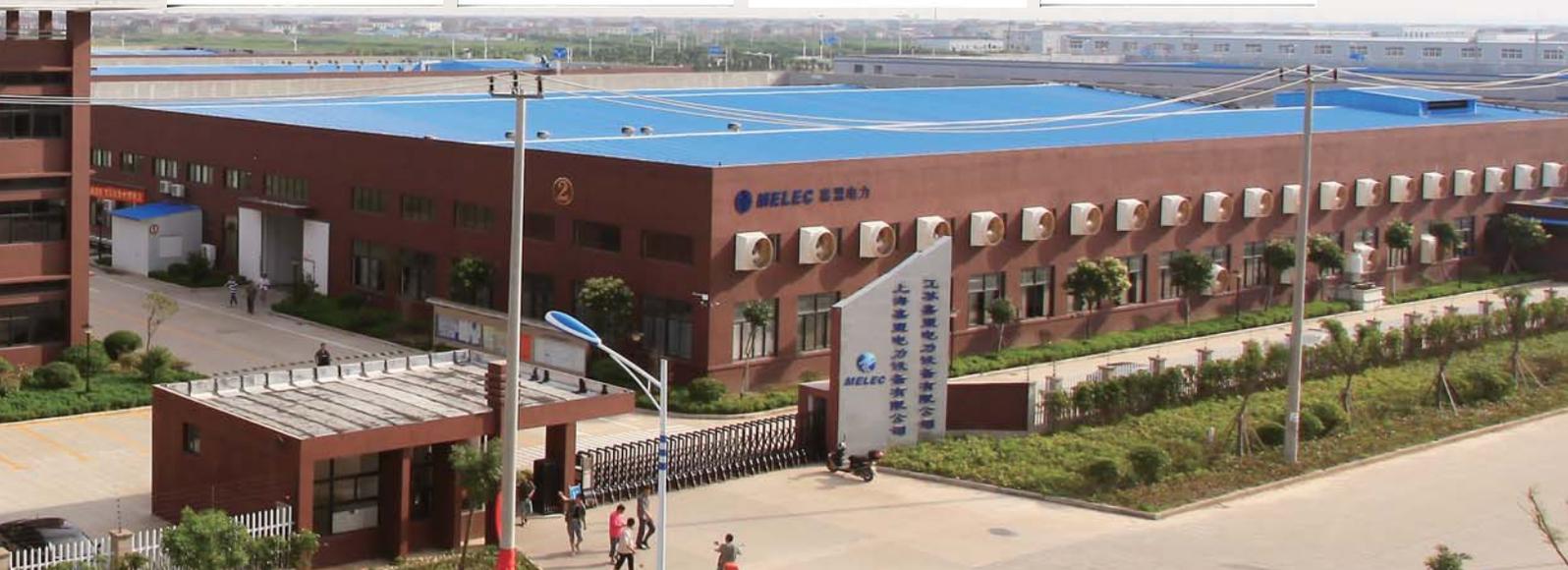
OUR VALUES

Our mission is to make the best of what we do; we are determined to provide quality products and services to our customers, and help our customers to achieve their goals. We are forerunners in many areas of our field, and we will continue to improve ourselves to set the industry's trend.

We have exceptional business ethic and work ethic, we value the importance of honesty, and we always get things done as we promised. We believe reliable products come from responsible people. We look forward to providing new products, expanded technical support and improved service to help your business reach higher level of success.



Test Reports





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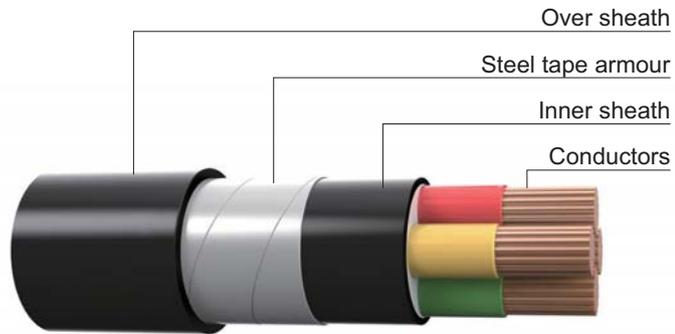
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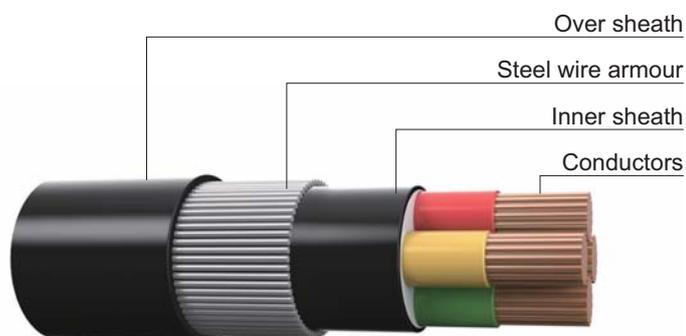
Low Voltage Cable Construction Steel Tape Armoured Termination



Package List

Items	Remarks
CABLE LUG	optional
HEAT SHRINKABLE INSULATION BREAKOUT	for non-single-core cables
HEAT SHRINKABLE TUBING	insulation tubing
HEAT SHRINKABLE TUBING	protection tubing
PHASE TUBING	
WATERPROOF SEALING MASTIC	
COPPER BRAID+CABLE LUG	
CONSTANT FORCE SPRING	
COPPER BINDING-WIRE	
PVC TAPE	
EMERY CLOTH	
CLEANING KIT	
CLEANING CLOTH	
UNDERSHIRT CLOTH GLOVES	
INSTALLATION INSTRUCTION	
PACKAGE LIST	

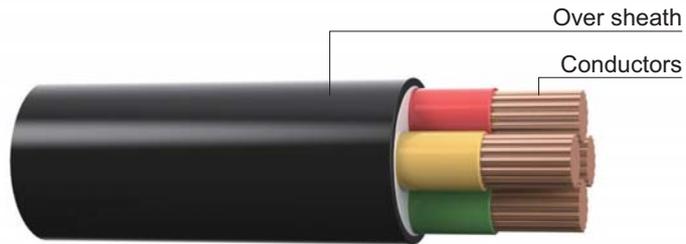
Low Voltage Cable Construction Steel Wire Armoured Termination



Package List

Items	Remarks
CABLE LUG	optional
HEAT SHRINKABLE INSULATION BREAKOUT	for non-single-core cables
HEAT SHRINKABLE TUBING	insulation tubing
HEAT SHRINKABLE TUBING	protection tubing
PHASE TUBING	
WATERPROOF SEALING MASTIC	
COPPER BRAID+CABLE LUG	
CONSTANT FORCE SPRING	
COPPER BINDING-WIRE	
STEEL ARMOUR RING	
HOSE CLAMP	
PVC TAPE	
EMERY CLOTH	
CLEANING KIT	
CLEANING CLOTH	
UNDERSHIRT CLOTH GLOVES	
INSTALLATION INSTRUCTION	
PACKAGE LIST	

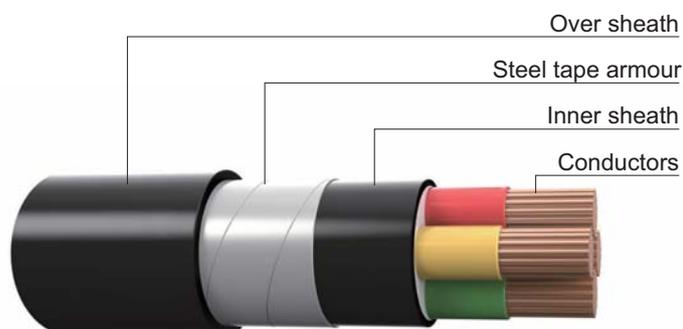
Low Voltage Cable Construction
Unarmoured
Termination



Package List

Items	Remarks
CABLE LUG	optional
HEAT SHRINKABLE INSULATION BREAKOUT	for non-single-core cables
HEAT SHRINKABLE TUBING	insulation tubing
PHASE TUBING	
WATERPROOF SEALING MASTIC	
PVC TAPE	
EMERY CLOTH	
CLEANING KIT	
CLEANING CLOTH	
UNDERSHIRT CLOTH GLOVES	
INSTALLATION INSTRUCTION	
PACKAGE LIST	

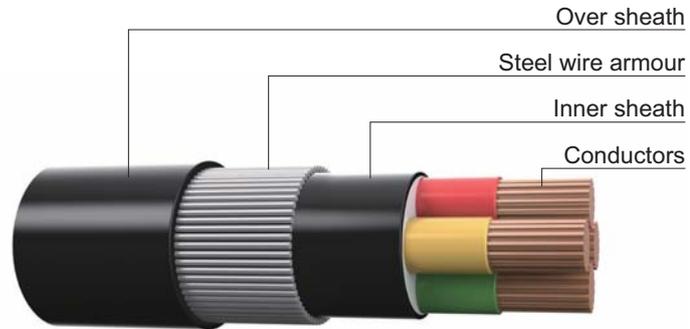
Low Voltage Cable Construction
Steel Tape Armoured
Straight Joint



Package List

Items	Remarks
CABLE LINK	optional
HEAT SHRINKABLE TUBING	insulation tubing
HEAT SHRINKABLE TUBING	protection tubing
WATERPROOF SEALING MASTIC	
COPPER BRAID	
COPPER BINDING-WIRE	
CONSTANT FORCE SPRING	
FILLING MASTIC	
PVC TAPE	
EMERY CLOTH	
CLEANING KIT	
CLEANING CLOTH	
UNDERSHIRT CLOTH GLOVES	
INSTALLATION INSTRUCTION	
PACKAGE LIST	

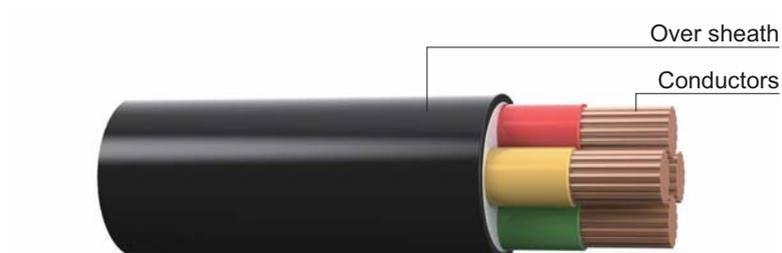
Low Voltage Cable Construction Steel Wire Armoured Straight Joint



Package List

Items	Remarks
CABLE LINK	optional
HEAT SHRINKABLE TUBING	insulation tubing
HEAT SHRINKABLE TUBING	protection tubing
WATERPROOF SEALING MASTIC	
COPPER BINDING-WIRE	
STEEL ARMOUR RING	
HOSE CLAMP	
STEEL ARMOUR CASE	
MEDICAL ADHESIVE TAPE	
PVC TAPE	
EMERY CLOTH	
CLEANING KIT	
CLEANING CLOTH	
UNDERSHIRT CLOTH GLOVES	
INSTALLATION INSTRUCTION	
PACKAGE LIST	

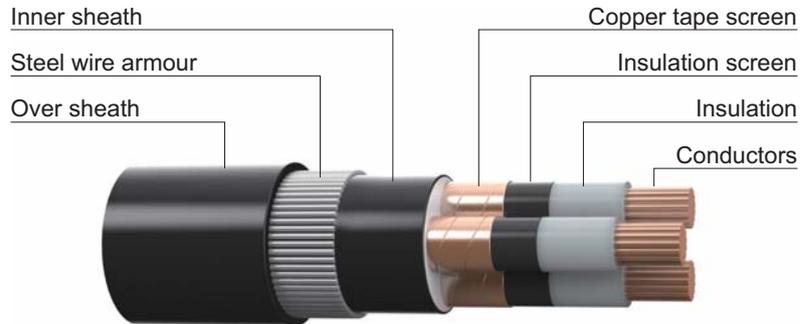
Low Voltage Cable Construction
Unarmoured
Straight Joint



Package List

Items	Remarks
CABLE LINK	optional
HEAT SHRINKABLE TUBING	insulation tubing
HEAT SHRINKABLE TUBING	protection tubing
WATERPROOF SEALING MASTIC	
FILLING MASTIC	
PVC TAPE	
EMERY CLOTH	
CLEANING KIT	
CLEANING CLOTH	
UNDERSHIRT CLOTH GLOVES	
INSTALLATION INSTRUCTION	
PACKAGE LIST	

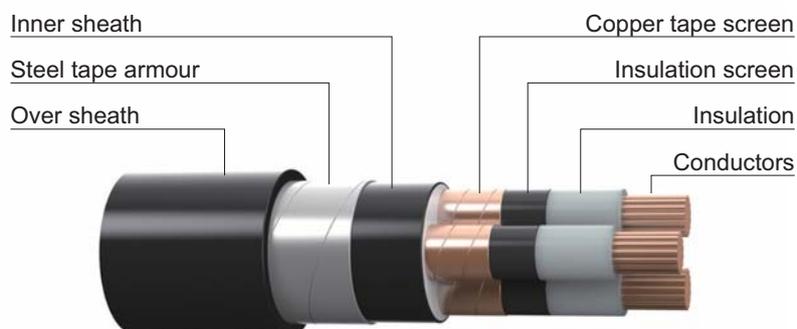
Medium Voltage Cable Construction Steel Wire Armoured, Copper Tape Screened Termination



Package List

Items	Remarks
CABLE LUG	optional
HEAT SHRINKABLE INSULATION BREAKOUT	only for 3-core cables
HEAT SHRINKABLE STRESS CONTROL TUBING	
HEAT SHRINKABLE TRACK-RESISTANT TUBING	
HEAT SHRINKABLE TUBING	protection tubing
HEAT SHRINKABLE SKIRT	only for outdoor termination
WATERPROOF SEALING MASTIC	
STRESS CONTROL MASTIC	
TRIANGULAR WEDGE	
SILICON GREASE	
COPPER BRAID	
COPPER BRAID+CABLE LUG	
CONSTANT FORCE SPRING	
COPPER FOIL TAPE	
COPPER BINDING-WIRE	
STEEL ARMOUR RING	
HOSE CLAMP	
PVC TAPE	
PHASE TUBING	
EMERY CLOTH	
CLEANING KIT	
CLEANING CLOTH	
PE GLOVES	
UNDERSHIRT CLOTH GLOVES	
INSTALLATION INSTRUCTION	
PACKAGE LIST	

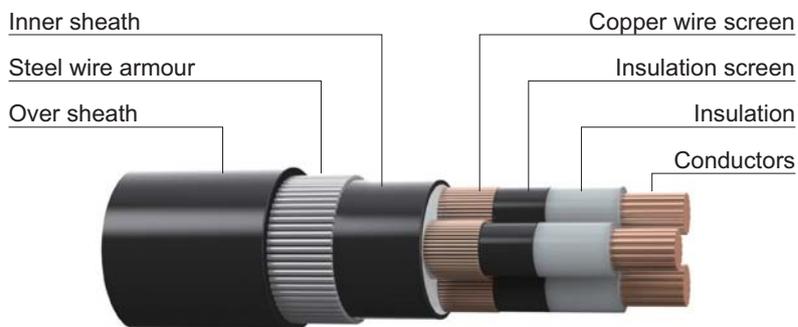
Medium Voltage Cable Construction Steel Tape Armoured, Copper Tape Screened Termination



Package List

Items	Remarks
CABLE LUG	optional
HEAT SHRINKABLE INSULATION BREAKOUT	only for 3-core cables
HEAT SHRINKABLE STRESS CONTROL TUBING	
HEAT SHRINKABLE TRACK-RESISTANT TUBING	
FILLING MASTIC	
HEAT SHRINKABLE SKIRT	only for outdoor termination
WATERPROOF SEALING MASTIC	
STRESS CONTROL MASTIC	
TRIANGULAR WEDGE	
SILICON GREASE	
COPPER BRAID+CABLE LUG	
CONSTANT FORCE SPRING	
SEMI-CONDUCTIVE TAPE	
COPPER BINDING-WIRE	
PVC TAPE	
PHASE TUBING	
EMERY CLOTH	
CLEANING KIT	
CLEANING CLOTH	
PE GLOVES	
UNDERSHIRT CLOTH GLOVES	
INSTALLATION INSTRUCTION	
PACKAGE LIST	

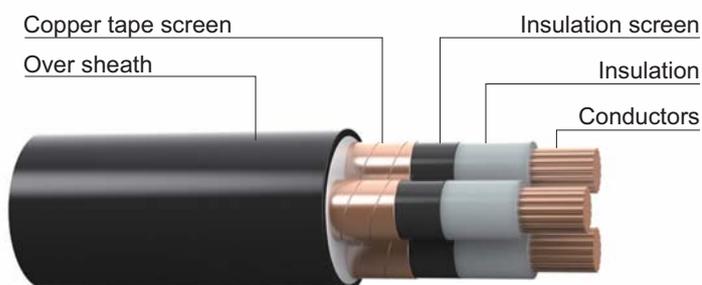
Medium Voltage Cable Construction Steel Wire Armoured, Copper Wire Screened Termination



Package List

Items	Remarks
CABLE LUG	optional
HEAT SHRINKABLE INSULATION BREAKOUT	only for 3-core cables
HEAT SHRINKABLE STRESS CONTROL TUBING	
HEAT SHRINKABLE TRACK-RESISTANT TUBING	
HEAT SHRINKABLE TUBING	protection tubing
HEAT SHRINKABLE SKIRT	only for outdoor termination
WATERPROOF SEALING MASTIC	
STRESS CONTROL MASTIC	
TRIANGULAR WEDGE	
SILICON GREASE	
CABLE LUG	for connecting Cu-wire screen
COPPER BINDING-WIRE	
STEEL ARMOUR RING	
HOSE CLAMP	
PVC TAPE	
PHASE TUBING	
EMERY CLOTH	
CLEANING KIT	
CLEANING CLOTH	
PE GLOVES	
UNDERSHIRT CLOTH GLOVES	
INSTALLATION INSTRUCTION	
PACKAGE LIST	

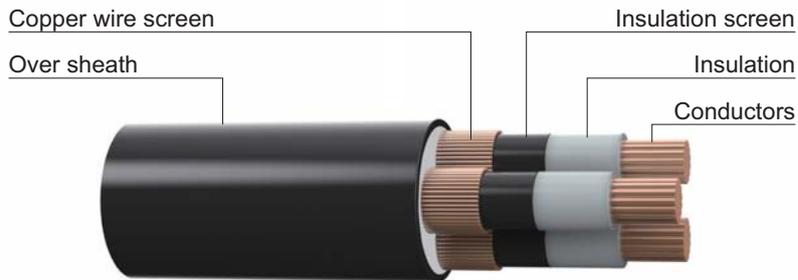
Medium Voltage Cable Construction Unarmoured, Copper Tape Screened Termination



Package List

Items	Remarks
CABLE LUG	optional
HEAT SHRINKABLE INSULATION BREAKOUT	only for 3-core cables
HEAT SHRINKABLE STRESS CONTROL TUBING	
HEAT SHRINKABLE TRACK-RESISTANT TUBING	
HEAT SHRINKABLE SKIRT	only for outdoor termination
WATERPROOF SEALING MASTIC	
STRESS CONTROL MASTIC	
TRIANGULAR WEDGE	
SILICON GREASE	
COPPER BRAID+CABLE LUG	
CONSTANT FORCE SPRING	
COPPER FOIL TAPE	
PVC TAPE	
PHASE TUBING	
EMERY CLOTH	
CLEANING KIT	
CLEANING CLOTH	
PE GLOVES	
UNDERSHIRT CLOTH GLOVES	
INSTALLATION INSTRUCTION	
PACKAGE LIST	

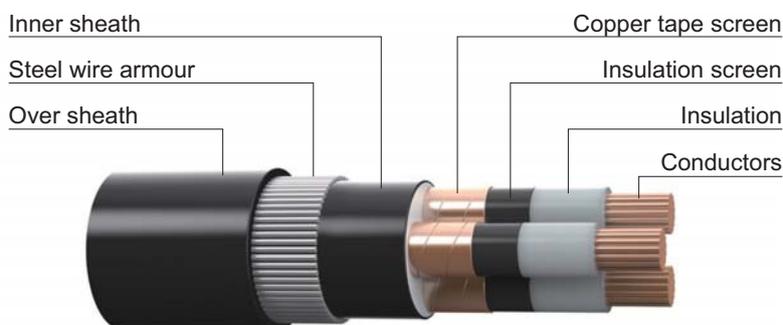
Medium Voltage Cable Construction Unarmoured, Copper Wire Screened Termination



Package List

Items	Remarks
CABLE LUG	optional
HEAT SHRINKABLE INSULATION BREAKOUT	only for 3-core cables
HEAT SHRINKABLE STRESS CONTROL TUBING	
HEAT SHRINKABLE TRACK-RESISTANT TUBING	
HEAT SHRINKABLE SKIRT	only for outdoor termination
WATERPROOF SEALING MASTIC	
STRESS CONTROL MASTIC	
TRIANGULAR WEDGE	
SILICON GREASE	
CABLE LUG	for connecting Cu-wire screen
PVC TAPE	
PHASE TUBING	
EMERY CLOTH	
CLEANING KIT	
CLEANING CLOTH	
PE GLOVES	
UNDERSHIRT CLOTH GLOVES	
INSTALLATION INSTRUCTION	
PACKAGE LIST	

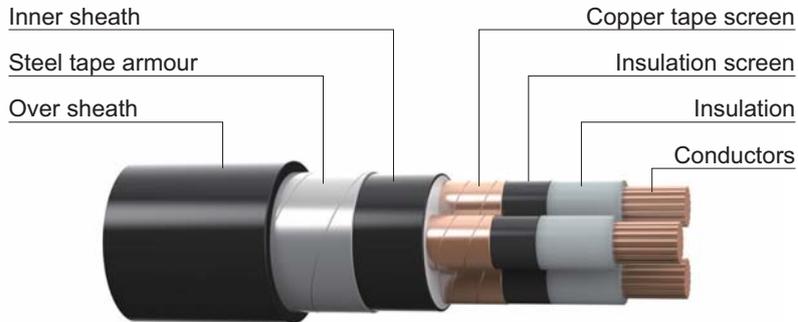
Medium Voltage Cable Construction Steel Wire Armoured, Copper Tape Screened Straight Joint



Package List

Items	Remarks
CABLE LINK	optional
HEAT SHRINKABLE STRESS CONTROL TUBING	
HEAT SHRINKABLE TRACK-RESISTANT TUBING	
HEAT SHRINKABLE INSULATION/SEMI CONDUCTIVE TUBING	
HEAT SHRINKABLE TUBING	protection tubing
WATERPROOF SEALING MASTIC	
STRESS CONTROL MASTIC	
SILICON GREASE	
COPPER BRAID	
CONSTANT FORCE SPRING	
COPPER FOIL TAPE	
COPPER BINDING-WIRE	
STEEL ARMOUR RING	
HOSE CLAMP	
STEEL ARMOUR CASE	
MEDICAL ADHESIVE TAPE	
TINNED SHIELDING COPPER NET	
PVC TAPE	
EMERY CLOTH	
CLEANING KIT	
CLEANING CLOTH	
PE GLOVES	
UNDERSHIRT CLOTH GLOVES	
INSTALLATION INSTRUCTION	
PACKAGE LIST	

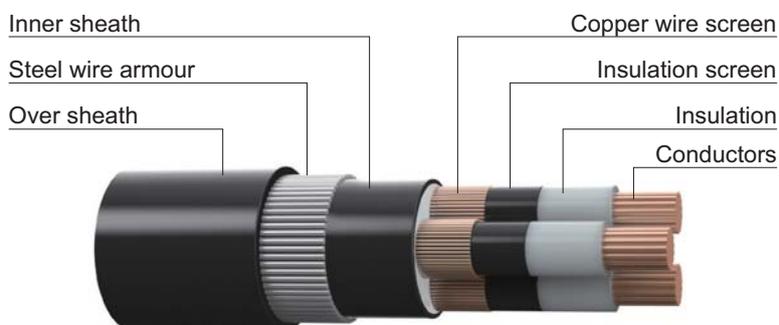
Medium Voltage Cable Construction Steel Tape Armoured, Copper Tape Screened Straight Joint



Package List

Items	Remarks
CABLE LINK	optional
HEAT SHRINKABLE STRESS CONTROL TUBING	
HEAT SHRINKABLE TRACK-RESISTANT TUBING	
HEAT SHRINKABLE INSULATION/SEMI CONDUCTIVE TUBING	
HEAT SHRINKABLE TUBING	protection tubing
WATERPROOF SEALING MASTIC	
STRESS CONTROL MASTIC	
SILICON GREASE	
COPPER BRAID	
CONSTANT FORCE SPRING	
SEMI-CONDUCTIVE TAPE	
COPPER BINDING-WIRE	
FILLING MASTIC	
TINNED SHIELDING COPPER NET	
PVC TAPE	
PVC INSULATION WRAP TAPE	
EMERY CLOTH	
CLEANING KIT	
CLEANING CLOTH	
PE GLOVES	
UNDERSHIRT CLOTH GLOVES	
INSTALLATION INSTRUCTION	
PACKAGE LIST	

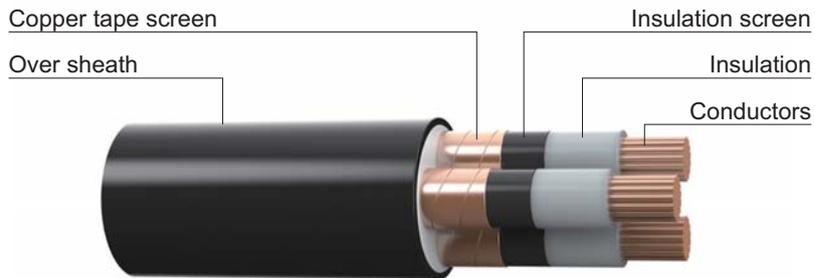
Medium Voltage Cable Construction Steel Wire Armoured, Copper Wire Screened Straight Joint



Package List

Items	Remarks
CABLE LINK	optional
HEAT SHRINKABLE STRESS CONTROL TUBING	
HEAT SHRINKABLE TRACK-RESISTANT TUBING	
HEAT SHRINKABLE INSULATION/SEMI CONDUCTIVE TUBING	
HEAT SHRINKABLE TUBING	protection tubing
WATERPROOF SEALING MASTIC	
STRESS CONTROL MASTIC	
SILICON GREASE	
CABLE LINK	for connecting Cu-wire screen
COPPER BINDING-WIRE	
STEEL ARMOUR RING	
HOSE CLAMP	
STEEL ARMOUR CASE	
MEDICAL ADHESIVE TAPE	
TINNED SHIELDING COPPER NET	
CONSTANT FORCE SPRING	
PVC TAPE	
EMERY CLOTH	
CLEANING KIT	
CLEANING CLOTH	
PE GLOVES	
UNDERSHIRT CLOTH GLOVES	
INSTALLATION INSTRUCTION	
PACKAGE LIST	

Medium Voltage Cable Construction Unarmoured, Copper Tape Screened Straight Joint



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Package List

Items	Remarks
CABLE LINK	optional
HEAT SHRINKABLE STRESS CONTROL TUBING	
HEAT SHRINKABLE INSULATION/SEMI CONDUCTIVE TUBING	
HEAT SHRINKABLE TUBING	protection tubing
WATERPROOF SEALING MASTIC	
STRESS CONTROL MASTIC	
SILICON GREASE	
TINNED SHIELDING COPPER NET	
COPPER BRAID	
CONSTANT FORCE SPRING	
COPPER FOIL TAPE	
PVC TAPE	
EMERY CLOTH	
CLEANING KIT	
CLEANING CLOTH	
PE GLOVES	
UNDERSHIRT CLOTH GLOVES	
INSTALLATION INSTRUCTION	
PACKAGE LIST	

Medium Voltage Cable Construction Unarmoured, Copper Wire Screened Straight Joint



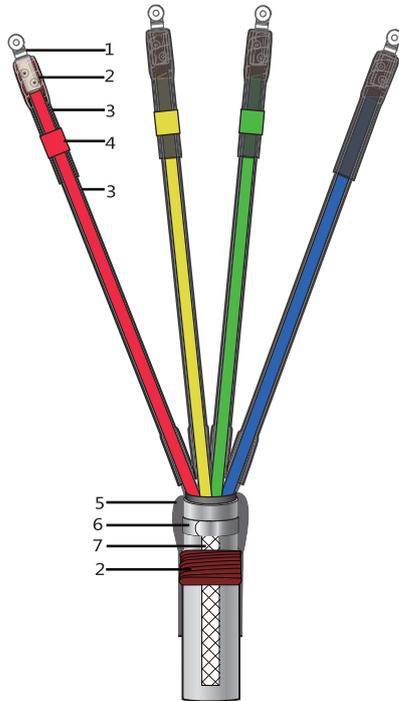
Medium Voltage
Cable Construction

Package List

Items	Remarks
CABLE LINK	optional
HEAT SHRINKABLE STRESS CONTROL TUBING	
HEAT SHRINKABLE INSULATION/SEMI CONDUCTIVE TUBING	
HEAT SHRINKABLE TUBING	protection tubing
WATERPROOF SEALING MASTIC	
STRESS CONTROL MASTIC	
SILICON GREASE	
TINNED SHIELDING COPPER NET	
CONSTANT FORCE SPRING	
CABLE LINK	for connecting Cu-wire screen
PVC TAPE	
EMERY CLOTH	
CLEANING KIT	
CLEANING CLOTH	
PE GLOVES	
UNDERSHIRT CLOTH GLOVES	
INSTALLATION INSTRUCTION	
PACKAGE LIST	

Low Voltage Heat Shrinkable Accessories Connection Layout

Termination



- 1.CABLE LUG
- 2.WATERPROOF SEALING MASTIC (MMFJ)
- 3.HEAT SHRINKABLE TUBING (MRA2)
- 4.PHASE TUBING
- 5.HEAT SHRINKABLE INSULATION BREAKOUT (MIB)
- 6.CONSTANT FORCE SPRING (MTH)
- 7.COPPER BRAID
- 8.PVC TAPE
- 9.ACCESSORIES(EMERY CLOTH, CLEANING CLOTH, CLEANING TISSUE & GLOVES)



Straight Joint

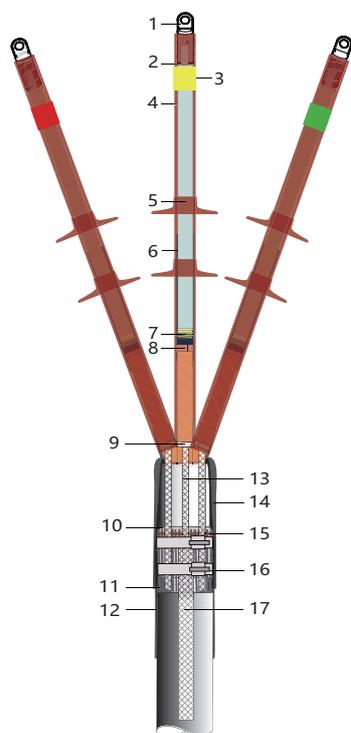


- 1.CONNECTOR
- 2.HEAT SHRINKABLE TUBING (MRA2)
- 3.COPPER BRAID
- 4.CONSTANT FORCE SPRING (MTH)
- 5.WATERPROOF SEALING MASTIC (MMFJ)
- 6.PVC TAPE
- 7.ACCESSORIES(EMERY CLOTH, CLEANING CLOTH, CLEANING TISSUE & GLOVES)



Medium Voltage Heat Shrinkable Accessories Connection Layout

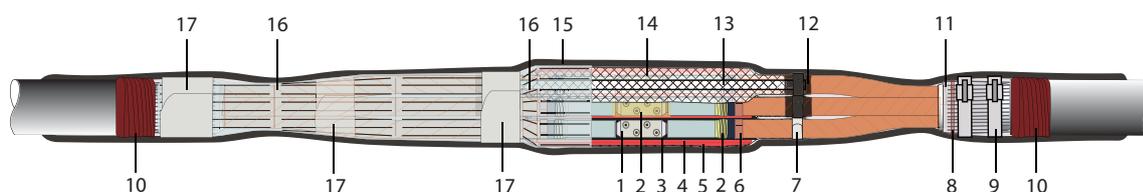
Termination



- 1.CABLE LUG
- 2.WATERPROOF SEALING MASTIC (MMFJ)
- 3.PHASE TUBING
- 4.HEAT SHRINKABLE TRACK-RESISTANT TUBING (MWNT)
- 5.HEAT SHRINKABLE SKIRT (MCES)
- 6.HEAT SHRINKABLE STRESS CONTROL TUBING (MSCT)
- 7.STRESS CONTROL MASTIC (MYLJ)
- 8.COPPER FOIL TAPE
- 9.CONSTANT FORCE SPRING (MTH)
- 10.STEEL ARMOUR RING
- 11.PVC TAPE
- 12.HEAT SHRINKABLE TUBING (MRA2)
- 13.COPPER BRAID (FOR COPPER SCREEN)
- 14.HEAT SHRINKABLE INSULATION BREAKOUT (MIB)
- 15.COPPER BINDING-WIRE
- 16.HOSE CLAMP
- 17.COPPER BRAID (FOR STEEL WIRE ARMOUR)
- 18.SILICON GREASE
- 19.ACCESSORIES(EMERY CLOTH, CLEANING CLOTH, CLEANING TISSUE & GLOVES)



Straight Joint



- 1.CONNECTOR
- 2.STRESS CONTROL MASTIC (MYLJ)
- 3.HEAT SHRINKABLE STRESS CONTROL TUBING (MSCT)
- 4.HEAT SHRINKABLE TRACK-RESISTANT TUBING (MWNT)
- 5.HEAT SHRINKABLE INSULATION/SEMI CONDUCTIVE TUBING (MCIT)
- 6.COPPER FOIL TAPE
- 7.CONSTANT FORCE SPRING (MTH)
- 8.COPPER BINDING-WIRE
- 9.HOSE CLAMP
- 10.WATERPROOF SEALING MASTIC (MMFJ)
- 11.STEEL ARMOUR RING
- 12.PVC TAPE
- 13.COPPER BRAID
- 14.TINNED SHIELDING COPPER NET
- 15.HEAT SHRINKABLE TUBING (MRA2)
- 16.STEEL TAPE ARMOUR
- 17.MEDICAL ADHESIVE TAPE
- 18.SILICON GREASE
- 19.ACCESSORIES(EMERY CLOTH, CLEANING CLOTH, CLEANING TISSUE & GLOVES)



19/21

Low Voltage Heat Shrinkable
Termination & Straight Joint
Accessories

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Make Cable CONNECTIONS More Reliable

Low Voltage Heat Shrinkable Termination & Straight Joint Accessories

1KV HEAT SHRINKABLE TERMINATION ACCESSORIES	20
1KV HEAT SHRINKABLE STRAIGHT JOINT ACCESSORIES	21



1kV Heat Shrinkable Termination Accessories

MDD/MDDK

Heat shrinkable termination is suitable for 0.6/1.0(1.2) kV, insulated with PVC, XLPE and PE polymeric cables. Products are fully tested in accordance with EN 50393.



Feature

- Compact dimensions
- Large cross-section range
- Excellent corrosion resistance
- UV resistance and weathering resistance
- Halogen-free
- Superior waterproof
- Superior electrical and mechanical properties

Performance

Test	Requirements
AC voltage withstand (in air)	4kV, 1min. No failure.
Insulation resistance (in air)	≥50MΩ
Heating cycle (in air)	Heat the conductor to 75°C-95°C, 63 times in air. No failure.
Heating cycle (Crutch immersed)	Heat the conductor to 75°C-95°C, 63 times in water. No failure.
AC voltage withstand (Crutch immersed)	4kV, 1min. No failure.
Insulation resistance (Crutch immersed)	≥50MΩ

4-core

Cores	*Cross-section (mm ²)	Type Unarmoured	Type Armoured
	10-35	MDD-4-01-A	MDDK-4-01-A
	50-95	MDD-4-01-B	MDDK-4-01-B
	120-185	MDD-4-01-C	MDDK-4-01-C
	240-300	MDD-4-01-D	MDDK-4-01-D

5-core

Cores	*Cross-section (mm ²)	Type Unarmoured	Type Armoured
	10-35	MDD-5-01-A	MDDK-5-01-A
	50-95	MDD-5-01-B	MDDK-5-01-B
	120-185	MDD-5-01-C	MDDK-5-01-C
	240-300	MDD-5-01-D	MDDK-5-01-D

* MELEC mechanical lugs are applicable for below cross-sections.

More information, please refer to MELEC Cable Lugs and Connectors Product Catalogue.

Please consult MELEC sales for compression lugs.

1kV Heat Shrinkable Straight Joint Accessories

MDJ/MDJK

Heat shrinkable straight joint is suitable for 0.6/1.0(1.2) kV, insulated with PVC, XLPE and PE polymeric cables. Products are fully tested in accordance with EN 50393.



Feature

- Compact dimensions
- Large cross-section range
- Excellent corrosion resistance
- UV resistance and weathering resistance
- Halogen-free
- Superior waterproof
- Superior electrical and mechanical properties

Performance

Test	Requirements
AC voltage withstand (in air)	4kV, 1min. No failure.
Insulation resistance (in air)	≥50MΩ
Impact at ambient temperature	A 4kg block dropped onto the accessory from a height of 1 m; Immersed for a minimum of 3h in water with depth of 1 m;
AC voltage withstand (immersed)	4kV, 1min. No failure.
Insulation resistance (immersed)	≥50MΩ
Heating cycle in air	Heat the conductor to 75°C-95°C, 63 times in air. No failure.
Heating cycle in water(oversheath damage)	Heat the conductor to 75°C-95°C, 63 times in water. No failure.
AC voltage withstand (immersed)	4kV, 1min. No failure.
Insulation resistance (immersed)	≥50MΩ

4-core

Cores	*Cross-section (mm ²)	Type	
		Unarmoured	Armoured
	10-35	MDJ-4-01-A	MDJK-4-01-A
	50-95	MDJ-4-01-B	MDJK-4-01-B
	120-185	MDJ-4-01-C	MDJK-4-01-C
	240-300	MDJ-4-01-D	MDJK-4-01-D

5-core

Cores	*Cross-section (mm ²)	Type	
		Unarmoured	Armoured
	10-35	MDJ-5-01-A	MDJK-5-01-A
	50-95	MDJ-5-01-B	MDJK-5-01-B
	120-185	MDJ-5-01-C	MDJK-5-01-C
	240-300	MDJ-5-01-D	MDJK-5-01-D

* MELEC mechanical connectors are applicable for below cross-sections.
 More information, please refer to MELEC Cable Lugs and Connectors Product Catalogue.
 Please consult MELEC sales for compression connectors.

22/24

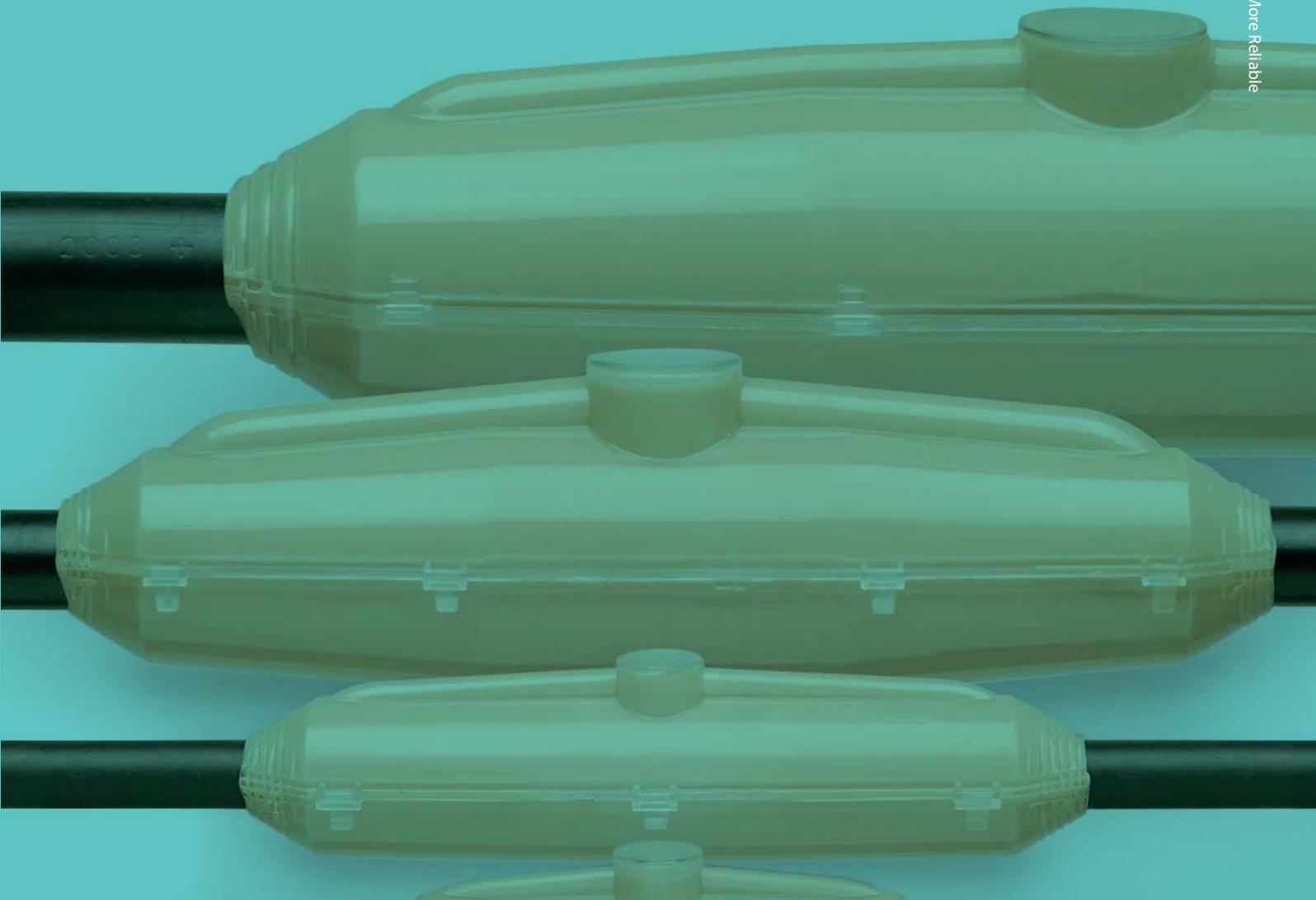
22

Make Cable CONNECTIONS More Reliable

Melec Cast Resin

CAST RESIN STRAIGHT JOINT

23-24



Cast Resin Straight Joint

Application

- Cast resin straight joint used for 0.6/1.0(1.2)kV, armoured and unarmoured cables insulated with PVC, XLPE and PE.
- It is widely used in indoor, outdoor and underground.

Feature

- Compact dimensions
- High quality transparent plastic shell
- Excellent corrosion resistance
- UV resistance and weathering resistance
- Superior electrical and mechanical properties
- Easy installation
- Safe component and no toxic
- Shelf life of cast-resin: 36 months at ambient temperature between 15°C to 35°C

Tests

- EN50393

Package list

Armoured

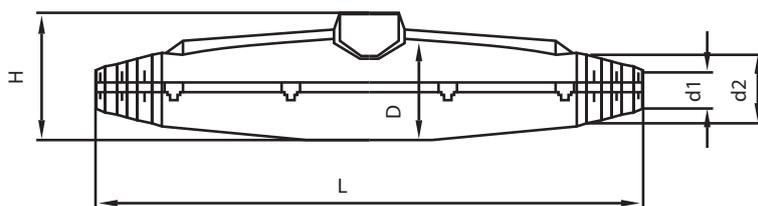


Unarmoured



1. Insulated power cable
2. Transparent plastic shell
3. Cast resin, containing two components with correct volume
4. Sandcloth paper
5. PVC tape
6. Constant force spring
7. Installation instructions

1. Transparent plastic shell
2. Cast resin, containing two components with correct volume
3. Sandcloth paper
4. PVC tape
5. Installation instructions



Type	Cable Size(mm ²) for 4-core unarmoured cable	Cable Size(mm ²) for 4-core armoured cable	L (mm)	d1 (mm)	d2 (mm)	D (mm)	H (mm)
M11	4x 4-10	4x4-6	190	15	23	36	50
M12	4x 10-25	4x6-16	260	16	34	47	63
M13	4x 25-50	4x16-35	360	21	43	55	75
M14	4x 50-95	4x35-70	400	26	48	70	95
M15	4x 95-150	4x70-120	530	35	63	100	120
M16	4x 150-240	4x120-240	700	47	74	125	160
M13A	4x 25-35	NA	360	21	43	55	75
M14A	4x 50-95	NA	400	26	48	70	95
M15A	4x 120-185	NA	530	35	63	100	120
M16A	4x 240-300	NA	700	47	74	125	160

Note:M13A-M16A are packed with MELEC mechanical connector .

Please refer to MELEC Cable Lugs and Connectors Catalogue or consult MELEC sales for compression connectors.



25/32

Medium Voltage Heat Shrinkable Termination & Straight Joint Accessories

MEDIUM VOLTAGE HEAT SHRINKABLE TERMINATION ACCESSORIES

26-29

MEDIUM VOLTAGE HEAT SHRINKABLE STRAIGHT JOINT ACCESSORIES

30-32

25

Make Cable CONNECTIONS More Reliable



Medium Voltage Heat Shrinkable Termination Accessories

Heat shrinkable termination is suitable for up to 12/20(24) kV, insulated with PVC, XLPE and PE polymeric cables for indoor and outdoor applications. Products are fully tested in accordance with IEC 60502-4.



Feature

- Reliable stress control
- Large cross-section range
- Excellent corrosion resistance
- UV resistance and weathering resistance
- Anti-tracking
- Superior electrical and mechanical properties
- Easy installation

Performance

Test	Requirements
AC and DC voltage	AC for 5min at $4.5 U_0$ and DC for 15min at $4 U_0$
AC (wet)	1min at $4 U_0$
Partial discharge	10 pC max. at $1.73 U_0$
Impulse at θ_t	10 impulses of each polarity
Heating cycles in air	60 cycles at θ_t and $2.5 U_0$
Immersion test	10 cycles at θ_t
Partial discharge at θ_t and ambient temperature	10 pC max. at $1.73 U_0$
Thermal short-circuit (screen)	Two short-circuits at I_{sc} of the cable screen. No visible deterioration
Thermal short-circuit (conductor)	Two short-circuits to raise conductor to θ_{sc} of the cable. No visible deterioration
Dynamic short-circuit	One short-circuit at I_i . No visible deterioration
Impulse	10 impulses of each polarity
AC voltage	15 min at $2.5 U_0$
Humidity	300h at $1.25 U_0$
Salt fog	1000h at $1.25 U_0$

* θ_t is the maximum cable conductor temperature in normal operation +5K to +10K;

θ_{sc} is maximum permissible short-circuit temperature of the cable conductor;

I_{sc} is short-circuit current (r.m.s. value) in the metallic screen;

I_i is short-circuit current (initial peak value) in the conductor.

10kV Heat Shrinkable Termination Accessories

MZDN/MZDNK
MZDW/MZDWK



1-core Indoor Application

*Cross-section	Type Unarmoured	Type Armoured	Diameter over Insulation (mm)
25-95	MZDN-1-10-A	MZDNK-1-10-A	16-22
50-150	MZDN-1-10-B	MZDNK-1-10-B	18-25
70-240	MZDN-1-10-C	MZDNK-1-10-C	19-29
120-300	MZDN-1-10-D	MZDNK-1-10-D	22-31
185-400	MZDN-1-10-E	MZDNK-1-10-E	26-34
500-630	MZDN-1-10-F	MZDNK-1-10-F	36-42



1-core Outdoor Application

*Cross-section	Type Unarmoured	Type Armoured	Diameter over Insulation (mm)
25-95	MZDW-1-10-A	MZDWK-1-10-A	16-22
50-150	MZDW-1-10-B	MZDWK-1-10-B	18-25
70-240	MZDW-1-10-C	MZDWK-1-10-C	19-29
120-300	MZDW-1-10-D	MZDWK-1-10-D	22-31
185-400	MZDW-1-10-E	MZDWK-1-10-E	26-34
500-630	MZDW-1-10-F	MZDWK-1-10-F	36-42



3-core Indoor Application

*Cross-section	Type Unarmoured	Type Armoured	Diameter over Insulation (mm)
25-95	MZDN-3-10-A	MZDNK-3-10-A	16-22
50-150	MZDN-3-10-B	MZDNK-3-10-B	18-25
70-240	MZDN-3-10-C	MZDNK-3-10-C	19-29
120-300	MZDN-3-10-D	MZDNK-3-10-D	22-31
185-400	MZDN-3-10-E	MZDNK-3-10-E	26-34
500-630	MZDN-3-10-F	MZDNK-3-10-F	36-42



3-core Outdoor Application

*Cross-section	Type Unarmoured	Type Armoured	Diameter over Insulation (mm)
25-95	MZDW-3-10-A	MZDWK-3-10-A	16-22
50-150	MZDW-3-10-B	MZDWK-3-10-B	18-25
70-240	MZDW-3-10-C	MZDWK-3-10-C	19-29
120-300	MZDW-3-10-D	MZDWK-3-10-D	22-31
185-400	MZDW-3-10-E	MZDWK-3-10-E	26-34
500-630	MZDW-3-10-F	MZDWK-3-10-F	36-42

* MELEC mechanical lugs are applicable for below cross-sections. More information, please refer to Cable Lugs and Connectors Product Catalogue. Please consult MELEC sales for compression lugs.

15kV Heat Shrinkable Termination Accessories

MZDN/MZDNK
MZDW/MZDWK

1-core Indoor Application



*Cross-section	Type Unarmoured	Type Armoured	Diameter over Insulation (mm)
25-95	MZDN-1-15-A	MZDNK-1-15-A	18-24
50-150	MZDN-1-15-B	MZDNK-1-15-B	20-27
70-240	MZDN-1-15-C	MZDNK-1-15-C	22-31
120-300	MZDN-1-15-D	MZDNK-1-15-D	25-33
185-400	MZDN-1-15-E	MZDNK-1-15-E	28-36
500-630	MZDN-1-15-F	MZDNK-1-15-F	38-44

1-core Outdoor Application



*Cross-section	Type Unarmoured	Type Armoured	Diameter over Insulation (mm)
25-95	MZDW-1-15-A	MZDWK-1-15-A	18-24
50-150	MZDW-1-15-B	MZDWK-1-15-B	20-27
70-240	MZDW-1-15-C	MZDWK-1-15-C	22-31
120-300	MZDW-1-15-D	MZDWK-1-15-D	25-33
185-400	MZDW-1-15-E	MZDWK-1-15-E	28-36
500-630	MZDW-1-15-F	MZDWK-1-15-F	38-44

3-core Indoor Application



*Cross-section	Type Unarmoured	Type Armoured	Diameter over Insulation (mm)
25-95	MZDN-3-15-A	MZDNK-3-15-A	18-24
50-150	MZDN-3-15-B	MZDNK-3-15-B	20-27
70-240	MZDN-3-15-C	MZDNK-3-15-C	22-31
120-300	MZDN-3-15-D	MZDNK-3-15-D	25-33
185-400	MZDN-3-15-E	MZDNK-3-15-E	28-36
500-630	MZDN-3-15-F	MZDNK-3-15-F	38-44

3-core Outdoor Application



*Cross-section	Type Unarmoured	Type Armoured	Diameter over Insulation (mm)
25-95	MZDW-3-15-A	MZDWK-3-15-A	18-24
50-150	MZDW-3-15-B	MZDWK-3-15-B	20-27
70-240	MZDW-3-15-C	MZDWK-3-15-C	22-31
120-300	MZDW-3-15-D	MZDWK-3-15-D	25-33
185-400	MZDW-3-15-E	MZDWK-3-15-E	28-36
500-630	MZDW-3-15-F	MZDWK-3-15-F	38-44

* MELEC mechanical lugs are applicable for below cross-sections. More information, please refer to Cable Lugs and Connectors Product Catalogue.
Please consult MELEC sales for compression lugs.

20kV Heat Shrinkable Termination Accessories

MZDN/MZDNK
MZDW/MZDWK

1-core Indoor Application



Cross-section	Type Unarmoured	Type Armoured	Diameter over Insulation (mm)
35-95	MZDN-1-20-A	MZDNK-1-20-A	19-26
50-150	MZDN-1-20-B	MZDNK-1-20-B	22-29
70-240	MZDN-1-20-C	MZDNK-1-20-C	24-33
120-300	MZDN-1-20-D	MZDNK-1-20-D	27-35
185-400	MZDN-1-20-E	MZDNK-1-20-E	30-38
500-630	MZDN-1-20-F	MZDNK-1-20-F	40-46

1-core Outdoor Application



Cross-section	Type Unarmoured	Type Armoured	Diameter over Insulation (mm)
35-95	MZDW-1-20-A	MZDWK-1-20-A	19-26
50-150	MZDW-1-20-B	MZDWK-1-20-B	22-29
70-240	MZDW-1-20-C	MZDWK-1-20-C	24-33
120-300	MZDW-1-20-D	MZDWK-1-20-D	27-35
185-400	MZDW-1-20-E	MZDWK-1-20-E	30-38
500-630	MZDW-1-20-F	MZDWK-1-20-F	40-46

3-core Indoor Application



Cross-section	Type Unarmoured	Type Armoured	Diameter over Insulation (mm)
35-95	MZDN-3-20-A	MZDNK-3-20-A	19-26
50-150	MZDN-3-20-B	MZDNK-3-20-B	22-29
70-240	MZDN-3-20-C	MZDNK-3-20-C	24-33
120-300	MZDN-3-20-D	MZDNK-3-20-D	27-35
185-400	MZDN-3-20-E	MZDNK-3-20-E	30-38
500-630	MZDN-3-20-F	MZDNK-3-20-F	40-46

3-core Outdoor Application



Cross-section	Type Unarmoured	Type Armoured	Diameter over Insulation (mm)
35-95	MZDW-3-20-A	MZDWK-3-20-A	19-26
50-150	MZDW-3-20-B	MZDWK-3-20-B	22-29
70-240	MZDW-3-20-C	MZDWK-3-20-C	24-33
120-300	MZDW-3-20-D	MZDWK-3-20-D	27-35
185-400	MZDW-3-20-E	MZDWK-3-20-E	30-38
500-630	MZDW-3-20-F	MZDWK-3-20-F	40-46

* MELEC mechanical lugs are applicable for below cross-sections. More information, please refer to Cable Lugs and Connectors Product Catalogue. Please consult MELEC sales for compression lugs.

Medium Voltage Heat Shrinkable Straight Joint

Heat shrinkable straight joint is suitable for up to 12/20(24) kV, insulated with PVC, XLPE and PE polymeric cables. Products are fully tested in accordance with IEC 60502-4.

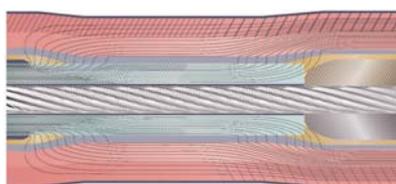


The MZJ/MZJK product includes mechanical aluminium connector covering an application range from 16-630mm². MELEC heat shrinkable straight joint is used for indoor, outdoor, underground and underwater.

Electrical stress control
The stress control tubing in combination with stress control mastic at the screen cut provide a precisely defined impedance characteristic which smoothes the electrical field.

Feature

- Reliable stress control
- Large cross-section range
- Excellent corrosion resistance
- UV resistance and weathering resistance
- Anti-tracking
- Superior electrical and mechanical properties
- Easy installation



Performance

Test	Requirements
AC and DC voltage	AC for 5min at 4.5 U ₀ and DC for 15min at 4 U ₀
Partial discharge	10 pC max. at 1.73 U ₀
Impulse at θ_t	10 impulses of each polarity
Heating cycles in air	30 cycles at θ_t and 2.5 U ₀
Heating cycles under water	30 cycles at θ_t and 2.5 U ₀ , water height 1m
Partial discharge at θ_t and ambient temperature	10 pC max. at 1.73 U ₀
Thermal short-circuit (screen)	Two short-circuits at I_{sc} of the cable screen. No visible deterioration
Thermal short-circuit (conductor)	Two short-circuits to raise conductor to θ_{sc} of the cable. No visible deterioration
Dynamic short-circuit	One short-circuit at I_d . No visible deterioration
Impulse	10 impulses of each polarity
AC voltage	15 min at 2.5 U ₀

- * θ_t is the maximum cable conductor temperature in normal operation +5K to +10K;
- θ_{sc} is maximum permissible short-circuit temperature of the cable conductor;
- I_{sc} is short-circuit current (r.m.s. value) in the metallic screen;
- I_d is short-circuit current (initial peak value) in the conductor.

10kV Heat Shrinkable Straight Joint Accessories

MZJ/MZJK

1-core Application



*Cross-section	Type Unarmoured	Type Armoured	Diameter over Insulation (mm)
25-95	MZJ-1-10-A	MZJK-1-10-A	16-22
50-150	MZJ-1-10-B	MZJK-1-10-B	18-25
70-240	MZJ-1-10-C	MZJK-1-10-C	19-29
120-300	MZJ-1-10-D	MZJK-1-10-D	22-31
185-400	MZJ-1-10-E	MZJK-1-10-E	26-34
500-630	MZJ-1-10-F	MZJK-1-10-F	36-42

3-core Application



*Cross-section	Type Unarmoured	Type Armoured	Diameter over Insulation (mm)
25-95	MZJ-3-10-A	MZJK-3-10-A	16-22
50-150	MZJ-3-10-B	MZJK-3-10-B	18-25
70-240	MZJ-3-10-C	MZJK-3-10-C	19-29
120-300	MZJ-3-10-D	MZJK-3-10-D	22-31
185-400	MZJ-3-10-E	MZJK-3-10-E	26-34
500-630	MZJ-3-10-F	MZJK-3-10-F	36-42

15kV Heat Shrinkable Straight Joint Accessories

MZJ/MZJK

1-core Application



*Cross-section	Type Unarmoured	Type Armoured	Diameter over Insulation (mm)
25-95	MZJ-1-15-A	MZJK-1-15-A	18-24
50-150	MZJ-1-15-B	MZJK-1-15-B	20-27
70-240	MZJ-1-15-C	MZJK-1-15-C	22-31
120-300	MZJ-1-15-D	MZJK-1-15-D	25-33
185-400	MZJ-1-15-E	MZJK-1-15-E	28-36
500-630	MZJ-1-15-F	MZJK-1-15-F	38-44

3-core Application



*Cross-section	Type Unarmoured	Type Armoured	Diameter over Insulation (mm)
25-95	MZJ-3-15-A	MZJK-3-15-A	18-24
50-150	MZJ-3-15-B	MZJK-3-15-B	20-27
70-240	MZJ-3-15-C	MZJK-3-15-C	22-31
120-300	MZJ-3-15-D	MZJK-3-15-D	25-33
185-400	MZJ-3-15-E	MZJK-3-15-E	28-36
500-630	MZJ-3-15-F	MZJK-3-15-F	38-44

* MELEC mechanical connectors are applicable for below cross-sections. More information, please refer to Cable Lugs and Connectors Product Catalogue. Please consult MELEC sales for compression connectors.

20kV Heat Shrinkable Straight Joint Accessories

MZJ/MZJK

1-core Application



*Cross-section	Type Unarmoured	Type Armoured	Diameter over Insulation (mm)
35-95	MZJ-1-20-A	MZJK-1-20-A	19-26
50-150	MZJ-1-20-B	MZJK-1-20-B	22-29
70-240	MZJ-1-20-C	MZJK-1-20-C	24-33
120-300	MZJ-1-20-D	MZJK-1-20-D	27-35
185-400	MZJ-1-20-E	MZJK-1-20-E	30-38
500-630	MZJ-1-20-F	MZJK-1-20-F	40-46

3-core Application



*Cross-section	Type Unarmoured	Type Armoured	Diameter over Insulation (mm)
35-95	MZJ-3-20-A	MZJK-3-20-A	19-26
50-150	MZJ-3-20-B	MZJK-3-20-B	22-29
70-240	MZJ-3-20-C	MZJK-3-20-C	24-33
120-300	MZJ-3-20-D	MZJK-3-20-D	27-35
185-400	MZJ-3-20-E	MZJK-3-20-E	30-38
500-630	MZJ-3-20-F	MZJK-3-20-F	40-46

* MELEC mechanical connectors are applicable for below cross-sections. More information, please refer to Cable Lugs and Connectors Product Catalogue.
Please consult MELEC sales for compression connectors.

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33

Make Cable CONNECTIONS More Reliable

Heat Shrink Tubing & Molded Parts & Others

HEAT SHRINKABLE TUBING	34-37
HEAT SHRINKABLE TRACK-RESISTANT TUBING	38
HEAT SHRINKABLE STRESS CONTROL TUBING	39
HEAT SHRINKABLE INSULATION/SEMI-CONDUCTIVE TUBING	40
HEAT SHRINKABLE BUSBAR INSULATION TUBING	41-42
HEAT SHRINKABLE INSULATION BREAKOUT	43-44
HEAT SHRINKABLE SKIRT	45
HEAT SHRINKABLE END CAP	46
CONSTANT FORCE SPRING	47
SEALING MASTIC	47
STRESS CONTROL MASTIC	47
FILLING MASTIC	47



Heat Shrinkable Tubing

MR2

Application

- Used for medium voltage up to 36kV.
- Protection against moisture and pressure.
- Suitable for cable termination and intermediate connecting insulation protection.

Feature

- Excellent corrosion resistance
- UV resistance and weathering resistance
- Halogen-free
- Superior electrical and mechanical properties
- Shrinkage ratio 3:1
- Medium wall

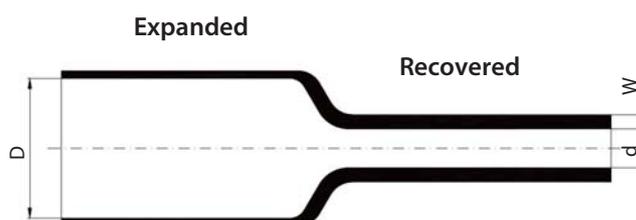
Color Standard: Black

Operating Temperature

- -40°C to +110°C

Type Test

- IEC 60684



Type	Application Diameter Range(mm)	Expanded(mm)	Recovered(mm)	
		D(min)	d(max)	W(min)
MR2 20/5	5.5-14	20	5	2
MR2 33/8	9-23	33	8	2
MR2 40/12	13-28	40	12	2
MR2 50/16	17-35	50	16	2
MR2 63/19	21-45	63	19	2.4
MR2 75/22	24-52	75	22	2.7
MR2 85/25	27-60	85	25	2.8
MR2 95/29	32-66	95	29	3.1
MR2 115/35	38-80	115	35	3.1
MR2 140/42	45-98	140	42	3.1
MR2 160/50	55-112	160	50	3.2
MR2 180/60	65-126	180	60	3.2

Performance

Property	Test Method	Requirements
Tensile strength	IEC 60684-2	> 13MPa
Elongation at break	IEC 60684-2	> 350%
Longitudinal shrinkage	IEC 60684-2	+5% to -15%
Bending at low temperature	IEC 60684-2	-40°C No cracking
Volume resistivity	IEC 60684-2	> 10 ¹² Ω.m
Water absorption	IEC 60684-2	< 0.2%
Breakdown strength	IEC 60684-2	> 10KV/mm
Copper corrosion	IEC 60684-2	None above the allowable 8%
Heat aging		
Tensile strength	IEC 60684-2	> 10MPa
Elongation at break	IEC 60684-2	> 200%
Heat shock		
Tensile strength	IEC 60684-2	> 10MPa
Elongation at break	IEC 60684-2	> 200%
Resistance to selected fluids		
Tensile strength	IEC 60684-2	> 10MPa
Elongation at break	IEC 60684-2	> 350%
Change in weight	IEC 60684-2	< 10%

Heat Shrinkable Tubing

MRA2

Application

- Used for medium voltage up to 36kV.
- Protection against moisture and pressure.
- Suitable for cable termination and intermediate connecting insulation protection.

Feature

- Hot-melt adhesive provides better waterproof Coating type: film coating
- Excellent corrosion resistance
- UV resistance and weathering resistance
- Halogen-free
- Superior electrical and mechanical properties
- Shrinkage ratio 3:1
- Medium wall

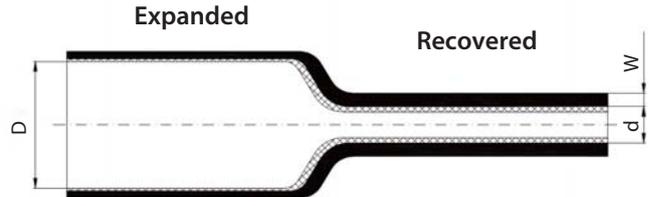
Color Standard: Black

Operating Temperature

- -40°C to +90°C

Type Test

- IEC 60684



Type	Application Diameter Range(mm)	Expanded(mm)		
		D(min)	d(max)	W(min)
MRA2 20/5	5.5-14	20	5	2
MRA2 33/8	9-23	33	8	2
MRA2 40/12	13-28	40	12	2
MRA2 50/16	17-35	50	16	2
MRA2 63/19	21-45	63	19	2.4
MRA2 75/22	24-52	75	22	2.7
MRA2 85/25	27-60	85	25	2.8
MRA2 95/29	32-66	95	29	3.1
MRA2 115/35	38-80	115	35	3.1
MRA2 140/42	45-98	140	42	3.1
MRA2 160/50	55-112	160	50	3.2
MRA2 180/60	65-126	180	60	3.2

Performance

Property	Test Method	Requirements
Tensile strength	IEC 60684-2	> 13MPa
Elongation at break	IEC 60684-2	> 350%
Longitudinal shrinkage	IEC 60684-2	+5% to -15%
Bending at low temperature	IEC 60684-2	-40°C No cracking
Volume resistivity	IEC 60684-2	> 10 ¹² Ω.m
Water absorption	IEC 60684-2	< 0.2%
Breakdown strength	IEC 60684-2	> 10KV/mm
Copper corrosion	IEC 60684-2	None above the allowable 8%
Heat aging		
Tensile strength	IEC 60684-2	> 10MPa
Elongation at break	IEC 60684-2	> 200%
Heat shock		
Tensile strength	IEC 60684-2	> 10MPa
Elongation at break	IEC 60684-2	> 200%
Resistance to selected fluids		
Tensile strength	IEC 60684-2	> 10MPa
Elongation at break	IEC 60684-2	> 350%
Change in weight	IEC 60684-2	< 10%

Heat Shrinkable Tubing

MR3

Application

- Used for medium voltage up to 36kV.
- Protection against moisture and pressure.
- Suitable for cable termination and intermediate connecting insulation protection.

Feature

- Excellent corrosion resistance
- UV resistance and weathering resistance
- Halogen-free
- Superior electrical and mechanical properties
- Shrinkage ratio 3:1
- Thick wall

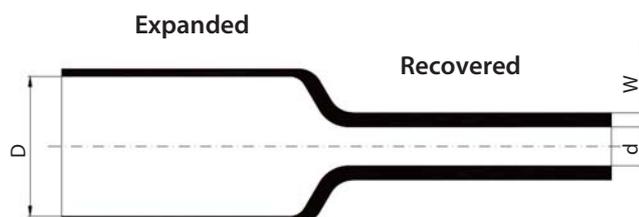
Color Standard: Black

Operating Temperature

- -40°C to +110°C

Type Test

- IEC 60684



Type	Application Diameter Range(mm)	Expanded(mm)			Recovered(mm)	
		D(min)	d(max)	W(min)	d(max)	W(min)
MR3 13/4	4.5-8	13	4	2.4		
MR3 20/6	6.5-14	20	6	2.5		
MR3 33/8	9-23	33	8	3.2		
MR3 43/12	13-30	43	12	4.3		
MR3 51/16	17-35	51	16	4.35		
MR3 65/19	21-45	65	19	4.35		
MR3 75/22	24-52	75	22	4.35		
MR3 85/25	27-60	85	25	4.35		
MR3 105/30	32-75	105	30	4.35		
MR3 130/36	38-91	130	36	4.3		
MR3 160/50	55-112	160	50	4.3		

Performance

Property	Test Method	Requirements
Tensile strength	IEC 60684-2	> 13MPa
Elongation at break	IEC 60684-2	> 350%
Longitudinal shrinkage	IEC 60684-2	+5% to -15%
Bending at low temperature	IEC 60684-2	-40°C No cracking
Volume resistivity	IEC 60684-2	> 10 ¹² Ω.m
Water absorption	IEC 60684-2	< 0.2%
Breakdown strength	IEC 60684-2	> 10KV/mm
Copper corrosion	IEC 60684-2	None above the allowable 8%
Heat aging		
Tensile strength	IEC 60684-2	> 10MPa
Elongation at break	IEC 60684-2	> 200%
Heat shock		
Tensile strength	IEC 60684-2	> 10MPa
Elongation at break	IEC 60684-2	> 200%
Resistance to selected fluids		
Tensile strength	IEC 60684-2	> 10MPa
Elongation at break	IEC 60684-2	> 350%
Change in weight	IEC 60684-2	< 10%

Heat Shrinkable Tubing

MRA3

Application

- Used for medium voltage up to 36kV.
- Protection against moisture and pressure.
- Suitable for cable termination and intermediate connecting insulation protection.

Color Standard: Black

Operating Temperature

- -40°C to +90°C

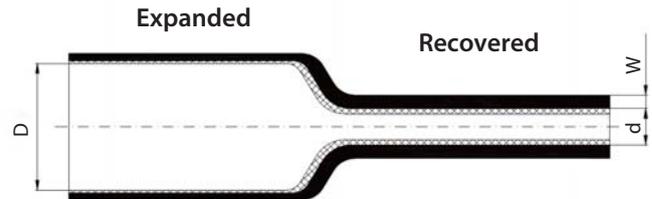
Type Test

- IEC 60684



Feature

- Hot melting adhesive provides better waterproof
- Coating type: film coating
- Excellent corrosion resistance
- UV resistance and weathering resistance
- Halogen-free
- Superior electrical and mechanical properties
- Shrinkage ratio 3:1
- Thick wall



Type	Application Diameter Range(mm)	Expanded(mm)	Recovered(mm)	
		D(min)	d(max)	W(min)
MRA3 13/4	4.5-8	13	4	2.4
MRA3 20/6	6.5-14	20	6	2.5
MRA3 33/8	9-23	33	8	3.2
MRA3 43/12	13-30	43	12	4.3
MRA3 51/16	17-35	51	16	4.35
MRA3 65/19	21-45	65	19	4.35
MRA3 75/22	24-52	75	22	4.35
MRA3 85/25	27-60	85	25	4.35
MRA3 105/30	32-75	105	30	4.35
MRA3 130/36	38-91	130	36	4.3
MRA3 160/50	55-112	160	50	4.3

Performance

Property	Test Method	Requirements
Tensile strength	IEC 60684-2	> 13MPa
Elongation at break	IEC 60684-2	> 350%
Longitudinal shrinkage	IEC 60684-2	+5% to -15%
Bending at low temperature	IEC 60684-2	-40°C No cracking
Volume resistivity	IEC 60684-2	> 10 ¹² Ω.m
Water absorption	IEC 60684-2	< 0.2%
Breakdown strength	IEC 60684-2	> 10KV/mm
Copper corrosion	IEC 60684-2	None above the allowable 8%
Heat aging		
Tensile strength	IEC 60684-2	> 10MPa
Elongation at break	IEC 60684-2	> 200%
Heat shock		
Tensile strength	IEC 60684-2	> 10MPa
Elongation at break	IEC 60684-2	> 200%
Resistance to selected fluids		
Tensile strength	IEC 60684-2	> 10MPa
Elongation at break	IEC 60684-2	> 350%
Change in weight	IEC 60684-2	< 10%

Heat Shrinkable Track-resistant Tubing

MWNT

Application

- Used for medium voltage up to 36kV.
- Suitable for cable termination and intermediate connecting insulation protection.

Color Standard: Red

Operating Temperature

- -40°C to +100°C

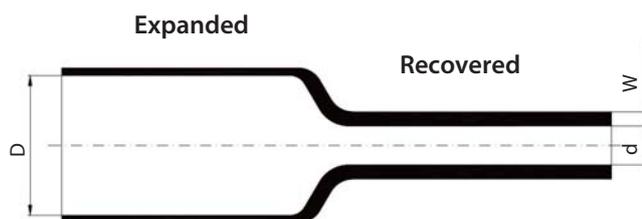
Type Test

- IEC 60684



Feature

- Anti-tracking
- Excellent corrosion resistance
- UV resistance and weathering resistance
- Halogen-free
- Superior electrical and mechanical properties
- Shrinkage ratio 3:1



Heat Shrinkable Track-resistant Tubing

Type	Application Diameter Range(mm)	Expanded(mm)		Recovered(mm)	
		D(min)		d(max)	W(min)
MWNT 30/10	12-20	30		10	3
MWNT 38/12	14-25	38		12	3
MWNT 45/15	17-30	45		15	3
MWNT 55/18	20-36	55		18	3
MWNT 60/21	23-39	60		21	3.1
MWNT 75/25	28-49	75		25	3.2
MWNT 95/30	33-62	95		30	3.3
MWNT 115/37	40-75	115		37	3.5

Performance

Property	Test Method	Requirements
Longitudinal change	IEC 60684-2	+5% to -10%
Tensile strength	IEC 60684-2	> 10MPa
Elongation at break	IEC 60684-2	> 300%
Bending at low temperature	IEC 60684-2	-40°C No cracking
volume resistivity	IEC 60684-2	10 ¹² Ω.m
Dielectric strength	IEC 60684-2	> 14KV/mm Expanded ID 10-25mm
		> 12KV/mm Expanded ID 26-59mm
		> 10KV/mm Expanded ID 60-120mm
Resistance to tracking	IEC 60684-2	Class 2A
		2.5KV-1h
		2.75KV-1h
		3.0KV-1h 3.25KV-20min
Heat aging		
Tensile strength	IEC 60684-2	> 8MPa
Elongation at break	IEC 60684-2	> 200%
Heat shock		
Tensile strength	IEC 60684-2	> 8MPa
Elongation at break	IEC 60684-2	> 200%
Resistance to selected fluids		
Tensile strength	IEC 60684-2	> 8MPa
Elongation at break	IEC 60684-2	> 200%
Resistance to weathering		
Tensile strength	IEC 60684-2	> 8MPa
Elongation at break	IEC 60684-2	> 200%
Resistance to tracking	IEC 60684-2	Class 2A 2.5KV/1 hour

Heat Shrinkable Stress Control Tubing

MSCT

Application

- Used for medium voltage termination and straight joint up to 24kV.
- Effectively disperse electrical stress, control partial discharge.
- * Please consult MELEC sales for higher voltage up to 36kV.

Color Standard: Black

Operating Temperature

- -40°C to +100°C

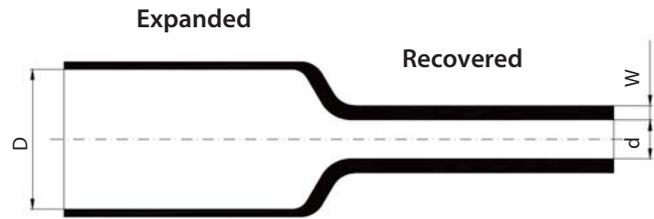
Type Test

- IEC 60684



Feature

- Superior electrical and mechanical properties
- Shrinkage ratio 2:1



Type	Application Diameter Range(mm)	Expanded(mm)			Recovered(mm)	
		D(min)	d(max)	W(min)		
MSCT 29/13	15-20	29	13	2.0		
MSCT 34/16	18-24	34	16	2.0		
MSCT 47/20	22-33	47	20	2.0		
MSCT 58/28	30-41	58	28	2.4		
MSCT 67/34	36-47	67	34	2.4		

Performance

Property	Test Method	Requirements
Tensile strength	IEC 60684-2	> 10MPa
Elongation at break	IEC 60684-2	> 200%
Bending at low temperature	IEC 60684-2	-40°C No cracking
Relative permittivity	IEC 60684-2	15-35
Volume resistivity	IEC 60684-2	> 10 ⁹ Ω.m
Heat aging		
Tensile strength	IEC 60684-2	> 5MPa
Elongation at break	IEC 60684-2	> 200%
Heat shock		
Tensile strength	IEC 60684-2	> 8MPa
Elongation at break	IEC 60684-2	> 175%
Resistance to selected fluids		
Tensile strength	IEC 60684-2	> 4MPa
Elongation at break	IEC 60684-2	> 150%

Heat Shrinkable Insulation/Semi-conductive Tubing

MCIT

Application

- Used for medium voltage straight joint up to 36kV.

Color Standard: Red/Black

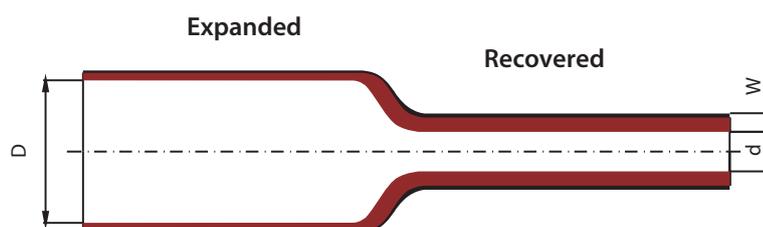
Operating Temperature

- -40°C to +100°C



Feature

- Inner layer is for insulation.
- External layer is for semi-conductive purpose.
- Superior electrical and mechanical properties



Type	Application Diameter Range(mm)	Expanded(mm)			Recovered(mm)	
		D(min)	d(max)	W(min)		
MCIT 35/13	14-23	35	13	5.2		
MCIT 45/16	17-30	45	16	5.2		
MCIT 55/20	21-36	55	20	5.2		
MCIT 65/27	28-43	65	27	5.2		
MCIT 85/30	31-55	85	30	6.5		

Performance

Property	Test Method	Requirements
Inner layer		
Tensile strength	IEC 60684-2	>8MPa
Elongation at break	IEC 60684-2	>400%
Bending at low temperature	IEC 60684-2	No cracking
Dielectric strength	IEC 60684-2	>12KV/mm
Water absorption	IEC 60684-2	< 0.5%
Heat aging		
Tensile strength	IEC 60684-2	> 8MPa
Elongation at break	IEC 60684-2	> 200%
External layer		
Tensile strength	IEC 60684-2	>10MPa
Elongation at break	IEC 60684-2	>200%
Water absorption	IEC 60684-2	< 0.5%
Volume resistivity	IEC 60684-2	> 10 ⁴ Ω.m

Heat Shrinkable Busbar Insulation Tubing

MBT/MBTH

Application

- Used in medium voltage substations up to 36kV to reduce electric clearance and increase insulation between busbars.

Color Standard: Red

Operating Temperature

- -40°C to +100°C

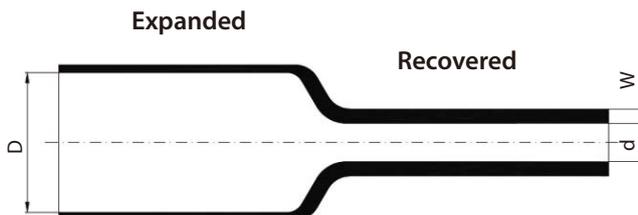


Feature

- Anti-tracking
- Excellent corrosion resistance
- UV resistance and weathering resistance
- Superior electrical and mechanical properties

Type Test

- IEC 60684



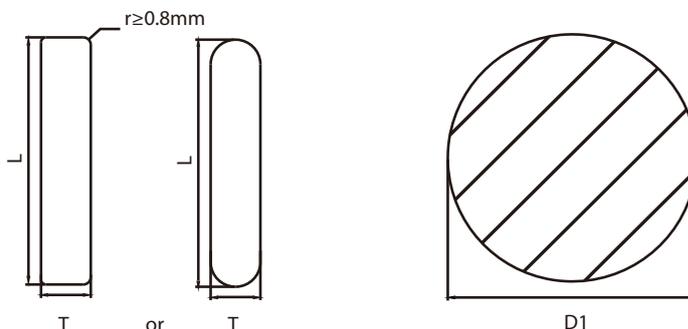
Type	Recovered(mm)		
	Expanded(mm) D(min)	d(max)	W(nom)
MBT-15/6	15	6	2.00
MBT-30/12	30	12	2.30
MBT-50/20	50	20	2.50
MBT-70/25	70	25	3.00
MBT-75/30	75	30	2.50
MBT-90/30	90	30	3.00
MBT-100/40	100	40	2.50
MBT-120/50	120	50	3.00
MBT-170/60	170	60	3.00

Type	Recovered(mm)		
	Expanded(mm) D(min)	d(max)	W(nom)
MBTH-25/10	25	10	4.0
MBTH-40/16	40	16	4.0
MBTH-65/25	65	25	4.0
MBTH-100/40	100	40	4.0

Performance

Property	Test Method	Requirements
Longitudinal change	IEC 60684-2	+5% to -10%
Tensile strength	IEC 60684-2	> 8MPa
Elongation at break	IEC 60684-2	> 200%
Bending at low temperature	IEC 60684-2	-40°C No cracking
Volume resistivity	IEC 60684-2	> 10 ¹² Ω.m
Dielectric strength	IEC 60684-2	> 12KV/mm
Resistance to tracking	IEC 60684-2	Pass
Heat aging		
Tensile strength	IEC 60684-2	> 5MPa
Elongation at break	IEC 60684-2	> 200%
Flame propagation		
Burning time	IEC 60684-2	≤60s
Burning length	IEC 60684-2	≤100mm
Heat shock		
Tensile strength	IEC 60684-2	> 5MPa
Elongation at break	IEC 60684-2	> 200%
Resistance to selected fluids		
Tensile strength	IEC 60684-2	> 5MPa
Elongation at break	IEC 60684-2	> 200%
Resistance to weathering		
Tensile strength	IEC 60684-2	> 8MPa
Elongation at break	IEC 60684-2	> 200%
Resistance to tracking	IEC 60684-2	Class 2A 2.5KV/30min

Application Range



Type	Rectangular Busbar		Round Busbar	
	L+T(mm)		D1(mm)	
	min	max	min	max
MBT-15/6	11	19	7	12
MBT-30/12	22	38	14	24
MBT-50/20	35	63	22	40
MBT-70/25	44	88	28	56
MBT-75/30	52	94	33	60
MBT-90/30	52	113	33	72
MBT-100/40	71	126	45	80
MBT-120/50	86	151	55	96
MBT-170/60	104	214	66	136

Type	Rectangular Busbar		Round Busbar	
	L+T(mm)		D1(mm)	
	min	max	min	max
MBTH-25/10	19	31	12	20
MBTH-40/16	28	50	18	32
MBTH-65/25	44	82	28	52
MBTH-100/40	71	126	45	85

Creepage Distance

Rated voltage	MBT		MBTH		Air Clearance (mm)
	ph-ph spacing(mm)	ph-gnd spacing(mm)	ph-ph spacing(mm)	ph-gnd spacing(mm)	
12	65	75	35	45	120
17.5	85	105	55	65	160
24	115	150	70	100	220
36	200	285	140	190	320

Heat Shrinkable Insulation Breakout

MIB

Application

- Used for medium voltage up to 36kV.
- Protection against moisture and pressure.
- Suitable for cable termination separation.

Color Standard: Black

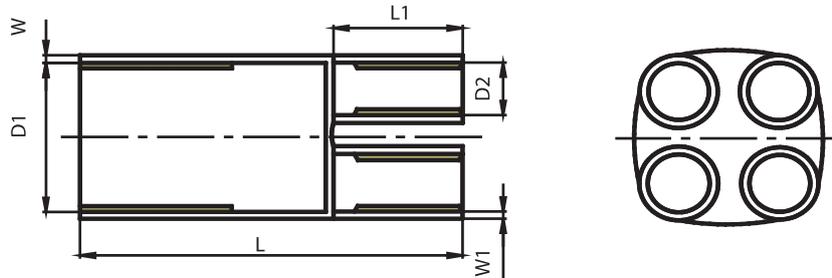
Operating Temperature

- -40°C to +100°C



Feature

- Hot melting adhesive provides better waterproof.
Coating type: spiral coating
- Excellent corrosion resistance
- UV resistance
- Superior waterproof
- Superior electrical and mechanical properties
- Easy installation



Type	D1(mm)		D2(mm)		W(mm)	W1(mm)	L(mm)	L1(mm)
	Expanded ID(min)	Recovered ID(max)	Expanded ID(min)	Recovered ID(max)	Recovered Wall Thickness(min)		Recovered Length(mm)	
2-core								
MIB2-34/12-14/4.5	34	12	14	4.5	2.2	2.0	85	20
MIB2-45/15-18/6	45	15	18	6	2.2	2.0	105	30
MIB2-60/23-25/8	60	23	25	8	2.5	2.0	118	38
3-core								
MIB3-38/15-14/4.5	38	15	14	4.5	2.2	2.0	90	22
MIB3-60/25-25/8	60	25	25	8	3.0	2.5	150	45
MIB3-80/38-35/14	80	38	35	14	3.5	3.0	165	45
MIB3-110/50-45/18	110	50	45	18	3.6	3.3	225	55
MIB3-125/57-55/20	125	57	55	20	3.6	3.3	235	65
*MIB3-140/70-62/26	140	70	62	26	4.0	3.8	235	65
*MIB3-170/77-75/30	170	77	75	30	4.0	3.8	235	65

*Note: Applied with film coating.

Type	D1(mm)		D2(mm)		W(mm)	W1(mm)	L(mm)	L1(mm)
	Expanded ID(min)	Recovered ID(max)	Expanded ID(min)	Recovered ID(max)	Recovered Wall Thickness(min)		Recovered Length(mm)	
4-core								
MIB4-40/15-14/4.5	40	15	14	4.5	2.2	2.0	95	20
MIB4-55/22-20/6	55	22	20	6	3.0	2.5	135	35
MIB4-75/27-28/9	75	27	28	9	3.0	2.5	160	40
MIB4-90/37-32/12	90	37	32	12	3.5	2.8	170	50
5-core								
MIB5-40/19-13/4.5	40	19	13	4.5	2.2	2.0	90	20
MIB5-55/24-18/5.5	55	24	18	5.5	3.0	2.4	120	30
MIB5-80/35-26/9	80	35	26	9	3.0	2.5	160	40
MIB5-100/44-34/12	100	44	34	12	3.0	2.8	175	50

Performance

Property	Test Method	Requirements
Tensile strength	IEC 60684-2	> 13MPa
Elongation at break	IEC 60684-2	> 300%
Bending at low temperature	IEC 60684-2	No cracking
Volume resistivity	IEC 60684-2	> 10 ¹¹ Ω.m
Dielectric strength	IEC 60684-2	> 15KV/mm
Water absorption	ISO 62	< 0.5%
Heat aging		
Tensile strength	IEC 60684-2	> 10MPa
Elongation at break	IEC 60684-2	> 250%

Heat Shrinkable Skirt

Application

- Used for medium voltage termination up to 36kV.
- Increase creepage distance, scatter rain, for outdoor use only.

Feature

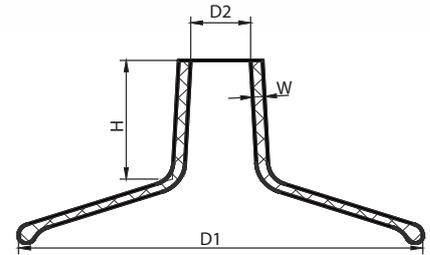
- Anti-tracking
- Excellent corrosion resistance
- UV resistance and weathering resistance
- Superior electrical and mechanical properties

MCES

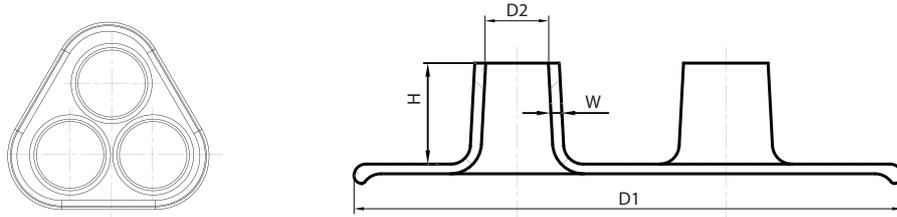
Color Standard: Red

Operating Temperature

- -40°C to +110°C



Type	Expanded(mm)		Recovered(mm)		
	D1(nom)	D2(min)	D2(max)	H(nom)	W(±10%)
MCES 37/14	85	37	14	20	2.5
MCES 50/21	95	50	21	25	2.5
MCES 67/28	112	67	28	30	2.8



Type	Expanded(mm)		Recovered(mm)		
	D1(nom)	D2(min)	D2(max)	H(nom)	W(±10%)
MCES3 50/18	140	50	18	25	2.5

Performance

Property	Test Method	Requirements
Tensile strength	ASTM D 2671	> 13MPa
Elongation at break	ASTM D 2671	> 400%
Bending at low temperature	ASTM D 2671	No cracking shall be visible
Volume resistivity	IEC 60093	> 10 ¹² Ω.m
Electric constant	IEC 250	< 3.0
Dielectric strength	IEC 60243	> 15KV/mm
Resistance to tracking	ASTM D 2303	3.5kV -1h
Flammability (Oxygen Index)	ISO 4589	> 25
Copper corrosion	ASTM D 2671	No crack
Water absorption	IEC 62	< 1.0%
Heat aging		
Tensile strength	ASTM D 2671	> 10MPa
Elongation at break	ASTM D 2671	> 350%

Heat Shrinkable End Cap

MRSM

Application

- Used for sealing ends of power cables, lines and pipes.

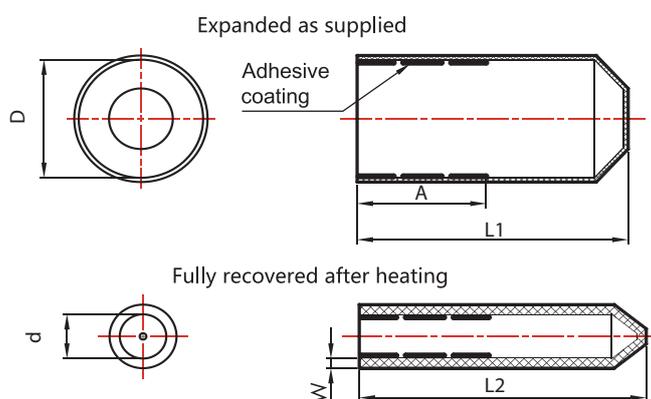
Color Standard: Black

Operating Temperature
• -40°C to +110°C



Feature

- Hot melting adhesive providing better waterproof
- Coating type: spiral coating
- Protect against humidity
- UV resistance
- Excellent corrosion resistance
- Superior mechanical strength



Type	Application Diameter Range(mm)	Expanded(mm)			Recovered(mm)		
		D(min)	L1(min)	A(±10%)	d(max)	L2(min)	W(min)
MRSM15/5	6-12	15	40	20	5	40	2.1
MRSM22/8	9-18	22	54	30	8	50	2.5
MRSM35/15	16-28	35	82	35	15	70	2.8
MRSM55/25	28-44	55	108	50	25	85	3.2
MRSM75/35	40-67	75	120	55	35	95	3.2
MRSM130/60	65-120	130	150	70	60	105	3.4

Performance

Property	Test Method	Requirements
Tensile strength	IEC 60684-2	> 11MPa
Elongation at break	IEC 60684-2	> 400%
Bending at low temperature	IEC 60684-2	No cracking
Volume resistivity	IEC 60684-2	> 10 ¹² Ω.m
Dielectric strength	IEC 60243	> 15KV/mm
Heat aging		
Elongation at break	IEC 60684-2	> 300%

Heat Shrinkable Right Angle Boot

MRAB

Application

- Used for medium voltage up to 36kV.
- Protection against flashover and surge.

Color Standard: Red

Operating Temperature

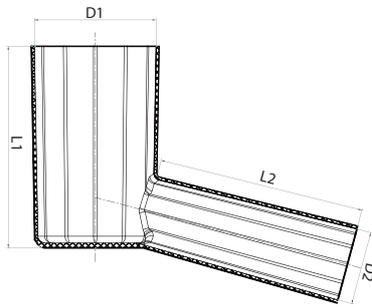
- -40°C to +110°C



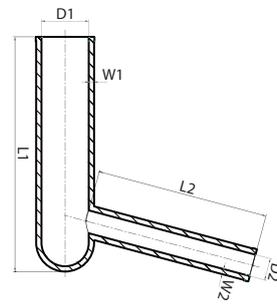
Feature

- Anti-tracking
- Excellent insulation performance
- UV resistance and weather resistance

Expanded



Recovered



Type	Expanded(mm)				Recovered(mm)					
	D1(min)	D2(min)	L1(min)	L2(min)	D1(max)	D2(max)	L1(min)	L2(min)	W1(min)	W2(min)
MRAB-80/36-50/18	80	50	100	115	36	18	110	80	3.8	3.8

Performance

Property	Test Method	Requirements
Tensile strength	IEC 60684-2	> 10MPa
Elongation at break	IEC 60684-2	> 200%
Bending at low temperature	IEC 60684-2	No cracking
Volume resistivity	IEC 60684-2	> 10 ¹² Ω.m
Dielectric strength	IEC 60684-2	> 12KV/mm
Heat aging		
Tensile strength	IEC 60684-2	> 8MPa
Elongation at break	IEC 60684-2	> 200%
Heat shock		
Tensile strength	IEC 60684-2	> 8MPa
Elongation at break	IEC 60684-2	> 200%

Constant Force Spring

MTH



Application

- Used for bundling copper braids for grounding in cable straight joints and terminations.

Type	Application Range (mm)	Inner Diameter (mm)	Thickness (mm)
MTH-D12	13-22	12	0.16
MTH-D16	18-30	16	0.23
MTH-D22	25-40	22	0.27
MTH-D28	32-50	28	0.27
MTH-D32	35-60	32	0.35
MTH-D38	42-70	38	0.45
MTH-D45	50-90	45	0.45

Sealing Mastic

MMFJ



Application

- Used for sealing cable straight joints and terminations for better waterproof.

Color Standard

- Red

Type	Length(mm)	Width(mm)	Thickness(mm)
MMFJ-1	330	26	2

Stress Control Mastic

MYLJ

Application

- Used together with stress control tubing at the screen cut providing a precisely defined impedance characteristic which smooths the electrical field.



Color Standard

- Yellow

Type	Shape	Length(mm)	Width(mm)	Thickness(mm)
MYLJ-1	strip	360	30	2
MYLJ-2	rhombus	100	25	1.2

Filling Mastic

MTCJ

Application

- Used for gap filling for cable terminations and straight joints.



Color Standard

- White

Thickness(mm)	Length(mm)	Width(mm)	Thickness(mm)
MTCJ	330	26	2

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