BS7870 Single Core Renewables Cable 33kV - STR AL, XLPE, MDPE - 70mm² to 1000mm²

Description

Single core high voltage 33kV stranded aluminium, high voltage cable, for Windfarms, Solar parks and other renewable energy applications. Suitable for power networks, underground, outdoors and installation in cable ducting. Conforms to BS 7870-4.10

Key Features

Voltage Rating
Uo/U 19Kv / 33Kv
Maximum Voltage: 36kV
Test Voltage: 75Kv
Partial Discharge: Level with Voltage 2Uo kV Max. 5Pc

Minimum Bending Radius
20x Overall Diameter

Temperature Limits
Maximum conductor temp: 90°C
Maximum operating temp: 130°C
Short Circuit temp: 250°C

Core Colours

Black

Standards

- AD7 & AD8 water resistance available.
- UV Resistant Sheath
- Halogen Free to IEC/EN 60754-1
- BS EN/IEC 60228
- BS 7870-4.10

Construction

- **Conductor**: Class 2 Stranded Aluminium Conductor
- **Conductor Screen**: Bonded semi conductive material
- **Insulation**: Cross Linked polyethylene (XLPE)
- **Insulation Screen**: Strippable Extruded Semi Conductor
- **Water Blocking**: Semi-Conductive Water Blocking Tape
- **Metallic Screen**: Copper Wires plus Copper tape
- **Tape**: Non Conductive Water Blocking Tape
- **Outer Sheath**: Medium Density Polyethylene (MDPE)
- **Sheath Colour**: Black

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

BS7870 Single Core Renewables Cable 33kV - STR AL, XLPE, MDPE - 70mm² to 1000mm² - Dimensions

Reference	Conductor Size (mm2)	No Of Cores	Stranding(mm)	Overall Diameter(mm)	Weight(Kg/Km)
33KV1X70AL/AD	70	1	19/2.1	36.7	1339
33KV1X95AL/AD	95	1	19/2.47	38.4	1467
33KV1X120AL/AD	120	1	37/2.03	39.8	1584
33KV1X150AL/AD	150	1	37/2.27	41.3	1720
33KV1X185AL/AD7	185	1	37/2.54	43.0	1881
33KV1X240AL/AD7	240	1	61/2.25	45.5	2130
33KV1X300AL/AD7	300	1	61/2.52	47.8	2381
33KV1X400AL/AD7	400	1	61/2.85	50.8	2723
33KV1X500AL/AD	500	1	61/3.2	54.3	3146
33KV1X630AL/AD	630	1	127.252	58.9	3675
33KV1X800AL/AD	800	1	127.285	66.0	4720
33KV1X1000AL/AD	1000	1	127.3.2	72	4980

33KV BS7870 SINGLE CORE ALUMINIUM MDPE 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 FREE AIR
MM^2	(Ω/km)	(Ω/km)	mf/km	(A/Km)	(W/Km)	(Ω/km)	(KA)	(KA)	AMPS	AMPS
70	0.443	0.569	0.157	0.935	71.04	0.145	6.559	4.1	232	239
95	0.32	0.411	0.17	1.017	77.31	0.139	8.9015	4.1	278	288
120	0.253	0.325	0.183	1.094	83.12	0.134	11.244	4.1	320	332
150	0.206	0.265	0.203	1.213	92.16	0.127	14.055	4.1	354	379
185	0.164	0.211	0.211	1.261	95.85	0.124	17.3345	4.1	405	433
240	0.125	0.161	0.233	1.39	105.61	0.119	22.488	4.1	468	513
300	0.1	0.129	0.253	1.512	114.92	0.115	28.11	4.1	526	590
400	0.0778	0.101	0.277	1.655	125.81	0.11	37.48	4.1	605	685
500	0.0605	0.079	0.306	1.829	139.05	0.106	46.85	4.1	684	803
630	0.0469	0.062	0.343	2.045	155.46	0.103	59.031	4.1	794	933
800	0.0367	0.049	0.385	2.297	174.6	0.099	74.96	4.1	899	1075

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