CSX BS8436/IS 273 Aluminium Tube, Protected Screened Fixed Wiring Cable, XLPE, LSZH - 1mm² to 10mm²



Description

BS8436/IS 273 Standard cables are 300/500V LSZH cables which are designed for use in building voids, partitions and walls at a depth of less than 50mm. The cables are manufactured to be electrically fail-safe in the event they are penetrated by a nail or screw. All cables manufactured to BS8436 must pass a nail penetration test six times and maintain functionality on each occasion.

The aluminium tube protected fixed wiring cable is an alternative multicore 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. The aluminium tube acts as both a mechanical protection and electromagnetic shield.

BS8346/IS 273 cables are compliant with the Construction Products Regulation (CPR). This standard requires the aluminium tube to be applied longitudinally or helically, with the metallic side of the tape in direct contact with the uninsulated CPC. It also requires an LSZH outer sheath to protect people and property in the event of a fire which produces no halogens, and minimal toxic smoke when burnt. The cable is covered by BC8436 to 4mm² and IS 273 from 6mm²

Key Features

Voltage Rating
1mm^2 to 4mm^2: 300/500 Volts
6mm^2 to 10mm^2: 600/1000 Volts

Minimum Bending Radius
Fixed: 6 x overall diameter

Flame Retardancy
BS EN 60332-1-2

Temperature Limits
Ambient Temperature: -20 to +70°C
Maximum conductor operating temperature: +90°C

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

Standards

- BS8436 1mm² to 4mm²
  IS 273 6mm² and above
- BS EN/IEC 60332-1-2
- IEC/EN 60754-1/2
- BS EN/IEC 60228

Construction

- **Conductor**: Class 2 stranded copper
- **Insulation**: Cross Linked polyethylene (XLPE)
- **Earth**: Bare tinned annealed copper earth wire
- **Armour**: Bonded Aluminium Tube or Copper foil screened.
- **Outer Sheath**: Low Smoke Zero Halogen (LSZH)
- **Sheath Colour**: White

Training & Testing Lab

AN ISO/IEC 17025 ACCREDITED FACILITY

Cleveland Cable Test & Training Lab
Our state-of-the-art cable testing facility ensures that every cable meets the highest standards of quality and compliance through continuous, rigorous testing.

ISO/IEC 17025 Accredited Testing Laboratory

CPR
Cleveland Cable Company is committed to compliance with the Construction Products Regulation (CPR). Where applicable, all cables manufactured after 1st July 2017 have been assessed in accordance with CPR requirements, with full supporting documentation available.

Our Sustainability Commitment

We are committed to the journey to Net Zero as a business partner, an employer and a community member.

By thinking and acting sustainably, we deliver excellent customer service while reducing carbon emissions in collaboration with our customers and suppliers.

ecovadis
Cleveland Cable Company has been independently assessed by EcoVadis, a globally recognised provider of business sustainability ratings. Our score places us among the top 35% of companies evaluated worldwide, reflecting our strong commitment to environmental, social, and ethical performance

CSX BS8436/IS 273 Aluminium Tube, Protected Screened Fixed Wiring Cable, XLPE, LSZH - 1mm² to 10mm² - 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	7/0.53	9.8	106	20A2	RCHL37
CSX3X1/5WH	1.5	3	7/0.53	10.4	140	20A2	RCHL40
CSX4X1/5WH	1.5	4	7/0.53	11.3	158	20A2	RCHL43
CSX2X2/5WH	2.5	2	7/0.67	10.8	135	20A2	RCHL43
CSX2X2/5WH	2.5	2	7/0.67	12.6	259	20A2	RCHL47
CSX3X2/5WH	2.5	3	7/0.67	11.1	182	20A2	RCHL43
CSX4X2/5WH	2.5	4	7/0.67	12.6	259	20A2	RCHL47
CSX2X4WH	4	2	7/0.85	11.5	206	25A2	RCHL43
CSX3X4WH	4	3	7/0.85	13.1	265	25A2	RCHL51
CSX4X4WH	4	4	7/0.85	13.9	320	25A2	RCHL54
CSX2X6WH	6	2	7/1.04	13.1	258	25A2	RCHL51
CSX3X6WH	6	3	7/1.04	14.2	328	25A2	RCHL54
CSX4X6WH	6	4	7/1.04	14.9	450	25A2	RCHL59
CSX2X10WH	10	2	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

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.

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

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

THE INFORMATION CONTAINED WITHIN THIS DATASHEET IS FOR GUIDANCE ONLY AND IS SUBJECT TO CHANGE WITHOUT NOTICE OR LIABILITY. WE BELIEVE THE INFORMATION IS CORRECT AT THE TIME OF PUBLICATION. PLEASE NOTE WHEN SELECTING CABLE ACCESSORIES THAT ACTUAL CABLE DIMENSIONS MAY VARY DUE TO MANUFACTURING TOLERANCES.

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