

Protected Screened Fixed Wiring Cable - BS8436, XLPE, LSZH - 1mm to 10mm



The protected fixed wiring cable is an alternative cable which can be used in place of steel wire armoured cables or singles cables. Intended for installation in air (which includes installation in trunking or other closed systems), and in thin partitions and building voids when connected to a suitably selected protective device. When cables are to be installed in any other environment, reference should be made to the cable manufacturer.

Key Features



Installation Guidelines

Should not be installed at temperatures below 0°C



Voltage Rating

1mm² to 4mm²: 300/500 Volts
6mm² to 10mm²: 600/1000 Volts



Minimum Bending Radius

As Per Manufacturers Datasheet



Temperature Limits

Ambient Temperature: -20 to +70°C

Maximum conductor operating temperature: +90°C

Construction

- **Conductor:** Plain Annealed Stranded Copper
- **Insulation:** Cross Linked polyethylene (XLPE)
- **Sheath:** Low Smoke Zero Halogen (LSZH)
- **Earth:** Bare tinned annealed copper earth wire
- **Armour:** Bonded Aluminium Tube
- **Sheath Colour:** White

Standards

- 1mm² To 4mm² & 10mm² to BS8436 6mm² manufactured to IS273, BS EN 50267-1:1998, Acid gas emissions to BS EN 50267-2-1, Smoke emissions to BS EN 50268-2

Core Colours

2 core - Brown Blue - (plus earth wire)

3 core - Brown Black Grey - (plus earth wire)

4 core - Brown Black Grey Blue - (plus earth wire)

Earth - Tinned annealed copper earth wire

Protected Screened Fixed Wiring Cable - BS8436, XLPE, LSZH - 1mm to 10mm - Dimensions

Reference	Conductor Size (mm2)	No Of Cores	Stranding(mm)	Overall Diameter(mm)	Weight(Kg/Km)	Gland Ref	1 Hole Clip Ref
CSX2X1/5WH *	1.5	2+E	7/0.53	9.8	106	20A2	RCHL37
CSX3X1/5WH R*	1.5	3+E	7/0.53	10.4	140	20A2	RCHL40
CSX4X1/5WH R*	1.5	4+E	7/0.53	11.3	158	20A2	RCHL43
CSX2X2/5WH R*	2.5	2+E	7/0.67	10.8	135	20A2	RCHL43
CSX3X2/5WH R*	2.5	3+E	7/0.67	11.1	182	20A2	RCHL43
CSX4X2/5WH R*	2.5	4+E	7/0.67	12.6	259	20A2	RCHL47
CSX2X4WHR*	4	2+E	7/0.85	11.5	206	25A2	RCHL43
CSX3X4WHR*	4	3+E	7/0.85	13.1	265	25A2	RCHL51
CSX4X4WHR*	4	4+E	7/0.85	13.9	320	25A2	RCHL54
CSX2X6WHR*	6	2+E	7/1.04	13.1	258	25A2	RCHL51
CSX3X6WHR*	6	3+E	7/1.04	14.2	328	25A2	RCHL54
CSX4X6WHR*	6	4+E	7/1.04	14.9	450	25A2	RCHL59
CSX2X10WH	10	2+E	7/1.50	16.1	413	25A2	RCHL63

Multicore 90°C thermosetting insulated and thermoplastic sheathed cables, non-armoured (COPPER CONDUCTORS) Reproduced from *BS7671:2018 Wiring Regulation*

TABLE 4E2A

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
(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

- 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).
- 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).
- 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		
(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	0.160	0.140	1.65
35	1.35	1.35	0.151	1.35	1.15	0.135	1.15
50	0.98	0.99	0.155	1.00	0.86	0.1351	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	0.115	0.115	0.120	0.165

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