

BS5467 Copper Conductor Single Core AWA 0.6/1kV

BS5467, IEC 60502-1 IEC60332-1-2



Application

Single core cable with aluminium wire armour AWA (to prevent induced current in the armour).
Designed for use in internal or external power networks.
Suitable for direct burial.

Construction

Conductor	Class 2 stranded copper conductor according to BS EN 60228 (previously BS 6360)
Insulation	XLPE Cross-Linked Polyethylene
Bedding	PVC Polyvinyl Chloride
Armour	AWA (Aluminium wire armour)
Sheath	PVC Polyvinyl Chloride / Black
Voltage Rating (U ₀ /U)	600/1000V
Temperature Rating Fixed:	-25°C to +90°C
Minimum Bending Radius	25mm ² and above - Fixed: 8 x overall diameter
Core Identification	core: Brown or Blue

Premier Part No	No of Cores	Nominal Cross Section mm ²	Nominal Insulation Thickness mm ²	Nominal Diameter Under Armour mm ²	Nominal Diameter Overall mm ²	Nominal Weight kg/km	CW/BW Glands metric
21001X050AWA	1	50	1	12.7	17.5	800	20
21001X070AWA	1	70	1.1	14.7	20.2	960	25
21001X095AWA	1	95	1.1	16.6	22.3	1240	25
21001X0120AWA	1	120	1.2	18.5	24.2	1510	25
21001X0150AWA	1	150	1.4	20.8	27.4	1900	32
21001X0185AWA	1	185	1.6	23.2	30.0	2320	32
21001X0240AWA	1	240	1.7	26.0	32.8	2930	32
21001X0300AWA	1	300	1.8	28.6	35.6	3580	40
21001X0400AWA	1	400	2.0	32.4	40.5	4600	40
21001X0500AWA	1	500	2.2	36.0	44.2	5770	50s
21001X0630AWA	1	630	2.4	40.0	48.8	7250	50
21001X0800AWA	1	800	2.6	45.6	55.4	9381	63s
21001X01000AWA	1	1000	2.8	50.6	60.6	11540	63s

Class 2 Stranded Copper Conductors for Single & Multi-Core Cables

Nominal Cross Sectional Area mm ²	Min. No. of Wires in Conductor			Max. Resistance of Conductor at 20°C Ohms /km
	Circular	Circular Compacted	Shaped	
50	19	6	6	0.387
70	19	12	12	0.268
95	19	15	15	0.193
120	37	18	18	0.153
150	37	18	18	0.124
185	37	30	30	0.0991
240	37	34	34	0.0754
300	61	34	34	0.0601
400	61	53	53	0.047
500	61	53	53	
630	91	53	53	0.0283
800	91	53		0.0221
1000	91	53		0.0176

In accordance with BS EN 60228

Current Carrying Capacity

Nominal Cross Sectional Area mm ²	Clipped Direct Touching		Free Air or Perforated Tray			Spaced/ Free Air or Perforated Tray		
	Single Phase	Three Phase	2 Cables	Three Phase	Three Phase	2 Cables DC	2 Cables AC	3 or 4 Cables
	2 Cables Ac or DC flat/amps	3 or 4 Cables AC/flat/amps	Single Phase AC/DC/flat/amps	3 Cables AC/flat/amps	3 Cables AC/ Trefoil/amps	Horizontal/Vertical amps	Horizontal/Vertical Single Phase	Horizontal/Vertical Three Phase AC
50	237	220	253	232	222	284/270	282/266	288/266
70	303	227	322	293	285	356/349	357/337	358/331
95	367	333	389	352	346	446/426	436/412	425/393
120	425	383	449	405	402	519/497	504/477	485/449
150	488	437	516	462	463	600/575	566/539	549/510
185	557	496	587	524	529	688/660	643/614	618/574
240	656	579	689	612	625	815/782	749/714	715/666
300	755	662	792	700	720	943/906	842/805	810/755
400	853	717	899	767	815	1137/1094	929/889	848/797
500	962	791	1016	851	918	1314/1266	1032/989	923/871
630	1082	861	1146	935	1027	1528/1474	1139/1092	992/940
800	1170	904	1246	987	1119	1809/1744	1204/1155	1042/978
1000	1261	961	1345	1055	1214	2100/2026	1289/1238	1110/1041

Air ambient temperature 30°C

Ground ambient temperature 20°C

Conductor operating temperature 90°C

Notes.

1. Where a conductor operates at a temperature exceeding 70°C it must be ascertained that the equipment connected to the conductor is suitable for the conductor operating temperature (see reg. 512.1.2 of the 17th edition of the IEE wiring regs.)

2. Where cables in this table are connected to equipment or accessories designed to operate at a temperature not exceeding 70°C, the current ratings given in the equivalent table for 70°C thermoplastic insulated cable (Table 4D4A) must be used (see regs 523.1 of the 17th edition of the IEE wiring regs.)

Information provided in accordance with table 4E4A of the 17th Edition of IEE wiring regs.

Voltage Drop

Nominal Cross sectional Area mm ²	Two Core Cable DC	Clipped Direct, on Tray or in Free Air														
		Touching			Spaced			Trefoil Touching			Flat Touching			Flat Spaced		
		r	x	z	r	x	z	r	x	z	r	x	z	r	x	z
50	0.98	0.990	0.210	1.000	0.980	0.290	1.000	0.860	0.180	0.870	0.840	0.250	0.880	0.840	0.330	0.900
70	0.67	0.680	0.200	0.710	0.690	0.290	0.750	0.590	0.170	0.620	0.600	0.250	0.650	0.620	0.320	0.700
95	0.49	0.510	0.195	0.550	0.530	0.280	0.600	0.440	0.170	0.470	0.460	0.240	0.520	0.490	0.310	0.580
120	0.39	0.410	0.190	0.450	0.430	0.270	0.510	0.350	0.165	0.390	0.380	0.240	0.440	0.410	0.300	0.510
150	0.31	0.330	0.185	0.380	0.360	0.270	0.450	0.290	0.160	0.330	0.310	0.230	0.390	0.340	0.290	0.450
185	0.25	0.270	0.185	0.330	0.300	0.260	0.400	0.230	0.160	0.280	0.260	0.230	0.340	0.290	0.290	0.410
240	0.195	0.210	0.180	0.280	0.240	0.260	0.350	0.180	0.155	0.240	0.210	0.220	0.300	0.240	0.280	0.370
300	0.155	0.170	0.175	0.250	0.195	0.250	0.320	0.145	0.150	0.210	0.170	0.220	0.280	0.200	0.270	0.340
400	0.115	0.145	0.170	0.220	0.180	0.240	0.300	0.125	0.150	0.185	0.160	0.210	0.270	0.200	0.270	0.330
500	0.093	0.125	0.170	0.210	0.165	0.240	0.290	0.105	0.145	0.180	0.145	0.200	0.250	0.190	0.240	0.310
630	0.073	0.105	0.165	0.195	0.150	0.230	0.270	0.092	0.145	0.170	0.135	0.195	0.240	0.175	0.230	0.290
800	0.056	0.090	0.160	0.910	0.145	0.230	0.270	0.086	0.140	0.165	0.130	0.180	0.230	0.175	0.195	0.260
1000	0.045	0.092	0.155	0.180	0.140	0.210	0.250	0.080	0.135	0.155	0.125	0.170	0.210	0.165	0.180	0.240

Conductor operating temperature 90°C

r = resistive component

x = reactive component

z = impedance value

The above table is in accordance with Table 4E4B of the 17th edition of the IEE wiring regs.

For cable having conductors of 16mm² or less cross sectional area their inductances can be ignored and (mV/A/m)r values only are tabulated.

For cable having conductors greater than 16mm² cross sectional area the impedance values are given as (mV/A/m)z together with the resistive component (mV/A/m)r and the reactive component (mV/A/m)x.



The information contained within this data sheet is for guidance only.
Cable and gland sizes are nominal and may vary according to different manufacturer's tolerances.
Every possible effort is made to ensure that the Information contained in this data sheet is correct.
However, we reserve the right to change the information or specification at any time in the light of technical developments or revisions.
References to or extracts from British Standards, current IEE regulations or other regulatory bodies should be verified with these organisations.