

BS7870 Single Core Service Cable 33kV - STR CU, XLPE, MDPE - 70mm² to 630mm²



Description

Single core high voltage cable for Windfarms, Solar Parks and other Renewable applications. Suitable for power networks, underground, outdoors and installation in cable ducting.
Conforms to BS 7870-4.10

Key Features



Voltage Rating

U₀/U 19Kv / 33Kv

Maximum Voltage: 36kV

Test Voltage: 75Kv

Partial Discharge: Level with Voltage 2U₀ kV Max. 5Pc



Temperature Limits

Maximum conductor temp: 90°C

Maximum operating temp: 130°C

Short Circuit temp: 250°C

Standards

- BS 7870-4.10

Construction

- **Conductor:** Stranded Copper Conductor
- **Insulation:** Cross Linked polyethylene (XLPE)
- **Metallic Screen:** Copper Wire Screen
- **Separator:** Copper Tape (O.H), Non-Conductive Water Blocking Tape
- **Tape:** Semi-Conductive Water Blocking Tape
- **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

ecovadis

BS7870 Single Core Service Cable 33kV - STR CU, XLPE, MDPE - 70mm² to 630mm² - Dimensions

Reference	Conductor Size (mm2)	No Of Cores	Stranding(mm)	Overall Diameter(mm)	Weight(Kg/Km)
33KVCU1X70BK	70	1	19/2.11	36.5	1751
33KVCU1X95BK	95	1	19/2.48	38.2	2043
33KVCU1X120BK	120	1	35/2.05	39.6	2309
33KVCU1X150BK	150	1	35/2.28	41.2	2614
33KVCU1X185BK	185	1	35/2.55	42.9	2997
33KVCU1X240BK	240	1	35/2.92	45.4	3596
33KVCU1X300BK	300	1	35/3.28	47.8	4225
33KVCU1X400BK	400	1	56/2.93	50.6	5069
33KVCU1X500BK	500	1	56/3.32	53.9	6156
33KVCU1X630BK	630	1	56/3.77	57.6	7570

33KV BS7870 SINGLE CORE COPPER ELECTRICAL CHARACTERISTICS

CONDUCTOR SIZE	MAX DC RESISTANCE AT 20°C	CONDUCTOR AC RESISTANCE AT MAX OPERATING TEMPERATURE AND 50hz	CAPACITANCE	INDUCTANCE AT 50HZ	CONDUCTOR S.C.C FOR 1 SEC	SCREEN S.C.C FOR 1 SEC	CURRENT RATING		
							LAID IN FREE AIR	LAID IN DUCT	LAID IN GROUND
MM ²	(Ω /km)	(Ω /km)	mf/km	(W/Km)	(KA)	(KA)	AMPS	AMPS	AMPS
70	0.268	0.342	0.14	15.35	9.7	4.8	320	270	270
95	0.193	0.247	0.16	16.81	13.5	4.8	390	320	320
120	0.153	0.196	0.17	18.37	17.1	4.8	445	360	360
150	0.124	0.159	0.18	20.15	21	4.8	510	405	410
185	0.0991	0.128	0.2	21.81	26.3	4.8	580	445	460
240	0.0754	0.098	0.22	24.47	34.6	4.8	680	520	530
300	0.0601	0.078	0.25	27.13	43.4	4.8	770	270	600
400	0.047	0.062	0.26	30	57.7	4.8	895	630	690
500	0.0366	0.049	0.29	33.76	72.1	4.8	1020	700	760
630	0.0283	0.039	0.32	38.51	90.7	4.8	1160	780	850
800	0.0221	0.035	0.35	43.03	115.1	4.8	1290	860	930
1000	0.0176	0.03	0.38	43.03	143.8	4.8	1430	920	1010

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.