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British Standard BS6485



PE/XLPE/PVC Covered Line Wire Conductor

APPLICATION

Used primarily for, but not limited to, overhead secondary distribution lines. Installed on insulators, otherwise treated as a bare conductor.

STANDARD

ANSI/ICEA S-70-547 BS6485

CONSTRUCTION

Aluminum alloy 1350-H19, 6201, or ACSR conductors, Copper, Copper Alloy, concentrically stranded. Covered with polyethylene or crosslinked polyethylene (XLP), PVC.

ALL ALUMINIUM CONDUCTORS (AAC) TYPE 8 PVC INSULATION (AAC/PVC) BS215.1- BS6485

Code Name	Nominal	Calculated	Wires		Approx.	Nominal	Max.D.C.	Alum. Weight	PVC Insulated Overall	PVC Insulated Total	Packing Length
	Area	Area	No.	Dia.	Overall Dia.	Load	Resistance at 20P				
	mm ²	mm ²		mm	mm	kN	Q/km	kg/km	mm	kg/km	m±5%
Midge	22	23.33	7	2.06	6.2	3.99	1.227	64	8.4	106	3000
Aphis	25	26.44	3	3.35	7.2	4.11	1.081	73	9.2	133	3000
Gnat	25	26.8	7	2.21	6.6	4.59	1.066	73	8.8	116	3000
Weevil	30	31.6	3	3.66	7.9	4.86	0.9082	86	10.1	158	3000
Mosquito	35	37	7	2.59	7.8	6.03	0.7762	101	10.0	158	3000
Ladybird	40	42.8	7	2.79	8.4	6.87	0.6689	117	10.6	177	3000
Ant	50	52.83	7	3.1	9.3	8.28	0.5419	145	11.5	212	3000
Fly	60	63.55	7	3.4	10.2	9.9	0.4505	174	12.4	249	2500
Blueeottle	70	73.55	7	3.66	11.0	11.34	0.3881	202	13.2	285	2500
Earwing	75	78.5	7	3.78	11.4	11.94	0.3644	215	13.6	302	2000
Grasshopper	80	84.1	7	3.91	11.7	12.78	0.3406	230	13.9	319	2000
Clegg	90	95.6	7	4.17	12.5	14.53	0.2994	262	14.7	359	2000
Wasp	100	108	7	4.39	13.21	16.0	0.2702	290	15.4	393	3000
Beetle	100	106.6	19	2.67	13.4	17.42	0.2704	293	15.6	387	3000
Bee	125	132	7	4.9	14.7	19.94	0.2169	361	16.5	482	2500
Cricket	150	157.9	7	5.36	16.1	23.85	0.1813	432	18.3	587	2000
Hornet	150	157.6	19	3.25	16.3	27.7	0.1825	434	18.5	638	3000
Caterpillar	175	186	19	3.53	17.7	28.63	0.1547	512	19.9	646	2500
Chafer	200	213.2	19	3.78	18.9	32.4	0.1349	587	21.1	733	2000
Spider	225	236.9	19	3.99	20.0	36.01	0.1211	652	22.2	809	2000

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Cockroach	250	265.7	19	4.22	21.1	40.4	0.1083	731	23.3	900	3000
Butterfly	300	322.7	19	4.65	23.3	48.7	0.08916	888	25.5	1082	3000
Moth	350	373.2	19	5.0	25.0	56.37	0.07711	1027	27.2	1241	2500
Drone	350	373.3	37	3.58	25.1	57.45	0.07741	1029	27.3	1222	2500
Locust	400	428.5	19	5.36	26.8	64.73	0.0671	1179	29	1416	2000
Centipede	400	415.2	37	3.78	26.5	63.1	0.06944	1145	28.7	1363	2000
Maybug	450	486.9	37	4.09	28.6	74.01	0.05931	1342	30.8	1573	2000
Scorpion	500	529.5	37	4.27	29.9	79.98	0.05441	1460	32.1	1706	1500
Cicada	600	628.6	37	4.65	32.6	94.95	0.04586	1733	34.5	2010	1500
Tarantula	750	794.8	37	5.23	36.6	120.1	0.03627	2191	38.5	2519	1000

ALLALUMINIUM CONDUCTORS (AAC) TYPE 8 PVC INSULATION (AAC/PVC) DIN48201.5- BS6485

Nominal Area	Calculated Area	Wires		Approx. Overall Dia.	Nominal Breaking Load	Max. D.C. Resistance at 20T	Alum. Weight	PVC Insulated Overall	PVC Insulated Total	Packing Length
		No.	Dia.							
mm'	mm'		mm	mm	kN	Q/km	kg/km	mm	kg/km	m±5%
16	15.89	7	1.7	5.1	2.84	1.802	44	7.3	77	3000
25	24.25	7	2.1	6.3	4.17	1.181	67	8.5	108	3000
35	34.36	7	2.5	7.5	5.78	0.8317	94	9.7	143	3000
50	49.48	7	3.0	9.0	7.94	0.5787	135	11.2	196	3000
50	48.35	19	1.8	9.0	8.45	0.5950	133	11.2	187	3000
70	65.81	19	2.1	10.5	11.32	0.4371	181	12.7	243	2000
95	93.27	19	2.5	12.5	15.68	0.3085	256	14.7	333	2000
120	117.0	19	2.8	14.0	18.78	0.2459	322	16.2	410	2000
150	147.1	37	2.25	15.7	25.30	0.1960	406	17.9	498	2000
185	181.6	37	2.5	17.5	30.54	0.1587	501	19.7	606	2000
240	242.5	61	2.25	20.2	39.51	0.1191	670	22.4	787	2000
300	299.4	61	2.5	22.5	47.70	0.0965	827	24.7	959	2000
400	400.1	61	2.89	26.0	60.86	0.0722	1105	28.2	1262	2000
500	499.8	61	3.23	29.1	74.67	0.0578	1381	31.3	1561	2000

BS6485

Annex B (normative)

Particulars of PVC-covered conductors

Table B.1 — PVC-covered stranded hard-drawn copper conductors (Based on BS 7884)

1	2	3	4	5	6	7	8	9
Nominal cross-sectional area mm ²	Stranding and wire diameter mm	Approximate overall diameter of bare conductor mm	Maximum resistance per kilometre at 20 °C Ω	Approximate breaking load kN	Approximate overall diameter of covered conductor		Approximate mass per kilometre of covered conductor	
					Type 8 mm	Type 16 mm	Type 8 kg	Type 16 kg
14	7/1.60	4.80	1.303	5.744	6.8	8.4	160	190
16	3/2.65	5.70	1.106	6.590	7.7	9.3	180	220
32	3/3.75	8.06	0.5520	12.71	10.5	12.1	350	390
35	7/2.50	7.50	0.5337	14.097	9.9	11.5	360	400
70	7/3.55	10.65	0.2646	26.88	13.5	14.7	690	750
100	7/4.30	12.90	0.1810	37.64	15.7	16.9	990	1 060

Table B.4 — PVC-covered aluminium conductors, steel reinforced (Based on BS 215-2)

1	2	3	4	5	6	7	8
Nominal cross-sectional area mm ²	Stranding and wire diameter		Approximate overall diameter of bare conductor mm	Calculated resistance per kilometre at 20 °C Ω	Approximate breaking load kN	Approximate overall diameter of covered conductor	Approximate mass per kilometre of covered conductor
	Aluminium mm	Steel mm				Type 16 mm	Type 16 kg
25	6/2.36	1/2.36	7.08	1.093	9.61	10.7	190
50	6/3.35	1/3.35	10.05	0.5426	18.35	14.1	330
100	6/4.72	7/1.57	14.15	0.2733	32.70	18.2	550
150	30/2.59	7/2.59	18.13	0.1828	69.20	22.2	920
150	18/3.35	1/3.35	16.75	0.1815	35.70	20.8	680
175	30/2.79	7/2.79	19.53	0.1576	79.80	23.6	1 050
175	18/3.61	1/3.61	18.05	0.1563	41.10	22.1	780
200	30/3.00	7/3.00	21.00	0.1363	92.25	25.0	1 190
200	18/3.86	1/3.86	19.30	0.1367	46.55	23.3	870

Table B.5 — PVC-covered aluminium alloy stranded conductors (Based on BS 3242)

1	2	3	4	5	6	7
Nominal cross-sectional area mm ²	Stranding and wire diameter mm	Approximate overall diameter of bare conductor mm	Calculated resistance per kilometre at 20 °C Ω	Approximate breaking load kN	Approximate overall diameter of covered conductor	Approximate mass per kilometre of covered conductor
					Type 16 mm	Type 16 kg
25	7/2.34	7.02	1.094	8.44	10.6	170
50	7/3.30	9.90	0.5498	16.80	13.9	280
100	7/4.65	13.95	0.2769	33.30	18.0	470
150	19/3.48	17.40	0.1830	50.65	21.4	680
175	19/3.76	18.80	0.1568	59.10	22.8	780

Table B.2 — PVC-covered stranded hard-drawn copper alloy conductors (Based on BS 7884)

1	2	3	4	5	6	7
Nominal cross-sectional area mm ²	Stranding and wire diameter mm	Approximate overall diameter of bare conductor mm	Maximum resistance per kilometre at 20 °C Ω	Approximate breaking load kN	Approximate overall diameter of covered conductor	Approximate mass per kilometre of covered conductor
					Type 16 mm	Type 16 kg
12	3/2.30	4.95	1.780	7.20	8.2	170
22	7/2.00	6.00	1.011	12.94	9.6	270
38	7/2.60	7.80	0.5983	21.69	11.8	430
75	7/3.70	11.10	0.2954	40.23	15.1	810
125	19/2.90	14.50	0.1784	68.75	18.5	1 310
150	19/3.20	16.00	0.1465	82.16	20.0	1 570



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Table B.3 — PVC-covered aluminium stranded conductors (Based on BS 215-1)

1	2	3	4	5	6	7
Nominal cross-sectional area mm ²	Stranding and wire diameter mm	Approximate overall diameter of bare conductor mm	Calculated resistance per kilometre at 20 °C Ω	Approximate breaking load kN	Approximate overall diameter of covered conductor	Approximate mass per kilometre of covered conductor
					Type 8 mm	Type 8 kg
22	7/2.06	6.18	1.227	3.99	8.2	100
50	7/3.10	9.30	0.5419	8.28	11.7	200
100	7/4.39	13.17	0.2702	16.00	16.0	360
200	19/3.78	18.90	0.1349	32.40	21.7	690