CLEVELAND CABLE COMPANY

BS7870 Single Core Service Cable 33kV - XLPE, MDPE - 70mm to 630mm

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

Installation Guidelines
Should not be installed at temperatures below 0°C

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

Minimum Bending Radius
As Per Manufacturers Datasheet

Temperature Limits
Maximum conductor temp: 90°C

Maximum operating temp: 130°C

Short Circuit temp: 250°C

Construction

- **Conductor**: Stranded Copper Conductor
- **Insulation**: Cross Linked polyethylene (XLPE)
- **Metallic Screen**: Copper Wire Screen
- **Sheath**: Medium Density Polyethylene (MDPE)
- **Separator**: Copper Tape (O.H), Non-Conductive Water Blocking Tape
- **Tape**: Semi-Conductive Water Blocking Tape
- **Sheath Colour**: Black

Standards

- BS 7870-4.10

BS7870 Single Core Service Cable 33kV - XLPE, MDPE - 70mm to 630mm - 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