

Cu/XLPE/SWA (AWA) /PVC

XLPE Insulated,PVC Sheathed,Armored Cables, BS5467

APPLICATION

BASEC
BRITISH APPROVALS SERVICE FOR CABLES



© **Conductor:** IEC 60228 or BS EN 60228 Class 2

© **Insulation:** 90°C cross-linked XLPE insulation,type GP8

-**Identification:** 1 **Core:** Brown or Blue

2 **Cores:** Brown,Blue

3 **Cores:** Brown,Blue,Yellow/Green or Brown, Black, Grey

4 **Cores:** Blue, Brown, Black, Grey

5 **Cores:** Green/Yellow, Blue, Brown, Black,Grey

Above 5 Cores: white color with black number

Other color available upon request.

© **Bedding:** PVC

© **Armour:** Aluminum wires for single core(AWA)

Galvanized steel wires for multi cores(SWA)

© **Sheath:** PVC sheath

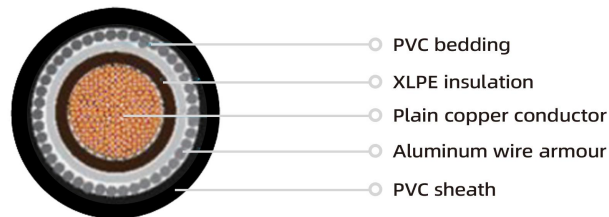
-Black color,other color available upon request.

TECHNICAL CHARACTERISTICS

Working voltage	600/1000V
Minimum bending radius	1.5mm ² to 16mm ² :6×Overall diameter 25mm ² and above: 8×Overall diameter
Operating temperature	-15°C to +90°C

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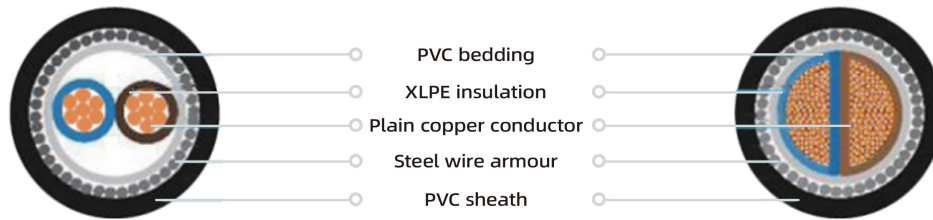
Single-core,aluminum wire armour(AWA)



Nominal cross sectional area	Approx. diameter Under Armour	Approx. overall diameter	Approximate cable weight	Maximum conductor resistance at 20°C	Short circuit rating (1 sec)	Current Rating			Voltage Drop		
						single phase AC or DC flat touching free air	three phase AC trefoil touching free air	three phase AC horizontal spaced by one diameter free air	single phase AC touching free air	three phase AC trefoil touching free air	three phase AC flat
mm²	mm	mm	kg/km	Ohms/km	kA	Amps			mV/A/m		
Single Core											
50	12.5	17.5	800	0.387	7.10	253	222	288	1.00	0.87	0.90
70	14.5	20.2	990	0.268	10.00	322	285	358	0.71	0.62	0.70
95	16.4	22.3	1280	0.193	13.60	389	346	425	0.55	0.47	0.58
120	18.2	24.2	1550	0.153	17.20	449	402	485	0.45	0.39	0.51
150	20.5	27.4	1900	0.124	21.40	516	463	549	0.38	0.33	0.45
185	22.8	30.0	2320	0.0991	26.50	587	529	618	0.33	0.28	0.41
240	25.5	32.8	2930	0.0754	34.30	689	625	715	0.28	0.24	0.37
300	28.2	35.6	3580	0.0601	42.90	792	720	810	0.25	0.21	0.34
400	31.9	40.5	4600	0.047	57.20	899	815	848	0.22	0.195	0.33
500	35.8	44.2	5680	0.0366	71.50	1016	918	923	0.21	0.180	0.31
630	39.9	48.8	7160	0.0283	90.10	1146	1027	992	0.195	0.170	0.29
800	44.8	55.4	9315	0.0221	114.40	1246	1119	1042	0.190	0.165	0.26
1000	48.1	60.6	11490	0.0176	143.00	1345	1214	1110	0.180	0.155	0.24

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Two-core,galvanized steel wire armour(SWA)

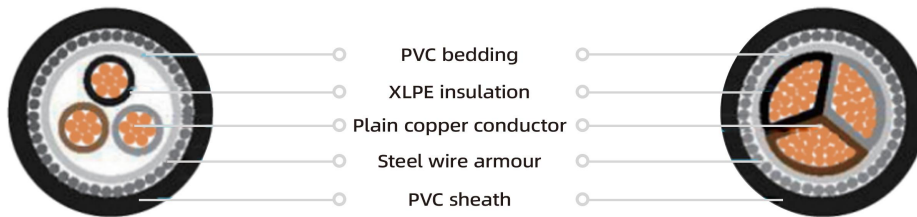


Nominal cross sectional area	Approx. diameter Under Armour	Approx. overall diameter	Approximate cable weight	Maximum conductor resistance at 20°C	Short circuit rating (1 sec)	Current Rating			Voltage Drop	
						single phase AC or DC clipped direct	single phase AC or DC free air	single phase AC or DC in ground or ducting	DC	single phase AC
mm²	mm	mm	kg/km	Ohms/km	kA	Amps			mV/A/m	
Two Core										
1.5	7.6	12.1	320	12.1	0.2	27	29	25	31	31
2.5	8.9	13.6	365	7.41	0.35	36	39	33	19	19
4	10.0	14.7	440	4.61	0.57	49	52	43	12	12
6.0	11.2	15.9	470	3.08	0.86	62	66	53	7.9	7.9
10	13.0	18.0	800	1.83	1.4	85	90	71	4.7	4.7
16	15.0	20.4	900	1.15	2.2	110	115	91	2.9	2.9
25	18.4	24.1	1240	0.727	3.6	146	152	116	1.85	1.90
35	21.1	27.7	1710	0.524	5.00	180	188	139	1.35	1.35
50*	18.2	25.8	1800	0.387	7.10	219	228	164	0.98	1.00
70*	21.0	29.0	2320	0.268	10.00	279	291	203	0.67	0.69
95*	23.4	33.0	3150	0.193	13.60	338	354	239	0.49	0.52
120*	26.0	36.1	3880	0.153	17.20	392	410	271	0.39	0.42
150*	31.8	39.3	4820	0.124	21.40	451	472	306	0.31	0.35
185*	34.2	44.7	5920	0.0991	26.50	515	539	343	0.25	0.29
240*	36.3	49.0	7300	0.0754	34.30	607	636	395	0.195	0.24
300*	44.1	53.5	8770	0.0601	42.90	698	732	446	0.155	0.21
400*	53.3	59.0	10905	0.047	57.20	787	847	504	0.120	0.19

※shaped stranded conductor(class 2)

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Three-core,galvanized steel wire armour(SWA)

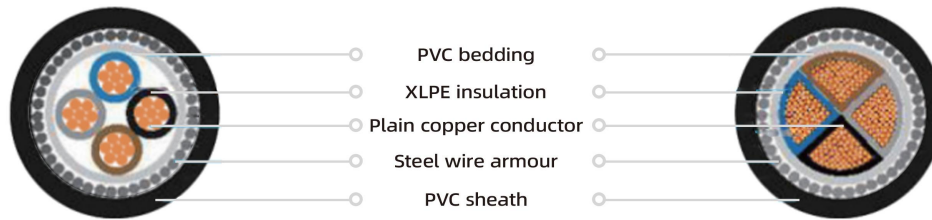


Nominal cross sectional area	Approx. diameter Under Armour	Approx. overall diameter	Approximate cable weight	Maximum conductor resistance at 20°C	Short circuit rating (1 sec)	Current Rating			Voltage Drop
						three phase AC clipped direct	three phase AC free air	three phase AC in ground or ducting	three phase AC
mm²	mm	mm	kg/km	Ohms/km	kA	Amps			mV/A/m
Three Core									
1.5	8.1	12.6	340	12.1	0.2	23	25	21	27
2.5	9.5	14.1	408	7.41	0.35	31	33	28	16
4	10.6	15.3	498	4.61	0.57	42	44	36	10
6.0	11.9	16.6	600	3.08	0.86	53	56	44	6.8
10	13.8	19.5	915	1.83	1.4	73	78	58	4.0
16	16.0	21.6	1130	1.15	2.2	94	99	75	2.5
25	20.1	26.7	1710	0.727	3.6	124	131	96	1.65
35	22.6	29.4	2100	0.524	5.00	154	162	115	1.15
50*	21.8	28.5	2450	0.387	7.10	187	197	135	0.87
70*	24.8	32.2	3120	0.268	10.00	238	251	167	0.60
95*	30.2	37.0	4310	0.193	13.60	289	304	197	0.45
120*	32.1	40.4	5160	0.153	17.20	335	353	223	0.37
150*	37.5	45.5	7160	0.124	21.40	386	406	251	0.30
185*	40.4	49.8	8600	0.0991	26.50	441	463	281	0.26
240*	45.5	55.1	10755	0.0754	34.30	520	546	324	0.21
300*	50.1	60.2	13080	0.0601	42.90	599	628	365	0.185
400*	67.2	66.6	15810	0.047	57.20	673	728	411	0.165

※shaped stranded conductor(class 2)

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Four-core,galvanized steel wire armour(SWA)

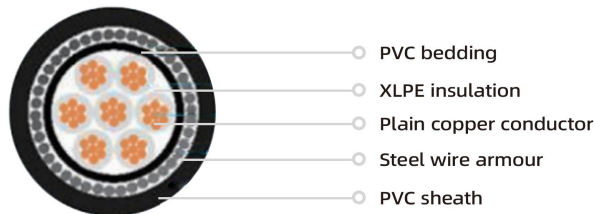


Nominal cross sectional area	Approx. diameter Under Armour	Approx. overall diameter	Approximate cable weight	Maximum conductor resistance at 20°C	Short circuit rating (1 sec)	Current Rating			Voltage Drop
						three phase AC clipped direct	three phase AC free air	three phase AC in ground or ducting	three phase AC
mm²	mm	mm	kg/km	Ohms/km	kA	Amps			mV/A/m
Four Core									
1.5	8.8	13.3	390	12.1	0.2	23	25	21	27
2.5	10.4	15.0	470	7.41	0.35	31	33	28	16
4	11.6	16.4	580	4.61	0.57	42	44	36	10
6.0	13.1	18.7	805	3.08	0.86	53	56	44	6.8
10	15.2	21.1	1090	1.83	1.4	73	78	58	4.0
16	17.7	23.4	1320	1.15	2.2	94	99	75	2.5
25	22.2	28.9	1840	0.727	3.6	124	131	96	1.65
35	25.0	31.9	2310	0.524	5.00	154	162	115	1.15
50*	25.4	32.0	2970	0.387	7.10	187	197	135	0.87
70*	30.4	37.7	4240	0.268	10.00	238	251	167	0.60
95*	35.0	41.7	5400	0.193	13.60	289	304	197	0.45
120*	38.3	47.1	7000	0.153	17.20	335	353	223	0.37
150*	42.9	51.4	8350	0.124	21.40	386	406	251	0.30
185*	48.9	56.6	10130	0.0991	26.50	441	463	281	0.26
240*	55.5	63.0	12840	0.0754	34.30	520	546	324	0.21
300*	61.7	68.8	15530	0.0601	42.90	599	628	365	0.185
400*	69.10	78.1	19950	0.047	57.20	673	728	411	0.165

※shaped stranded conductor(class 2)

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Multi-core,galvanized steel wire armour(SWA)



Nominal cross sectional area	Approx. diameter Under Armour	Approx. overall diameter	Approximate cable weight	Maximum conductor resistance at 20°C	Short circuit rating (1 sec)	Current Rating			Voltage Drop
						single phase AC or DC clipped direct	single phase AC or DC free air	single phase AC or DC in ground or ducting	single phase AC
mm ²	mm	mm	kg/km	Ohms/km	kA	Amps			mV/A/m
Seven Core									
1.5	10.5	15.2	500	12.1	0.2	27	29	25	31
2.5	12.4	17.1	730	7.41	0.35	36	39	33	19
4.0	14.0	19.7	840	4.61	0.57	49	52	43	12
Twelve Core									
1.5	13.7	19.4	820	12.1	0.2	27	29	25	31
2.5	16.4	22.4	1020	7.41	0.35	36	39	33	19
4.0	19.0	25.7	1390	4.61	0.57	49	52	43	12
Nineteen Core									
1.5	16.1	22.2	1080	12.1	0.2	27	29	25	31
2.5	19.8	26.6	1530	7.41	0.35	36	39	33	19
4.0	22.3	29.3	1850	4.61	0.57	49	52	43	12
Twenty seven Core									
1.5	19.8	26.7	1550	12.1	0.2	27	29	25	31
2.5	23.8	30.7	1960	7.41	0.35	36	39	33	19
4.0	26.9	34.4	2350	4.61	0.57	49	52	43	12
Thirty seven Core									
1.5	22.1	29.0	1850	12.1	0.2	27	29	25	31
2.5	26.7	33.8	2450	7.41	0.35	36	39	33	19
4.0	30.7	39.2	2800	4.61	0.57	49	52	43	12

TEMPERATURE RATING FACTORS

Ambient Temperature °C	25	30	35	40	45	50	55	60	65
Rating Factor	1.02	1.00	0.96	0.91	0.87	0.82	0.76	0.71	0.65

CORRECTION FACTORS FOR GROUPING OF CABLES

Installation Method		Number of circuits or multi-core cables							
		2	3	4	5	6	7	8	9
Single layer clipped to a non-metallic surface	Touching	0.85	0.79	0.75	0.73	0.72	0.72	0.71	0.70
Single layer multicore on a perforated metal cabletray,vertical or horizontal	Touching	0.86	0.81	0.77	0.75	0.74	0.73	0.73	0.72

※Note: Ambient Temperature 30°C.Ground ambient temperature 20°C.Conductor Operation Temperature 90°C

If current rating and buildings is required reference should be made to BS7671 (IEE Wiring Regs)

Complied with the HongKong EMSD COP,and the rating is the average of the conductor cross-sectional area and installation method, and the overall error is within ±5%