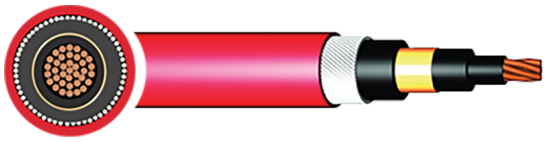
BS7835 Single Core Armoured Power Cable 33kV - XLPE, AWA, LSZH - 70mm² to 1000mm²



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
19kV / 33kV (36kV)
Tested To Voltage And Duration of BS7835

Minimum Bending Radius
15 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

Outer Sheath: UV Resistant Red

Standards

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

Construction

- **Conductor**: Class 2 stranded copper conductor
- **Insulation**: Cross Linked polyethylene (XLPE)
- **Insulation Screen**: Semi-Conductive XLPE
- **Bedding**: Low Smoke Zero Halogen (LSZH)
- **Metallic Screen**: Individual copper tape screen
- **Armour**: Aluminium Wire Armour (AWA)
- **Outer Sheath**: Low Smoke Zero Halogen (LSZH)

QA Lab

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. Where applicable, cables are independently tested and certified by BASEC to ensure full compliance.

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 Single Core Armoured Power Cable 33kV - XLPE, AWA, LSZH - 70mm² to 1000mm² - Dimensions

Reference	Conductor Size (mm2)	No Of Cores	Stranding(mm)	Overall Diameter(mm)	Weight(Kg/Km)
33KVLSZH1X70RD	70	1	19/2.14	41.5	2315
33KVLSZH1X95RD	95	1	19/2.52	43.5	2700
33KVLSZH1X120RD	120	1	37/2.03	45.0	3050
33KVLSZH1X150RD	150	1	37/2.25	48.0	3525
33KVLSZH1X185RD	185	1	37/2.52	50.0	4025
33KVLSZH1X240RD	240	1	61/2.25	52.0	4650
33KVLSZH1X300RD	300	1	61/2.52	55.0	5465
33KVLSZH1X400RD	400	1	61/2.85	58.0	6350
33KVLSZH1X500RD	500	1	61/3.20	61.5	7620
33KVLSZH1X630RD	630	1	127/2.52	65.5	9165
33KVLSZH1X800RD	800	1	127/2.85	72.0	11125
33KVLSZH1X1000RD	1000	1	127/3.20	77.0	13425

22KV AND 33KV SINGLE 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	CONDUCTOR S.C.C FOR 1 SEC	SCREEN S.C.C FOR 1 SEC		CURRENT RATING		
							35mm² CWS	50mm² CWS	LAID IN GROUND	LAID IN DUCT	LAID IN FREE AIR
MM²	(Ω/km)	(Ω/km)	mf/km	(A/Km)	(W/Km)	(KA)	(KA)		AMPS	AMPS	AMPS
70	0,268	0,342	0,159	0,947	72,00	10,02	4,80	8,20	270	260	310
95	0,193	0,247	0,171	1,022	77,64	13,50	4,80	8,20	320	305	375
120	0,153	0,196	0,184	1,101	83,67	17,17	4,80	8,20	360	340	430
150	0,124	0,159	0,199	1,191	90,51	21,46	4,80	8,20	410	375	490
185	0,0991	0,128	0,213	1,275	96,88	26,47	4,80	8,20	455	410	550
240	0,0754	0,0975	0,236	1,408	107,03	34,34	4,80	8,20	520	470	650
300	0,0601	0,0784	0,258	1,541	117,11	42,93	4,80	8,20	580	500	740
400	0,047	0,0623	0,282	1,684	127,99	57,23	4,80	8,20	650	530	840
500	0,0366	0,0498	0,313	1,870	142,16	71,54	4,80	8,20	710	570	930
630	0,0283	0,0401	0,356	2,127	161,68	90,14	4,80	8,20	760	620	1040
800	0,0221	0,0332	0,394	2,351	178,65	114,47	4,80	8,20	810	660	1140
1000	0,0176	0,03	0,42	2,583	195,75	129,53	4,80	8,20	860	690	1230

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: 0.8m
Ground temperature: 15°C
Air temperature: 25°C
Frequency: 50Hz