BS6622/BS7835 Single Core Armoured 11kV XLPE Stranded Copper Conductor

CABLE CHARACTERISTICS



Bending radius r=15D

CABLE DESCRIPTION

1.CONDUCTOR
Compact circular stranded copper conductor complying with BS6360 Class 2.

CONDUCTOR SCREEN
Extruded semi-conducting compound bonded to the insulation and applied in the same operation as the insulation.

2.INSULATION
Extruded cross-linked polyethylene (XLPE) suitable for operation at a conductor temperature of 90°C.

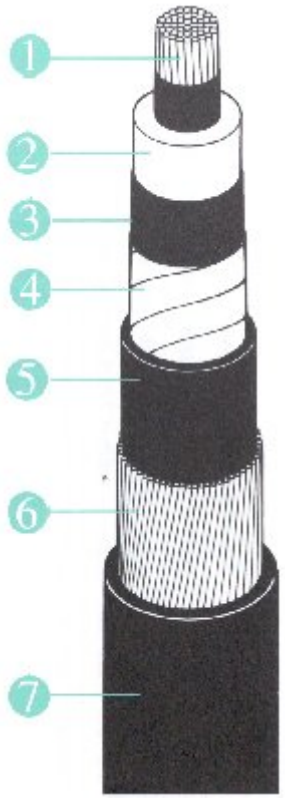
3.INSULATION SCREEN
Extruded semi-conducting compound applied in the same operation as the insulation. Cold strippable screens are supplied as standard but fully bonded screens may be provided if specified.

4.METALLIC SCREEN
Copper tapes applied overlapped to provide an earth fault current path.

5.BEDDING
Extruded black polyvinyl chloride (PVC) or Low Smoke Zero Halogen (LSOH) compound is supplied as standard. Alternative materials may be provided if specified.

6.ARMOURING
Single layer of circular aluminium wires.

7.OVERSHEATH
Extruded black polyvinyl chloride (PVC) or Low Smoke Zero Halogen (LSOH) compound is supplied as standard. Alternative materials may be provided if specified
e.g. medium density polyethylene (MDPE).



BS6622/BS7835 Single Core Armoured 11kV XLPE Stranded Copper Conductor

Constructional Data

Cross-sectional area mm²	Minimum average thickness of insulation mm	Nominal diameter over insulation mm	Nominal thickness of PVC/LSOH bedding mm	Nominal number and diameter of armoured wires no/mm	Nominal thickness of PVC/LSOH oversheath mm	Nominal overall diameter of cable mm
50	3.4	17.0	1.2	39/1.6	1.8	27.7
70	3.4	18.8	1.2	42/1.6	1.9	29.7
95	3.4	20.5	1.2	45/1.6	1.9	31.4
120	3.4	22.0	1.2	47/1.6	2.0	33.1
150	3.4	23.3	1.2	40/2.0	2.1	35.4
185	3.4	25.1	1.2	43/2.0	2.1	37.2
240	3.4	27.3	1.2	46/2.0	2.2	39.8
300	3.4	29.6	1.2	49/2.0	2.3	42.3
400	3.4	32.3	1.2	53/2.0	2.4	45.2
500	3.4	35.2	1.3	46/2.5	2.5	49.5
630	3.4	38.6	1.4	50/2.5	2.6	53.3
800	Please refer to	our technical	department	for further	information	-
1000	Please refer to	our technical	department	for further	information	-

Installation Data

Cross-sectional area mm²	Appoximate cable weight kg/m	Nominal drum length m	Minimum bending radius mm	Nominal internal diameter of ducts mm
50	1.3	1000	450	100
70	1.6	1000	450	100
95	1.9	1000	500	100
120	2.2	500	500	100
150	2.6	500	550	100
185	3.0	500	600	100
240	3.6	500	600	100
300	4.3	500	650	100
400	5.2	300	700	100
500	6.5	300	750	100
630	7.9	300	800	100
800	Please refer	to our technical	department for	further information
1000	Please refer	to our technical	department for	further information

BS6622/BS7835 Single Core Armoured 11kV XLPE Stranded Copper Conductor

Electrical Data

Cross-sectional area mm²	Maximum DC resistance of conductor at 20°C µOhms/m	Maximum AC resistance of conductor at 90°C µOhms/m	Reactance at 50Hz µOhms/m	Impedance at 50Hz µOhms/m	Maximum Capacitance pF/m	Maximum charging current at normal voltage and frequency mA/m
50	387	494	138	512	252	0.5
70	268	343	130	366	288	0.58
95	193	248	123	276	323	0.65
120	153	196	118	229	353	0.71
150	124	159	117	197	380	0.76
185	99.1	128	112	169	416	0.83
240	75.4	98	109	146	460	0.92
300	60.1	80	105	131	506	1.01
400	47	64	101	119	561	1.12
500	36.6	51	99.8	112	619	1.24
630	28.3	42	96.5	105	698	1.37
800	Please refer	to our technical	department	for	further	information
1000	Please refer	to our technical	department	for	further	information

Ratings Data

Cross-secttional area mm²	Current Ratings			Short Circuit Ratings	
	Laid in ground Amps	Drawn into ducts Amps	Laid in air Amps	One secomd short circuit rating of conductor kA	One second short circuit rating of copper tape screen kA
50	220	220	250	6.8	-
70	270	260	310	9.8	Typically
95	320	305	375	13.3	less
120	360	340	430	17.2	then
150	410	375	490	21.2	1kA
185	455	410	550	26.6	-
240	520	460	650	34.9	-
300	580	500	740	43.8	-
400	650	530	840	57.3	-
500	710	570	930	72.3	-
630	760	620	1040	91.2	-
800	Please refer to	our technical	department for	furter information	-
1000	Please refer to	our technical	department for	furter information	-

Current Rating Conditions:

Ground Temperature 15°C
Ambient temperature (air) 25°c
Depth of Burial 0.8m
Thermal Resistance of Soil 1.2°C m/W

Single core cables in trefoil, bonded and earthed at both ends.

BASEC
BRITISH APPROVALS SERVICE FOR CABLES

Certificate No:
017/006/090
Issue No: 7

Certificate of Product Approval

Licensee:
Prysmian Cables & Systems Ltd

Chickenhall Lane, Eastleigh, SO50 6YU, Hampshire, United Kingdom

Factory:
Oak Road

Wrexham Industrial Estate, Wrexham, LL13 9PH, Clwyd, United Kingdom

Standard:
BS 7835:2007 Incorporating Corrigendum No.1

Description:
Medium voltage power cables up to 33kV with LSHF sheathing

Details:
Stranded circular copper or aluminium class 2 conductors. XLPE insulation. Bonded or strippable semi-conducting insulation screen. Copper tape and/or copper wire screened. Extruded inner sheath. Aluminium round wire armoured (single-core cables). Galvanised steel round wire armoured (3-core cables). LTS1, halogen free, low smoke extruded outer sheath. Voltage ratings: : 3.8/6.6 (7.2)kV, 6.35/11(12)kV, 8.7/15 (17.5)kV, 12.7/22 (24)kV and19/33 (36)kV Range

Materials:
Insulation XLPE, Sheath LTS 1

Brand Name:
N/A

Origin Mark:
PRYSMIAN (W)

Permissible Approval Marks:

BASEC name | BASEC roundel

Signed for and on behalf of
BASEC Group Ltd

Kieran O'Brien Date: 20/07/2023

Date of original issue: 06/02/2020

Check BASEC website to verify validity.

BASEC Group Ltd, Presley House, Presley Way, Milton Keynes, MK8 0ES, UK
Registered in England No. 13950143, Tel: +44 (0)1908 267300
Email: mail@basec.org.uk Web: www.basec.org.uk

BSF079 Issue 5 (20-03-2023)

UKAS PRODUCT CERTIFICATION 0004

Expiry date:
11/08/2026

BASEC
BRITISH APPROVALS SERVICE FOR CABLES

Certificate No:
017/006/090

Issue No: 7

Type(s) and Range(s) of Approval

Table / Clause	Code Designation	Conductor Class	Range of Cores	Min Nominal Size -sqmm	Max Nominal Size - sqmm
N/A	N/A	Class 2	1	70	1000
N/A	N/A	Class 2	3	70	300

Signed for and on behalf of
BASEC Group Ltd

Kieran O'Brien Date: 20/07/2023

Date of original issue: 06/02/2020

Check BASEC website to verify validity.

BASEC Group Ltd, Presley House, Presley Way, Milton Keynes, MK8 0ES, UK
Registered in England No.13950143, Tel: +44 (0)1908 267300
Email: mail@basec.org.uk Web: www.basec.org.uk

BSF079 Issue 5 (20-03-2023)

UKAS PRODUCT CERTIFICATION 0004

Expiry date:
11/08/2026