



# POWER CABLE



**HUATONG**

The logo consists of a stylized blue 'H' shape with a grey top bar. Below the logo, the word 'HUATONG' is written in a bold, blue, sans-serif font. The bottom of the page features three overlapping, wavy lines in blue, green, and red.



Huatong Cable Inc. was founded in 1993 in Luoyang, Henan Province, the venerable historical capital that has been sacred ground since the late Neolithic period and known for its beautiful peonies. Luoyang was among the first “National Historical and Cultural Cities” listed by the State Council, and also the most important industrial city in central China. Born during the rapid industrialization of China, Huatong Cable Inc. has made notable contributions to the development of State Grid Corporation of China, China Southern Power Grid Company and other power enterprises at home and abroad. The honors Huatong has won are well-deserved, thanks to its determined pursuit of product innovation, painstaking efforts to serve the customers and strong will to forge ahead into the future for over twenty years.

Huatong Cable Inc. is comprised of the Overhead Conductor Business Division, the Power Cable Division and the Business Division for Wires and Cables of Electrical Equipment. All three divisions are responsible for the manufacturing and sales of their respective products. In 2002, the Division for Cable Industrial Design and Technology R&D was established to provide product design and R&D support for the company. As a complement to its independent research, and in order to meet specific requirements of individual customers as well as market demand for special cables, Huatong has also sought cooperation with Shanghai Electric Cable Research Institute and China Electric Power Research Institute, among other academic institutions. So far the company enjoys 25 exclusive rights to use registered trade mark and 14 patents of proprietary intellectual property rights, among which, ACSR-720/50 has passed the technical evaluation by the China Electricity Council while its EHV(Extra High Voltage) conductor at 1000kV+ has been put into production and use, with satisfactory performance.

Products of Huatong Cable Inc. are widely applicable in power transmission, transport, energy and urban construction, etc. It adopts the team marketing method and has set up regional sales sections, with more than a hundred sales outlets and hundreds of salespersons capable of optimizing customer satisfaction all over China. Our partners are not limited to state-owned electric power companies: we have provided high quality products for China Datang Corporation, China Huaneng Group, China Guodian Corporation, China Power Investment Corporation, Sinopec Group, China National Petroleum Corporation, etc., as well. In addition, the company has also been the supplier for national key projects like the Qinghai-Tibet Railway, the Wuhan-Guangzhou Railway, the West-East Natural Gas Transmission, the South-to-North Water Diversion and the Three Gorges Dam. International partners include America, India, Burma, the Philippines, Australia, Nigeria, Kenya, Ghana, South Africa, Brazil and Chile, among other countries. Huatong becomes increasingly well-known and has won the trust of more and more customers.

In 2013, the Huatong brand was awarded the “China Famous Trade Mark” by the Trademark Office of China’s State Administration of Industry and Commerce, which eloquently demonstrates Huatong’s brand influence and prestige among Chinese customers. Huatong is also the first Henan-based brand to have won such an honor. In 2015 Huatong Cable was successfully listed on NEEQ stock market, which is bound to further enhance the company’s reputation and help it expand in an accelerated yet steady manner. Huatong Cable Inc. is dedicated to improve itself by contributing to the customer’s progress. It seeks to strengthen its strategic partnership with customers with business model innovation, product portfolio restructuring and development of environmentally-friendly high quality products. With this objective in mind, Huatong Cable Inc. will continue its unswerving efforts to better serve the customer and embrace the future.

# HUATONG Medium & Low Voltage Power Cables

0.6/1kV~18/30kV According to IEC 60502, 61034, 60754

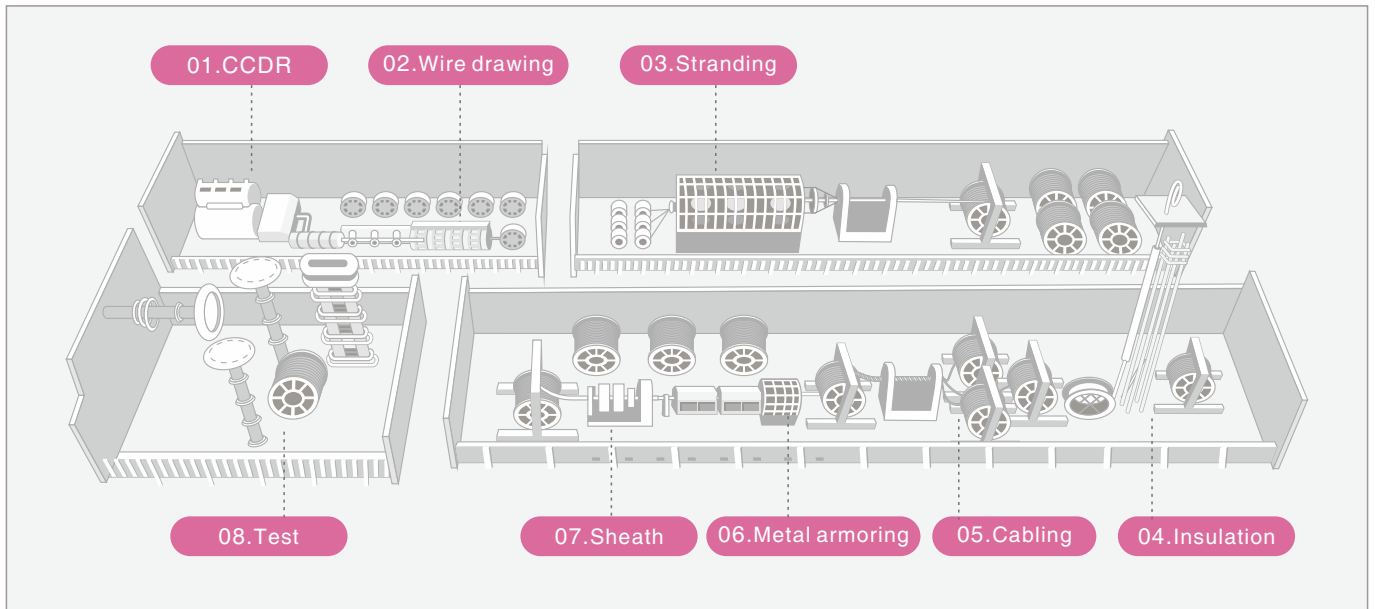
During last 15-20 years the demand for cross-linked polyethylene insulated cable has expanded rapidly and this type of cable has become the main type for power cables.

HUATONG Cable has actively developed and applied recent manufacturing techniques for XLPE insulated cable, and has been engaged in a constant effort to obtain more stable quality, and produce XLPE cables for higher voltages, exceeding 500kV.

The products in this catalogue are based on the IEC Pub 502-1983 specification.

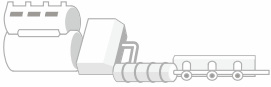


# CRAFTSMANSHIP




- 01


**CCDR ( Continue Casting Direct Rolling )**  
Put the Aluminum ingot into the melting furnace, moulding it into Aluminum rod or Aluminum alloy rod of diameter 8-9.5mm after melt.


- 02


**Wire drawing**  
Draw the electric round aluminum rod into wire of diameter 0.15-5mm with high-speed drawing equipment.


- 03

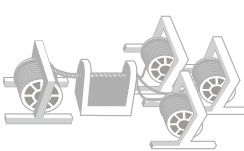
**Stranding**  
Strand one or more wire layers surrounding the concentric wire into conductor.


- 04


**Insulation**  
Extrude the conductor with the XLPE raw material surrounding it, material cross link under high- temperature and high-pressure, then cooled to be insulation.


- 05

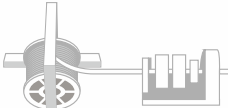
**Cabling**  
The process to bunch several insulated conductors into one.


- 06

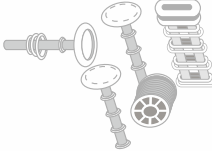
**Metal armoring**  
In order to protect the insulated conductor, surround the insulated conductor with magnetic or non magnetic metal material, like steel wire or aluminum wire.


- 07

**Sheath**  
Extrude the cable after surround the semi-finished armored insulated conductors with melting PVC or PE.


- 08

**Test**  
The power cable plays an important role in power transmission lines, can be used only after strict testing.



# Code Designation

The code designations for HUATONG XLPE cable consist of the initial letter "C", to which the following letters indicating individual important component parts are added, starting from the insulation.

- C** : Cross-linked polyethylene insulation (XLPE)
- V** : PVC Inner covering or separation sheath or outer sheath
- AWA** : Aluminum Wire Armor(Single Core)
- WA** : Galvanized Steel Wire Armor
- TA** : Double Steel Tape Armor
- ATA** : Double Aluminum tape Armor(Single Core)

## Examples of cables with copper conductors.

- **1x95mm 2 6/10kV CV**

Single core screened cable with XLPE insulation, PVC outer sheath

- **3x95mm 2 6/10kV CVWAV**

Three core screened cable with XLPE insulation, PVC separation sheath,

Galvanized steel wire armor and PVC sheath.

- **3x95mm 2 6/10kV CVTAV**

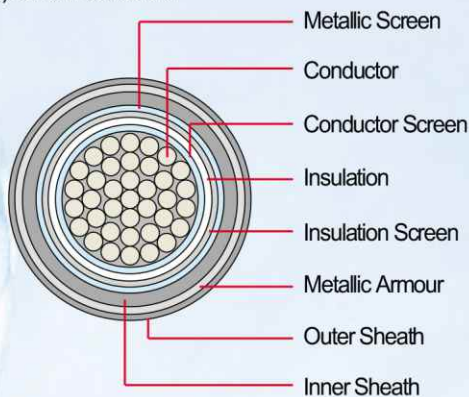
Three core screened cable with XLPE insulation, PVC separation sheath,



# Design & Construction of XLPE Cable

## Structure of XLPE Cable

The XLPE Cable has the construction of a conductor (copper or aluminum) insulated with the cross-linked polyethylene and then shielded with metallic screen (corrugated and seamless aluminum or wire shield), to be covered by PVC (ST<sub>2</sub>), PE (ST<sub>7</sub>) or halogenfree (ST<sub>8</sub>) for anti-corrosion.



## Conductor

The conductor consists of annealed copper or hard aluminum stranded wires and classified into three (3) major types of concentric, compacted circular and segmental compacted circular.

The concentric is the wires wound up concentrically, the compacted circular conductor consists of segments wound up and then compacted. Normally the segmental compacted circular conductor has four (4) segments and is applied for the cross-section over than 800mm<sup>2</sup>, to prevent the increase of A.C. resistance caused by skin effect. When the conductor's cross-section is less than 800mm<sup>2</sup>, the compacted circular is applied generally.

## Conductor Screen

The conductor screen consists of an extruded semi-conducting polyethylene to minimize electrical stresses due to the stranded configuration of the conductor. The semi-conducting material used for conductor screen has no deleterious effect on the conductor. Semi-conducting tape is sometimes applied as a separator.

## Insulation

The insulation material is extruded cross-linked polyethylene. The conductor screen, the insulation and the insulation screen mentioned to the following clause are extruded simultaneously in one process to ensure that the screen and insulation are intimately bonded together and free from all possibilities of voids between layers.

The extrusion process is carried out under strictly controlled atmospheric conditions.

The thickness of the insulation layer is the maximum value figured out from the design of the impulse voltage and A.C. voltage.

The conventional cross-linking process by saturated steam has frequently caused deterioration of the electrical characteristics of the insulation as treeing phenomena arose when put to use for long time. But the new process by N<sub>2</sub> gas has enabled to protect the electrical characteristics from being deteriorated and to lessen the thickness of the insulation and accordingly the cable's outer diameter itself.

## Insulation Screen

The insulation screen is provided over the insulation by extruding the semi-conducting compound concentrically and circularly to minimize the possibility of ionization on the outer surface of the dielectric.

## Assembly

The assembly of multiple conductors shall be done by cabling together the required number of conductors with suitable fillers. The metallic shielding in multiple conductor cables are in contact with each other. A suitable binder tape shall be applied over the entire assembly.

## Metallic Armour

The armor is a single layer of round wires or double tapes. Material for the armor shall consist of galvanized steel or aluminum. The armor for single core cables for use on AC circuits shall consist of non-magnetic material (eg aluminum) due to the excessive losses induced by steel armor. When round wire or tape armor is required, in the case of single and multiple conductor cables, it shall be applied on extruded PVC an inner covering[not clear], if there is no screening.

Where the metal screening and the armor applied over the screening are of different metals, the two shall be separated by an extruded separation sheath.

When a tape armor is applied, the thickness of the inner covering shall be reinforced by a bedding tape. If a separating sheath is provided, the additional bedding tape is not necessary.

The tape armor shall be applied helically in two layers so that the outer tape is approximately centered over the gap of the inner tape. The gap between the adjacent turns of each layer of tape shall not exceed 50% of the width of the tape. The standard color of the inner covering and separation sheath shall be black.

## Outer Sheath

To protect the metallic sheath from electrical or chemical corrosion, it is covered by PVC (ST<sub>2</sub>), PE (ST<sub>7</sub>) or halogenfree (ST<sub>8</sub>)

## Core Identification

Multiple conductors shall be identified by color or numbering with a suitable method. The color code may be changed in any contract.

- For 0.6/1kV
  - Two core : Black, Red
  - Three core : Red, Yellow, Blue
  - Four core : Black, Red, Yellow, Blue
- For 3.6/6kV ~ 18/30kV
  - Three core : Red, Yellow, Blue or 1ONE. 2TWO. 3THREE.

## Cable Marking

The standard marking for all cables shall be shown on the external surface of the outer sheath with voltage designation, manufacturer's name, year of manufacture and others as required, with a suitable method.

## Test

The finished cable shall meet all the test requirements specified by IEC 60502, as applicable.

# Structure Icon

## Conductor



Stranded conductor



Annealed conductor



Bundled Bunched conductor



Aluminum conductor



Copper conductor



Round wire

## Insulation



Polyvinyl chloride



Crosslinked polyethylene



Polyethylene

## Shielding



Semi-conducting shielding, copper wire shielding, copper tape shielding

## Fill



PE Filler strip  
PP rope

## Armoured



Steel wire  
Aluminum wire armored



Steel tape  
Aluminum tape

## Sheath



Polyvinyl chloride



Polyethylene

# Performance Icon



flame retardant  
fire resistant



Chemical  
Resistance



Sun/Rain  
Resistance



Low temperature  
laying permitted



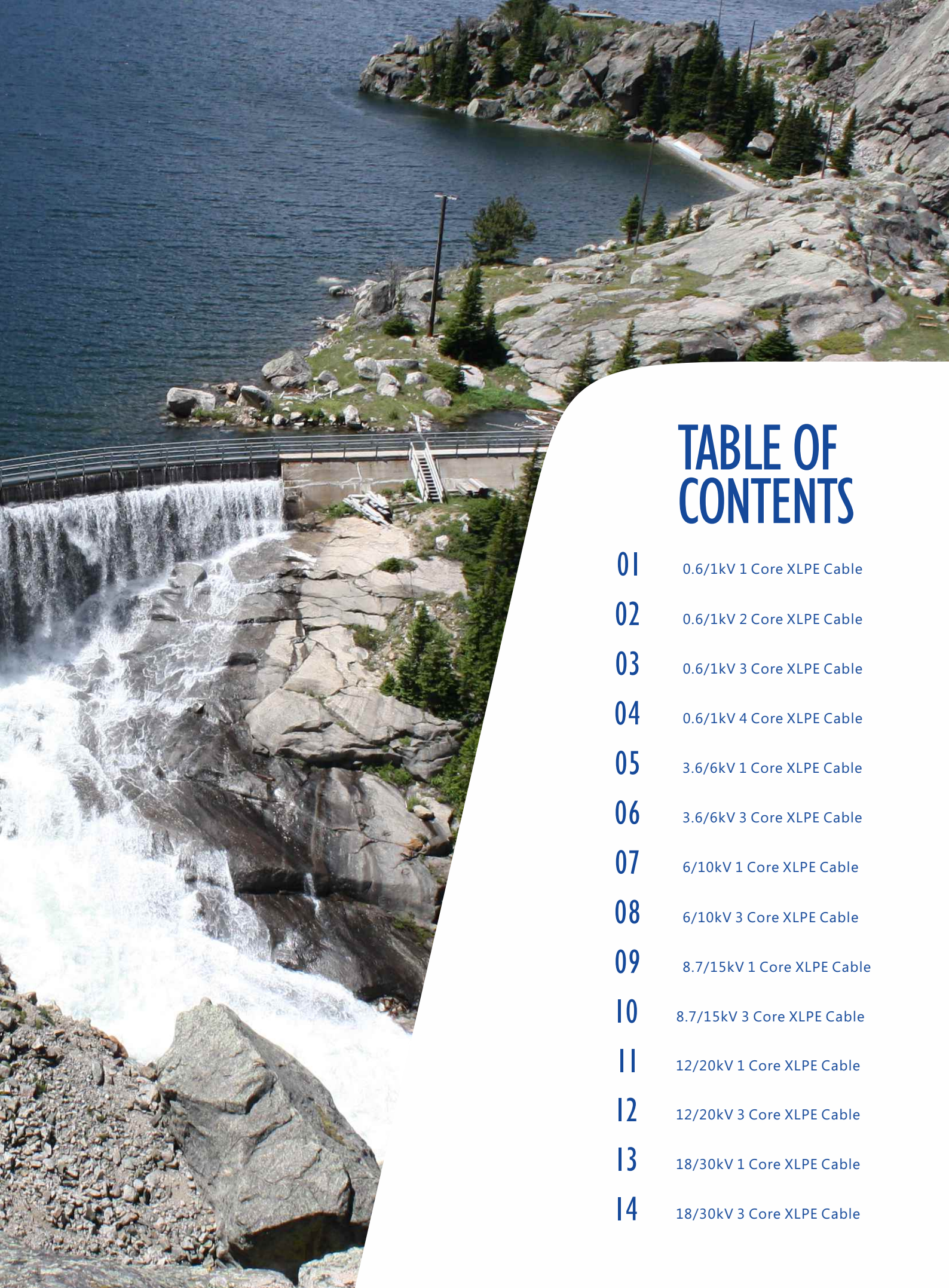
Max working  
temperature 75°C



Max working  
temperature 90°C



Min bending radius  
of cable laying

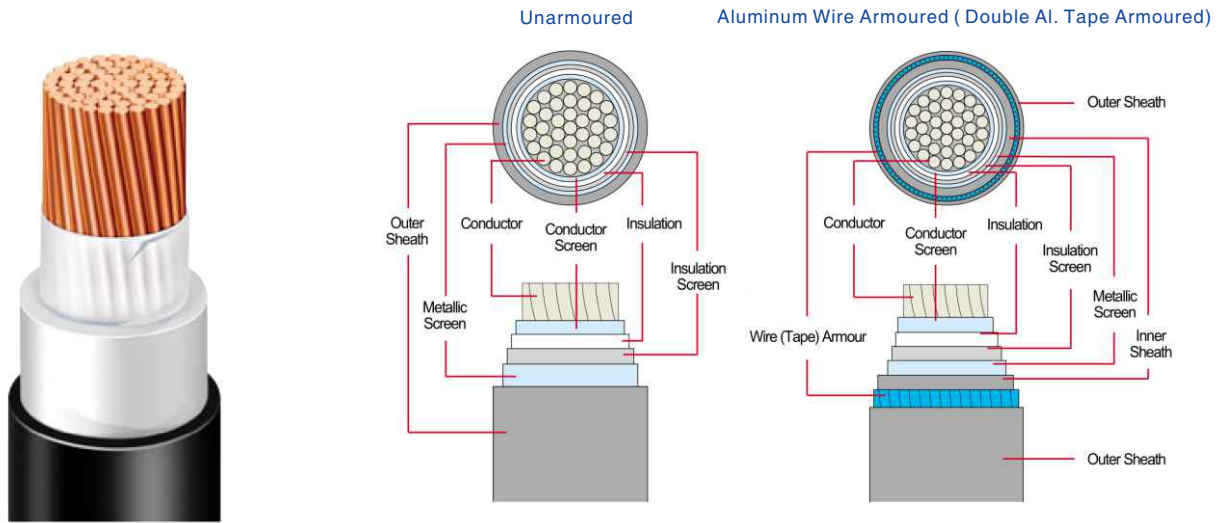


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<b>13</b>	18/30kV 1 Core XLPE Cable
<b>14</b>	18/30kV 3 Core XLPE Cable



# 0.6/1kV 1 Core XLPE Cable



Construction Table (in accordance with IEC 60502-1, 61034 and 60754)

Nominal Cross-sectional Area	Approx. Outside Diameter of Conductor	Thickness of Insulation (nom.)	Thickness of Extruded Inner Covering		Diameter of Armour Wire (nom.)		Thickness of PVC Outer Sheath (nom.)			Approx. Overall Diameter			Approx. Weight of Cable							
			AWA	DATA	AWA	DATA	UnAr	AWA	DATA	UnAr	AWA	DATA	Copper Conductor			Aluminum Conductor				
													mm	mm	mm	mm	mm	mm	mm	kg/km
1.5	1.59	0.7	1.0		0.9		1.4	1.8		7	11		50	160						
2.5	2.01	0.7	1.0		0.9		1.4	1.8		7	11		65	170						
4	2.55	0.7	1.0		0.9		1.4	1.8		8	12		80	190						
6	3.12	0.7	1.0		0.9		1.4	1.8		8	12		110	240						
10	4.05	0.7	1.0		0.9		1.4	1.8		9	13		150	280						
16	4.7	0.7	1.0	1.0	0.9	0.5	1.4	1.8	1.8	10	14	14	210	340	320	120	250	220		
25	5.9	0.9	1.0	1.0	0.9	0.5	1.4	1.8	1.8	11	16	16	310	470	440	160	310	280		
35	6.9	0.9	1.0	1.0	0.9	0.5	1.4	1.8	1.8	12	17	17	410	580	540	200	360	330		
50	8.1	1	1.0	1.0	0.9	0.5	1.4	1.8	1.8	14	18	18	540	720	680	250	430	390		
70	9.8	1.1	1.0	1.0	0.9	0.5	1.4	1.8	1.8	16	20	20	750	960	910	330	530	490		
95	11.4	1.1	1.0	1.0	0.9	0.5	1.5	1.8	1.8	18	22	22	1,010	1,230	1,180	430	640	590		
120	12.8	1.2	1.0	1.0	1.6	0.5	1.5	1.8	1.8	19	25	23	1,270	1,610	1,450	530	860	700		
150	14.2	1.4	1.0	1.0	1.6	0.5	1.6	1.8	1.8	21	27	25	1,560	1,920	1,750	640	1,000	820		
185	15.8	1.6	1.0	1.0	1.6	0.5	1.6	1.8	1.8	23	29	27	1,940	2,330	2,140	780	1,170	980		
240	18.1	1.7	1.0	1.0	1.6	0.5	1.7	1.9	1.8	26	32	30	2,540	2,980	2,750	1,000	1,440	1,210		
300	20.4	1.8	1.0	1.0	1.6	0.5	1.8	2.0	1.9	29	34	33	3,160	3,630	3,390	1,230	1,700	1,450		
400	23.2	2.0	1.2	1.2	2.0	0.5	1.9	2.1	2.0	32	39	36	4,010	4,670	4,290	1,550	2,200	1,820		
500	26.3	2.2	1.2	1.2	2.0	0.5	2.0	2.2	2.2	36	43	42	5,110	5,840	5,630	1,950	2,670	2,460		
630	30.2	2.4	1.4		2.5		2.2	2.5		42	49		6,680	7,360		2,580	3,570			
800	34	2.6	1.4		2.5		2.3	2.7		46	54		8,450	9,240		3,200	4,320			
1000	38.7	2.8	1.4		2.5		2.4	2.8		51	59		10,530	11,567		3,940	5,070			

16mm<sup>2</sup> to 800mm<sup>2</sup> are normal compact round for single and multi core cable.

800m<sup>2</sup> and above are compact round segments for single core cables.

AWA:Aluminum Wire Armoured/ DATA:Double Al.Tape Armoured/ UnAr:Unarmoured

Only the halogen free cables shall be generally complied with IEC 61034 and 60754.

For the 1 core cables armoured with magnetic materials using in communication system , even specific strcuture is applied, the carrying capacity will be greatly reduced, so should be should be carefully selected.

# 0.6/1kV 2 Core XLPE Cable



**Construction Table (in accordance with IEC 60502-1, 61034 and 60754)**

Nominal Cross-sectional Area	Approx. Outside Diameter of Conductor	Thickness of Insulation (nom.)	Thickness of Extruded Inner Covering		Diameter of Armour Wire (nom.)		Thickness of PVC Outer Sheath (nom.)			Approx. Overall Diameter			Approx. Weight of Cable					
			GSAW	DSTA	GSAW	DSTA	UnAr	GSAW	DSTA	UnAr	GSAW	DSTA	Copper Conductor			Aluminum Conductor		
													mm	mm	mm	mm	mm	mm
1.5	1.59	0.7	1.0	1.0	0.9	0.2	1.8	1.8	1.8	11	15	14	130	360	230			
2.5	2.01	0.7	1.0	1.0	0.9	0.2	1.8	1.8	1.8	12	15	15	170	430	320			
4	2.55	0.7	1.0	1.0	0.9	0.2	1.8	1.8	1.8	13	16	16	210	500	380			
6	3.12	0.7	1.0	1.0	0.9	0.2	1.8	1.8	1.8	14	17	17	280	570	440			
10	4.05	0.7	1.0	1.0	0.9	0.2	1.8	1.8	1.8	16	20	19	370	710	500			
16	4.7	0.7	1.0	1.0	0.9	0.2	1.8	1.8	1.8	17	21	21	500	850	630	300	650	430
25	5.9	0.9	1.0	1.0	1.6	0.2	1.8	1.8	1.8	21	26	24	730	1,460	980	420	1,140	670
35	6.9	0.9	1.0	1.0	1.6	0.2	1.8	1.8	1.8	23	28	26	960	1,750	1,220	530	1,310	790
50	8.1	1.0	1.0	1.0	1.6	0.2	1.8	1.8	1.8	26	31	29	1,250	2,130	1,540	660	1,530	950
70	9.8	1.1	1.0	1.0	1.6	0.2	1.8	2.0	1.9	29	35	33	1,730	2,760	2,080	870	1,910	1,220
95	11.4	1.1	1.2	1.2	2.0	0.2	2.0	2.1	2.0	33	40	37	2,330	3,770	2,730	1,140	2,580	1,540
120	12.8	1.2	1.2	1.2	2.0	0.5	2.1	2.2	2.2	37	43	43	2,920	4,530	3,870	1,400	3,010	2,350
150	14.2	1.4	1.2	1.2	2.0	0.5	2.2	2.3	2.3	41	47	47	3,580	5,350	4,620	1,710	3,520	2,750
185	15.8	1.6	1.4	1.4	2.5	0.5	2.3	2.5	2.4	45	53	52	4,450	6,940	5,640	2,110	4,600	3,300
240	18.1	1.7	1.4	1.4	2.5	0.5	2.5	2.7	2.6	51	59	58	5,850	8,640	7,150	2,740	5,530	4,040
300	20.4	1.8	1.6	1.6	2.5	0.5	2.7	2.8	2.8	57	65	63	7,270	10,440	8,730	3,360	6,530	4,830
400	23.2	2.0	1.6	1.6	2.5	0.5	2.9	3.1	3.0	63	71	70	9,170	12,740	10,820	4,180	7,760	5,840

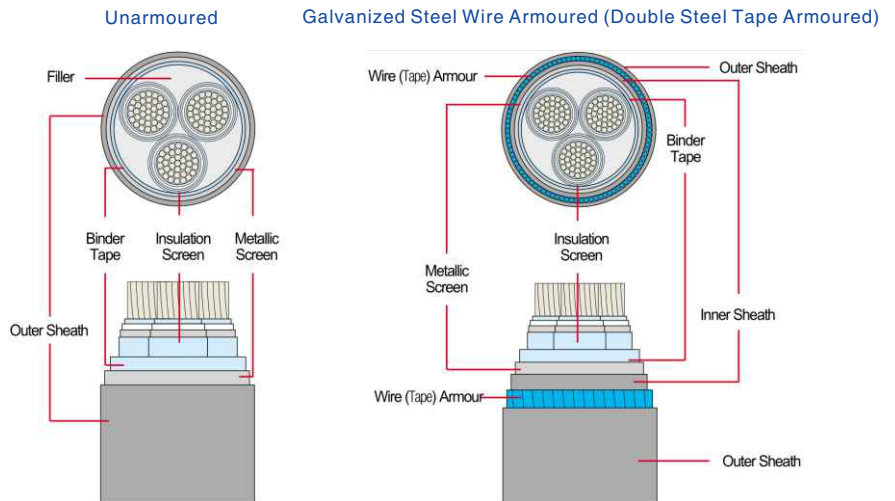
16mm<sup>2</sup> to 800mm<sup>2</sup> are normal compact round for single and multi core cable.

800mm<sup>2</sup> and above are compact round segments for single core cables.

GSAW: Galvanized Steel Wire Armoured/ DSTA: Double Steel Tape Armoured/ UnAr: Unarmoured

Only the halogen free cables shall be generally complied with IEC 61034 and 60754.

# 0.6/1kV 3 Core XLPE Cable



**Construction Table (in accordance with IEC 60502-1, 61034 and 60754)**

Nominal Cross-sectional Area	Approx. Outside Diameter of Conductor	Thickness of Insulation (nom.)	Thickness of Extruded Inner Covering		Diameter of Armour Wire (nom.)		Thickness of PVC Outer Sheath (nom.)			Approx. Overall Diameter			Approx. Weight of Cable					
			GSWA	DSTA	GSWA	DSTA	UnAr	GSWA	DSTA	UnAr	GSWA	DSTA	Copper Conductor			Aluminum Conductor		
													mm	mm	mm	mm	mm	mm
1.5	1.59	0.7	1.0	1.0	0.9	0.2	1.8	1.8	1.8	12	15	15	160	390	260			
2.5	2.01	0.7	1.0	1.0	0.9	0.2	1.8	1.8	1.8	13	16	16	200	470	360			
4	2.55	0.7	1.0	1.0	0.9	0.2	1.8	1.8	1.8	14	17	17	260	560	430			
6	3.12	0.7	1.0	1.0	0.9	0.2	1.8	1.8	1.8	15	18	18	330	660	520			
10	4.05	0.7	1.0	1.0	0.9	0.2	1.8	1.8	1.8	17	20	20	480	830	610			
16	4.7	0.7	1.0	1.0	0.9	0.2	1.8	1.8	1.8	18	22	22	660	1,040	880	360	740	580
25	5.9	0.9	1.0	1.0	1.6	0.2	1.8	1.8	1.8	22	27	25	990	1,740	1,240	520	1,270	780
35	6.9	0.9	1.0	1.0	1.6	0.2	1.8	1.8	1.8	24	30	28	1,350	2,220	1,660	620	1,500	930
50	8.1	1.0	1.0	1.0	1.6	0.2	1.8	1.9	1.8	27	32	31	1,710	2,660	2,020	820	1,770	1,130
70	9.8	1.1	1.0	1.0	1.6	0.2	1.9	2.0	2.0	32	37	35	2,400	3,750	2,770	1,120	2,470	1,480
95	11.4	1.1	1.2	1.2	2.0	0.2	2.0	2.2	2.1	36	42	41	3,220	4,800	4,140	1,440	3,010	2,350
120	12.8	1.2	1.2	1.2	2.0	0.5	2.1	2.3	2.3	39	46	45	4,060	5,790	5,100	1,780	3,520	2,820
150	14.2	1.4	1.2	1.2	2.0	0.5	2.3	2.5	2.4	44	52	50	5,020	7,420	6,170	2,200	4,610	3,350
185	15.8	1.6	1.4	1.4	2.5	0.5	2.4	2.6	2.5	49	56	55	6,230	8,920	7,500	2,720	5,400	3,980
240	18.1	1.7	1.4	1.4	2.5	0.5	2.6	2.8	2.7	55	63	61	8,200	11,180	9,590	3,540	6,520	4,930
300	20.4	1.8	1.6	1.6	2.5	0.5	2.8	3.0	2.9	61	69	67	10,200	13,540	11,780	4,340	7,680	5,920
400	23.2	2.0	1.6	1.6	2.5	0.5	3.0	3.2	3.2	68	76	75	12,890	16,700	14,720	5,410	9,220	7,240

16mm<sup>2</sup> to 800mm<sup>2</sup> are normal compact round for single and multi core cable.

800mm<sup>2</sup> and above are compact round segments for single core cables.

GSWA:Galvanized Steel Wire Armoured/ DSTA:Double Steel Tape Armoured/ UnAr:Unarmoured

Only the halogen free cables shall be generally complied with IEC 61034 and 60754.

# 0.6/1kV 4 Core XLPE Cable

**Construction Table (in accordance with IEC 60502-1, 61034 and 60754)**

Nominal Cross-sectional Area	Approx. Outside Diameter of Conductor	Thickness of Insulation (nom.)	Thickness of Extruded Inner Covering		Diameter of Armour Wire (nom.)		Thickness of PVC Outer Sheath (nom.)			Approx. Overall Diameter			Approx. Weight of Cable					
			GSA	DSTA	GSA	DSTA	UnAr	GSA	DSTA	UnAr	GSA	DSTA	Copper Conductor			Aluminum Conductor		
													UnAr	GSA	DSTA	UnAr	GSA	DSTA
mm <sup>2</sup>	mm	mm	mm		mm		mm			mm			kg/km					
1.5	1.59	0.7	1.0	1.0	0.9	0.2	1.8	1.8	1.8	12	16	16	180	440	290			
2.5	2.01	0.7	1.0	1.0	0.9	0.2	1.8	1.8	1.8	13	17	17	240	530	410			
4	2.55	0.7	1.0	1.0	0.9	0.2	1.8	1.8	1.8	15	18	18	320	630	500			
6	3.12	0.7	1.0	1.0	0.9	0.2	1.8	1.8	1.8	16	19	19	420	760	610			
10	4.05	0.7	1.0	1.0	0.9	0.2	1.8	1.8	1.8	18	22	22	610	990	750			
16	4.7	0.7	1.0	1.0	0.9	0.2	1.8	1.8	1.8	20	24	23	830	1,240	1,070	440	840	680
25	5.9	0.9	1.0	1.0	1.6	0.2	1.8	1.8	1.8	24	29	27	1,260	2,090	1,540	630	1,460	910
35	6.9	0.9	1.0	1.0	1.6	0.2	1.8	1.9	1.8	27	32	30	1,660	2,600	1,970	790	1,730	1,110
50	8.1	1.0	1.0	1.0	1.6	0.2	1.9	2.0	1.9	30	35	33	2,210	3,260	2,560	1,020	2,070	1,370
70	9.8	1.1	1.2	1.2	2.0	0.2	2.0	2.1	2.1	35	41	39	3,210	4,640	3,560	1,410	2,930	1,850
95	11.4	1.1	1.2	1.2	2.0	0.5	2.1	2.3	2.3	39	46	45	4,210	5,940	5,240	1,570	3,560	2,860
120	12.8	1.2	1.4	1.4	2.5	0.5	2.3	2.5	2.4	44	52	50	5,300	7,760	6,470	2,270	4,730	3,440
150	14.2	1.4	1.4	1.4	2.5	0.5	2.4	2.6	2.6	49	56	55	6,530	9,220	7,830	2,780	5,480	4,080
185	15.8	1.6	1.4	1.4	2.5	0.5	2.6	2.8	2.7	54	62	60	8,170	11,120	9,560	3,480	6,440	4,870
240	18.1	1.7	1.6	1.6	2.5	0.5	2.8	3.0	2.9	61	69	68	10,710	14,132	12,340	4,490	7,920	6,130
300	20.4	1.8	1.6	1.6	2.5	0.5	3.0	3.2	3.1	68	76	74	13,320	17,050	15,090	5,510	9,230	7,270
400	23.2	2.0	1.8	1.8	3.15	0.5	3.3	3.5	3.4	76	85	83	17,000	22,340	18,990	7,023	12,370	9,020

16mm<sup>2</sup> to 800mm<sup>2</sup> are normal compact round for single and multi core cable.

800m<sup>2</sup> and above are compact round segments for single core cables.

GSA:Galvanized Steel Wire Armoured/ DSTA:Double Steel Tape Armoured/ UnAr:Unarmoured

Only the halogen free cables shall be generally complied with IEC 61034 and 60754.

## 0.6/1kV 4 Core XLPE Cable with Reduced Conductor and Phase Conductor

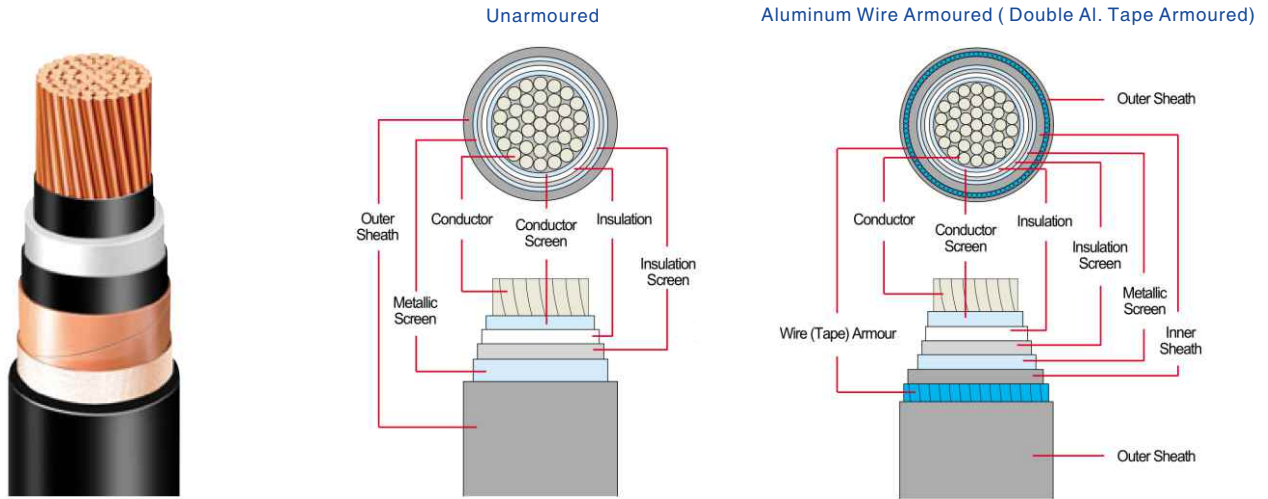
Nominal Cross-sectional Area		Thickness of Insulation (nom.)		Thickness of Extruded Inner	Diameter of Armour Wire	Thickness of PVC Outer Sheath (nom.)		Approx. Overall Diameter		Approx. Weight of Cable				Nominal Drum Length
Phaes Conductor	Neutral Conductor	Phaes Conductor	Neutral Conductor	Armoured	Armoured	UnAr	Ar	UnAr	Ar	Copper Conductor		Aluminum Conductor		
										UnAr	Ar	UnAr	Ar	
mm <sup>2</sup>	mm <sup>2</sup>	mm	mm	mm	mm	mm	mm	mm	mm	Kg/km	Kg/km	Kg/km	Kg/km	m
25	16	0.9	0.7	1.0	1.6	1.8	1.8	23	28	1,130	1,940	560	1,380	500
35	16	0.9	0.7	1.0	1.6	1.8	1.8	25	30	1,430	2,300	680	1,560	500
50	25	1	0.9	1.0	1.6	1.8	1.9	28	34	1,940	2,950	900	1,910	500
70	35	1.1	0.9	1.2	2	1.9	2.1	33	39	2,710	4,210	1,220	2,710	500
95	50	1.1	1.0	1.2	2	2.1	2.2	37	43	3,670	5,330	1,614	3,260	500
120	70	1.2	1.1	1.2	2	2.2	2.3	42	48	4,720	6,570	2,020	3,870	500
150	70	1.4	1.1	1.4	2.5	2.3	2.5	45	53	5,620	8,180	2,400	4,960	500
185	95	1.6	1.1	1.4	2.5	2.5	2.7	51	58	7,100	9,950	3,010	5,860	500
240	120	1.7	1.2	1.6	2.5	2.7	2.9	57	65	9,280	12,560	3,880	7,160	500
300	150	1.8	1.4	1.6	2.5	2.9	3	63	71	10,740	14,270	3,980	7,510	250
300	185	1.8	1.6	1.6	2.5	2.9	3.1	64	73	11,940	15,600	4,960	8,610	250

16mm<sup>2</sup> to 800mm<sup>2</sup> are normal compact round for single and multi core cable. / 800mm<sup>2</sup> and above are compact round segments for single core cable.

\*UnAr : Unarmoured / \*\*Ar : Armoured

Only the halogen free cables shall be generally complied with IEC 61034 and 60754.

# 3.6/6kV 1 Core XLPE Cable



Construction Table (in accordance with IEC 60502-2, 61034 and 60754)

Nominal Cross-section Area	Approx. Outside diameter of Conductor	Thickness of Insulation (nom.)	Thickness of Extruded Inner Covering		Diameter of Armour Wire (nom.)		Thickness of PVC Outer Sheath (nom.)			Approx. Overall Diameter			Approx. Weight of Cable					
			mm		mm		mm			mm			kg/km			kg/km		
			AWA	DATA	AWA	DATA	UnAr	AWA	DATA	UnAr	AWA	DATA	UnAr	AWA	DATA	UnAr	AWA	DATA
10	4.05	2.5	1.2	1.2	0.9	0.5	1.4	1.8	1.8	15	21	1.9	320	550	480			
16	4.7	2.5	1.2	1.2	0.9	0.5	1.4	1.8	1.8	16	21	20	390	630	550	290	530	450
25	5.9	2.5	1.2	1.2	1.6	0.5	1.5	1.8	1.8	18	24	21	500	850	670	350	700	510
35	6.9	2.5	1.2	1.2	1.6	0.5	1.5	1.8	1.8	19	25	22	610	980	790	400	760	570
50	8.1	2.5	1.2	1.2	1.6	0.5	1.6	1.8	1.8	20	26	23	760	1,140	940	470	850	640
70	9.8	2.5	1.2	1.2	1.6	0.5	1.6	1.8	1.8	22	28	25	990	1,400	1,180	560	970	750
95	11.4	2.5	1.2	1.2	1.6	0.5	1.7	1.9	1.8	24	30	27	1,280	1,710	1,460	690	1,130	880
120	12.8	2.5	1.2	1.2	1.6	0.5	1.7	1.9	1.8	25	31	28	1,540	2,010	1,740	790	1,260	990
150	14.2	2.5	1.2	1.2	1.6	0.5	1.8	2.0	1.9	27	33	30	1,840	2,330	2,050	910	1,400	1,120
185	15.8	2.5	1.2	1.2	2.0	0.5	1.8	2.0	1.9	28	35	31	2,220	2,830	2,440	1,060	1,670	1,280
240	18.1	2.6	1.2	1.2	2.0	0.5	1.9	2.1	2.0	32	39	35	2,870	3,540	3,120	1,330	2,000	1,580
300	20.4	2.8	1.2	1.2	2.0	0.5	2.0	2.2	2.1	35	41	39	3,530	4,250	3,950	1,600	2,320	2,010
400	23.2	3.0	1.2	1.2	2.0	0.5	2.1	2.3	2.3	38	45	42	4,420	5,220	4,890	1,950	2,750	2,430
500	26.3	3.2	1.3	1.3	2.5	0.5	2.2	2.5	2.4	42	50	46	5,560	6,640	6,400	2,400	3,480	2,930
630	30.2	3.2	1.4		2.5		2.3	2.6		47	55		7,020	7,920		2,920	4,130	
800	34.0	3.2	1.4		2.5		2.4	2.7		50	59		8,900	9,780		3,640	4,860	
1,000	38.7	3.2	1.6		2.5		2.6	2.9		55	64		11,010	12,220		4,120	5,720	

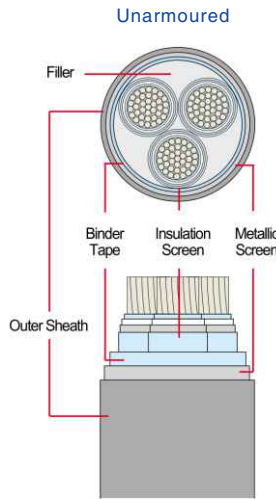
16mm<sup>2</sup> to 800mm<sup>2</sup> are normal compact round for single and multi core cable.  
 800mm<sup>2</sup> and above are compact round segments for single core cable.

AWA: Aluminium Wire Armoured / DATA: Double Al. Tape Armoured / UnAr.: Unarmoured

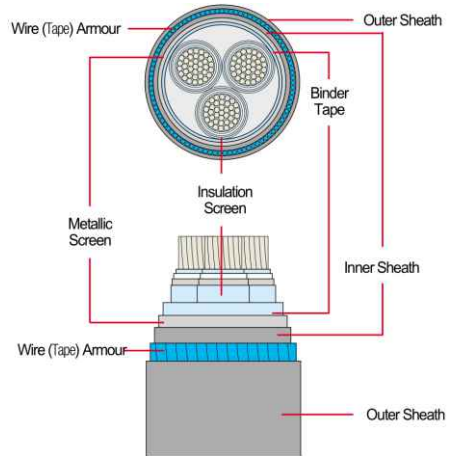
Only the halogen free cables shall be generally complied with IEC 61034 and 60754.

For the 1 core cables armoured with magnetic materials using in communication system, even specific structure is applied, the carrying capacity will be greatly reduced, so should be carefully selected.

# 3.6/6kV 3 Core XLPE Cable



Galvanized Steel Wire Armoured (Double Steel Tape Armoured)



Construction Table (in accordance with IEC 60502-2, 61034 and 60754)

Nominal Cross-section Area	Approx. Outside diameter of Conductor	Thickness of Insulation (nom.)	Thickness of Extruded Inner Covering				Diameter of Amour Wire(nom.)			Thickness of PVC Outer Sheath (nom.)			Approx.Overall Diameter			Approx.Weight of Cable					
			GSWA		DATA		GSWA		DATA	UnAr		GSWA	DATA	Copper Conductor			Aluminium Conductor				
			mm		mm		mm		mm	mm		mm	mm	kg/km			kg/km				
10	4.05	2.5	1.2	1.2	2.0	0.2	1.9	2.1	2.0	30	37	33	1,040	2,440	1,420						
16	4.7	2.5	1.2	1.2	2.0	0.5	2.0	2.2	2.1	31	38	36	1,270	2,730	2,040	970	2,440	1,740			
25	5.9	2.5	1.2	1.2	2.0	0.5	2.0	2.3	2.2	34	41	38	1,610	3,220	2,470	1,140	2,750	2,010			
35	6.9	2.5	1.2	1.2	2.0	0.5	2.1	2.4	2.3	37	44	41	1,990	3,690	2,900	1,330	3,040	2,250			
50	8.1	2.5	1.3	1.3	2.5	0.5	2.2	2.5	2.4	39	47	44	2,460	4,730	3,460	1,570	3,840	2,570			
70	9.8	2.5	1.4	1.4	2.5	0.5	2.3	2.6	2.5	43	52	48	3,200	5,730	4,320	1,910	4,440	3,030			
95	11.4	2.5	1.4	1.4	2.5	0.5	2.5	2.7	2.6	47	56	52	4,140	6,840	5,330	2,350	5,050	3,540			
120	12.8	2.5	1.5	1.5	2.5	0.5	2.6	2.9	2.8	51	59	56	5,030	7,980	6,350	2,750	5,710	4,080			
150	14.2	2.5	1.6	1.6	2.5	0.5	2.7	3.0	2.9	54	63	59	5,960	9,140	7,400	3,150	6,330	4,590			
185	15.8	2.5	1.6	1.6	2.5	0.5	2.8	3.1	3.0	58	67	63	7,190	10,570	8,720	3,680	7,060	5,210			
240	18.1	2.6	1.7	1.7	2.5	0.5	3.0	3.3	3.2	65	74	70	9,310	13,150	11,050	4,650	8,490	6,390			
300	20.4	2.8	1.8	1.8	3.15	0.5	3.2	3.5	3.4	71	82	76	11,460	16,680	13,390	5,600	10,820	7,530			
400	23.2	3.0	2.0	2.0	3.15	0.8	3.4	3.8	3.7	78	89	85	14,330	21,021	17,510	6,850	12,730	10,090			

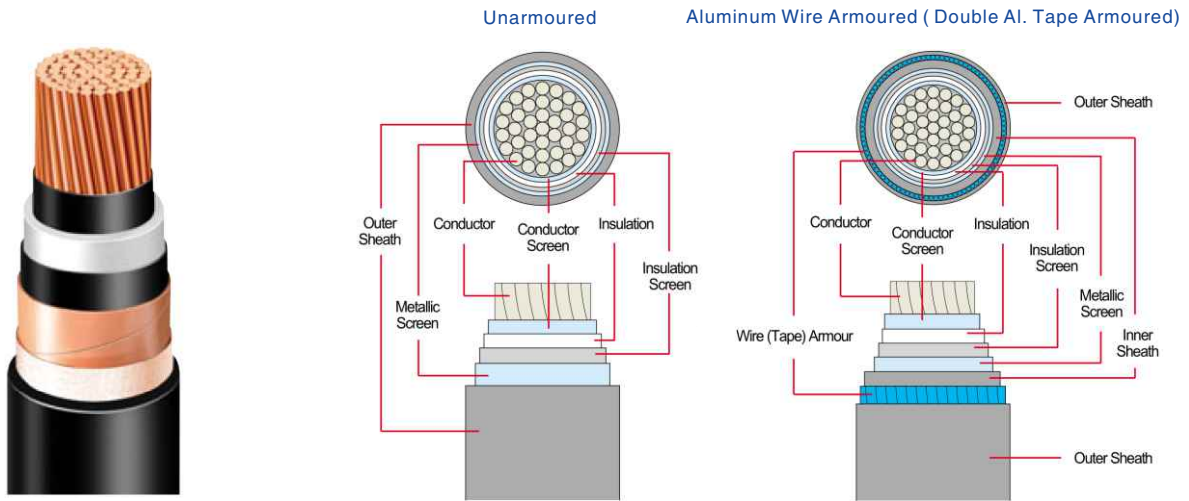
16mm<sup>2</sup> to 800mm<sup>2</sup> are normal compact round for single and multi core cable.

800mm<sup>2</sup> and above are compact round segments for single core cable.

GSWA:Galvanized Steel Wire Armoured/ DSTA:Double Steel Tape Armoured/ UnAr:Unarmoured

Only the halogen free cables shall be generally complied with IEC 61034and 60754.

# 6/10kV 1 Core XLPE Cable



**Construction Table (in accordance with IEC 60502-2, 61034 and 60754)**

Nominal Cross-section Area	Approx. Outside diameter of Conductor	Thickness of Insulation (nom.)	Thickness of Extruded Inner Covering		Diameter of Amour Wire(nom.)		Thickness of PVC Outer Sheath (nom.)			Approx.Overall Diameter			Approx.Weight of Cable					
			AWA DATA		AWA DATA		UnAr AWA DATA			UnAr AWA DATA			Copper Conductor			Aluminium Conductor		
			mm		mm		mm			mm			kg/km			kg/km		
16	4.7	3.4	1.2	1.2	1.6	0.5	1.5	1.8	1.8	19	24	22	460	800	630	360	710	530
25	5.9	3.4	1.2	1.2	1.6	0.5	1.5	1.8	1.8	20	26	23	570	940	760	420	790	600
35	6.9	3.4	1.2	1.2	1.6	0.5	1.6	1.8	1.8	21	27	24	700	1,070	880	480	860	670
50	8.1	3.4	1.2	1.2	1.6	0.5	1.6	1.8	1.8	22	28	25	840	1,230	1,030	550	940	740
70	9.8	3.4	1.2	1.2	1.6	0.5	1.7	1.9	1.8	24	30	27	1,090	1,500	1,280	660	1,080	850
95	11.4	3.4	1.2	1.2	1.6	0.5	1.7	1.9	1.8	24	31	29	1,370	1,810	1,570	780	1,230	980
120	12.8	3.4	1.2	1.2	1.6	0.5	1.8	2.0	1.9	27	33	31	1,650	2,130	1,870	900	1,380	1,120
150	14.2	3.4	1.2	1.2	2.0	0.5	1.8	2.0	1.9	29	35	32	1,940	2,520	2,170	1,020	1,600	1,240
185	15.8	3.4	1.2	1.2	2.0	0.5	1.9	2.1	2.0	31	37	34	2,340	2,960	2,580	1,180	1,800	1,420
240	18.1	3.4	1.2	1.2	2.0	0.5	2.0	2.2	2.1	34	40	37	2,990	3,660	3,260	1,450	2,120	1,720
300	20.4	3.4	1.2	1.2	2.0	0.5	2.0	2.3	2.2	36	43	40	3,620	4,350	4,070	2,530	2,410	2,140
400	23.2	3.4	1.2	1.2	2.00	0.5	2.1	2.4	2.3	39	46	43	4,490	5,280	4,970	2,020	2,810	2,510
500	26.3	3.4	1.3	1.3	2.50	0.5	2.2	2.5	2.4	42	50	47	5,610	6,650	6,160	2,440	3,480	2,990
630	30.2	3.4	1.4		2.5		2.3	2.6		47	55		7,170	7,950		3,070	4,160	
800	34	3.4	1.4		2.5		2.5	2.7		51	59		8,980	9,800		3,720	4,880	
1,000	38.7	3.4	1.6		2.5		2.6	2.9		52	65		11,060	12,230		4,480	5,730	

16mm<sup>2</sup> to 800mm<sup>2</sup> are normal compact round for single and multi core cable.

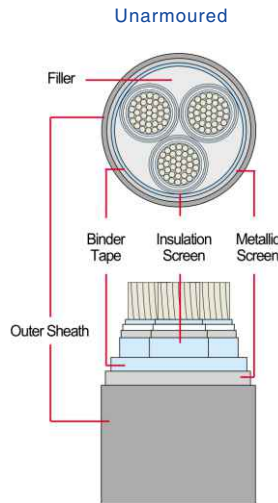
800mm<sup>2</sup> and above are compact round segments for single core cable.

AWA:Aluminium Wire Armoured / DATA:Double Al.Tape Armoured / UnAr.:Unarmoured

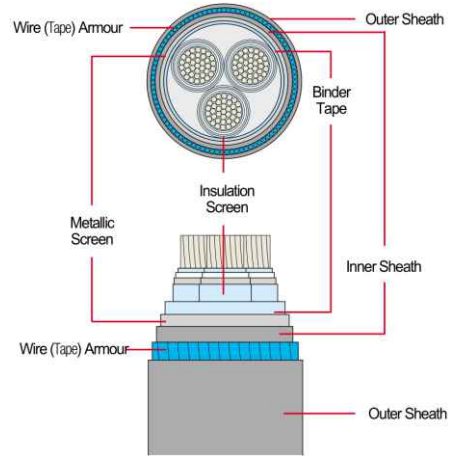
Only the halogen free cables shall be generally complied with IEC 61034and 60754.

For the 1 core cables armoured with magnetic materials using in communication system , even specific strcuture is applied, the carrying capacity will be greatly reduced, so should be should be carefully selected.

# 6/10kV 3 Core XLPE Cable



Galvanized Steel Wire Armoured (Double Steel Tape Armoured)



Construction Table (in accordance with IEC 60502-2, 61034 and 60754)

Nominal Cross-section Area	Approx. Outside diameter of Conductor	Thickness of Insulation (nom.)	Thickness of Extruded Inner Covering		Diameter of Armour Wire(nom.)		Thickness of PVC Outer Sheath (nom.)			Approx. Overall Diameter			Approx. Weight of Cable					
			GSWA	DATA	GSWA	DATA	UnAr	GSWA	DATA	UnAr	GSWA	DATA	Copper Conductor			Aluminium Conductor		
													mm	mm	mm	mm	mm	mm
16	4.7	3.4	1.2	1.2	2.0	0.5	2.1	2.3	2.3	36	43	41	1,520	3,150	2,440	1,230	2,860	2,140
25	5.9	3.4	1.3	1.3	2.5	0.5	2.2	2.5	2.3	39	47	44	1,920	4,140	2,900	1,450	3,670	2,430
35	6.9	3.4	1.3	1.3	2.5	0.5	2.3	2.5	2.4	42	49	46	2,310	4,640	3,350	1,660	3,990	2,690
50	8.1	3.4	1.4	1.4	2.5	0.5	2.4	2.6	2.5	44	52	49	2,800	5,280	3,920	1,900	4,390	3,030
70	9.8	3.4	1.4	1.4	2.5	0.5	2.5	2.8	2.7	48	56	53	3,580	6,290	4,820	2,290	5,010	3,540
95	11.4	3.4	1.5	1.5	2.5	0.5	2.6	2.9	2.8	52	60	57	4,510	7,480	5,090	2,730	5,700	4,090
120	12.8	3.4	1.6	1.6	2.5	0.5	2.7	3.0	2.9	56	64	61	5,430	8,610	6,910	1,190	6,330	4,630
150	14.2	3.4	1.6	1.6	2.5	0.5	2.8	3.1	3.0	59	67	64	6,370	9,730	7,930	3,560	6,920	5,110
185	15.8	3.4	1.7	1.7	2.5	0.5	2.9	3.2	3.1	63	71	68	7,640	12,230	9,340	4,130	7,720	5,820
240	18.1	3.4	1.8	1.8	3.15	0.5	3.1	3.4	3.3	70	79	75	9,840	14,770	11,660	5,180	10,110	6,990
300	20.4	3.4	1.9	1.9	3.15	0.5	3.3	3.6	3.5	74	84	80	11,830	17,170	13,890	5,970	11,310	8,030
400	23.2	3.4	2.0	2.0	3.15	0.8	3.5	3.8	3.7	81	92	88	14,650	20,640	17,880	7,170	13,160	10,400

16mm<sup>2</sup> to 800mm<sup>2</sup> are normal compact round for single and multi core cable.

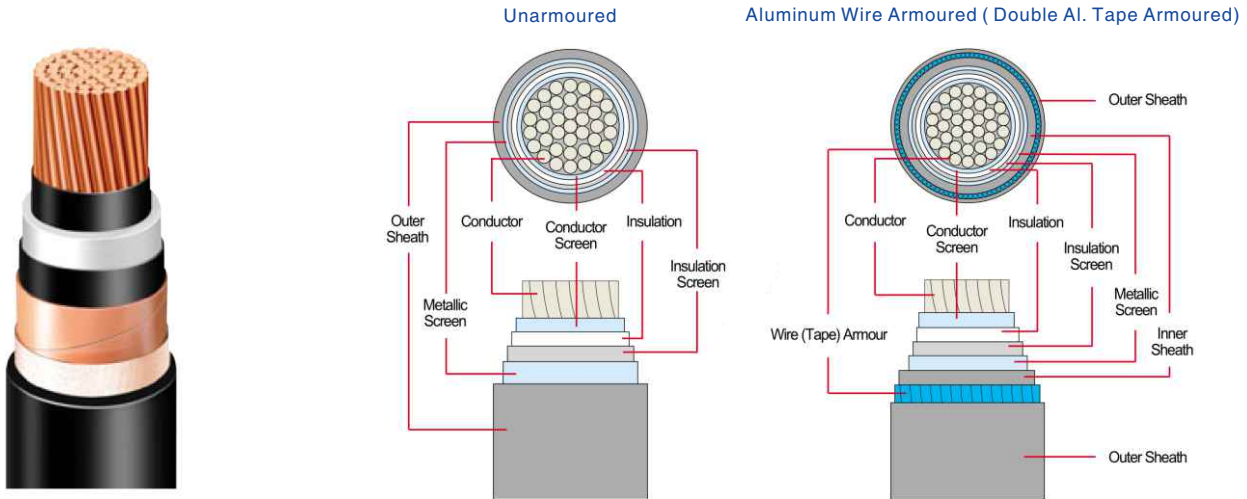
800mm<sup>2</sup> and above are compact round segments for single core cable.

GSWA:Galvanized Steel Wire Armoured/ DSTA:Double Steel Tape Armoured/ UnAr:Unarmoured

Only the halogen free cables shall be generally complied with IEC 61034and 60754.



# 8.7/15kV 1 Core XLPE Cable



**Construction Table (in accordance with IEC 60502-2, 61034 and 60754)**

Nominal Cross-sectional Area	Approx. Outside diameter of Conductor	Thickness of the insulation (non.)	Thickness of Extruded Inner Covering		Diameter of Amour Wire (nom.)		Thickness of the PVC Outer Sheath (nom.)			Approx. Overall Diameter			Approx. Weight of Cable					
			AWA	DTA	AWA	DATA	UnAr	AWA	DATA	UnAr	AWA	DATA	Copper Conductor			Aluminum Conductor		
													mm	mm	mm	mm	mm	mm
25	5.9	4.5	1.2	1.2	1.6	0.5	1.6	1.8	1.8	22	28	26	70	1,070	870	520	910	710
35	6.9	4.5	1.2	1.2	1.6	0.5	1.7	1.9	1.8	24	29	27	80	1,210	990	590	1,000	780
50	8.1	4.5	1.2	1.2	1.6	0.5	1.7	1.9	1.8	25	30	28	95	1,380	1,150	660	1,090	860
70	9.8	4.5	1.2	1.2	1.6	0.5	1.7	1.9	1.9	26	32	30	1,190	1,640	1,410	770	1,220	990
95	11.4	4.5	1.2	1.2	2.0	0.5	1.8	2.0	1.9	28	35	31	1,490	2,070	1,720	900	1,480	1,130
120	12.8	4.5	1.2	1.2	2.0	0.5	1.9	2.1	2.0	30	37	33	1,790	2,390	2,020	1,030	1,640	1,270
150	14.2	4.5	1.2	1.2	2.0	0.5	1.9	2.1	2.0	32	38	35	2,080	2,710	2,330	1,150	1,780	1,410
185	15.8	4.5	1.2	1.2	2.0	0.5	2.0	2.2	2.1	33	40	36	2,490	3,150	2,740	1,330	1,990	1,580
240	18.1	4.5	1.2	1.2	2.0	0.5	2.0	2.3	2.2	36	43	41	3,130	3,870	3,590	1,590	2,330	2,050
300	20.4	4.5	1.2	1.2	2.0	0.5	2.1	2.3	2.3	39	45	43	3,790	4,560	4,270	1,850	2,610	2,330
400	23.2	4.5	1.3	1.3	2.5	0.5	2.2	2.5	2.4	43	49	46	4,670	5,690	5,210	2,200	3,220	2,740
500	26.3	4.5	1.3	1.3	2.5	0.5	2.3	2.6	2.5	45	53	50	5,800	6,960	6,380	2,630	3,800	3,210
630	30.2	4.5	1.4		2.5		2.4	2.6		50	58		7,390	9,560		3,290	5,760	
800	34	4.5	1.4		2.5		2.5	2.8		54	62		9,180	11,560		3,930	6,630	
1000	38.7	4.5	1.6		2.5		2.7	3.0		58	67		11,310	14,190		4,270	7,700	

16mm<sup>2</sup> to 800mm<sup>2</sup> are normal compact round for single and multi core cable.

800mm<sup>2</sup> and above are compact round segments for single core cable.

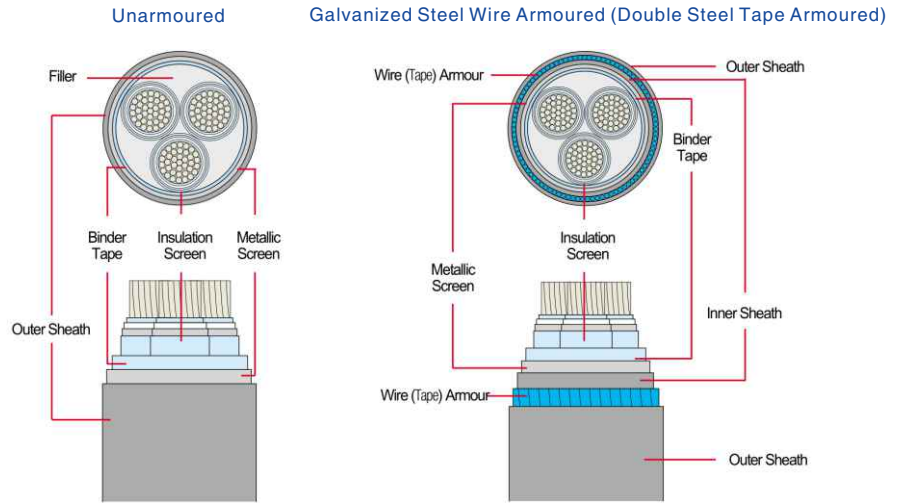
AWA: Aluminum Wire Armoured / DATA: Double Al. Tape Armoured / UnAr: Unarmoured

Only the galogen free cables shall be generally complied with IEC 61034 and 60754.

For the 1 core cables armoured with magnetic materials using in communication system ,

even specific strcuture is applied, the carrying capacity will be greatly reduced, so should be should be carefully selected.

# 8.7/15kV 3 Core XLPE Cable



**Construction Table (in accordance with IEC 60502-1, 61034 and 60754)**

Nominal Cross-sectional Area	Approx. Outside diameter of Conductor	Thickness of the insulation (non.)	Thickness of Extruded Inner Covering		Diameter of Armour Wire (nom.)		Thickness of the PVC Outer Sheath (nom.)			Approx. Overall Diameter		Approx. Weight of Cable						
			GSWA	DSTA	GSWA	DSTA	UnAr	GSWA	DSTA	UnAr	GSWA	DSTA	Copper Conductor			Aluminum Conductor		
													mm	mm	mm	mm	mm	mm
25	5.9	4.5	1.4	1.4	2.5	0.5	2.4	2.6	2.5	45	53	49	2,280	4,770	3,420	1,810	4,310	2,950
35	6.9	4.5	1.4	1.4	2.5	0.5	2.4	2.7	2.6	47	55	52	2,680	5,330	3,900	2,030	4,680	3,340
50	8.1	4.5	1.5	1.5	2.5	0.5	2.5	2.8	2.7	50	58	55	3,190	6,020	4,500	2,290	5,120	3,610
70	9.8	4.5	1.5	1.5	2.5	0.5	2.7	2.9	2.8	54	62	59	4,030	7,060	5,410	2,740	5,780	4,120
95	11.4	4.5	1.6	1.6	2.5	0.5	2.8	3.1	3.0	58	66	63	5,000	8,270	6,530	3,210	6,490	4,740
120	12.8	4.5	1.7	1.7	2.5	0.5	2.9	3.2	3.1	61	70	66	5,930	9,430	7,580	3,660	7,150	5,310
150	14.2	4.5	1.7	1.7	3.15	0.5	3.0	3.2	3.2	64	74	70	6,920	11,470	8,650	4,110	8,670	5,840
185	15.8	4.5	1.8	1.8	3.15	0.5	3.1	3.4	3.3	68	78	74	8,190	13,070	10,060	4,680	9,560	6,550
240	18.1	4.5	1.9	1.9	3.15	0.5	3.3	3.6	3.5	75	85	80	10,390	15,800	12,460	5,720	11,140	7,800
300	20.4	4.5	2.0	2.0	3.15	0.8	3.4	3.8	3.7	80	90	87	12,470	18,270	15,720	6,610	12,410	9,860
400	23.2	4.5	2.1	2.1	3.15	0.8	3.6	4.0	3.9	86	95	93	15,330	21,800	18,860	7,850	14,320	11,380

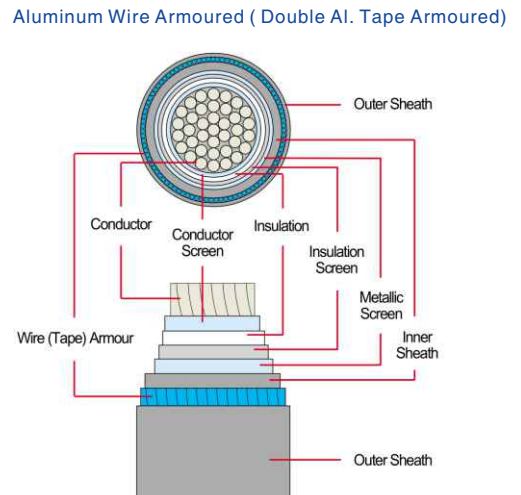
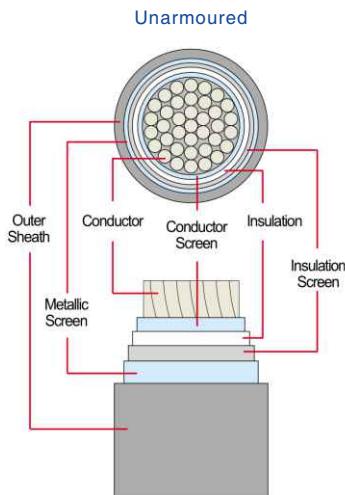
16mm<sup>2</sup> to 800mm<sup>2</sup> are normal compact round for single and multi core cable.

800mm<sup>2</sup> and above are compact round segments for single core cable.

GSWA: Galvanized Wire Armoured / DSTA: Double Steel Tape Armoured / UnAr: Unarmoured

Only the galogon free cables shall be generally complied with IEC 61034 and 60754.

# 12/20kV 1 Core XLPE Cable



**Construction Table (in accordance with IEC 60502-2, 61034 and 60754)**

Nominal Cross-sectional Area	Approx. Outside diameter of Conductor	Thickness of the insulation (nom.)	Thickness of Extruded Inner Covering		Diameter of Amour Wire (nom.)		Thickness of the PVC Outer Sheath (nom.)			Approx. Overall Diameter			Approx. Weight of Cable					
			AWA DATA		AWA DATA		UnAr AWA DATA			UnAr AWA DATA			Copper Conductor			Aluminum Conductor		
			mm		mm		mm			mm			kg/km			kg/km		
35	6.9	5.5	1.2	1.2	1.6	0.5	1.7	1.9	1.8	26	32	29	910	1,370	1,120	700	1,150	910
50	8.1	5.5	1.2	1.2	2	0.5	1.8	2	1.9	28	33	31	1,080	1,550	1,300	790	1,260	1,000
70	9.8	5.5	1.2	1.2	2	0.5	1.8	2	1.9	29	36	32	1,330	1,920	1,560	900	1,490	1,130
95	11.4	5.5	1.2	1.2	2	0.5	1.9	2.1	2	31	38	34	1,640	2,270	1,880	1,050	1,680	1,290
120	12.8	5.5	1.2	1.2	2	0.5	1.9	2.1	2	33	39	36	1,920	2,580	2,180	1,170	1,820	1,430
150	14.2	5.5	1.2	1.2	2	0.5	2	2.2	2.1	34	41	39	2,240	2,920	2,660	1,310	1,990	1,730
185	15.8	5.5	1.2	1.2	2	0.5	2	2.2	2.2	36	42	40	2,640	3,340	3,090	1,480	2,180	1,930
240	18.1	5.5	1.2	1.2	2.5	0.5	2.1	2.3	2.3	39	45	43	3,310	4,090	3,800	1,770	2,550	2,260
300	20.4	5.5	1.3	1.2	2.5	0.5	2.2	2.4	2.3	42	49	46	3,980	4,970	4,490	2,040	3,040	2,560
400	23.2	5.5	1.3	1.3	2.5	0.5	2.3	2.5	2.4	44	52	49	4,870	5,930	5,420	2,410	3,460	2,950
500	26.3	5.5	1.3	1.3	2.5		2.3	2.6	2.5	50	53	50	5,800	6,960	6,380	2,630	3,800	3,210
500	26.3	5.5	1.4	1.4	2.5	0.5	2.4	2.6	2.5	48	56	52	6,030	7,250	6,640	2,860	4,080	3,640
630	30.2	5.5	1.4		2.5		2.5	2.7		53	60		7,640	9,970		3,540	6,180	
800	34	5.5	1.4		2.5		2.6	2.9		57	65		9,450	12,080		4,190	7,160	
1000	38.7	5.5	1.6		2.5		2.7	3		61	69		11530	14400		4950	7910	

16mm<sup>2</sup> to 800mm<sup>2</sup> are normal compact round for single and multi core cable.

800mm<sup>2</sup> and above are compact round segments for single core cable.

AWA:Aluminum Wire Armoured /DATA:Double Al.Tape Amoured/UnAr:Unarmoured

Only the galogen free cables shall be generally complied with IEC 61034 and 60754.

For the 1 core cables armoured with magnetic materials using in communication system ,

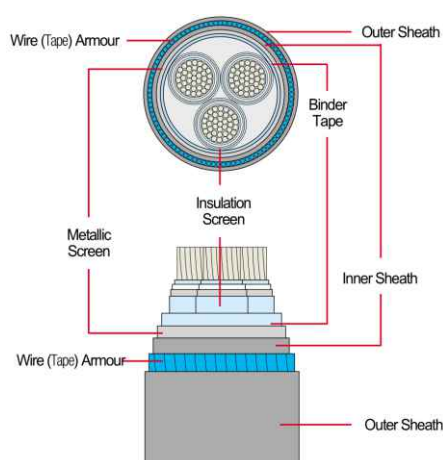
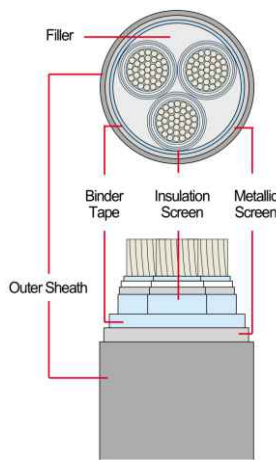
even specific strcuture is applied, the carrying capacity will be greatly reduced, so should be should be carefully selected.

# 12/20kV 3 Core XLPE Cable



Unarmoured

Galvanized Steel Wire Armoured (Double Steel Tape Armoured)



Construction Table (in accordance with IEC 60502-2, 61034 and 60754)

Nominal Cross-sectional Area	Approx. Outside diameter of Conductor	Thickness of the insulation (nom.)	Thickness of Extruded Inner Covering		Diameter of Amour Wire (nom.)		Thickness of the PVC Outer Sheath (nom.)			Approx. Overall Diameter	Approx. Weight of Cable								
			GSWA	DSTA	GSWA	DSTA	UnAr	GSWA	DSTA		Copper Conductor			Aluminum Conductor					
											mm	mm	mm	mm	mm	mm	mm	kg/km	kg/km
35	6.9	5.5	1.5	1.5	2.5	0.5	2.6	2.9	2.8	53	61	58	3,170	6,190	4,570	2,520	5,530	3,920	
50	8.1	5.5	1.6	1.6	2.5	0.5	2.7	3.0	2.9	56	64	61	3,690	6,870	5,180	2,800	5,980	4,290	
70	9.8	5.5	1.6	1.6	2.5	0.5	2.8	3.1	3.0	60	68	65	4,530	7,940	6,110	3,240	6,650	4,820	
95	11.4	5.5	1.7	1.7	2.5	0.5	2.9	3.2	3.1	64	72	69	5,520	9,150	7,230	3,730	7,370	5,440	
120	12.8	5.5	1.8	1.8	3.2	0.5	3.0	3.4	3.2	67	77	72	6,480	11,310	8,310	4,200	9,040	6,040	
150	14.2	5.5	1.8	1.8	3.2	0.5	3.1	3.5	3.3	70	80	76	7,510	12,630	9,430	4,700	9,820	6,620	
185	15.8	5.5	1.9	1.9	3.2	0.5	3.2	3.6	3.4	74	84	80	8,810	14,190	10,870	5,300	10,680	7,360	
240	18.1	5.5	2.0	2.1	3.2	0.8	3.4	3.8	3.7	81	92	88	11,050	17,000	14,370	6,390	12,340	9,710	
300	20.4	5.5	2.1	2.1	3.2	0.8	3.6	3.9	3.8	86	97	93	13,210	19,630	16,690	7,350	13,770	10,830	
400	23.2	5.5	2.2	2.2	3.2	0.8	3.8	4.2	4.1	92	104	100	16,140	23,280	20,000	8,660	15,810	12,520	

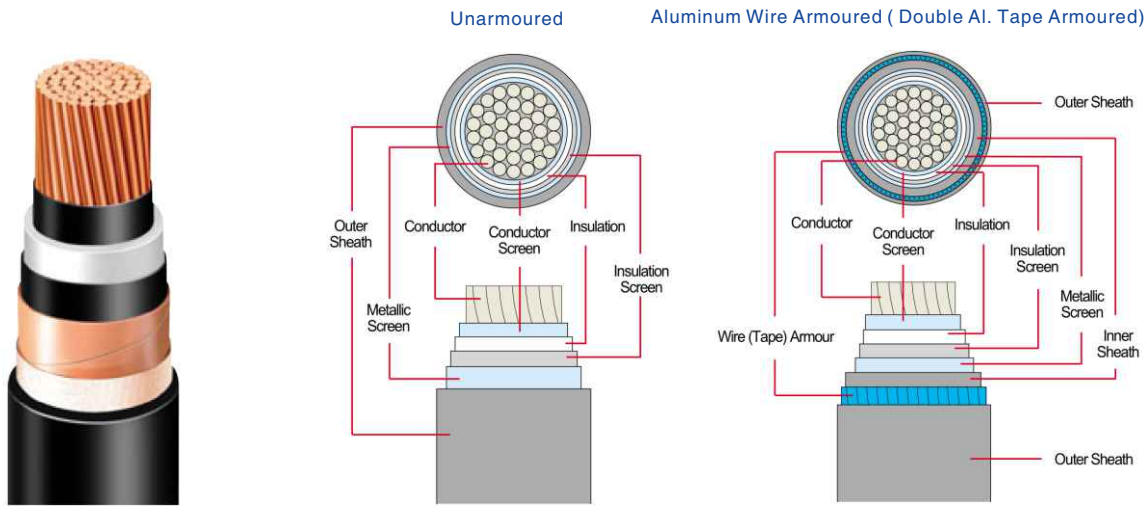
16mm<sup>2</sup> to 800mm<sup>2</sup> are normal compact round for single and multi core cable.

800mm<sup>2</sup> and above are compact round segments for single core cable.

GSWA:Galvanized Wire Armoured /DSTA:Double Steel Tape Amoured/UnAr:Unarmoured

Only the galogen free cables shall be generally complied with IEC 61034 and 60754.

# 18/30kV 1 Core XLPE Cable



**Construction Table (in accordance with IEC 60502-2, 61034 and 60754)**

Nominal Cross-sectional Area	Approx. Outside Diameter of Conductor	Thickness of Insulation	Thickness of Extruded Inner Covering		Diameter of Armour Wire (nom.)		Thickness of PVC Outer Sheath (nom.)			Approx. Overall Diameter			Approx. Weight of Cable					
			AWA	DSTA	AWA	DSTA	UnAr	AWA	DSTA	UnAr	GSA	DSTA	Copper Conductor			Aluminum Conductor		
													mm	mm	mm	mm	mm	mm
50	8.1	8.0	1.8	1.8	3.15	0.5	3.1	3.4	3.3	72	78	77	5,210	10,360	7,160	4,310	9,470	6,270
70	9.8	8.0	1.8	1.8	3.15	0.5	3.2	3.5	3.4	76	85	81	6,110	11,500	8,170	4,830	10,210	6,880
95	11.4	8.0	1.9	1.9	3.15	0.5	3.3	3.7	3.5	79	90	85	7,110	12,960	9,390	5,330	11,170	7,600
120	12.8	8.0	2	2	3.15	0.8	3.4	3.8	3.7	83	93	90	8,250	14,270	11,620	5,970	12,000	9,050
150	14.2	8.0	2	2	3.15	0.8	3.5	3.9	3.8	86	97	93	9,340	15,590	12,830	6,530	12,780	10,020
185	15.8	8.0	2.1	2.1	3.15	0.8	3.6	4	3.9	90	101	97	10,740	17,330	14,430	7,230	13,820	10,920
240	18.1	8.0	2.2	2.2	3.15	0.8	3.8	4.2	4.1	97	107	104	13,120	20,200	17,110	8,460	15,540	12,450
300	20.4	8.0	2.3	2.3	3.15	0.8	3.9	4.3	4.2	102	112	109	15,350	22,860	19,580	9,490	17,000	13,720
400	23.2	8.0	2.4	2.5	3.15	0.8	4.2	4.6	4.5	108	121	116	18,440	26,940	23,200	10,970	19,470	15,720

16mm<sup>2</sup> to 800mm<sup>2</sup> are normal compact round for single and multi core cable.

800mm<sup>2</sup> and above are compact and round segments for single core cable.

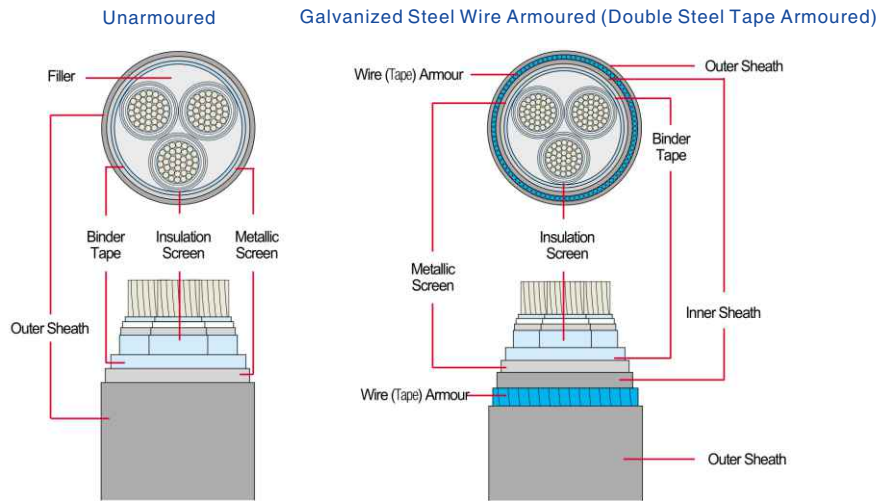
AWA:Aluminum Wire Armoured /DATA:Double Al.Tape Amoured/UnAr:Unarmoured

Only the halogen free cables shall be generally complied with IEC 61034 and 60454.

For the 1 core cables armoured with magnetic materials using in communication system ,

even specific structure is applied, the carrying capacity will be greatly reduced, so should be carefully selected.

# 18/30kV 3 Core XLPE Cable



**Construction Table (in accordance with IEC 60502-2, 61034 and 60754)**

Nominal Cross-sectional Area	Approx. Outside Diameter of Conductor	Thickness of Insulation	Thickness of Extruded Inner Covering		Diameter of Armour Wire (nom.)		Thickness of PVC Outer Sheath (nom.)			Approx. Overall Diameter	Approx. Weight of Cable							
			GSWA	DSTA	GSWA	DSTA	UnAr	GSWA	DSTA		Copper Conductor			Aluminum Conductor				
											mm	mm	mm	mm	mm	mm	mm	mm
50	8.1	8.0	1.2	1.2	2.0	0.5	1.9	2.2	2.1	34	41	37	1,440	2,140	1,720	1,140	1,840	1,380
70	9.8	8.0	1.2	1.2	2.0	0.5	2	2.2	2.1	36	43	40	4,720	2,440	2,160	1,300	2,010	1,740
95	11.4	8.0	1.2	1.2	2.0	0.5	2.1	2.3	2.2	38	44	42	2,040	2,800	2,510	1,450	2,220	1,920
120	12.8	8.0	1.2	1.2	2.0	0.5	2.1	2.3	2.3	40	46	44	2,360	3,130	2,850	2,030	2,470	2,100
150	14.2	8.0	1.3	1.3	2.5	0.5	2.1	2.4	2.3	41	49	46	2,670	3,670	3,200	1,750	2,750	2,270
185	15.8	8.0	1.3	1.3	2.5	0.5	2.2	2.5	2.4	43	51	47	3,110	4,150	3,660	1,950	2,990	2,500
240	18.1	8.0	1.3	1.3	2.5	0.5	2.3	2.5	2.4	46	54	50	3,820	4,910	4,380	2,280	3,370	2,840
300	20.4	8.0	1.4	1.4	2.5	0.5	2.4	2.6	2.5	48	56	53	4,510	5,680	5,120	2,580	3,750	3,190
400	23.2	8.0	1.4	1.4	2.5	0.5	2.5	2.7	2.6	51	59	56	5,440	6,670	6,090	2,970	4,210	3,620
500	26.3	8.0	1.5	1.5	2.5	0.5	2.5	2.8	2.7	55	63	59	6,600	8,050	7,340	3,430	4,880	4,170
630	30.2	8.0	1.6		2.5		2.7	2.9		60	66		8,300	9,150		4,200	5,360	
800	34	8.0	1.6		2.5		2.8	3		64	70		10,150	11,100		4,890	6,190	
1000	38.7	8.0	1.6		2.5		2.9	3.2		68	75		12,310	13,650		5,720	7,160	

16mm<sup>2</sup> to 800mm<sup>2</sup> are normal compact round for single and multi core cable.

800mm<sup>2</sup> and above are compact and round segments for single core cable.

GSWA:Galvanized Steel Wire Amoured/ DSTA:Double Steel Tape Amoured/ UnAr:Unaroured

Only the halogen free cables shall be generally complied with IEC 61034 and 60454.

**HUATONG**  
Cable&Solution  
[www.htcable.cn](http://www.htcable.cn)

## Power Cable Division

Shijawan Industrial Estate, Yanshi City, Henan Province  
Tel. +86 371-55157230 E-mail. [ht@htcable.cn](mailto:ht@htcable.cn)