

BS 7835 Aluminium AWA/SWA PVC 3.8/6.6kV Cable



APPLICATION

Armoured power distribution cables with aluminium conductors for external and direct burial applications in power networks.

CHARACTERISTICS

Voltage Rating U_0/U (Um)

3.8/6.6 (7.2)kV

Test Voltage (AC)

12.5 KV

Temperature Rating

Maximum operating temperature: 90°C

Maximum short circuit temperature: 250°C

Minimum Bending Radius

Single core: 15 x overall diameter

Multi core: 12 x overall diameter

STANDARDS

IEC 60502-2, EN 60228

Low Smoke Zero Halogen to: IEC 60754-1/2, IEC 61034-2

Flame Retardant: IEC 60332-3-24 Cat C, IEC 60332-1-2

UV Resistant: ISO 4892-3

Abrasion and Tear Resistant: EN 60229-4.1

Impact rated to: AG2 EN 60364-5.51

THE CABLE TEST

We have world-class testing facility, and made rigorous testing regime, every meter of cable before leaving the factory must go through strict testing, testing qualified products will be shipped to customers, effectively ensure product quality and meet customer requirements.

SUSTAINABILITY COMMITMENT

Guowang Cable actively implements the "carbon reduction" goal, strives to promote the green's low-carbon transformation, strengthens energy-saving and emission reduction technology innovation, and promotes the company's healthy and sustainable development.

CONSTRUCTION

Conductor

Class 2 Compacted Aluminium conductor

Conductor Screen

Semi-conductive XLPE
(Cross-Linked Polyethylene)

Insulation

XLPE (Cross-Linked Polyethylene)

Insulation Screen

Concentric copper wires and copper tape

Inner Sheath

Concentric copper wires and copper tape

Armour

Single core: AWA (Aluminium Wire Armoured)

Multi-core: SWA (Galvanised Steel Wire)

Sheath

PVC (Polyvinyl Chloride)

Sheath Colour

● Black

DIMENSIONS

NO. OF CORES	NOMINAL CROSS SECTIONAL AREA	NOMINAL OVERALL DIAMETER	NOMINAL WEIGHT
	mm ²	mm	kg/km
1	35	24.40	823
1	50	25.60	894
1	70	27.70	1034
1	95	29.60	1179
1	120	30.80	1285
1	150	32.50	1508
1	185	35.20	1773
1	240	37.90	2038
1	300	40.80	2357
1	400	45.00	2893
1	500	49.80	3553
1	630	56.20	4164
3	50	49	3750
3	70	54	4500
3	95	57	5000
3	120	60	5500
3	150	64	6000
3	185	68	6750
3	240	76	8750
3	300	82	10000
3	400	90	12000
3	500	97	14000

ELECTRICAL CHARACTERISTICS

Single Core Cable

NO. OF CORES	NOMINAL CROSS SECTIONAL AREA	MAXIMUM RESISTANCE OF CONDUCTOR AT 20°C	OPERATING INDUCTANCE mH/KM		OPERATION CAPACITY	CONTINUOUS CURRENT RATING Amps			
						In Ground		In Air	
						mm2	ohms/km	Flat	Trefoil
1	35	0.868	0.748	0.401	0.266	-	-	-	-
1	50	0.641	0.719	0.381	0.297	186	178	2233	188
1	70	0.443	0.684	0.357	0.339	234	217	280	235
1	95	0.320	0.659	0.342	0.381	287	259	344	286
1	120	0.253	0.636	0.327	0.416	338	298	392	329
1	150	0.206	0.620	0.319	0.454	388	333	441	376
1	185	0.164	0.602	0.310	0.495	449	377	510	428
1	240	0.125	0.579	0.300	0.556	530	438	587	508
1	300	0.100	0.562	0.295	0.617	605	495	682	586
1	400	0.0788	0.543	0.290	0.681	678.00	562.000	781	676
1	500	0.0605	0.525	0.283	0.758	762	633	883	772
1	630	0.0469	0.507	0.276	0.853	858.00	712	1007	882

Multi Core Cable

NO. OF CORES	NOMINAL CROSS SECTIONAL AREA	MAXIMUM RESISTANCE OF CONDUCTOR AT 20°C	OPERATING INDUCTANCE	OPERATING CAPACITANCE	CONTINUOUS CURRENT RATING Amps	
					W/Km	ohms/km
	mm2	ohms/km	mH/KM	uF/km		
3	50	0.641	0.33	0.31	162	160
3	70	0.443	0.31	0.37	199	199
3	95	0.320	0.30	0.41	238	242
3	120	0.253	0.29	0.44	271	280
3	150	0.206	0.28	0.49	304	318
3	185	0.164	0.27	0.53	345	365
3	240	0.125	0.27	0.57	401	431
3	300	0.100	0.26	0.58	516	649
3	400	0.0778	0.26	0.61	572	737
3	500	0.0605	0.25	0.65	638	835

The information contained within this datasheet is for guidance only and is subject to change without notice or liability. All the information is provided in good faith and is believed to be correct at the time of publication. When selecting cable accessories, please note that actual cable dimensions may vary due to manufacturing tolerances.