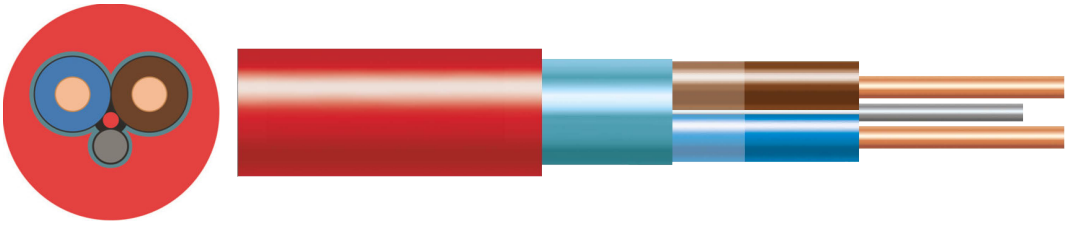
STANDARD FIRE RESISTANT CWZ CABLE BS7629-1



Fire-resistant cables, meticulously crafted to meet the stringent standards of BS7629. These cables are specifically engineered for fire alarm and emergency lighting systems, ensuring uninterrupted operation even in the event of a fire. With their soft skin design, they offer enhanced durability and reliability in fire detection, fire alarm, voice alarm, and emergency lighting circuits

CONDUCTOR	Plain Copper
STRANDING	Class 1 and Class 2
INSULATION	Silicone
OUTERSHEATH	LSZH
OUTERSHEATH COLOUR	Black, White, Red
RATED VOLTAGE	300/500V
CORE IDENTIFICATION	2 Core: Blue, Brown 3 Core: Brown, Black, Grey 4 Core: Brown, Black, Grey, Blue 7 Core: Numbering or for identification by colour: in each layer: Brown (starting core), black (reference core) 12 Core: Numbering or for identification by colour: in each layer: Brown (starting core), black (reference core) 19 core: Numbering or for identification by colour: in each layer: Brown (starting core), black (reference core)
MINIMUM BENDING RADIUS	6 x Overall Diameter
OPERATING TEMPERATURE	90°C
STANDARDS	BS7629-1, BS6387 & BS5839-1

SPECIFICATION DATA

ELECTRICAL CHARACTERISTICS

Nominal Cross Sectional Area	Conductor Resistance at 20ºC	Insulation Resistance at 20ºC	Core/Core	Core/Screen
1	18.1	300	100	170
1.5	12.1	300	110	190
2.5	7.41	300	130	220
4	4.61	300	160	270

DIMENSIONS

BATT Part No	Cores	Nominal cross sectional area of conductor	Earth Wire Contruction	Approx overall diameter	Weight
44245	2	1		7.5	74
44226	2	1.5		8.4	94
44399	2	2.5		10.3	143
44230	2	4		11.6	206
44369	2	6		12	251
44247	3	1		7.9	88
44232	3	1.5		9	123
44417	3	2.5		11.1	191
44236	3	4		12.5	263
44244	4	1		8.7	109
44238	4	1.5		9.8	146
44420	4	2.5		12	233
44242	4	4		14	320
44165	7	1.5		11.9	227
44166	7	2.5		14.5	461
44167	12	1.5		15.6	380
44168	12	2.5		18.8	540
44169	19	1.5		18	536

RATING TABLES

TABLE 4E2A – Multicore 90 °C thermosetting insulated and thermoplastic sheathed cables, non-armoured (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 E (free air or on a perforated cable tray etc, horizontal or vertical)	
	1 two-core cable*, single-phase AC or DC	1 three- or four-core cable*, three-phase AC	1 two-core cable*, single-phase AC or DC	1 three- or four-core cable*, three-phase AC	1 two-core cable*, single-phase AC or DC	1 three- or four-core cable*, three-phase AC	1 two-core cable*, single-phase AC or DC	1 three- or four-core cable*, three-phase AC
1	2	3	4	5	6	7	8	9
(mm²)	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)
1	14.5	13	17	15	19	17	21	18
1.5	18.5	16.5	22	19.5	24	22	26	23
2.5	25	22	30	26	33	30	36	32
4	33	30	40	35	45	40	49	42
6	42	38	51	44	58	52	63	54
10	57	51	69	60	80	71	86	75
16	76	68	91	80	107	96	115	100
25	99	89	119	105	138	119	149	127
35	121	109	146	128	171	147	185	158
50	145	130	175	154	209	179	225	192
70	183	164	221	194	269	229	289	246
95	220	197	265	233	328	278	352	298
120	253	227	305	268	382	322	410	346
150	290	259	334	300	441	371	473	399
185	329	295	384	340	506	424	542	456
240	386	346	459	398	599	500	641	538
300	442	396	532	455	693	576	741	621
400	-	-	625	536	803	667	865	741

* with or without a protective conductor

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 4E2B

VOLTAGE DROP (per ampere per metre): Conductor operating temperature: 90 °C

Conductor cross-sectional area	Two-core cable, DC	Two-core cable, single-phase AC			Three- or four-core cable, three-phase AC		
1	2	3			4		
(mm²)	(mV/A/m)	(mV/A/m)			(mV/A/m)		
1	46	46			40		
1.5	31	31			27		
2.5	19	19			16		
4	12	12			10		
6	7.9	7.9			6.8		
10	4.7	4.7			4.0		
16	2.9	2.9			2.5		
		r	x	z	r	x	z
25	1.85	1.85	0.160	1.90	1.60	0.140	1.65
35	1.35	1.35	0.155	1.35	1.15	0.135	1.15
50	0.98	0.99	0.155	1.00	0.86	0.135	0.87
70	0.67	0.67	0.150	0.69	0.59	0.130	0.60
95	0.49	0.50	0.150	0.52	0.43	0.130	0.45
120	0.39	0.40	0.145	0.42	0.34	0.130	0.37
150	0.31	0.32	0.145	0.35	0.28	0.125	0.30
185	0.25	0.26	0.145	0.29	0.22	0.125	0.26
240	0.195	0.200	0.140	0.24	0.175	0.125	0.21
300	0.155	0.160	0.140	0.21	0.140	0.120	0.185
400	0.120	0.130	0.140	0.190	0.115	0.120	0.165