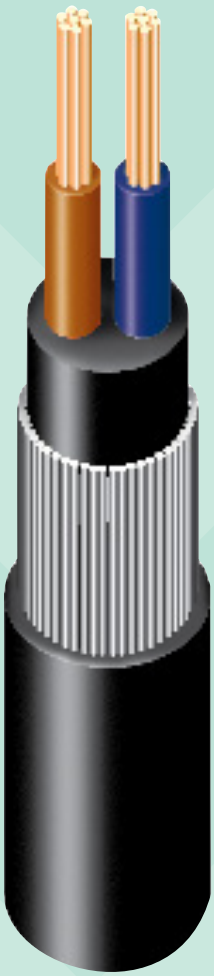
Standard Power Cables
Low Voltage (600/1000 V)

BS5467



Cable Approvals

> Cable approved to BS5467

Conductor

> Plain annealed copper stranded (Class 2) conductor for ease of handling

Insulation

> 90°C cross-linked XLPE insulation complying with BS EN 60228 Class 2

Core Identification

o o blue-brown

o o o brown-black-grey

o o o o blue-brown-black-grey

o o o o o blue-brown-black-grey-green/yellow

7 - 48 cores white with printed numbers

Bedding

> Extruded bedding compound

Outer Sheath

> PVC Sheath

Armour

> Single layer of galvanised steel wires

> Aluminium wires on single core

Temperature Range
-15 to +90°C

Bending Radius
Circular conductor r = 6D
Shaped conductor r = 8D

Mechanical Impact
Very Good

Fire Performance
BS EN 60332-1-2

Flexibilty
Rigid

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BS5467

Cable Details

Standard current ratings from ERA 69-30pt V	
Ambient temperature (air)	25°C
Ground Temperature	15°C
Depth of burial	0.5m
Thermal resistance of soil	1.2°C m/w
Armour bonded and earthed at both ends	Yes

NOTE: If current rating in buildings is required reference should be made to BS7671 (IEE Wiring Regs). Alternatively rating are as BS6724 cables

Nominal cross sectional area	Approx. overall dia.	Approx. Dia. Under Armour	Nominal dia. of armour wires	Approx. cable weight	Max. conductor resistance @ 20°C	Conductor short circuit rating (1 sec)	Current rating				Volt drop single phase AC touching	Volt drop Three phase AC trefoil
							Single phase AC in air horizontal spaced	Three phase in ground trefoil formation	Three phase in Trefoil Duct	Three phase in air trefoil formation		
mm²	mm	mm	mm	kg/km	Ohms/km	kA	Amps	Amps	Amps		mV/A/m	mV/A/m
Single Core												
150	25.8	19.5	1.6	1950	0.1240	21.4	510	431	396	483	0.38	0.33
185	28.0	21.6	1.6	2350	0.0991	26.4	574	485	437	555	0.33	0.28
240	30.5	23.9	1.6	3000	0.0754	34.3	661	558	489	654	0.28	0.24
300	33.5	26.5	1.6	3675	0.0601	42.9	739	623	534	745	0.25	0.21
400	37.8	30.4	2.0	4700	0.0470	57.2	820	691	567	851	0.22	0.195
500	41.1	33.9	2.0	5925	0.0366	71.5	910	765	615	963	0.21	0.18
630	45.3	38.2	2.0	7450	0.0283	90.1	1001	841	664	1084	0.195	0.17
800	54.8	43.7	2.5	9400	0.0221	114	1055	888	692	1178	0.19	0.165
1000	58.4	48.5	2.5	11400	0.0176	143	1115	942	735	1278	0.18	0.155

Single phase AC Volt drop- If the cable spacing is larger than 1 cable diameter then the volt drop will be larger than those specified.
If current rating in buildings is required reference should be made to BS7671 (IET Wiring Regs). Alternatively rating are as BS6724 cables.

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Cable Details

Nominal cross sectional area	Approx. overall diameter	Approx. diameter under armour	Nominal diameter of armour wires	Approx. cable weight	Maximum conductor resistance @ 20°C	Conductor short circuit rating (1 sec)	Armour short circuit rating (1sec)	Current rating			Volt drop single phase AC touching
								Direct in ground	In duct	In air	
mm²	mm	mm	mm	kg/km	Ohms/km		kA	Amps	Amps	Amps	mV/A/m
Two Core											
1.5	11.5	7.1	0.9	320	12.1	0.20	0.65	38	31	31	31
2.5	12.9	8.3	0.9	365	7.41	0.35	0.75	49	41	41	19
4	14.4	9.8	0.9	440	4.61	0.57	0.85	65	53	55	12
6	15.6	11	0.9	470	3.08	0.86	1.0	81	67	70	7.9
10	16.8	12	0.9	810	1.83	1.4	1.2	109	89	95	4.7
16	19.6	14.1	1.25	1025	1.15	2.2	1.9	141	115	126	2.9
25*	20.9	15.6	1.25	1000	0.727	3.6	1.9	183	148	164	1.9
35*	23	17	1.6	1400	0.524	5.0	2.8	219	178	202	1.35
50*	25.3	19.3	1.6	1750	0.387	7.1	3.1	259	211	244	1
70*	28.5	22.3	1.6	2300	0.268	10.0	3.7	317	260	306	0.69
95*	32.3	25.1	2	3100	0.193	13.6	5.2	381	313	378	0.52
120*	34.8	27.4	2	3700	0.153	17.2	5.8	433	357	437	0.42
150*	37.9	30.3	2	4400	0.124	21.4	6.4	485	401	499	0.35
185*	42.5	33.5	2.5	5700	0.0991	26.5	8.8	547	455	576	0.29
240*	46.5	37.3	2.5	7100	0.0754	34.3	9.9	632	527	680	0.24
300*	50.3	40.9	2.5	8500	0.0601	42.9	10.9	708	592	775	0.21
400*	54.7	45.1	2.5	10700	0.047	57.2	12.2	799	669	892	0.19
Seven Core											
1.5	15.8	10.7	0.9	500	12.1	0.20	1.0	38	31	31	31
2.5	17.6	12.5	0.9	730	7.41	0.35	1.1	49	41	41	19
4	20.1	14.1	1.25	840	4.61	0.57	1.8	65	53	55	12
Twelve Core											
1.5	20	14	1.25	820	12.1	0.20	1.8	38	31	31	31
2.5	22.8	16.6	1.25	1020	7.41	0.35	0.2	49	41	41	19
4	26.1	19.2	1.6	1390	4.61	0.57	3.1	65	53	-	12
Ninteen Core											
1.5	22.6	16.4	1.25	1080	12.1	0.20	2.1	38	31	31	31
2.5	27	19.9	1.6	1530	7.41	0.35	3.2	49	41	41	19
4	29.7	22.6	1.6	1850	4.61	0.57	3.7	65	53	55	12
Twenty-Seven Core											
1.5	27.3	20.0	1.6	1850	12.1	0.20	3.8	38	31	31	31
2.5	31.3	24	1.6	1960	7.41	0.35	3.8	49	41	41	19
4	34.8	27.3	1.6	2420	4.61	0.57	4.4	65	53	55	12
Thirty Seven Core											
1.5	29.9	22.5	1.6	1850	12.1	0.20	3.8	38	31	31	31
2.5	34.3	27	1.6	2440	7.41	0.35	4.3	49	41	41	19
4	39.6	31.1	2	3320	4.61	0.57	6.4	65	53	55	12
Forty Eight Core											
1.5	33.5	26	1.6	2900	12.1	0.20	4.1	38	31	31	31
2.5	40.1	31.4	2	3550	7.41	0.35	6.4	49	41	41	19
4	44.7	35.8	2	4850	4.61	0.57	7.2	65	53	55	-

* Shaped conductors, all others are Circular conductors

For auxilary cables having greater than 4 loaded cores apply derating as given in table 4B5 of IET wiring regulations.

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PRYSMIAN CABLES & SYSTEMS

Cable Details

Nominal cross sectional area	Approx. overall diameter	Approx. diameter under armour	Nominal diameter of armour wires	Approx. cable weight	Maximum conductor resistance @ 20°C	Conductor short circuit rating (1 sec)	Armour short circuit rating (1sec)	Current rating			Volt drop Three phase AC
								Direct in ground	In duct	In air	
mm²	mm	mm	mm	kg/km	Ohms/km	kA	kA	Amps	Amps	Amps	mV/A/m
Three Core											
1.5	12	8	0.9	300	12.1	0.20	0.74	32	26	26	27
2.5	13	9	0.9	350	7.41	0.35	0.88	42	34	35	16
4	15	10	0.9	450	4.61	0.57	0.97	55	45	47	10
6	16	11	0.9	550	3.08	0.86	1.0	69	56	59	6.8
10	18	13	1.25	800	1.83	1.4	1.8	92	75	82	4
16	21	15	1.25	1100	1.15	2.2	2.0	119	96	107	2.5
25	26	19	1.6	1700	0.727	3.6	2.8	152	124	140	1.65
35	28	22	1.6	2100	0.524	5.0	3.0	182	149	172	1.15
50*	30	23	1.6	2400	0.387	7.1	3.6	217	177	209	0.87
70*	34	26	1.6	3100	0.268	10.0	4.1	266	218	263	0.6
95*	36	29	2	4100	0.193	13.6	5.9	319	263	324	0.45
120*	40	32	2	5000	0.153	17.2	6.5	363	300	376	0.37
150*	45	36	2.5	6300	0.124	21.4	9.3	406	338	430	0.3
185*	49	40	2.5	7600	0.00991	26.5	10.2	458	382	495	0.26
240*	54	44	2.5	9600	0.0754	34.3	11.6	529	442	584	0.21
300*	59	49	2.5	11600	0.0601	42.9	12.4	592	496	666	0.185
400*	65	55	2.5	14400	0.047	57.2	14.1	667	570	766	0.165
Four Core											
1.5	12.9	8.3	0.9	400	12.1	0.20	0.78	32	26	26	27
2.5	14.4	9.8	0.9	470	7.41	0.35	0.92	42	34	35	16
4	15.7	11.1	0.9	580	4.61	0.57	1.0	55	45	47	10
6	17.9	12.4	1.25	810	3.08	0.86	1.6	69	56	59	6.8
10	19.7	14.2	1.25	10875	1.83	1.4	1.9	92	75	82	4
16	22.4	16.7	1.25	1450	1.15	2.2	2.2	119	96	107	2.5
25	27.3	20.7	1.6	2060	0.727	3.6	3.2	152	124	140	1.65
35	30.2	23.4	1.6	2550	0.524	5.0	3.7	182	149	172	1.15
50*	32.2	26	1.6	2875	0.387	7.1	4.1	217	177	209	0.87
70*	38	30.6	2	4250	0.268	10.0	6.1	266	218	263	0.6
95*	41.7	34.1	2	5475	0.193	13.6	6.8	319	263	324	0.45
120*	45.4	37.6	2.5	7175	0.153	17.2	9.5	363	300	376	0.37
150*	50.6	41.6	2.5	8475	0.124	21.4	10.6	406	338	430	0.3
185*	55.3	46	2.5	10350	0.0991	26.5	11.8	458	382	495	0.26
240*	61.2	51.7	2.5	13000	0.0754	34.3	13.4	529	442	584	0.21
300*	66.8	56.9	2.5	15750	0.0601	42.9	14.8	592	496	666	0.185
400*	75.4	64	3.15	20400	0.047	57.2	20.9	667	570	766	0.165
Five Core											
1.5	14.9	9.8	0.9	400	12.1	0.20	0.88	32	26	26	27
2.5	16.5	11.4	0.9	490	7.41	0.35	1.0	42	34	35	16
4	18.9	12.9	1.25	715	4.61	0.57	1.1	55	45	47	10
6	20.4	14.4	1.25	900	3.08	0.86	1.8	69	56	59	6.8
10	23.2	17	1.25	1200	1.83	1.4	2.1	92	75	82	4
16	27.3	20.2	1.6	1650	1.15	2.2	3.3	119	96	107	2.5
25	30	24	1.6	2200	0.727	3.6	4.0	152	124	140	1.65
35	32.9	26.7	1.6	2700	0.524	5.0	4.6	182	149	172	1.15

* Shaped conductors, all others are Circular conductors

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Resistance & Area of Armour

Nominal cross sectional area	Conductor Resistance at 20°C	Nominal Area of Armour and Maximum Armour Resistance at 20°C									
		Single Core*		Two Core		Three Core		Four Core		Five Core	
mm²	Ohms/km	mm²	Ohms/km	mm²	Ohms/km	mm²	Ohms/km	mm²	Ohms/km	mm²	Ohms/km
1.5	12.1	-	-	15	10.2	16	9.5	17	8.8	19	8.2
2.5	7.41	-	-	17	8.8	19	8.2	20	7.7	22	6.8
4	4.61	-	-	19	7.9	20	7.5	22	6.8	25	6.2
6	3.08	-	-	22	7.0	23	6.7	36	4.3	40	3.9
10	1.83	-	-	26	6.0	39	4.0	42	3.7	46	3.4
16	1.15	-	-	42	3.7	45	3.5	50	3.1	72	2.2
25	0.727	-	-	42	3.7	62	2.5	70	2.3	88	1.8
35	0.524	-	-	60	2.6	68	2.3	78	2.0	100	1.6
50	0.387	-	-	68	2.3	78	2.0	90	1.8	-	-
70	0.268	-	-	80	2.0	90	1.8	131	1.2	-	-
95	0.193	-	-	113	1.4	128	1.3	147	1.1	-	-
120	0.153	-	-	125	1.3	141	1.2	206	0.76	-	-
150	0.124	76	0.42	138	1.2	201	0.78	230	0.68	-	-
185	0.0991	84	0.38	191	0.82	220	0.71	255	0.61	-	-
240	0.0754	94	0.34	215	0.73	250	0.63	289	0.54	-	-
300	0.0601	104	0.31	235	0.67	269	0.58	319	0.49	-	-
400	0.0470	147	0.22	265	0.59	304	0.52	452	0.35	-	-
500	0.0366	163	0.20	-	-	-	-	-	-	-	-
630	0.0283	182	0.18	-	-	-	-	-	-	-	-
800	0.0221	260	0.13	-	-	-	-	-	-	-	-
1000	0.0176	284	0.12	-	-	-	-	-	-	-	-

* Armour wires for single core cables are aluminium.

No. of Cores	Nominal Area of Armour and Maximum Armour Resistance at 20 °C					
	1.5mm²		2.5mm²		4.0mm²	
	mm²	Ohms/km	mm²	Ohms/km	mm²	Ohms/km
7	20	7.5	24	6.3	39	4.0
12	39	4.0	45	3.5	68	2.3
19	45	3.5	70	2.3	80	2.0
27	70	2.3	84	1.9	96	1.7
37	78	2.0	94	1.7	138	1.2
48	90	1.8	138	1.2	157	1.0

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