

# BS7629 Fire Resistant Cable

Incorporating circuit protective conductor (CPC) 300/500V



## Application

Unarmoured fire resistant cable for use in fixed wiring installations where it is necessary for the cable to retain circuit integrity in the event of a fire, e.g. emergency services, alarm systems, lighting.

## Specifications

- In accordance with BS7629 Part 1.

- BASEC Approved.

- **Conductors:** Solid Class 1 or stranded Class 2 copper conductors to BS EN 60228.

- **Insulation:** Silicone rubber insulation type EI2 to BS EN 50363-1.

- **Core Identification:**

2 core - brown, blue

3 core - brown, black, grey

4 core - brown, black, grey, blue

7, 12, 19 core brown and black marker cores in each layer, remaining cores grey.

- Woven glass tape to BS EN 61067.

- Tinned copper CPC (Class 1, 2 or 5) under and in contact with aluminium/mylar tape.

- Low smoke zero halogen sheath Type LTS3 to BS7655 (red or white).

- Fire resistant to IEC60331 and categories CWZ of BS6387. Meets BS5839 26.2, pH30 BS EN 50200 (Standard).

- Flame retardant to BS EN 60332-1-2.

- Meets BS7622 and IEC 61034 3m cube smoke emission test.

- **Temperature Rating:** 70°C maximum conductor operating temperature.

- **Voltage Rating:** 300/500V.

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Anixter Number	Number of Cores	Nominal Conductor Area mm <sup>2</sup>	Nominal Conductor Stranding #/mm	Nominal C.P.C. Area mm <sup>2</sup>	Nominal C.P.C. Stranding #/mm	Insulation Thickness mm	Nom O/D mm	Approx Weight kg/km	Min Bending Radius (fixed bend) mm
<b>Solid Conductors</b>									
BS7629-2C10-***	2	1.0	1/1.13	1.0	1/1.13	0.6	7.0	83	50
BS7629-2C15-***	2	1.5	1/1.38	1.5	1/1.38	0.7	7.9	110	50
BS7629-2C25-***	2	2.5	1/1.78	2.5	1/1.78	0.8	9.3	160	60
<b>Solid Conductors</b>									
BS7629-3C10-***	3	1.0	1/1.13	1.0	1/1.13	0.6	7.3	91	50
BS7629-3C15-***	3	1.5	1/1.38	1.5	1/1.38	0.7	8.3	128	50
BS7629-3C25-***	3	2.5	1/1.78	2.5	1/1.78	0.8	9.9	160	60
<b>Solid Conductors</b>									
BS7629-4C10-***	4	1.0	1/1.13	1.0	1/1.13	0.6	8.2	115	60
BS7629-4C15-***	4	1.5	1/1.38	1.5	1/1.38	0.7	9.5	160	60
BS7629-4C25-***	4	2.5	1/1.78	2.5	1/1.78	0.8	11.3	235	70
<b>Solid Conductors</b>									
BS7629-7C10-***	7	1.0	1/1.13	1.0	32/0.2	0.6	10.5	175	70
BS7629-12C10-***	12	1.0	1/1.13	1.0	32/0.2	0.6	13.5	275	80
BS7629-19C10-***	19	1.0	1/1.13	1.0	32/0.2	0.6	15.7	405	90
<b>Solid Conductors</b>									
BS7629-7C15-***	7	1.5	1/1.38	1.5	30/0.25	0.7	12.2	250	70
BS7629-12C15-***	12	1.5	1/1.38	1.5	30/0.25	0.7	15.2	390	100
BS7629-19C15-***	19	1.5	1/1.38	1.5	30/0.25	0.7	18.2	560	110
<b>Solid Conductors</b>									
BS7629-7C25-***	7	2.5	1/1.78	2.5	50/0.25	0.8	14.6	375	90
BS7629-12C25-***	12	2.5	1/1.78	2.5	50/0.25	0.8	19.5	610	120
BS7629-19C25-***	19	2.5	1/1.78	2.5	50/0.25	0.8	22.8	900	140
<b>Stranded Conductors</b>									
BS7629-2C15-***-S	2	1.5	7/0.53	1.5	7/0.53	0.7	8.4	125	60
BS7629-2C2.5-***-S	2	2.5	7/0.67	2.5	7/0.67	0.8	9.7	175	60
BS7629-2C40-***-S	2	4.0	7/0.85	4.0	7/0.85	0.8	11.1	243	70
<b>Stranded Conductors</b>									
BS7629-3C15-***-S	3	1.5	7/0.53	1.5	7/0.53	0.7	8.9	142	60
BS7629-3C25-***-S	3	2.5	7/0.67	2.5	7/0.67	0.8	10.6	210	70
BS7629-3C40-***-S	3	4.0	7/0.85	4.0	7/0.85	0.8	12.2	297	80
<b>Stranded Conductors</b>									
BS7629-4C15-***-S	4	1.5	7/0.53	1.5	7/0.53	0.7	10.2	177	70
BS7629-4C25-***-S	4	2.5	7/0.67	2.5	7/0.67	0.8	12.3	265	80
BS7629-4C40-***-S	4	4.0	7/0.85	4.0	7/0.85	0.8	13.8	365	90
<b>Stranded Conductors</b>									
BS7629-7C15-***-S	7	1.5	7/0.53	1.5	30/0.25	0.7	12.9	275	80
BS7629-7C25-***-S	7	2.5	7/0.67	2.5	50/0.25	0.8	15.0	400	90
<b>Stranded Conductors</b>									
BS7629-12C15-***-S	12	1.5	7/0.53	1.5	30/0.25	0.7	16.7	427	110
BS7629-12C25-***-S	12	2.5	7/0.67	2.5	50/0.25	0.8	19.8	640	120
<b>Stranded Conductors</b>									
BS7629-19C15-***-S	19	1.5	7/0.53	1.5	30/0.25	0.7	19.4	617	120
BS7629-19C25-***-S	19	2.5	7/0.67	2.5	50/0.25	0.8	23.1	930	140

Above details are based on Draka Firetuf cables. For further technical information see page 1.72.

\*\*\* WTE = white sheath, RED = red sheath.

## Technical Information

- BS7629 Fire Resistant Cable

Ratings do not apply if the cable is protected by a semi-enclosed fuse to BS3036.

For further guidance refer to the BS7671 (IEE Wiring Regulations - latest edition).

For cables of five core and above it is assumed only two cores are loaded simultaneously (i.e. live and neutral) and the two core rating should be taken.

For ambient air temperatures other than 30°C, the following factors should be applied.

Ambient air temp °C	25	35	40	45	50	55	60	65
Rating factor	1.03	0.94	0.87	0.79	0.71	0.61	0.50	0.35

# Technical Information

## CURRENT CARRYING CAPACITY (Amperes) & VOLTAGE DROP (per Ampere per metre)

Nominal Cross Sectional Area of Conductor	Installation Method							
	('Enclosed') in Trunking				Clipped Direct			
	One Twin Cable a.c. or d.c.		One 3 or 4 Core Cable 3 Phase a.c.		One Twin Cable a.c. or d.c.		One 3 or 4 Core Cable 3 Phase a.c.	
	Current Carrying Capacity	Volt Drop per amp per m	Current Carrying Capacity	Volt Drop per amp per m	Current Carrying Capacity	Volt Drop per amp per m	Current Carrying Capacity	Volt Drop per amp per m
mm <sup>2</sup>	A	mV	A	mV	A	mV	A	mV
1.0	13	44	11.5	38	15	44	13.5	38
1.5	16.5	29	15	25	19.5	29	17.5	25
2.5	23	18	20	15	27	18	24	15
4.0	30	11	27	9.5	36	11	32	9.5

Ambient air temperature 30°C

Conductor operating temperature 70°C

## ADDITIONAL TECHNICAL INFORMATION ON BS7629 CABLES

Conductor Size mm <sup>2</sup>	Capacitance Core-Core pF/m	Capacitance Core-Screen pF/m	L/R Ratio $\mu\text{H}/\Omega$
1.0	100	175	25
1.5	102	180	40
2.5	115	205	50
4.0	125	230	65