FIRE RESISTANT SINGLE CORE CWZ CABLE BS6387

Engineered to BS6387 CWZ standards, they serve as both fire alarm (BS5839) and emergency lighting (BS5266) cables. These cables offer enhanced durability and reliability for fire detection, fire alarm, voice alarm, and emergency lighting circuits. Designed to maintain functionality for a specific duration under fire conditions, ensuring safety in critical situations.

CONDUCTOR	Plain Copper
STRANDING	Class 2
INSULATION	MGT+XLPE
OUTERSHEATH	LSZH
OUTERSHEATH COLOUR	Black, Blue, Grey, Red, Green/Yellow, Brown
OPERATING TEMPERATURE	90°C
STANDARDS	BS EN 50266 (IEC60332-1): flame retardancy for a single cable length BS EN 61304: smoke density BS EN 5067-2-1:1999 (IEC60754-1): acid gas evolution IEC60331: maintenance of circuit integrity when subjected to 750°C flame BS6387:1994: Specification for performance requirements for cables required to maintain circuit integrity under fire conditions Meets the requirements of BS6387 CWZ and IEC60331
APPROVALS	LPCB

SPECIFICATION DATA

Size mm²	Max conductor resistance at 20°C ohms/km	Short circuit rating (1 sec) amps	Current rating DC or single phase AC amps	Current rating three phase AC amps	Volt drop DC mV/A/m	Volt drop single phase AC mV/A/m	Volt drop three phase AC mV/A/m
1.5	21.1	215	23	20	31	31	27
2.5	7.41	360	31	28	19	19	16
4	4.61	570	42	37	12	12	10
6	3.08	860	54	48	7.9	7.9	6.8
10	1.83	1425	75	66	4.7	4.7	4
16	1.15	2275	100	88	2.9	2.9	2.5
25	0.727	3375	133	117	1.85	1.9	1.65
35	0.524	5000	164	144	1.35	1.35	1.15
50	0.387	7150	198	175	0.99	1.05	0.9
70	0.268	10000	253	222	0.68	0..75	0.65
95	0.193	13575	306	269	0.49	0.58	0.5
120	0.153	17150	354	312	0.39	0.48	0.42
150	0.124	21450	393	342	0.32	0.43	0.37
185	0.0991	26450	449	384	0.25	0.37	0.32
240	0.0754	34325	528	450	0.19	0.33	0.29
300	0.0601	42925	603	514	0.155	0.31	0.27
400	0.0470	57225	683	584	0.120	0.29	0.25
500	0.0366	71525	783	666	0.093	0.28	0.24
630	0.0283	90125	900	764	0.072	0.27	0.23

BATT Part No	Colour	Nominal cross sectional area of conductor	Radial thickness of insulation	Approx overall diameter	Weight
44193	Green/Yellow	1.5	0.7	3.6	30
44196	Green/Yellow	2.5	0.8	42	40
44255	Green/Yellow	4	0.8	4.7	60
44277	Green/Yellow	6	0.8	5.2	80
44280	Green/Yellow	10	1	6.8	130
44334	Green/Yellow	16	1	7.7	190
44335	Green/Yellow	25	1.2	9.5	290
44344	Green/Yellow	35	1.2	10.5	390
44345	Green/Yellow	50	1.4	12	520
44360	Green/Yellow	70	1.4	15.2	770
44361	Green/Yellow	95	1.6	17.6	1140
44362	Green/Yellow	120	1.6	19.3	1425
44363	Green/Yellow	150	1.8	21.3	1720
44364	Green/Yellow	185	2	23.7	2155
44365	Green/Yellow	240	2.2	26.8	2900
44366	Green/Yellow	300	2.4	29.7	3540
44367	Green/Yellow	400	2.6	33.3	4410

RATING TABLES

TABLE 4E1A – Single-core 90 °C thermosetting insulated cables, non-armoured, with or without sheath (COPPER CONDUCTORS)

COPPER CONDUCTORS

CURRENT-CARRYING CAPACITY (amperes):

Ambient temperature: 30 °C
Conductor operating temperature: 90 °C

Conductor cross-sectional area	Reference Method A (enclosed in conduit in thermally insulating wall etc.)		Reference Method B (enclosed in conduit on a wall or in trunking etc.)		Reference Method C (clipped direct)		Reference Method F (in free air or on a perforated cable tray etc horizontal or vertical etc) Touching			Reference Method G (in free air) Spaced by one cable diameter	
	2 cables, single-phase AC or DC	3 or 4 cables, three-phase AC	2 cables, single-phase AC or DC	3 or 4 cables, three-phase AC	2 cables, single-phase AC or DC flat and touching	3 or 4 cables, three-phase AC flat and touching or trefoil	2 cables, single-phase AC or DC flat	3 cables, three-phase AC flat	3 cables, three-phase AC trefoil	2 cables, single-phase AC or DC or 3 cables three-phase AC flat	
										Horizontal	Vertical
1	2	3	4	5	6	7	8	9	10	11	12
(mm²)	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)
1	14	13	17	15	19	17.5	-	-	-	-	-
1.5	19	17	23	20	25	23	-	-	-	-	-
2.5	26	23	31	28	34	31	-	-	-	-	-
4	35	31	42	37	46	41	-	-	-	-	-
6	45	40	54	48	59	54	-	-	-	-	-
10	61	54	75	66	81	74	-	-	-	-	-
16	81	73	100	88	109	99	-	-	-	-	-
25	106	95	133	117	143	130	161	141	135	182	161
35	131	117	164	144	176	161	200	176	169	226	201
50	158	141	198	175	228	209	242	216	207	275	246
70	200	179	253	222	293	268	310	279	268	353	318
95	241	216	306	269	355	326	377	342	328	430	389
120	278	249	354	312	413	379	437	400	383	500	454
150	318	285	393	342	476	436	504	464	444	577	527
185	362	324	449	384	545	500	575	533	510	661	605
240	424	380	528	450	644	590	679	634	607	781	719
300	486	435	603	514	743	681	783	736	703	902	833
400	-	-	683	584	868	793	940	868	823	1085	1008
500	-	-	783	666	990	904	1083	998	946	1253	1169
630	-	-	900	764	1130	1033	1254	1151	1088	1454	1362
800	-	-	-	-	1288	1179	1358	1275	1214	1581	1485
1000	-	-	-	-	1443	1323	1520	1436	1349	1775	1671

NOTES:
1. Where it is intended to connect the cables in this table to equipment or accessories designed to operate at a temperature lower than the maximum operating temperature of the cable, the cables should be rated at the maximum operating temperature of the equipment or accessory (see Regulation 512.1.5).
2. Where it is intended to group a cable in this table with other cables, the cable should be rated at the lowest of the maximum operating temperatures of any of the cables in the group (see Regulation 512.1.5).
3. For cables having flexible conductors see section 2.4 of this appendix for adjustment factors for current-carrying capacity and voltage drop.

TABLE 4E1B

VOLTAGE DROP (per ampere per metre):

Conductor operating temperature: 90°C

Conductor cross-sectional area	2 cables, DC	2 cables, single-phase AC						3 or 4 cables, three-phase AC												
		Reference Methods A & B (enclosed in conduit or trunking)			References Methods C, F & G (clipped direct, on tray or in free air)						Reference Methods A & B (enclosed in conduit or trunking)			Reference Methods C, F & G (clipped direct, on tray or in free air)								
					Cables touching			Cables spaced*						Cables touching, Trefoil			Cables touching, Flat			Cables spaced*, Flat		
1	2	3			4			5			6			7			8			9		
(mm²)	(mV/A/m)	(mV/A/m)			(mV/A/m)			(mV/A/m)			(mV/A/m)			(mV/A/m)			(mV/A/m)			(mV/A/m)		
		r	x	z	r	x	z	r	x	z	r	x	z	r	x	z	r	x	z	r	x	z
1	46	46			46			46			40			40			40			40		
1.5	31	31			31			31			27			27			27			27		
2.5	19	19			19			19			16			16			16			16		
4	12	12			12			12			10			10			10			10		
6	7.9	7.9			7.9			7.9			6.8			6.8			6.8			6.8		
10	4.7	4.7			4.7			4.7			4.0			4.0			4.0			4.0		
16	2.9	2.9			2.9			2.9			2.5			2.5			2.5			2.5		
25	1.85	1.85	0.31	1.90	1.85	0.190	1.85	1.85	0.28	1.85	1.60	0.27	1.65	1.60	0.165	1.60	1.60	0.190	1.60	1.60	0.27	1.65
35	1.35	1.35	0.29	1.35	1.35	0.180	1.35	1.35	0.27	1.35	1.15	0.25	1.15	1.15	0.155	1.15	1.15	0.180	1.15	1.15	0.26	1.20
50	0.99	1.00	0.29	1.05	0.99	0.180	1.00	0.99	0.27	1.00	0.87	0.25	0.90	0.86	0.155	0.87	0.86	0.180	0.87	0.86	0.26	0.89
70	0.68	0.70	0.28	0.75	0.68	0.175	0.71	0.68	0.26	0.73	0.60	0.24	0.65	0.59	0.150	0.61	0.59	0.175	0.62	0.59	0.25	0.65
95	0.49	0.51	0.27	0.58	0.49	0.170	0.52	0.49	0.26	0.56	0.44	0.23	0.50	0.43	0.145	0.45	0.43	0.170	0.46	0.43	0.25	0.49
120	0.39	0.41	0.26	0.48	0.39	0.165	0.43	0.39	0.25	0.47	0.35	0.23	0.42	0.34	0.140	0.37	0.34	0.165	0.38	0.34	0.24	0.42
150	0.32	0.33	0.26	0.43	0.32	0.165	0.36	0.32	0.25	0.41	0.29	0.23	0.37	0.28	0.140	0.31	0.28	0.165	0.32	0.28	0.24	0.37
185	0.25	0.27	0.26	0.37	0.26	0.165	0.30	0.25	0.25	0.36	0.23	0.23	0.32	0.22	0.140	0.26	0.22	0.165	0.28	0.22	0.24	0.33
240	0.190	0.21	0.26	0.33	0.20	0.160	0.25	0.195	0.25	0.31	0.185	0.22	0.29	0.170	0.140	0.22	0.170	0.165	0.24	0.170	0.24	0.29
300	0.155	0.175	0.25	0.31	0.160	0.160	0.22	0.155	0.25	0.29	0.150	0.22	0.27	0.140	0.140	0.195	0.135	0.160	0.21	0.135	0.24	0.27
400	0.120	0.140	0.25	0.29	0.130	0.155	0.20	0.125	0.24	0.27	0.125	0.22	0.25	0.110	0.135	0.175	0.110	0.160	0.195	0.110	0.24	0.26
500	0.093	0.120	0.25	0.28	0.105	0.155	0.185	0.098	0.24	0.26	0.100	0.22	0.24	0.090	0.135	0.160	0.088	0.160	0.180	0.085	0.24	0.25
630	0.072	0.100	0.25	0.27	0.086	0.155	0.175	0.078	0.24	0.25	0.088	0.21	0.23	0.074	0.135	0.150	0.071	0.160	0.170	0.068	0.23	0.24
800	0.056		-		0.072	0.150	0.170	0.064	0.24	0.25		-		0.062	0.130	0.145	0.059	0.155	0.165	0.055	0.23	0.24
1000	0.045		-		0.063	0.150	0.165	0.054	0.24	0.24		-		0.055	0.130	0.140	0.050	0.155	0.165	0.047	0.23	0.24

NOTE: * Spacings larger than one cable diameter will result in a larger voltage drop.