BS7835 3 Core Armoured Mains Cable 11kV - CU, XLPE, SWA, LSZH - 35mm² to 400mm²



Description

BS7835 cables are armoured power cables designed for medium voltage fixed installations, such as power networks and industrial installations, including power supply stations, and sub stations. Can be installed indoors, outdoors, underground, and in cable ducts. These Single core cables have copper conductors with cross-linked polyethylene (XLPE) insulation various screen options, water blocking options, aluminium wire armour and LSZH bedding and outer sheath.

The UV resistant LSZH outer sheath means this cable is suitable for Internal use in buildings, power stations, or switchboards and are often run in cable tray for industrial applications. They can also be used externally in cable duct and due to the armour can be buried directly in free draining soil.

Key Features

Voltage Rating
6.35kV / 11kV (12kV)
Tested To Voltage And Duration of BS7835

Minimum Bending Radius
12 x Overall Diameter

Flame Retardancy
BS EN/IEC 60332-1
BS EN/IEC 60332-3-24

Temperature Limits
Maximum operating temp: 90°C
Initial temperature at S.C.C for screen: 80°C
Maximum temp during short circuit: 250°C

Core Colours

Brown, Black, Grey Tapes

Outer Sheath: Red or Black

Standards

- BS 7835
- BS EN/IEC 60228
- BS EN/IEC 60754-1
- BS EN/IEC 61034
- BS EN/IEC 60332-1-2 & BS EN/IEC 60332-3-24

Construction

- **Conductor**: Class 2 stranded copper conductor
- **Insulation**: Cross Linked polyethylene (XLPE)
- **Insulation Screen**: Semi-Conductive XLPE
- **Filler**: Polyethylene Terephthalate fibers (PET)
- **Metallic Screen**: Individual copper tape screen
- **Bedding**: Low Smoke Zero Halogen (LSZH)
- **Armour**: Steel Wire Armour (SWA)
- **Outer Sheath**: Low Smoke Zero Halogen (LSZH)

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
UKAS TESTING 31196

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

BS7835 3 Core Armoured Mains Cable 11kV - CU, XLPE, SWA, LSZH - 35mm² to 400mm² - Dimensions

Reference	Conductor Size (mm2)	No Of Cores	Stranding(mm)	Overall Diameter(mm)	Weight(Kg/Km)	Nylon Cleat Size
10302RD	35	3	19/1.53	50.5	4501	TC9
10304RD	50	3	19/1.78	53.3	5117	TC9
10306RD	70	3	19/2.14	56.9	6032	TC9
10308RD	95	3	19/2.52	61	7163	TC10
10310RD	120	3	37/2.03	64.6	8216	TC11
10312RD	150	3	37/2.25	67.8	9292	TC11
10314RD	185	3	37/2.52	71.9	10726	TC12
10316RD	240	3	61/2.25	78.8	13763	TC14
10318RD	300	3	61/2.52	84.1	16077	TC14
10320RD	400	3	70/3.15	90.3	19124	TC15

11KV 3 CORE ELECTRICAL CHARACTERISTICS

CONDUCTOR SIZE	MAX DC RESISTANCE AT 20°C	CONDUCTOR AC RESISTANCE AT MAX OPERATING TEMPERATURE AND 50hz	CAPACITANCE	CHARGING CURRENT	DIELECTRIC LOSSES	RESISTANCE AT 50HZ	CONDUCTOR S.C.C FOR 1 SEC	SCREEN S.C.C FOR 1 SEC	CURRENT RATING		
									LAID IN GROUND	LAID IN DUCT	LAID IN FREE AIR
MM^2	(Ω/km)	(Ω/km)	mf/km	(A/Km)	(W/Km)	(Ω/km)	(KA)	(KA)	AMPS	AMPS	AMPS
35	0.524	0.67	0.22	0.36	5.8	0.11	5.01	1.45	178	162	173
50	0.387	0.494	0.316	0.525	13.33	0.109	7.15	1.50	214	170	228
70	0.268	0.342	0.363	0.605	15.35	0.102	10.01	1.66	263	211	285
95	0.193	0.247	0.398	0.662	16.81	0.099	13.585	1.80	313	253	342
120	0.153	0.196	0.435	0.723	18.37	0.096	17.16	2.00	354	286	392
150	0.124	0.159	0.477	0.793	20.15	0.092	21.45	2.10	397	321	444
185	0.0991	0.128	0.516	0.859	21.81	0.089	26.455	2.59	446	365	504
240	0.0754	0.098	0.579	0.964	24.47	0.086	34.32	2.70	511	421	589
300	0.0601	0.078	0.642	1.068	27.13	0.084	42.9	2.83	569	474	667
400	0.047	0.062	0.71	1.181	30	0.081	57.2	2.95	634	532	754

Electrical Data:

Maximum conductor operating temperature: 90°C
Maximum screen operating temperature: 80°C
Maximum conductor temperature during S.C: 250°C

Laying conditions at trefoil formation are as below:

Soil thermal resistivity: 120°C. Cm/Watt
Burial depth: 0.5m
Ground temperature: 15°C
Air temperature: 25°C
Frequency: 50Hz

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.