
CLEVELAND CABLE COMPANY

Branches around the UK

Unrivalled in the Industry

As is illustrated within our catalogue, we stock a comprehensive range of cables for every conceivable application. All types shown are considered as standard items to our range and are always available for immediate delivery. Our stocks are extremely large and unrivalled in the industry.

We are fortunate to have a very experienced and dedicated team of people who are able to assist and advise. Additionally our policy of continuing investment in the best available technology, warehousing, handling and measuring equipment and delivery vehicles enables us to guarantee all our customers an extremely high quality service.

Enquiries are welcome from customers worldwide. Our export service is efficient and reliable with the ability to ship by air or sea freight to any destination.

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Cleveland Cable Company, established in 1978, is undoubtedly **the foremost distributor of electrical cables** in the UK and possibly Europe.

The Head Office and principal stocking location is located at Middlesbrough in the North East of England. This site covers an area of twelve acres and includes over 160,000 square feet of warehousing. Additionally there are regional depots at Bristol, Glasgow, London, Milton Keynes, Newcastle, Warrington and Dublin. We also have our fully stocked cable distribution business in Dubai, U.A.E, Cleveland Cable Trading FZCO. Each location holds comprehensive stocks and is equipped with the most modern handling and measuring equipment. Deliveries are made by our own fleet of purpose-designed vehicles, all of which are fitted with hydraulic lifting equipment for safe offloading onsite and also efficient collection of empty drums.

ISO 14001 ISO 9001 UVDB RISQS FPAL FORS CPR CE

CLEVELAND CABLE COMPANY

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SECTION 1 Low Voltage PVC Fixed Wiring & Mains Cables

6491X (HO7V-R) PVC

Stranded plain annealed compacted circular copper conductor, PVC outer sheath. Ref 6491X. Harmonised code HO7V-R. 450/750 volts grade to BS EN 50525-2-3. Flame propagation to BS EN 50265.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	Weight (Kg/Km)	Overall Diameter (mm)	Brass A2	Nylon A2
6491X1/5	1.5	7/0.53	21	3.00	20/16	16
6491X2/5	2.5	7/0.67	35	3.65	20/16	16
6491X4	4	7/0.85	50	4.20	20/16	16
6491X6	6	7/1.04	71	4.75	20/16	16
6491X10	10	7/1.35	120	6.15	20/16	16
6491X16	16	7/1.70	180	7.10	20/16	16
6491X25	25	7/2.14	280	8.90	20S	20
6491X35	35	7/2.52	380	9.95	20S	20
6491X50	50	19/1.78	510	11.70	20	20
6491X70	70	19/2.14	720	13.35	20	25
6491X95	95	19/2.52	990	15.60	25	25
6491X120	120	37/2.03	1200	17.20	25	25
6491X150	150	37/2.25	1500	19.10	25	32
6491X185	185	37/2.52	1900	21.30	32	32
6491X240	240	61/2.25	2500	24.30	32	32
6491X300	300	61/2.52	3000	27.05	40	40
6491X400	400	61/2.85	3950	30.35	40	40
6491X500	500	61/3.20	4950	32.80	50S	50
6491X630	630	127/2.50	6250	36.50	50S	50

Temperature limits: -15 to +70°C.

*Bending radius: up to $10mm^2$ - 3 x overall diameter. above $25mm^2$ - 6 x overall diameter.

Standard colours available: $1.5mm^2$ & $2.5mm^2$ - Brown, Black, Grey, Blue, Green/Yellow, White, Orange, Violet, Pink

$4mm^2$-$630mm^2$ - Brown, Black, Grey, Blue, Green/Yellow.

Should not be installed at temperatures below 0°C or above +60°C.

SURFACE WIRING CABLES PVC 6181Y

Plain annealed stranded circular copper conductor, single core, PVC insulated, PVC sheathed, Ref 6181 Y. 300/500 volts grade to BS6004 120mm rated at 600/1000 V. Brown/Grey or Blue/Grey. Flame propagation to BS EN 50265.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size (mm)	Nylon Cleat Size
6181Y1**	1	1/1.13	1	28	4.50	20/16	-
6181Y1/5**	1.5	1/1.38	1	36	5.10	20/16	-
6181Y2/5**	2.5	1/1.78	1	51	6.00	20/16	-
6181Y4	4	7/0.85	1	75	6.80	20/16	-
6181Y6	6	7/1.04	1	98	7.40	20/16	-
6181Y10	10	7/1.35	1	150	8.80	20S	-
6181Y16	16	7/1.70	1	220	10.50	20S	0.5
6181Y25	25	7/2.14	1	340	12.50	20	0.5
6181Y35	35	7/2.52	1	440	13.50	25	0.6
6181Y50	50	19/1.78	1	540	14.38	25	0.6
6181Y70	70	19/2.14	1	750	15.30	25	0.7
6181Y95	95	19.2.52	1	1010	17.70	25	0.7
6181Y120	120	37/2.03	1	1250	19.30	32	0.8

Temperature limits: -15 to +70°C.

*Bending radius: up to $10mm^2$ - 3 x overall diameter. over $10mm^2$ - 4 x overall diameter.

Should not be installed at temperatures below 0°C or above +60°C.

**1.0 - $2.5mm^2$ are solid conductor.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

SURFACE WIRING CABLES PVC 624*Y

Plain annealed copper conductor, PVC insulated one, two or three cores laid flat with an uninsulated circuit protective conductor and PVC sheathed. Grey. Ref 6241/2/3Y 300/500 V to BS6004. Flame propagation to BS EN 50265.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	CPC Size (mm^2)	Weight (Kg/Km)	Overall Diameter (mm)
6241Y1	1	1/1.13	1	1.0	49	4.15 X 5.40
6241Y1/5	1.5	1/1.37	1	1.0	51	4.65 X 5.80
6242Y1	1	1/1.13	2	1.0	69	4.10 X 8.65
6243Y1	1.0	1/1.13	3	1.0	92	4.60 X 10.20
6242Y1/5	1.5	1/1.38	2	1.0	85	4.55 X 8.80
6242Y1/5BRBR	1.5	1/1.38	2	1.0	85	4.55 X 8.80
6242Y2/5	2.5	1/1.77	2	1.5	120	5.40 X 10.50
6243Y1/5	1.5	1/1.37	3	1.0	115	4.75 X 11.45
6243Y2/5	2.5	1/1.77	3	1.5	170	5.45 X 13.40
6242Y4	4	7/0.85	2	1.5	175	6.10 X 12.00
6242Y6	6	7/1.04	2	2.5	240	6.90 X 13.80
6242Y10	10	7/1.35	2	4.0	390	8.40 X 18.50
6242Y16	16	7.1.70	2	6.0	560	9.70 X 20.60

Temperature limits:
- 15 to + 70°C.

*Bending radius:
Fixed 3x overall diameter.

Should not be installed at temperatures below 0°C or above +60°C.

Core identification:
1 core - Brown or Blue.
2 core - Brown, Blue.
3 core - Brown, Black, Grey.

DOMESTIC AND INDUSTRIAL WIRING CABLES PVC

Plain annealed class 1 solid conductor, PVC insulated, PVC sheathed. Grey. 300/500 volt rated to BS EN 50265-2-1. Suitable for industrial or home applications and designed for dry, moist or wet open areas ie under plaster and in concrete - not suitable for exposure to direct sunlight.

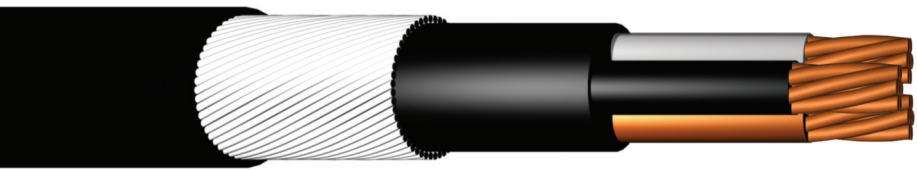
CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)
NYMJ3X1/5	1.5	1/1.38	3	120
NYMJ4X1/5	1.5	1/1.38	4	140
NYMJ5X1/5	1.5	1/1.38	5	170
NYMJ7X1/5	1.5	1/1.38	7	210
NYMJ12X1/5	1.5	1/1.38	12	405
NYMJ3X2/5	2.5	1/1.78	3	165
NYMJ5X2/5	2.5	1/1.78	5	245
NYMJ3X4	4	1/2.25	3	240
NYMJ5X4	4	1/2.25	5	370
NYMJ3X6	6	1/2.76	3	330
NYMJ5X6	6	1/2.76	5	406
NYMJ3X10	10	1/3.56	3	510
NYMJ5X10	10	1/3.56	5	770
NYMJ3X16	16	7/1.70	3	740
NYMJ5X16	16	7/1.70	5	1150

Temperature limits:
-30 to +70°C.

Core identification:
3 core - Blue, Brown & Green/Yellow.
4 core - Brown, Black, Grey & Green/Yellow
5 core - Brown, Black, Grey, Blue & Green/Yellow.
7 core - White numbered.
Packing, 100m coils or 500m reels

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.



MAINS AND CONTROL CABLES PVC

Stranded plain annealed copper conductors, thermosetting XLPE insulated, PVC bedding, galvanised steel wire armour, PVC outer sheath. Black. 600/1000 volts grade to BS5467. Flame propagation to BS EN 60332-1.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size (mm)	Nylon Cleat Size
XLPE2X1/5	1.5	7/0.53	2	234	11.06	20/16	0.5
XLPE3X1/5**	1.5	7/0.53	3	271	11.54	20/16	0.5
XLPE4X1/5	1.5	7/0.53	4	306	12.26	20/16	0.5
XLPE5X1/5	1.5	7/0.53	5	356	13.23	20S	0.6
XLPE7X1/5	1.5	7/0.53	7	391	14.10	20S	0.6
XLPE8X1/5	1.5	7/0.53	8	501	16.70	20	0.7
XLPE10X1/5	1.5	7/0.53	10	650	18.00	20	0.8
XLPE12X1/5	1.5	7/0.53	12	657	18.30	20	0.8
XLPE19X1/5	1.5	7/0.53	19	863	20.78	25	0.9
XLPE27X1/5	1.5	7/0.53	27	1310	25.10	25	1.0
XLPE37X1/5	1.5	7/0.53	37	1590	27.50	32	1.1
XLPE48X1/5	1.5	7/0.53	48	1900	30.00	32	1.2
XLPE2X2/5	2.5	7/0.67	2	312	12.40	20S	0.5
XLPE3X2/5**	2.5	7/0.67	3	343	12.99	20S	0.6
XLPE4X2/5	2.5	7/0.67	4	392	13.86	20S	0.6
XLPE5X2/5	2.5	7/0.67	5	463	14.92	20S	0.6
XLPE7X2/5	2.5	7/0.67	7	509	15.96	20	0.8
XLPE10X2/5	2.5	7/0.67	10	850	20.00	25	0.8
XLPE12X2/5	2.5	7/0.67	12	861	21.11	25	0.9
XLPE19X2/5	2.5	7/0.67	19	1324	25.16	25	1.0
XLPE27X2/5	2.5	7/0.67	27	1760	30.00	32	1.2
XLPE37X2/5	2.5	7/0.67	37	2185	33.00	40	1.4
XLPE48X2/5	2.5	7/0.67	48	2800	36.00	40	1.6
XLPE2X4	4	7/0.85	2	373	13.38	20S	0.6
XLPE3X4**	4	7/0.85	3	421	14.05	20S	0.6
XLPE4X4	4	7/0.85	4	496	15.04	20	0.6
XLPE5X4	4	7/0.85	5	573	16.35	20	0.7
XLPE7X4	4	7/0.85	7	741	18.21	20	0.8
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XLPE19X4	4	7/0.85	19	1690	27.61	32	1.1
XLPE27X4	4	7/0.85	27	2250	32.0	32	1.4
XLPE2X6	6	7/1.04	2	450	14.38	20S	0.6
XLPE3X6**	6	7/1.04	3	515	15.14	20	0.7
XLPE4X6	6	7/1.04	4	696	17.03	20	0.7
XLPE5X6	6	7/1.04	5	808	18.39	20	0.8
XLPE7X6	6	7/1.04	7	1100	21.90	25	0.9
XLPE2X10	10	7/1.35	2	590	16.18	20	0.7
XLPE3X10**	10	7/1.35	3	781	17.76	20	0.8
XLPE4X10	10	7/1.35	4	927	19.09	25	0.8
XLPE5X10	10	7/1.35	5	1095	20.91	25	0.9
XLPE7X10	10	7/1.35	7	1500	25.00	25	1.0
XLPE2X16	16	7/1.70	2	893	19.06	25	0.8
XLPE3X16**	16	7/1.70	3	1059	20.35	25	0.9
XLPE4X16	16	7/1.70	4	1269	21.95	25	0.9
XLPE5X16	16	7/1.70	5	1679	25.19	25	1.1
XLPE7X16	16	7/1.70	7	2150	28.10	32	1.2

Temperature limits:
-15 to +90°C.

*Bending radius:
6 x overall diameter.

Core identification:
2 core - Brown, Blue.
3 core - Brown, Black, Grey.
4 core - Brown, Black, Grey, Blue.
5 core and above - Up to 6mm² - White with Black numbers. Also available as Brown, Black, Grey, Blue, Green/Yellow.
5 - 10mm² and 16mm² - Brown, Black, Grey, Blue, Green/Yellow.

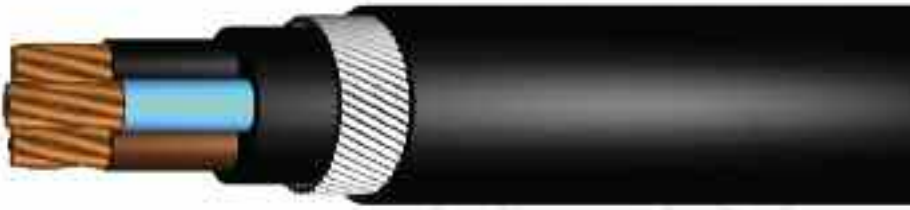
1.5 & 2.5 - 2,3,4 core also available in white numbered cores to ESI 09-6.

Should not be installed at temperatures below 0°C or above +40°C.

** Also available as Brown, Blue, Green/Yellow core identification.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.



MAINS CABLES PVC

Stranded plain annealed copper conductors, thermosetting XLPE insulated, PVC bedding, galvanised steel wire armour, PVC outer sheath. Black. 600/1000 volts grade to BS5467. Flame propagation to BS EN 60332-1.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size (mm)	Nylon Cleat Size
6942X25	25	7/2.14	2	1050	20.00	25	0.8
6943X25**	25	7/2.14	3	1500	23.00	25	1.0
6944X25	25	7/2.14	4	1800	25.00	32	1.0
6945X25	25	7/2.14	5	2200	29.00	32	1.2
6942X35	35	7/2.52	2	1400	22.00	25	0.9
6943X35**	35	7/2.52	3	1800	26.00	32	1.1
6944X35	35	7/2.52	4	2200	28.00	32	1.2
6945X35	35	7/2.52	5	2800	33.00	40	1.4
6942X50	50	19/1.78	2	1750	25.00	32	1.0
6943X50	50	19/1.78	3	2250	28.00	32	1.2
6944X50	50	19/1.78	4	2850	31.00	32	1.4
6945X50	50	19/1.78	5	3850	38.00	40	1.6
6942X70	70	19/2.14	2	2200	28.00	32	1.2
6943X70	70	19/2.14	3	3000	32.00	32	1.4
6944X70	70	19/2.14	4	4100	37.00	40	1.6
6945X70	70	19/2.14	5	5100	43.00	50S	1.8
6942X95	95	19/2.52	2	3000	32.00	40	1.4
6943X95	95	19/2.52	3	4150	37.00	40	1.6
6944X95	95	19/2.52	4	5200	40.00	50S	1.8
6945X95	95	19/2.52	5	7700	52.00	50	TC9
6942X120	120	37/2.03	2	3600	35.00	40	1.4
6943X120	120	37/2.03	3	4950	40.00	50S	1.8
6944X120	120	37/2.03	4	6700	46.00	50	2.0
6945X120	120	37/2.03	5	9030	56.70	63S	TC9
6942X150	150	37/2.25	2	4250	37.00	40	1.6
6943X150	150	37/2.25	3	6300	45.00	50	1.8
6944X150	150	37/2.25	4	7900	49.00	50	2.0
6942X185	185	37/2.52	2	5500	43.00	50	1.8
6943X185	185	37/2.52	3	7650	49.00	50	2.0
6944X185	185	37/2.52	4	9650	55.00	63S	TC9
6942X240	240	61/2.25	2	6900	48.00	50	2.0
6943X240	240	61/2.25	3	9650	56.00	63S	TC9
6944X240	240	61/2.25	4	12400	62.00	63	TC10
6942X300	300	61/2.52	2	8200	50.00	50	2.0
6943X300	300	61/2.52	3	11550	59.00	63	TC10
6944X300	300	61/2.52	4	14800	66.00	75S	TC11
6942X400	400	61/2.85	2	10100	56.00	63S	TC9
6943X400	400	61/2.85	3	14350	65.00	75S	TC11
6944X400	400	61/2.85	4	19300	76.60	75	TC14

Temperature limits:
-15 to +90°C.

*Bending radius:
8 x overall diameter.

Core identification:
2 core - Brown, Blue.
3 core - Brown, Black, Grey.
4 core - Brown, Black, Grey, Blue.
5 core - Brown, Black, Grey, Blue,Green/Yellow.

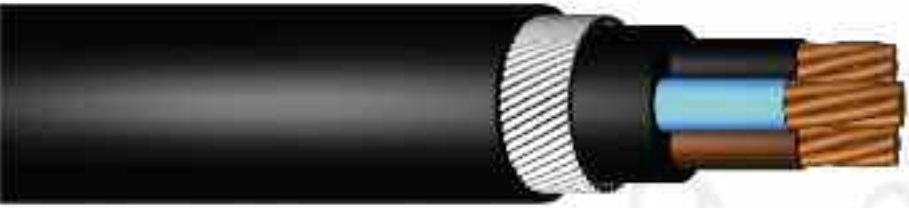
Should not be installed at temperatures below 0°C or above +60°C.

NB 5 CORE 95MM AND ABOVE ARE MANUFACTURED TO IEC60502-1

** Additionally these cables are stocked with Brown, Blue and Green/Yellow core identification.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.



FIXED WIRING AND MAINS CABLES MDPE SHEATHED

Stranded plain annealed copper conductor, thermosetting XLPE insulated, PVC bedding, galvanised steel wire armour, MDPE outer sheath. Black. 600/1000v grade generally to BS5467.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size (mm)	Nylon Cleat Size
6942PE4	4	7/0.86	2	344	13.40	20S	0.6
6943PE4	4	7/0.86	3	389	14.10	20S	0.6
6944PE4	4	7/0.86	4	462	15.00	20S	0.6
6942PE6	6	7/1.06	2	418	14.40	20S	0.6
6943PE6	6	7/1.06	3	480	15.10	20S	0.6
6944PE6	6	7/1.06	4	655	17.00	20	0.7
6942PE10	10	7/1.36	2	552	16.20	20	0.7
6943PE10	10	7/1.36	3	739	17.80	20	0.8
6944PE10	10	7/1.36	4	881	19.10	25	0.8
6942PE16	16	7/1.74	2	847	19.10	20	0.8
6943PE16	16	7/1.74	3	1006	20.40	25	0.9
6944PE16	16	7/1.74	4	1211	22.00	25	0.9
6945PE16	16	7/1.74	5	1606	25.20	25	1.0
6943PE25	25	7/2.21	3	1562	24.90	25	1.0
6944PE25	25	7/2.21	4	1895	26.80	32	1.1
6943PE35	35	7/2.66	3	1964	27.20	32	1.1
6944PE35	35	7/2.66	4	2393	29.50	32	1.2
6943PE50	50	19/1.88	3	2199	28.60	32	1.2
6944PE50	50	19/1.88	4	2763	32.10	32	1.4
6943PE70	70	19/2.21	3	2937	32.30	32	1.4
6944PE70	70	19/2.21	4	3967	37.40	40	1.6
6943PE95	95	37/1.88	3	4036	37.00	40	1.6
6944PE95	95	37/1.88	4	5128	41.60	50S	1.8

Temperature limits:
- 15 to + 90°C.

Bending radius: 8 x Overall Diameter.

Core identification:
2 core - Brown, Blue.
3 core - Brown, Blue, Green/Yellow.
4 core - Brown, Black, Grey, Blue.
5 core - Brown, Black, Grey, Blue, Green/Yellow.

Should not be installed at temperatures below 0°C or above 40°C.

MAINS CABLES WITH ALUMINIUM CONDUCTORS PVC

Solid plain aluminium sectoral conductors, thermosetting XLPE insulated, PVC bedding, galvanised steel wire armour, PVC outer sheath. Black. 600/1000 volts grade to BS5467. Flame propagation to BS EN 60332.

CCC Code	Conductor Size (mm^2)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size (mm)	Nylon Cleat Size
SAC4X70	70	4	2401	34.70	40	1.4
SAC4X95	95	4	2905	38.30	40	1.6
SAC4X120	120	4	3705	42.20	50S	1.8
SAC4X150	150	4	4550	46.00	50	2.0
SAC4X185	185	4	5076	51.10	50	TC9
SAC4X240	240	4	6104	56.40	63S	TC9
SAC4X300	300	4	7212	61.40	63	TC10

Temperature limits:
-15 to +90°C.

*Bending radius: 8 x overall diameter.

Core identification: Brown, Black, Grey, Blue.

Should not be installed at temperatures below 0°C or above +60°C.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

SINGLE CORE NON-ARMOURED MAINS CABLES PVC

Plain annealed stranded compacted circular copper conductor, single core, thermosetting XLPE insulated, PVC outer sheath Black. 600/1000 volts grade to BS7889/97. Flame propagation to BS EN 60332.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	Weight (Kg/Km)	Overall Diameter (mm)	Brass A2	Nylon A2	Nylon Cleat Size	Trefoil Cleat
6181X50	50	19/1.78	520	13.50	25	25	0.6	-
6181X70	70	19/2.14	720	15.50	25	25	0.7	-
6181X95	95	19/2.52	985	17.50	25	25	0.7	-
6181X120	120	37/2.03	1215	19.00	32	32	0.8	-
6181X150	150	37/2.25	1515	21.50	32	32	0.9	-
6181X185	185	37/2.52	1865	23.50	32	32	1.0	-
6181X240	240	61/2.25	2415	26.50	40	40	1.1	-
6181X300	300	61/2.52	3005	29.00	40	40	1.2	376AC04
6181X400	400	61/2.85	3810	32.50	50S	50	1.4	376AC06
6181X500	500	61/3.20	4890	37.00	50S	50	1.6	376AC09
6181X630	630	127/2.52	6355	42.00	50	63	1.8	376AC12
6181X800	800	127/2.85	8075	46.00	63S	-	2.0	376AC15
6181X1000	1000	127/3.20	9860	53.00	63	-	TC9	376AC19

Temperature limits:
-15 to +90°C.

*Bending radius: 6 x overall diameter.

Core identification:
Brown inner - Black outer.

Should not be installed at temperatures below 0°C or above +60°C.

FIXED WIRING AND MAINS CABLES

Stranded plain annealed compacted circular copper conductors, thermosetting XLPE insulated, PVC bedding, aluminium wire armoured, PVC outer sheath. Black. 600/100 volts grade to BS5467. Flame propagation to BS EN 60332-1-2.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size cw Ali (mm)	Gland Size Brass A2 (mm)	Nylon Cleat Size	Trefoil Cleat
6941AX50	50	19/1.78	1	638	17.70	20	25	0.7	-
6941AX70	70	19/2.14	1	891	19.60	25	32	0.8	-
6941AX95	95	19/2.52	1	1166	21.50	25	32	0.9	-
6941AX120	120	37/2.03	1	1412	23.10	25	32	1.0	-
6941AX150	150	37/2.25	1	1800	26.00	32	40	1.1	-
6941AX185	185	37/2.52	1	2200	28.00	32	40	1.2	376AC04
6941AX240	240	61/2.25	1	2800	32.00	40	50S	1.4	376AC06
6941AX300	300	61/2.52	1	3400	33.00	40	50S	1.4	376AC06
6941AX400	400	61/2.85	1	4450	38.00	40	50	1.6	376AC10
6941AX500	500	61/3.2	1	5550	43.00	50S	63S	1.8	376AC13
6941AX630	630	127/2.52	1	7100	47.00	50	63S	2.0	376AC15
6941AX800	800	127/2.85	1	9200	55.00	63S	75S	TC9	376AC20
6941AX1000	1000	127/3.2	1	11270	58.80	63S	75S	TC10	376AC22

Temperature limits:
- 15 to + 90°C.

*Bending radius:
6 x Overall Diameter.

Core identification:
Brown inner - Black outer

Should not be installed at temperatures below 0°C or above +60°C.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

EEMUA133 CONTROL CABLES PVC

Plain annealed stranded copper conductors, thermosetting XLPE insulated, PVC bedding, lead sheathed, PVC bedding, galvanised steel wire armour, PVC outer sheath. Cores white with black numbers. 600/1000 volts grade to BS5467 and EEMUA 133. Flame propagation to BS EN 60332-1 (IEC 60332-1), bunched cables to BS EN 50266-2-2 (IEC 60332-3-22 category A) and BS EN 50266-2-4 (IEC 60332-3-24 category C).

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size (mm)	Nylon Cleat Size
EEMUA2X1/5 ESI	1.5	7/0.53	2	690	15.00	20	0.6
EEMUA3X1/5 ESI	1.5	7/0.53	3	750	15.50	20	0.7
EEMUA4X1/5 ESI	1.5	7/0.53	4	810	16.00	20	0.7
EEMUA5X1/5	1.5	7/0.53	5	895	16.80	20	0.7
EEMUA7X1/5	1.5	7/0.53	7	1072	17.70	20	0.7
EEMUA12X1/5	1.5	7/0.53	12	1387	22.30	25	0.9
EEMUA19X1/5	1.5	7/0.53	19	1686	24.80	25	1.0
EEMUA27X1/5	1.5	7/0.53	27	2418	30.00	32	1.2
EEMUA37X1/5	1.5	7/0.53	37	2850	32.70	32	1.4
EEMUA2X2/5 ESI	2.5	7/0.67	2	800	16.00	20	0.7
EEMUA3X2/5 ESI	2.5	7/0.67	3	870	16.50	20	0.7
EEMUA4X2/5 ESI	2.5	7/0.67	4	950	17.50	20	0.7
EEMUA5X2/5	2.5	7/0.67	5	1038	18.40	20	0.8
EEMUA7X2/5	2.5	7/0.67	7	1180	20.00	20	0.8
EEMUA12X2/5	2.5	7/0.67	12	1750	24.50	25	1.0
EEMUA19X2/5	2.5	7/0.67	19	2450	29.00	32	1.2
EEMUA27X2/5	2.5	7/0.67	27	3100	33.00	32	1.4
EEMUA37X2/5	2.5	7/0.67	37	3720	36.00	40	1.6
EEMUA5X4	4.0	7/0.85	5	1014	20.60	20	0.9
EEMUA7X4	4.0	7/0.85	7	1110	21.50	25	0.9

Temperature limits:
-15 to +90°C.

*Bending radius:
12 x overall diameter.

Core identification:
White with Black numbers.

Should not be installed at temperatures below 0°C or above +60°C.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

EEMUA133 MAINS CABLES PVC

Plain annealed stranded copper conductors, thermosetting XLPE insulated, PVC bedding, lead sheathed, PVC bedding, galvanised steel wire armour, PVC outer sheath. Black. 600/1000 volts grade to BS5467 and EEMUA 133 (formerly OCMA 4B). Flame propagation to BS EN 60332-1 (IEC 60332-1), bunched cables to BS EN 50266-2-2 (IEC 60332-3-22 category A) and BS EN 50266-2-4 (IEC 60332-3-24 category C).

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size (mm)	Nylon Cleat Size
EEMUA2X1/5	1.5	7/0.53	2	690	15.00	20	0.6
EEMUA3X1/5	1.5	7/0.53	3	750	15.50	20	0.7
EEMUA4X1/5	1.5	7/0.53	4	810	16.00	20	0.7
EEMUA2X2/5	2.5	7/0.67	2	800	16.00	20	0.7
EEMUA3X2/5	2.5	7/0.67	3	870	16.50	20	0.7
EEMUA4X2/5	2.5	7/0.67	4	950	17.50	20	0.7
EEMUA2X4	4	7/0.85	2	920	17.50	20	0.7
EEMUA3X4	4	7/0.85	3	1000	17.50	20	0.7
EEMUA4X4	4	7/0.85	4	1110	19.00	25	0.8
EEMUA2X6	6	7/1.04	2	1020	18.00	20	0.8
EEMUA3X6	6	7/1.04	3	1150	19.00	25	0.8
EEMUA4X6	6	7/1.04	4	1400	20.50	25	0.9
EEMUA2X10	10	7/1.35	2	1250	20.00	25	0.8
EEMUA3X10	10	7/1.35	3	1530	22.00	25	0.9
EEMUA4X10	10	7/1.35	4	1720	23.00	25	1.0
EEMUA2X16	16	7/1.70	2	1630	23.00	25	1.0
EEMUA3X16	16	7/1.70	3	1880	24.00	25	1.0
EEMUA4X16	16	7/1.70	4	2150	26.00	32	1.1

Temperature limits:
-15 to +90°C.

*Bending radius:
12 x overall diameter.

Core identification:
2 core - Brown, Blue.
3 core - Brown, Black, Grey.
4 core - Brown, Black, Grey, Blue.

Should not be installed at temperatures below 0°C or above +60°C.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

EEMUA133 MAINS CABLES PVC

Plain annealed stranded copper conductors, thermosetting XLPE insulated, PVC bedding, lead sheathed, PVC bedding, galvanised steel wire armour, PVC outer sheath. Black, 600/1000 volts grade to BS5467 and EEMUA 133 (formerly OCMA 4B). Flame propagation to BS EN 60332-1 (IEC 60332-1), bunched cables to BS EN 50266-2-2 (IEC 60332-3-22 category A) and BS EN 50266-2-4 (IEC 60332-3-24 category C).

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size (mm)	Nylon Cleat Size
EEMUA2X25	25	7/2.14	2	2094	27.10	32	1.1
EEMUA3X25	25	7/2.14	3	2740	30.00	32	1.2
EEMUA4X25	25	7/2.14	4	3160	32.00	32	1.4
EEMUA2X35	35	19/1.53	2	2868	31.90	32	1.4
EEMUA3X35	35	19/1.53	3	3205	32.00	32	1.4
EEMUA4X35	35	19/1.53	4	3840	34.50	40	1.4
EEMUA2X50	50	19/1.78	2	2783	28.10	32	1.2
EEMUA3X50	50	19/1.78	3	3655	33.50	40	1.6
EEMUA4X50	50	19/1.78	4	4530	37.00	40	1.6
EEMUA2X70	70	19/2.14	2	3566	31.10	32	1.4
EEMUA3X70	70	19/2.14	3	4675	37.50	40	1.6
EEMUA4X70	70	19/2.14	4	6175	43.00	50S	1.8
EEMUA2X95	95	19/2.52	2	4678	35.10	40	1.4
EEMUA3X95	95	19/2.52	3	6180	42.50	50S	1.8
EEMUA4X95	95	19/2.52	4	7695	47.00	50	2.0
EEMUA2X120	120	37/2.03	2	5641	38.50	50S	1.6
EEMUA3X120	120	37/2.03	3	7390	46.00	50	2.0
EEMUA4X120	120	37/2.03	4	9730	53.00	63S	TC9
EEMUA2X150	150	37/2.25	2	6660	41.80	50S	1.8
EEMUA3X150	150	37/2.25	3	9300	52.00	50	TC9
EEMUA4X150	150	37/2.25	4	11530	58.50	63S	TC10
EEMUA2X185	185	37/2.52	2	8457	47.10	50	2.0
EEMUA3X185	185	37/2.52	3	10980	56.50	63S	TC9
EEMUA4X185	185	37/2.52	4	14160	65.00	63	TC11
EEMUA2X240	240	61/2.25	2	10286	52.30	50	TC9
EEMUA3X240	240	61/2.25	3	13815	63.00	63	TC10
EEMUA4X240	240	61/2.25	4	17700	65.80	75S	TC11
EEMUA2X300	300	61/2.52	2	16519	64.10	63	TC11
EEMUA3X300	300	61/2.52	3	21173	71.50	75S	TC12

Temperature limits:
-15 to +90°C.

*Bending radius:
12 x overall diameter.

Core identification:
2 core - Brown, Blue
3 core - Brown, Black, Grey.
4 core - Brown, Black, Grey, Blue.

Should not be installed at temperatures below 0°C or above +60°C.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

MAINS AND CONTROL CABLE NON ARMOURED TYPE NYY-J

Solid plain copper conductors, PVC insulated, PVC filler, PVC outer sheath. Black. 600/1000 volts grade to IEC60502-1 and VDE 0276-603. For installation indoors and outdoors as underground, or in cable ducts, installations with additional protection where mechanical damage is unexpected.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size (mm)	Nylon Cleat Size
NYY2X1/5	1.5	1/1.38	2	157	10.50	20s	0.5
NYY3X1/5	1.5	1/1.38	3	190	11.00	20	0.5
NYY4X1/5	1.5	1/1.38	4	220	11.80	20	0.5
NYY5X1/5	1.5	1/1.38	5	270	12.80	20	0.6
NYY7X1/5	1.5	1/1.38	7	299	13.70	25	0.6
NYY12X1/5	1.5	1/1.38	12	400	17.50	25	0.7
NYY2X2/5	2.5	1/1.78	2	193	11.30	20	0.5
NYY3X2/5	2.5	1/1.78	3	240	11.90	20	0.5
NYY4X2/5	2.5	1/1.78	4	290	12.80	20	0.6
NYY5X2/5	2.5	1/1.78	5	350	13.90	25	0.6
NYY7X2/5	2.5	1/1.78	7	388	14.90	25	0.6
NYY2X4	4	1/2.25	2	267	13.00	20	0.6
NYY3X4	4	1/2.25	3	330	13.70	25	0.6
NYY4X4	4	1/2.25	4	400	14.80	25	0.6
NYY5X4	4	1/2.25	5	480	16.30	25	0.7
NYY2X6	6	1/2.76	2	329	14.00	25	0.6
NYY3X6	6	1/2.76	3	420	14.80	25	0.6
NYY4X6	6	1/2.76	4	510	16.00	25	0.7
NYY5X6	6	1/2.76	5	600	17.60	25	0.7
NYY2x10	10	1/3.56	2	498	16.60	25	0.7
NYY3x10	10	1/3.56	3	580	17.80	25	0.8
NYY4x10	10	1/3.56	4	751	19.30	32	0.8
NYY5x10	10	1/3.56	5	910	21.20	32	0.9
NYY2x16	16	1/4.51	2	684	18.80	25	0.8
NYY3x16	16	1/4.51	3	800	20.20	32	0.9
NYY4x16	16	1/4.51	4	1057	22.00	32	0.9
NYY5x16	16	1/4.51	5	1257	24.20	32	1.0

Temperature limits: -30 to +70°C.

Bending radius: 15 x overall diameter.

Core identification
2 core - Brown, Blue.
3 core - Brown, Blue, Green/Yellow
4 core - Brown, Blue, Black, Green/Yellow
5 core - Brown, Blue, Black, Grey, Green/Yellow.

Should not be installed at temperatures below - 5°C.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

BARE SOFT DRAWN COPPER STRAND

Stranded plain annealed compacted circular copper conductor, non insulated and non sheathed. 450 volts grade, soft drawn to BS6360/81. Also 50mm and 70mm available as hard drawn copper to BS7884.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	Weight (Kg/Km)	Overall Diameter (mm)
CB006	6	7/1.04	58	3.00
CB010	10	7/1.35	96	4.20
CB016	16	7/1.70	154	5.10
CB025	25	7/2.14	240	5.90
CB035	35	7/2.52	336	7.80
CB050	50	19/1.78	480	8.80
CB070	70	19/2.14	672	9.80
CB095	95	19/2.52	912	12.50
CB120	120	37/2.03	1152	12.80
CB150	150	37/2.25	1440	14.40
CB185	185	37/2.52	1776	16.10
CB240	240	61/2.25	2304	19.80
CB300	300	61/2.52	2800	20.60
CB400	400	61/2.85	3750	26.40

Temperature limits:
- 15 to + 70°C.

*Bending radius:
Up to 10mm - 3 x overall diameter.
Above 25mm - 6 x overall diameter.

BARE HARD DRAWN COPPER STRAND

Non isulated and non sheathed. To BS7884. Available in 7 or 19 strands.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	Weight (Kg/Km)	Overall Diameter (mm)
HDC050/7	50	7/3.0	445	9.20
HDC050/19	50	19/1.80	405	9.20
HDC070/7	70	7/3.55	621	10.65
HDC070/19	70	19/2.1	640	10.65

SINGLE CORE HMWPE NON ARMOURED CATHODIC PROTECTION CABLE

Tinned stranded compacted copper conductor, PVDF insulation, HMWPE sheathed

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)
HMWPE1X6	6	7/1.03	1	92	7.2
HMWPE1X10	10	7/1.34	1	138	8.1
HMWPE1X16	16	7/1.69	1	200	9.3
HMWPE1X25	25	7/2.10	1	288	10.4
HMWPE1X35	35	19/1.51	1	385	11.6
HMWPE1X50	50	19/1.75	1	500	13.0
HMWPE1X70	70	19/2.12	1	715	14.7
HMWPE1X95	95	19/2.50	1	958	16.5

Temperature limits:
-55 to +105°C.

Bending radius:
15 x overall diameter.

Core identification
Available in black or red sheath

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

SINGLE CORE NON-ARMOURED CATHODIC PROTECTION CABLES PVC

Plain annealed compacted circular copper conductor, thermosetting XLPE insulated, PVC outer sheath, 600/1000 volts grade generally to IEC 60502. Colours Black/Black or Red/Red.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size (mm)
6181X4	4	7/0.85	75	6.80	20/16
6181X6**	6	7/1.04	105	7.20	20/16
6181X10**	10	7/1.35	150	8.10	20/16
6181X16**	16	7/1.70	210	9.00	20S
6181X25	25	7/2.14	305	10.60	20S
6181X35	35	7/2.52	395	11.60	20

Temperature limits:
-15 to +90°C.

*Bending radius:
4 x overall diameter.

Core identification
Black inner – Black outer.
Red inner – Red outer.

Should not be installed at temperatures below 0°C or above +60°C.

**Additionally these cables are stocked with Blue inner, Blue outer and Yellow inner, Yellow outer.

SINGLE CORE ARMOURED CATHODIC PROTECTION CABLES PVC

Plain annealed compacted circular copper conductor, thermosetting XLPE insulated, PVC bedding, galvanised steel wire armour, PVC outer sheath. Black. 600/1000 volts grade generally to IEC 60502 & BS5467.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size (mm)
6941X6	6	7/1.04	285	11.50	20/16
6941X10	10	7/1.35	355	12.50	20/16
6941X16	16	7/1.70	435	13.50	20S
6941X25	25	7/2.14	585	15.00	20S
6941X35	35	7/2.52	685	16.00	20
6941X50	50	19/1.78	835	17.50	20
6941X70	70	19/2.14	1080	19.50	20
6941X95	95	19/2.52	1375	21.60	25
6941X120	120	37/2.03	1685	23.40	25
6941X150	150	37/2.25	2120	26.40	25
6941X185	185	37/2.52	2505	28.90	32

Temperature limits:
-15 to +90°C.

*Bending radius:
4 x overall diameter.

Core identification
Brown inner - Black outer.

Should not be installed at temperatures below 0°C or above +60°C.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

SPLIT CONCENTRIC CABLES PVC

Plain annealed stranded copper phase conductor, thermosetting XLPE insulated surrounded by a concentric layer of plain annealed solid copper neutral conductors. Thermosetting XLPE insulated and plain annealed solid strand bare copper earth conductors, PVC outer sheath. Black. 600/1000 volts grade to BS 7870.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size (mm)
4 SPLITCON	4	7/0.85	206	9.60	20S
6 SPLITCON	6	7/1.04	281	11.40	20
10 SPLITCON	10	7/1.35	394	12.70	20
16 SPLITCON	16	7/1.70	583	14.60	25
25 SPLITCON	25	**7/2.14	843	18.70	32
35 SPLITCON	35	7/2.52	1300	23.00	40

Temperature limits: -15 to +90°C.

**Stranding of neutral is the same as phase conductor except 25 sq mm which has 11 x 1.70mm.

Core identification: Brown Live/Blue Neutral.

Should not be installed at temperatures below 0°C or above +60°C.

Also available in Violet outer sheath in 6mm, 10mm, 16mm & 25mm.

STRAIGHT CONCENTRIC CABLES PVC

Plain annealed stranded copper phase conductor, PVC insulated surrounded by a concentric layer of plain annealed solid copper neutral/earth conductors in concentric layer, PVC outer sheath. Black. 600/1000 volts grade to BS 7870 & ESI 09-7. Combined neutral and earth (CNE).

CCC Code	Conductor Size (mm^2)	Stranding (mm)	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size (mm)
4 STRCON	4	7/0.85	180	9.00	20S
6 STRCON	6	7/1.04	230	10.00	20S
16 STRCON	16	7/1.70	440	12.00	20
25 STRCON	25	7/2.14	600	15.00	25
35 STRCON	35	7/2.25	850	16.00	25

Temperature limits: -15 to +70°C.

Core identification: Brown Live.

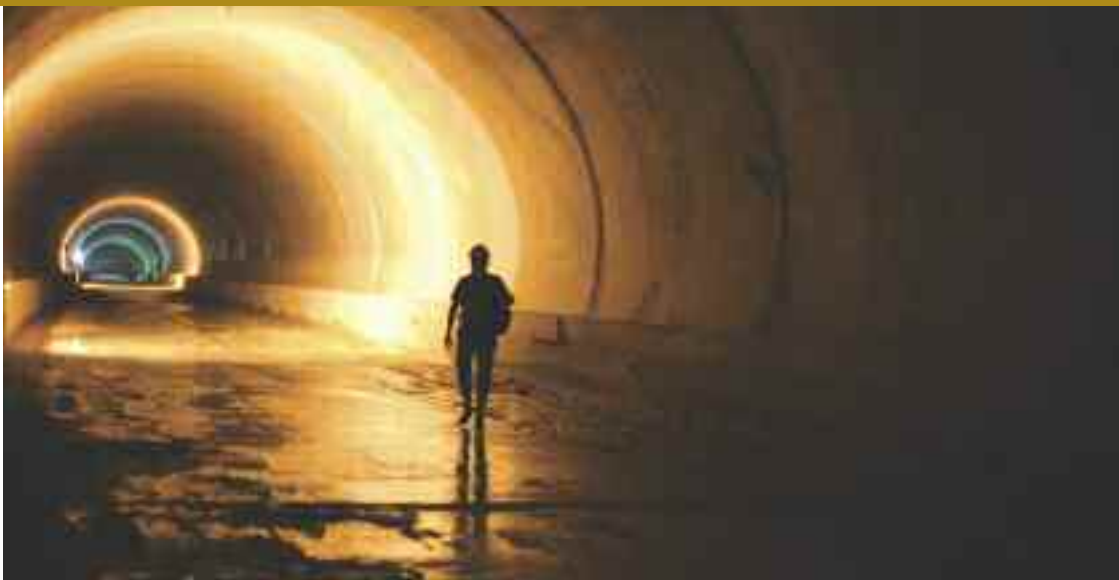
*Bending radius: 10 x overall diameter.

Should not be installed at temperatures below 0°C or above +60°C.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

SECTION 2 3300V Mains Cables



SINGLE CORE ARMOURED MAINS CABLES 1900/3300V PVC

Stranded plain annealed copper conductors, thermosetting XLPE insulated, PVC bedding, Aluminium wire armour, PVC outer sheath. Black. 1900/3300 volts grade to BS5467. Flame propagation to BS EN 60332.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size (mm)	Nylon Cleat Size	Trefoil Cleat
6941AX120/3	120	37/2.03	1	1490	23.20	25	1.2	-
6941AX150/3	150	37/2.25	1	1870	26.30	32	1.2	-
6941AX185/3	185	37/2.52	1	2290	28.70	32	1.4	376AC04
6941AX240/3	240	61/2.25	1	2880	31.40	40	1.4	376AC05
6941AX300/3	300	61/2.52	1	3520	34.10	40	1.8	376AC07
6941AX400/3	400	61/2.85	1	4520	38.90	50S	1.8	376AC10
6941AX500/3	500	61/3.20	1	5680	42.80	50S	1.8	376AC12
6941AX630/3	630	127/2.52	1	7120	47.30	50	2.0	376AC15

Temperature limits:
-15 to +90°C.

*Bending radius:
6 x overall diameter.

Core identification:
Brown inner/Black outer.

Should not be installed at temperatures below 0°C or above +60°C.

3 CORE MAINS CABLES 1900/3300V PVC

Stranded plain annealed copper conductors, thermosetting XLPE insulated, PVC bedding, galvanised steel wire armour, PVC outer sheath. Black. 1900/3300 volts grade to BS5467. Flame propagation to BS EN 60332.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size (mm)	Nylon Cleat Size
XLPE3X16/3	16	7/1.70	3	1600	29.50	32	1.2
XLPE3X25/3	25	7/2.14	3	2060	32.30	32	1.4
XLPE3X35/3	35	7/2.52	3	2330	35.00	40	1.4
XLPE3X50/3	50	19/1.78	3	3040	34.90	40	1.4
XLPE3X70/3	70	19/2.14	3	3800	38.00	40	1.6
XLPE3X95/3	95	19/2.52	3	4730	41.40	50S	1.8
XLPE3X120/3	120	37/2.03	3	6070	45.60	50S	1.8
XLPE3X150/3	150	37/2.25	3	7010	48.30	50	2.0
XLPE3X185/3	185	37/2.52	3	8270	51.60	50	TC9
XLPE3X240/3	240	61/2.25	3	10310	56.50	63S	TC9
XLPE3X300/3	300	61/2.52	3	12300	60.70	63	TC10
XLPE3X400/3	400	61/2.85	3	14780	65.80	75S	TC11

Temperature limits:
-15 to +90°C.

*Bending radius:
8 x overall diameter.

Core identification:
Brown, Black, Grey.

Should not be installed at temperatures below 0°C or above +60°C.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

SINGLE CORE ARMOURED MAINS CABLE 1900/3300V LSZH

Stranded plain annealed compacted circular copper conductors, thermosetting XLPE insulated, low smoke and zero halogen (LSZH) extruded bedding, aluminium wire armour, low smoke and zero halogen (LSZH) outer sheath. Black. 1900/3300 volts grade to BS6724. Acid gas emission to BS EN 50267 (IEC 60754-1), smoke emission to BS EN 50268 (IEC 61034) and flame propagation to IEC 60332-1, IEC 60332-3, BS EN 50265, Category C; BS EN 50266,low smoke and zero halogen (LSZH).

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size (mm)	Nylon Cleat Size	Trefoil Cleat
6941AB120/3	120	37/2.03	1	1490	23.20	25	1.2	-
6941AB150/3	150	37/2.25	1	1870	26.30	32	1.2	-
6941AB185/3	185	37/2.52	1	2290	28.70	32	1.4	376AC04
6941AB240/3	240	61/2.25	1	2880	31.40	40	1.4	376AC05
6941AB300/3	300	61/2.52	1	3520	34.10	40	1.8	376AC07
6941AB400/3	400	61/2.85	1	4520	38.90	50S	1.8	376AC10
6941AB500/3	500	61/3.20	1	5680	42.80	50S	1.8	376AC12
6941AB630/3	630	127/2.52	1	7120	47.30	50	2	376AC15

Temperature limits:
-25 to +70°C.

*Bending radius:
6 x overall diameter.

Core identification:
Brown inner/Black outer.

Should not be installed at temperatures below 5°C or above +60°C.

3 CORE MAINS CABLES 1900/3300V LSZH

Stranded plain annealed copper conductors, thermosetting XLPE insulated, low smoke and zero halogen (LSZH) extruded bedding, galvanised steel wire armour, low smoke and zero halogen (LSZH) outer sheath. Black. 1900/3300 volts grade to BS6724. acid gas emission to BS EN 50267 (IEC 60754-1), smoke emission to BS EN 50268 (IEC 61034) and flame propagation to IEC 60332-1, IEC 60332-3, BS EN 50265, Category C; BS EN 50266,low smoke and zero halogen (LSZH).

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size (mm)	Nylon Cleat Size
LSF3X16/3	16	7/1.70	3	1600	29.50	32	1.2
LSF3X25/3	25	7/2.14	3	2060	32.30	32	1.4
LSF3X35/3	35	7/2.52	3	2330	35.00	40	1.4
LSF3X50/3	50	19/1.78	3	3040	34.90	40	1.4
LSF3X70/3	70	19/2.14	3	3800	38.00	40	1.6
LSF3X95/3	95	19/2.52	3	4730	41.40	50S	1.8
LSF3X120/3	120	37/2.03	3	6070	45.60	50S	1.8
LSF3X150/3	150	37/2.25	3	7010	48.30	50	2.0
LSF3X185/3	185	37/2.52	3	8270	51.60	50	TC9
LSF3X240/3	240	61/2.25	3	10310	56.50	63S	TC9
LSF3X300/3	300	61/2.52	3	12300	60.70	63	TC10

Temperature limits:
-25 to +90°C.

*Bending radius:
8 x overall diameter.

Core identification: Brown, Black, Grey.

Should not be installed at temperatures below 0°C or above +60°C.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

MAINS CABLES FOR MINES & QUARRIES 1900/3300V

Plain annealed stranded copper conductors, thermosetting XLPE insulated, PVC extruded bedding, galvanised steel wire armour incorporating tinned copper wires to provide 60% conductivity of any one phase, PVC outer sheath. Black. 1900/3300 volts grade generally to BS5467 and BC295. Flame propagation to BS EN 60332.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size (mm)	Nylon Cleat Size
NCB3X16/3	16	7/1.70	3	1600	29.50	32	1.2
NCB3X25/3	25	19/1.35	3	2060	32.30	32	1.4
NCB3X35/3	35	19/1.53	3	2330	35.00	40	1.4
NCB3X50/3	50	19/1.78	3	3040	34.90	40	1.4
NCB3X70/3	70	19/2.14	3	3800	38.00	40	1.6
NCB3X95/3	95	19/2.52	3	4730	41.40	50S	1.8
NCB3X120/3	120	37/2.03	3	6070	45.60	50S	1.8
NCB3X150/3	150	37/2.25	3	7110	48.30	50	2.0
NCB3X185/3	185	37/2.52	3	8270	51.60	50	TC9
NCB3X240/3	240	61/2.25	3	10310	56.50	63S	TC9
NCB3X300/3	300	61/2.52	3	12300	60.70	63	TC10

Temperature limits:
-15 to +70°C.

*Bending radius:
up to 16mm^2 - 6 x overall diameter.
over 16mm^2 - 8 x overall diameter.

Core identification:
3 core - Brown, Black, Grey.

Should not be installed at temperatures below 0°C or above +60°C.

EEMUA133 MAINS CABLES 1900/3300V PVC

Plain annealed stranded copper conductors, thermosetting XLPE insulated, PVC bedding, lead sheathed, PVC bedding, galvanised steel wire armour, PVC outer sheath. Black. 1900/3300 volts grade to BS5467 and EEMUA 133 (formerly OCMA 4B). Flame propagation to BS EN 60332-1 (IEC 60332-1), bunched cables to BS EN 50266-2-2 (IEC 60332-3-22 category A) and BS EN 50266-2-4 (IEC 60332-3-24 category C).

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size (mm)	Nylon Cleat Size
EEMUA3X25/3	25	7/2.14	3	3400	32.50	32	1.4
EEMUA3X35/3	35	19/1.53	3	3560	38.40	40	1.6
EEMUA3X50/3	50	19/1.78	3	4520	38.10	40	1.6
EEMUA3X70/3	70	19/2.14	3	5550	41.40	50S	1.8
EEMUA3X95/3	95	19/2.52	3	6770	45.00	50S	2.0
EEMUA3X120/3	120	37/2.03	3	8390	49.40	50	2.0
EEMUA3X150/3	150	37/2.25	3	9630	52.30	50	TC9
EEMUA3X185/3	185	37/2.52	3	11270	55.80	63S	TC9
EEMUA3X240/3	240	61/2.25	3	13720	60.90	63	TC10
EEMUA3X300/3	300	61/2.52	3	16380	65.30	75S	TC11

Temperature limits:
-15 to +90°C.

*Bending radius:
12 x overall diameter.

Core identification:
Brown, Black, Grey.

Should not be installed at temperatures below 0°C or above +60°C.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

SECTION 3 LSZH Fixed Wiring & Mains Cables

6491B (HO7Z-R) LSZH

Stranded plain annealed compacted circular copper conductor, low smoke and zero halogen (LSZH) outer sheath. 450/750 volts grade to BS7211/BS EN 50525-3-41. Acid gas emission to BS EN 50267 (IEC60754), smoke emission to BS EN 50268 (IEC 61034) and flame propagation to BS EN 50265 (IEC 60332), low smoke and zero halogen (LSZH).

CCC Code	Conductor Size (mm^2)	Stranding (mm)	Weight (Kg/Km)	Overall Diameter (mm)	Brass A2	Nylon A2
6491B1/5	1.5	7/0.53	22	3.00	20/16	16
6491B2/5	2.5	7/0.67	33	3.65	20/16	16
6491B4	4	7/0.85	49	4.20	20/16	16
6491B6	6	7/1.04	69	4.75	20/16	16
6491B10	10	7/1.35	116	6.15	20/16	16
6491B16	16	7/1.70	175	7.10	20/16	16
6491B25	25	7/2.14	273	8.90	20S	20
6491B35	35	7/2.52	367	9.95	20S	20
6491B50	50	19/1.78	510	11.70	20	20
6491B70	70	19/2.14	715	13.35	20	25
6491B95	95	19/2.52	990	15.60	25	25
6491B120	120	37/2.03	1230	17.20	25	25
6491B150	150	37/2.25	1510	19.10	25	32
6491B185	185	37/2.52	1900	21.30	32	32
6491B240	240	61/2.25	2490	24.36	32	32
6491B300	300	61/2.52	3050	27.05	40	40
6491B400	400	61/2.85	3842	30.35	40	40
6491B500	500	61/3.20	4900	32.80	50S	50
6491B630	630	127/2.50	6334	36.50	50S	50

Temperature limits: -15 to +90°C.

*Bending radius: up to 10mm^2 - 3 x overall diameter. 10 to 25mm^2 - 4 x overall diameter. Above 25mm^2 - 6 x overall diameter.

Standard colours available: 1.5mm^2 & 2.5mm^2 - Brown, Black, Grey, Blue, Green/Yellow, White, Orange, Turquoise, Violet, Pink. 4mm^2 - 630mm^2 - Brown, Black, Grey, Blue, Green/Yellow.

Should not be installed at temperatures below 0°C or above +40°C.

SURFACE WIRING CABLES LSZH 6181B

Plain annealed stranded circular copper conductor, single core, thermosetting XLPE insulated, (LSZH) sheathed, Ref 6181B. 300/500 volts grade to BS7211. Brown/White or Grey/White. Acid gas emission to BS EN 50267 (IEC60754), smoke emission to BS EN 50268 (IEC 61034) and flame propagation to BS EN 50265 (IEC 60332), low smoke and zero halogen (LSZH).

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	Gland Ref	Nylon Size Size
6181B1**	1	1/1.13	1	28	4.50	20/16	-
6181B1/5**	1.5	1/1.38	1	34	5.10	20/16	-
6181B2/5**	2.5	1/1.78	1	49	6.00	20/16	-
6181B4	4	7/0.85	1	75	6.80	20/16	-
6181B6	6	7/1.04	1	99	7.40	20/16	-
6181B10	10	7/1.35	1	155	8.80	20S	-
6181B16	16	7/1.04	1	225	10.50	20S	0.5
6181B25	25	7/2.14	1	340	12.50	20	0.5
6181B35	35	7/2.52	1	440	13.50	25	0.6
6181B50	50	19/1.78	1	525	13.00	25	0.6
6181B70	70	19/2.14	1	730	15.50	25	0.7
6181B95	95	19/2.52	1	990	18.00	25	0.7
6181B120	120	37/2.30	1	1230	19.50	32	0.8

Temperature limits: -25 to +90°C.

*Bending radius: up to 10mm^2 - 3 x overall diameter. over 10mm^2 - 4 x overall diameter.

Should not be installed at temperatures below 0°C or above +40°C.

**1.0 - 2.5mm^2 are solid conductor.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

CLEVELAND CABLE COMPANY

A WORLD POWER IN CABLE SUPPLY

LSZH Fixed Wiring & Mains Cables

SURFACE WIRING CABLES LSZH 624*B

Plain annealed compacted copper conductor, thermosetting XLPE insulated, one, two or three cores laid flat with an uninsulated circuit protective conductor and (LSZH) sheathed. White. Ref 6241/2/3B 300/500V to BS7211 low smoke and zero halogen (LSZH). Acid gas emission to BS EN 50267 (IEC60754), smoke emission to BS EN 50268 (IEC 61034) and flame propagation to BS EN 50265 (IEC 60332), low smoke and zero halogen (LSZH).

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No.Of Cores	CPC Size (mm^2)	Weight (Kg/Km)	Overall Diameter (mm)
6241B1/5	1.5	1/1.37	1	1.0	51	4.65 X 5.80
6241B1/5	1.5	1/1.37	1	1.0	51	4.65 X 5.80
6242B1WH	1	1/1.13	2	1.0	69	4.10 X 8.65
6242B1/5WH	1.5	1/1.37	2	1.0	85	4.55 X 8.80
6242B1/5BRBR	1.5	1/1.37	2	1.0	85	4.55 X 8.80
6242B2/5WH	2.5	1/1.77	2	1.5	120	5.40 X 10.50
6242B4WH	4	7/0.85	2	1.5	175	6.10 X 12.00
6242B6WH	6	7/1.04	2	2.5	240	6.90 X 13.80
6242B10WH	10	7/1.35	2	4.0	390	8.40 X 18.50
6242B16WH	16	7/1.70	2	6.0	560	9.70 X 20.60
6243B1WH	1	1/1.13	3	1.0	92	4.60 X 10.20
6243B1/5WH	1.5	1/1.37	3	1.0	115	5.75 X 11.45
6243B2/5WH	2.5	1/1.77	3	1.5	170	5.30 X 12.80

Temperature limits:
-25 to +90°C.

*Bending radius:
Fixed = 3 x diameter

Should not be installed at temperatures below 0°C or above +40°C.

Core identification:
1 core - Brown or Blue.
2 core - Brown, Blue.
3 core - Brown, Black, Grey.

NHXMH-J LSZH WIRING CABLE

Plain annealed class 1 solid conductor, LSZH insulated, LSZH sheathed. Grey. 300/500 volt rated to BS EN 50265-2-1. Suitable for industrial or home applications and designed for dry, moist or wet open areas ie under plaster and in concrete - not suitable for exposure to direct sunlight.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Overall Diameter (mm)	Weight (Kg/Km)
NHXMHJ3X1/5LSF	1.50	1/1.38	3	120	9.9
NHXMHJ4X1/5LSF	1.50	1/1.38	4	140	10.7
NHXMHJ5X1/5LSF	1.50	1/1.38	5	170	11.5
NHXMHJ7X1/5LSF	1.50	1/1.38	7	210	12.6
NHXMHJ12X1/5LSF	1.50	1/1.38	12		
NHXMHJ3X2/5LSF	2.50	1/1.78	3	165	11.4
NHXMHJ5X2/5LSF	2.50	1/1.78	5	245	13.3
NHXMHJ3X4LSF	4	1/2.25	3	240	13.0
NHXMHJ5X4LSF	4	1/2.25	5	370	16.0
NHXMHJ3X6LSF	6	1/2.76	3	330	14.7
NHXMHJ5X6LSF	6	1/2.76	5	406	17.5
NHXMHJ3X10LSF	10	1/3.56	3	510	17.7
NHXMHJ5X10LSF	10	1/3.56	5	770	21.3

Temperature limits:
-10 to +70°C.

Core identification:
3 core - Blue, Brown & Green/Yellow.
4 core - Brown, Black, Grey & Green/Yellow.
5 core - Brown, Black, Grey, Blue & Green/Yellow.
7 core - White numbered.
Packing, 100m coils or 500m reels

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

MAINS AND CONTROL CABLES LSZH

Plain annealed stranded copper conductors, thermosetting XLPE insulated, low smoke and zero halogen (LSZH) bedding, galvanised steel wire armour, low smoke and zero halogen (LSZH) outer sheath. Black. 600/1000 volts grade to BS6724. Acid gas emission to BS EN 50267 (IEC 60754-1), smoke emission to BS EN 50268 (IEC 61034) and flame propagation to IEC 60332-1, IEC 60332-3, BS EN 50265, Category C; BS EN 50266, low smoke and zero halogen (LSZH).

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size (mm)	Nylon Cleat Size
LSF2X1/5	1.5	7/0.53	2	260	11.00	20/16	0.5
LSF3X1/5**	1.5	7/0.53	3	295	11.20	20/16	0.5
LSF4X1/5	1.5	7/0.53	4	350	12.50	20S	0.5
LSF5X1/5	1.5	7/0.53	5	362	12.90	20S	0.6
LSF7X1/5	1.5	7/0.53	7	398	13.70	20S	0.6
LSF10X1/5	1.5	7/0.53	10	650	18.00	20	0.8
LSF12X1/5	1.5	7/0.53	12	680	18.00	20	0.8
LSF19X1/5	1.5	7/0.53	19	885	20.60	25	0.9
LSF27X1/5	1.5	7/0.53	27	1310	25.10	32	1.0
LSF37X1/5	1.5	7/0.53	37	1590	27.50	32	1.1
LSF48X1/5	1.5	7/0.53	48	1958	31.00	32	1.4
LSF2X2/5	2.5	7/0.67	2	270	12.20	20S	0.5
LSF3X2/5**	2.5	7/0.67	3	360	12.80	20S	0.6
LSF4X2/5	2.5	7/0.67	4	410	13.50	20S	0.6
LSF5X2/5	2.5	7/0.67	5	435	14.70	20	0.6
LSF7X2/5	2.5	7/0.67	7	520	15.60	20	0.7
LSF10X2/5	2.5	7/0.67	10	250	20.00	25	0.8
LSF12X2/5	2.5	7/0.67	12	905	21.00	25	0.9
LSF19X2/5	2.5	7/0.67	19	1360	25.00	32	1.0
LSF27X2/5	2.5	7/0.67	27	1760	30.00	32	1.2
LSF37X2/5	2.5	7/0.67	37	2185	33.00	40	1.4
LSF48X2/5	2.5	7/0.67	48	3003	37.30	40	1.6
LSF2X4	4	7/0.85	2	381	13.10	20S	0.6
LSF3X4**	4	7/0.85	3	435	13.70	20S	0.6
LSF4X4	4	7/0.85	4	495	14.80	20	0.6
LSF5X4	4	7/0.85	5	583	16.35	20	0.7
LSF7X4	4	7/0.85	7	760	18.20	20	0.8
LSF12X4	4	7/0.85	12	1266	24.24	25	1.0
LSF19X4	4	7/0.85	19	1701	27.61	32	1.2
LSF27X4	4	7/0.85	27	2347	32.30	40	1.4
LSF2X6	6	7/1.04	2	405	14.10	20	0.6
LSF3X6**	6	7/1.04	3	490	14.80	20	0.6
LSF4X6	6	7/1.04	4	670	17.30	20	0.7
LSF5X6	6	7/1.04	5	823	18.39	20	0.8
LSF7X6	6	7/1.04	7	1100	21.90	25	0.9
LSF2X10	10	7/1.35	2	600	16.10	20	0.7
LSF3X10	10	7/1.35	3	750	17.90	20	0.8
LSF4X10	10	7/1.35	4	885	19.30	25	0.8
LSF5X10	10	7/1.35	5	1106	20.91	25	0.9
LSF7X10	10	7/1.35	7	1500	25.00	25	1.0
LSF2X16	16	7/1.70	2	905	19.00	25	0.8
LSF3X16**	16	7/1.70	3	990	20.00	25	0.8
LSF4X16	16	7/1.70	4	1195	22.00	25	0.9
LSF5X16	16	7/1.70	5	1695	25.19	25	1.0
LSF7X16	16	7/1.70	7	2150	28.10	32	1.2

Temperature limits:
-25 to +90°C.

*Bending radius:
6 x overall diameter.

Core identification:
2 core - Brown, Blue.
3 core - Brown, Black, Grey.
4 core - Brown, Black, Grey, Blue.
5 core and above - Up to $6mm^2$ - White with Black numbers. Also available as Brown, Black, Grey, Blue, Green/Yellow.
5 - 10mm^2 and 16mm^2 - Brown, Black, Grey, Blue, Green/Yellow.

1.5 & 2.5 - 2,3,4 core also available in white numbered cores to ESI 09-6.

Should not be installed at temperatures below 0°C or above +40°C.

** Also available as Brown, Blue, Green/Yellow core identification.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

MAINS CABLES LSZH

Stranded plain annealed copper conductors, thermosetting XLPE insulated, low smoke and zero halogen (LSZH) extruded bedding, galvanised steel wire armour, low smoke and zero halogen (LSZH) outer sheath. Black. 600/1000 volts grade to BS6724. Acid gas emission to BS EN 50267 (IEC 60754-1), smoke emission to BS EN 50268 (IEC 61034) and flame propagation to IEC 60332-1, IEC 60332-3, BS EN 50265, Category C; BS EN 50266, low smoke and zero halogen (LSZH).

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size (mm)	Nylon Cleat Size
LSF2X25	25	7/2.14	2	1050	20.00	25	0.8
LSF3X25**	25	7/2.14*	3	1500	23.00	25	1.0
LSF4X25	25	7/2.14	4	1800	25.00	32	1.0
LSF5X25	25	7/2.14	5	2200	29.00	32	1.2
LSF2X35	35	7/2.52	2	1400	22.00	25	0.9
LSF3X35**	35	7/2.52	3	1800	26.00	32	1.1
LSF4X35	35	7/2.52	4	2200	28.00	32	1.2
LSF5X35	35	7/2.52	5	2800	33.00	40	1.4
LSF2X50	50	19/1.78	2	1750	25.00	32	1.0
LSF3X50	50	19/1.78	3	2250	28.00	32	1.2
LSF4X50	50	19/1.78	4	2850	31.00	32	1.4
LSF5X50	50	19/1.78	5	3850	38.00	40	1.6
LSF2X70	70	19/2.14	2	2200	28.00	32	1.2
LSF3X70	70	19/2.14	3	3000	32.00	32	1.4
LSF4X70	70	19/2.14	4	4100	37.00	40	1.6
LSF5X70	70	19/2.14	5	5100	43.00	50S	1.8
LSF2X95	95	19/2.52	2	3000	32.00	32	1.4
LSF3X95	95	19/2.52	3	4150	37.00	40	1.6
LSF4X95	95	19/2.52	4	5200	40.00	50S	1.6
LSF5X95	95	19/2.52	5	7700	52.00	50	TC9
LSF2X120	120	37/2.03	2	3600	35.00	40	1.4
LSF3X120	120	37/2.03	3	4950	40.00	50S	1.6
LSF4X120	120	37/2.03	4	6700	46.00	50	2.0
LSF5X120	120	37/2.03	5	9030	56.70	63S	TC9
LSF2X150	150	37/2.25	2	4250	37.00	40	1.6
LSF3X150	150	37/2.25	3	6300	45.00	50S	1.8
LSF4X150	150	37/2.25	4	7900	49.00	50	2.0
LSF5X150	150	37/2.25	5	10752	64.31	63	TC11
LSF2X185	185	37/2.52	2	5500	43.00	50S	1.8
LSF3X185	185	37/2.52	3	7650	49.00	50	2.0
LSF4X185	185	37/2.52	4	9650	55.00	63S	TC9
LSF5X185	185	37/2.52	5	11765	64.60	75S	TC11
LSF2X240	240	61/2.25	2	6900	48.00	50	2.0
LSF3X240	240	61/2.25	3	9650	56.00	63S	TC9
LSF4X240	240	61/2.25	4	12400	62.00	63	TC10
LSF5X240	240	61/2.25	5	15000	73.80	75	TC12
LSF2X300	300	61/2.52	2	8200	50.00	50	2.0
LSF3X300	300	61/2.52	3	11550	59.00	63	TC10
LSF4X300	300	61/2.52	4	14800	66.00	75S	TC11
LSF3X400	400	61/2.85	3	14350	65.00	75S	TC11
LSF4X400	400	61/2.85	4	19300	76.60	75	TC14

Temperature limits:
-25 to +90°C.

*Bending radius:
8 x overall diameter.

Core identification:
2 core - Brown, Blue.
3 core - Brown, Black, Grey.
4 core - Brown, Black, Grey, Blue.
5 core - Brown, Black, Grey, Blue, Green/Yellow.

Should not be installed at temperatures below 0°C or above +40°C.

NB 5 CORE 95MM AND ABOVE ARE MANUFACTURED TO IEC60502-1

** Also available as Brown, Blue, Green/Yellow core identification.

N2XH POWER CABLE

Plain annealed copper conductor (1.5mm to 6.0mm class 1 solid, 10.0mm to 300mm class 2 stranded), XLPE insulated, LSZH sheathed.Black. 600/1000 volt grade to BS-EN 60332-3-24(C) and VDE 0276For fixed indoor installation - not suitable for direct burial.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)
N2XH3X1/5	1.50	1/1.38	3	170	11.0
N2XH4X1/5	1.50	1/1.38	4	200	12.0
N2XH5X1/5	1.50	1/1.38	5	245	13.0
N2XH3X2/5	2.50	1/1.78	3	220	12.0
N2XH4X2/5	2.5	1/1.78	4	239	12.2
N2XH5X2/5	2.50	1/1.78	5	300	14.0
N2XH3X4	4	1/2.25	3	285	13.0
N2XH4X4	4	1/2.25	4	318	13.4
N2XH5X4	4	1/2.25	5	410	15.0
N2XH3X6	6	1/2.76	3	365	14.0
N2XH4X6	6	1/2.76	4	414	14.7
N2XH5X6	6	1/2.76	5	530	16.0
N2XH3X10	10	7/1.35	3	520	16.0
N2XH5X10	10	7/1.35	5	770	19.0
N2XH3X16	16	7/1.70	3	780	18.0
N2XH5X16	16	7/1.70	5	1160	21.0
N2XH1X150	150	37/2.25	1	1700	24.4
N2XH1X185	185	37/2.52	1	2200	25.8
N2XH1X240	240	61/2.25	1	2750	28.6
N2XH1X300	300	61/2.52	1	3300	32.8

Temperature limits:
0 to +70°C.

Core identification:
3 core - Blue, Brown & Green/Yellow.
4 core - Brown, Black, Grey & Green/Yellow.
5 core - Brown, Black, Grey, Blue & Green/Yellow.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

SINGLE CORE NON-ARMOURED MAINS CABLES LSZH

Plain annealed stranded compacted circular copper conductor, single core, thermosetting XLPE insulated, low smoke and zero halogen (LSZH) outer sheath. Black. 600/1000 volts grade to BS8573. Acid gas emission to BS EN 50267 (IEC 60754-1), smoke emission to BS EN 50268 (IEC 61034) and flame propagation to IEC 60332-1, IEC 60332-3, BS EN 50265, Category C; BS EN 50266, low smoke and zero halogen (LSZH).

CCC Code	Conductor Size (mm^2)	Stranding (mm)	Weight (Kg/Km)	Overall Diameter (mm)	Brass A2	Nylon A2	Nylon Cleat Size	Trefoil Cleat
6181B50	50	19/1.78	525	13.00	25	25	0.6	-
6181B70	70	19/2.14	730	15.50	25	25	0.7	-
6181B95	95	19/2.52	990	18.00	25	25	0.7	-
6181B120	120	37/2.03	1230	19.50	32	32	0.8	-
6181B150	150	37/2.25	1525	21.50	32	32	0.9	-
6181B185	185	37/2.52	1885	24.00	32	32	1.0	-
6181B240	240	61/2.25	2440	27.00	40	40	1.1	-
6181B300	300	61/2.52	3045	29.50	40	40	1.2	376AC04
6181B400	400	61/2.52	3855	33.00	50S	50	1.4	376AC06
6181B500	500	61/3.20	4950	37.50	50S	50	1.6	376AC09
6181B630	630	127/2.52	6345	42.00	50	63	1.8	376AC12
6181B800	800	127/2.85	8140	47.50	63S	-	2.0	376AC15
6181B1000	1000	127/3.20	9860	53.00	63	-	TC9	376AC19

Temperature limits:
-25 to +90°C.

*Bending radius:
6 x overall diameter.

Core identification:
Brown inner/Black outer.

Should not be installed at temperatures below 0°C or above +40°C.

SINGLE CORE ARMOURED MAINS CABLES LSZH

Stranded plain annealed compacted circular copper conductors, thermosetting XLPE insulated, low smoke and zero halogen (LSZH) extruded bedding, aluminium wire armour, low smoke and zero halogen (LSZH) outer sheath. Black. 600/1000 volts grade to BS6724. Acid gas emission to BS EN 50267 (IEC 60754-1), smoke emission to BS EN 50268 (IEC 61034) and flame propagation to IEC 60332-1, IEC 60332-3, BS EN 50265, Category C; BS EN 50266, low smoke and zero halogen (LSZH).

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size Cw Ali (mm)	Gland Size Brass A2 (mm)	Nylon Cleat Size	Trefoil Cleat
6941AB50	50	19/1.78	1	638	17.70	20	25	0.7	-
6941AB70	70	19/2.14	1	891	19.60	25	32	0.8	-
6941AB95	95	19/2.52	1	1166	21.50	25	32	0.9	-
6941AB120	120	37/2.03	1	1412	23.10	25	32	1.0	-
6941AB150	150	37/2.25	1	1800	26.00	32	40	1.1	-
6941AB185	185	37/2.52	1	2200	28.00	32	40	1.2	376AC04
6941AB240	240	61/2.25	1	2800	32.00	40	50S	1.4	376AC06
6941AB300	300	61/2.52	1	3400	33.00	40	50S	1.4	376AC06
6941AB400	400	61/2.85	1	4450	38.00	40	50	1.6	376AC10
6941AB500	500	61/3.2	1	5550	43.00	50S	63S	1.8	376AC13
6941AB630	630	127/2.52	1	7100	47.00	50	63S	2.0	376AC15
6941AB800	800	127/2.85	1	9200	55.00	63S	75S	TC9	376AC20
6941AB1000	1000	127/3.2	1	11270	58.80	63S	75S	TC10	376AC22

Temperature limits:
- 25 to + 90°C.

*Bending radius:
6 x Overall Diameter.

Core identification:
Brown inner - Black outer.

Should not be installed at temperatures below 0°C or above +40°C.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

SCREENED FIXED WIRING AND MAINS CABLES TO BS 8436

Plain annealed stranded copper, thermosetting XLPE insulated, tinned annealed stranded copper earth wire, bonded aluminium tube applied longitudinally, low smoke and zero halogen (LSZH) outer sheath, to BS EN 50267-1:1998 and BS EN 50268-2:2000, 300/500v to BS8436, White. Acid gas emissions to BS EN 50267-2-1, smoke emissions to BS EN 50268-2 and flame retardant to BS EN 60332-1-2 (IEC 60332-1-1).

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	1 Hole Clip Ref	Gland Ref
CSX2X1WH	1	7/0.44	2	85	8.60	RCHL34	20SA2
CSX3X1WH	1	7/0.44	3	105	9.40	RCHL37	20SA2
CSX4X1WH	1	7/0.44	4	130	10.00	RCHL37	20A2
CSX2X1/5WH	1.5	7/0.53	2	106	9.80	RCHL37	20A2
CSX3X1/5WH	1.5	7/0.53	3	140	10.40	RCHL40	20A2
CSX4X1/5WH	1.5	7/0.53	4	158	11.30	RCHL43	20A2
CSX2X2/5WH	2.5	7/0.67	2	135	10.80	RCHL43	20A2
CSX3X2/5WH	2.5	7/0.67	3	182	11.10	RCHL43	20A2
CSX4X2/5WH	2.5	7/0.67	4	259	12.60	RCHL47	20A2
CSX2X4WH	4	7/0.85	2	206	11.50	RCHL43	20A2
CSX3X4WH	4	7/0.85	3	265	13.10	RCHL51	25A2
CSX4X4WH	4	7/0.85	4	320	13.90	RCHL54	25A2
CSX2X6WH	6	7/1.04	2	258	13.10	RCHL51	25A2
CSX3X6WH	6	7/1.04	3	328	14.20	RCHL54	25A2
CSX4X6WH	6	7/1.04	4	450	14.90	RCHL59	25A2
CSX2X10WH	10	7/1.35	2	413	16.10	RCHL63	25A2

Minimum installation temperature:
-10°C.

Maximum continuous conductors operating temperature: +90°C.

Core identification:
2 core - Brown, Blue.
3 core - Brown, Black, Grey.
4 core - Brown, Black, Grey, Blue.

Solid cores available on request. Different sheath and core colours available on request.

$10mm^2$ and $16mm^2$ available on request.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

SECTION 4 Medium Voltage 11000V & Above

SINGLE CORE ARMOURED MAINS CABLES PVC 11000V

Stranded plain annealed circular compacted copper conductors, thermosetting XLPE insulated, semi-conducting tape insulated, copper tape screen, PVC bedding, aluminium wire armour, PVC outer sheath - Red. 6350/11000 volts grade to BS6622 and IEC 60502. Flame propagation to BS EN 60332. Red outer sheath can be prone to fading when exposed to U.V rays.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter Size	Nylon Cleat Size	Trefoil Cleat
10001	50	19/1.78	1	1200	28.70	12	376AC04
10002	70	19/2.14	1	1461	30.50	14	376AC05
10003	95	19/2.52	1	1761	32.20	14	376AC06
10004	120	37/2.03	1	2049	33.80	14	376AC07
10005	150	37/2.25	1	2451	36.20	16	376AC08
10006	185	37/2.52	1	2848	37.90	16	376AC09
10007	240	61/2.25	1	3470	40.40	16	376AC11
10008	300	61/2.52	1	4103	42.60	18	376AC12
10009	400	61/2.85	1	4995	45.60	18	376AC14
10010	500	61/3.20	1	6320	50.00	20	376AC17
10011	630	127/2.52	1	7840	54.00	TC9	376AC19

Temperature limits: up to 90°C.

*Bending radius: 12 x overall diameter.

Core identification: Brown.

Should not be installed at temperatures below 0°C or above +60°C.

3 CORE MAINS CABLES PVC 11000V

Stranded plain annealed circular compacted copper conductors, thermosetting XLPE insulated, semi-conducting tape insulated, each core copper tape screened, PVC bedding, galvanised steel wire armour, PVC outer sheath - Red. 6350/11000 volts grade to BS6622 and IEC 60502. Flame propagation to BS EN 60332. Red outer sheath can be prone to fading when exposed to U.V rays.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	Nylon Cleat Size
11KV XLPE3X25RD	25	7/2/14	3	4300	48.40	2.0
11KV XLPE3X35RD	35	19/1/53	3	4491	50.50	2.0
11KV XLPE3X50RD	50	19/1/78	3	5105	53.30	TC9
11KV XLPE3X70RD	70	19/2/14	3	6019	56.90	TC9
11KV XLPE3X95RD	95	19/2/52	3	7148	61.00	TC10
11KV XLPE3X120RD	120	37/2/03	3	8199	64.60	TC11
11KV XLPE3X150RD	150	37/2/25	3	9274	67.80	TC11
11KV XLPE3X185RD	185	37/2/52	3	10706	71.90	TC12
11KV XLPE3X240RD	240	61/2/25	3	13740	78.80	TC14
11KV XLPE3X300RD	300	61/2/52	3	16051	84.10	TC14
11KV XLPE3X400RD	400	61/2/85	3	19095	90.30	TC15

Temperature limits: up to 90°C.

*Bending radius: 12 x overall diameter.

Core identification: Brown, Black, Grey tapes.

Should not be installed at temperatures below 0°C or above +60°C.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

3 CORE MAINS CABLES PVC 11000V

Plain stranded aluminium conductors, thermosetting XLPE insulated, semi-conducting tape insulated, each core copper tape screened, PVC bedding (extruded), galvanised steel wire armour, PVC outer sheath. Red. 6350/11000 volts grade to BS6622 and IEC 60502. Flame propagation to BS EN 60332. Red outer sheath can be prone to fading when exposed to U.V rays.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	Nylon Cleat Size
10115RD	95	19/2.52	3	5800	62.60	TC10
10116RD	120	37/2.03	3	6400	66.60	TC11
10117RD	150	37/2.25	3	7000	68.60	TC11
10118RD	185	37/2.52	3	7800	74.10	TC12
10119RD	240	61/2.25	3	9800	81.20	TC14
10120RD	300	61/2.52	3	11000	86.80	TC15

Temperature limits:
up to 90°C.

*Bending radius:
13 x overall diameter.

Core identification:
Brown, Black, Grey tapes.

Should not be installed at temperatures below 0°C or above +60°C.

TRIPLEX CABLES 11000V AND 33000V

Solid or stranded aluminium conductor, thermosetting XLPE insulated, copper wire screen ($35mm^2$). MDPE outer sheath. Red. 6350/11000 volts grade or 33000V to BS7870-4.10 which allows for stranded or solid conductor. Red outer sheath can be prone to fading when exposed to U.V rays.

CCC Code	Conductor Size (mm^2)	Conductor Type	Nominal Conductor Diameter (mm)	No. Of Cores	Weight (Kg/Km)	Diameter In Triplex Formation
11KVTRIP3X70AL	70	SOLID	9.30	3	2763	57.4
11KVTRIP3X70AL	70	STRANDED	9.80	3	2650	58.3
11KVTRIP3X95AL	95	SOLID	10.70	3	3055	60.8
11KVTRIP3X95AL	95	STRANDED	12.16	3	2901	57.83
11KVTRIP3X185AL	185	SOLID	14.90	3	4095	70.5
11KVTRIP3X185AL	185	STRANDED	15.80	3	4060	72.5
11KVTRIP3X300AL	300	SOLID	19.00	3	5374	80.4
11KVTRIP3X300AL	300	STRANDED	20.50	3	5360	81.4
33KVTRIP3X95AL	95	STRANDED	38.0	3	4080	82.08
33KVTRIP3X185AL	185	STRANDED	43.0	3	5244	92.88

Temperature limits:
-15 to +90°C.

*Bending radius:
15 x overall diameter.

Core identification:
Brown, Black, Grey tapes.

Should not be installed at temperatures below 0°C.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

SINGLE CORE ARMOURED MAINS CABLES LSZH 11000V

Stranded plain annealed compacted circular copper conductor, thermosetting XLPE insulated, semi-conducting tape insulated, copper tape screen, low smoke and zero halogen (LSZH) bedding, aluminium wire armour, low smoke and zero halogen (LSZH) outer sheath - Red. 6350/11000 volts grade to BS7835. Acid gas emission to BS EN 50267 (IEC60754), smoke emission to BS EN 50268 (IEC 61034) and flame propagation to BS EN 50265, BS EN 50266 (IEC 60332). Due to poor U.V resistant qualities, red outer sheath cables are not recommended for outdoor installation.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	Nylon Cleat Size	Trefoil Cleat
10050	50	19/1.78	1	1200	28.70	12	376AC04
10051	70	19/2.14	1	1461	30.50	14	376AC05
10052	95	19/2.52	1	1761	32.20	14	376AC06
10053	120	37/2.03	1	2049	33.80	14	376AC07
10054	150	37/2.25	1	2451	36.20	16	376AC08
10055	185	37/2.52	1	2848	37.90	16	376AC09
10056	240	61/2.25	1	3470	40.40	16	376AC11
10057	300	61/2.52	1	4103	42.60	18	376AC12
10058	400	61/2.85	1	4995	45.60	18	376AC14
10059	500	61X3.20	1	6320	50.00	20	376AC17
10060	630	127X2.52	1	7840	54.00	TC9	376AC19

Temperature limits: up to 90°C.

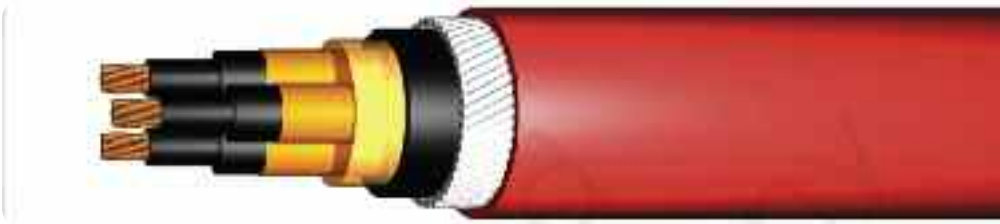
*Bending radius: 12 x overall diameter.

Core identification: Brown.

Should not be installed at temperatures below 0°C or above +40°C.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.



3 CORE MAINS CABLES LSZH 11000V

Stranded plain annealed compacted circular copper conductors, thermosetting XLPE insulated, semi-conducting tape insulated, each core copper tape screened, low smoke and zero halogen (LSZH) bedding, galvanised steel wire armour, low smoke and zero halogen (LSZH) outer sheath - Red. 6350/11000 volts grade to BS7835. Acid gas emission to BS EN 50267 (IEC60754), smoke emission to BS EN 50268 (IEC 61034) and flame propagation to BS EN 50265, BS EN 50266 (IEC 60332). Due to poor U.V resistant qualities red outer sheath cables are not recommended for outdoor installation.

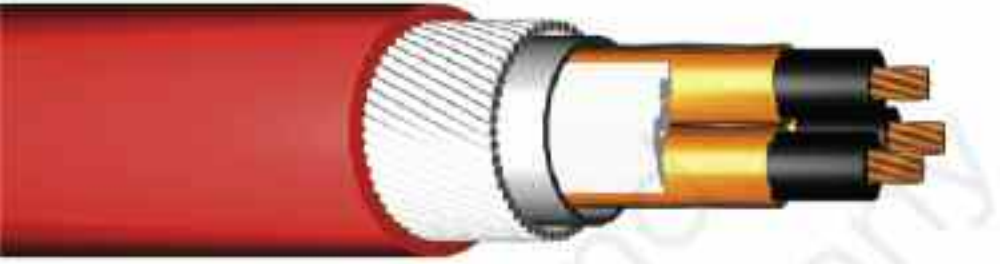
CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	Nylon Cleat Size
10302RD	35	19/1.53	3	4501	50.5	TC9
10304RD	50	19/1.78	3	5117	53.3	TC9
10306RD	70	19/2.14	3	6032	56.9	TC9
10308RD	95	19/2.52	3	7163	61.0	TC10
10310RD	120	37/2.03	3	8216	64.6	TC11
10312RD	150	37/2.25	3	9292	67.8	TC11
10314RD	185	37/2.52	3	10726	71.9	TC12
10316RD	240	61/2.25	3	13763	78.8	TC14
10318RD	300	61/2.52	3	16077	84.1	TC14
10320RD	400	70/3.15	3	19124	90.3	TC15

Temperature limits:
- 15 to + 90°C

*Bending radius:
12 x overall diameter.

Core identification: Brown, Black, Grey tapes.

Should not be installed at temperatures below 0°C or above +40°C.



THREE CORE MAINS CABLES 22KV AND 33KV

Compacted circular stranded annealed copper conductor, extruded semi-conductive conductor screen, thermosetting XLPE insulated, extruded strippable semi-conductive insulation screen helically overlapped copper tape metallic screen, extruded low smoke zero halogen(LSZH) bedding, galvanised steel wire armour, extruded low smoke zero halogen (LSZH) sheath - Red. 12700/22000 volts grade to BS7835. Due to poor U.V resistant qualities red outer sheath cables are not recommended for outdoor installation.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)
22KVXLPE3X95RD	95	19/2.52	3	8820	70.30

Temperature limits:
- 15 to + 90°C.

*Bending radius:
12 x overall diameter.

Core identification:
Brown, Black, Grey tapes.

Should not be installed at temperatures below 0°C or above +40°C.

Compacted circular stranded annealed copper conductor, extruded semi-conductive conductor screen, thermosetting XLPE insulated, extruded strippable semi-conductive insulation screen helically overlapped copper tape metallic screen, extruded low smoke zero halogen(LSZH) bedding, galvanised steel wire armour, extruded low smoke zero halogen (LSZH) sheath - Red. 19000/33000 volts grade to BS7835. Due to poor U.V resistant qualities red outer sheath cables are not recommended for outdoor installation.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)
33KVLSF3X95RD	95	19/2.52	3	12020	85.30
33KVLSF3X185RD	185	37/2.52	3	20000	96.00

Temperature limits:
- 15 to + 90°C.

*Bending radius:
12 x overall diameter

Core identification:
Brown, Black, Grey tapes.

Should not be installed at temperatures below 0°C or above +40°C.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

SECTION 5 High Voltage 33000v Service And Windfarm Cables

SINGLE CORE MAINS CABLE MDPE 33000V WINDFARM CABLE

Round stranded compacted aluminium conductor, inner semi-conductive layer thermosetting XLPE insulated, outer semi-conductive layer, semi-conductive swelling tape insulation screen, copper wire and tape metallic screen (35mm²), polyester tape/water blocking swelling tape separator, extruded black MDPE outer sheath. 33000 volts grade to BS7870, IEC 60502-2.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)
33KV1X70AL	70	19/2.1	1	1339	36.70
33KV1X95AL	95	19/2.47	1	1467	38.40
33KV1X120AL	120	35/2.04	1	1584	39.80
33KV1X150AL	150	35/2.27	1	1720	41.30
33KV1X185AL	185	35/2.54	1	1881	43.00
33KV1X240AL	240	35/2.91	1	2130	45.50
33KV1X300AL	300	35/3.25	1	2381	47.80
33KV1X400AL	400	56/2.91	1	2723	50.80
33KV1X500AL	500	56/3.3	1	3146	54.30
33KV1X630AL	630	56/3.75	1	3675	58.90

Rated voltage Uo/U 19/33 kv

Max operating voltage 36 kv

Test voltage 75 kv

Partial discharge level with voltage 2Uo kv max. 5pC

Max. perm conductor temperature 90°C

Max. perm operating temperature 130°C

Short circuit temperature 250°C

*Minimum bending radius 12 x overall diameter

SINGLE CORE MAINS CABLE MDPE 33000V SERVICE CABLE

Round stranded compacted copper conductor, inner semi-conductive layer thermosetting XLPE insulated, outer semi-conductive layer, semi-conductive swelling tape insulation screen, copper wire and tape metallic screen (35mm²), polyester tape/water blocking swelling tape separator, extruded black MDPE outer sheath. 33000 volts grade to BS7870, IEC 60502-2.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)
33KVCU1X70BK	70	19/2.11	1	1751	36.50
33KVCU1X95BK	95	19/2.48	1	2043	38.20
33KVCU1X120BK	120	35/2.05	1	2309	39.60
33KVCU1X150BK	150	35/2.28	1	2614	41.20
33KVCU1X185BK	185	35/2.55	1	2997	42.90
33KVCU1X240BK	240	35/2.92	1	3596	45.40
33KVCU1X300BK	300	35/3.28	1	4225	47.80
33KVCU1X400BK	400	56/2.93	1	5069	50.60
33KVCU1X500BK	500	56/3.32	1	6156	53.90
33KVCU1X630BK	630	56/3.77	1	7570	57.60

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

SECTION 6 Fire Protection, Alarm & Security Cables

FIREPROOF CABLES - MINERAL INSULATED

Solid plain annealed copper conductors, magnesium oxide insulated, solid copper sheath to BS6207, IEC 331 and BS 6387 CWZ. Available in the following options:

(a) Light Duty = 500 volts grade
Heavy Duty = 1000 volts grade

(b) Outer sheath finishes, bare copper, PVC or LSZH

(c) Outer sheath colours. Orange, Red, White or Black.

Size Ref.	Bare (Kg/Km)	Sheathed (Kg/Km)	Overall Diameter Bare (mm)	Overall Diameter Sheathed (mm)	Gland For Use With Rps Seals	Single Hole Clip Reference Bare	Single Hole Clip Reference Sheathed	Nominal Std Drum Lths (Mts)
2L1.0	104	125.00	5.10	6.60	20	20	26	500
2L1.5	136	159.00	5.70	7.20	20	22	28	500
2L2.5	187	213.00	6.60	8.10	20	26	32	500
2L4.0	248	282.00	7.70	9.40	20	30	37	500
3L1.0	136	159.00	5.80	7.30	20	22	28	500
3L1.5	176	201.00	6.40	7.90	20	24	30	500
3L2.5	223	256.00	7.30	9.00	20	28	34	500
4L1.0	162	187.00	6.30	7.80	20	24	30	500
4L1.5	203	230.00	7.00	8.50	20	28	34	500
4L2.5	277	313	8.10	9.80	20	32	37	500
7L1.5	295	332	8.40	10.10	25	32	40	380
7L2.5	411	454	9.70	11.40	25	37	43	285
1H6.0	173	213	6.40	7.70	20	34	34	650
1H10	240	273	7.30	9.00	20	28	34	510
1H16	326	361	8.30	10.00	20	32	37	400
1H25	457	499	9.60	11.30	20	37	43	275
1H35	585	632	10.70	12.40	20	40	47	222
1H50	758	810	12.10	13.80	25	47	54	170
1H70	1016	1075	13.70	15.40	25	54	59	190
1H95	1324	1413	15.40	17.70	25	59	67	155
1H120	1612	1709	16.80	19.10	32	63	75	135
1H150	1949	2055	18.40	20.7	32	71	79	110
1H240	3050	3213	23.30	26.10	40	88	101	67
2H1.5	237	272	7.90	9.60	20	30	37	500
2H2.5	276	314	8.70	10.40	20	34	40	500
2H4.0	355	397	9.80	11.50	20	37	43	500
2H6.0	446	493	10.90	12.60	20	43	47	500
2H10	619	673	12.70	14.40	25	47	54	500
2H16	850	912	14.70	16.40	25	54	63	112
2H25	1178	1277	17.10	19.40	32	67	75	80
3H1.5	254	290	8.30	10.00	20	32	37	500
3H2.5	323	364	9.30	11.00	20	37	43	500
3H4.0	415	460	10.40	12.10	20	40	47	500
3H6.0	526	575	11.50	13.20	25	43	51	184
3H10	754	812	13.60	15.30	25	54	59	130
3H16	1034	1124	15.60	17.90	25	59	71	100
3H25	1444	1549.00	18.20	20.50	40	71	79	70
4H1.5	305	345.00	9.10	10.80	20	37	43	500
4H2.5	384	428.00	10.10	11.80	20	40	47	500
4H4.0	507	556.00	11.40	13..10	25	43	51	195
4H6.0	644	698.00	12.70	14.40	25	47	54	144
4H10	911	974.00	14.80	16.50	25	54	63	110
4H16	1286	1386.00	17.30	19.60	32	67	75	89
4H25	1805	1947.00	20.10	22.90	40	79	88	60
7H1.5	432	479.00	10.80	12.50	25	43	47	245
7H2.5	559	611.00	12.10	13.80	25	47	54	195
12H2.5	911	1001.00	15.60	17.90	32	59	71	148
19H1.5	992	1088.00	16.60	18.90	40	63	71	112

Temperature limits:
PVC sheath -20 to +70°C.
LSF sheath -20 to +80°C.

*Bending radius:
6 x overall diameter.
Should not be installed at temperatures below 0°C.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

STANDARD FIRE ALARM AND SECURITY WIRING CABLES

Plain annealed copper conductor, silicon rubber insulated aluminium/polyester tape screen, tinned annealed copper earth wire, low smoke zero halogen (LSZH) outer sheath. Red, White, Orange or Black. Fire resistant to IEC 331 and BS6387. Flame retardant to BS5839-1:2003 and IEC 60332-3 CAT CWZ, BS7629-1 1997. Acid gas emission to BS EN 50267 (IEC60754), smoke emission to BS EN 50268 (IEC 61034) and flame propagation to BS EN 50265, BS EN 50266 (IEC 60332).

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size (mm)	1 Hole Clip Ref	Gland Ref
FP2X1	1	1/1.13	2+E	90	7.50	20	28	251
FP3X1	1	1/1.13	3+E	110	8.00	20	30	251
FP4X1	1	1/1.13	4+E	135	8.80	20	34	251
FP7X1	1	1/1.13	7+E	170	10.50	20	40	252
FP12X1	1	1/1.13	12+E	270	13.70	25	54	254
FP2X1/ 5	1.5	1/1.38	2+E	110	8.00	20	32	251
FP3X1/ 5	1.5	1/1.38	3+E	130	8.40	20	34	251
FP4X1/5	1.5	1/1.38	4+E	160	9.50	20	37	251
FP7X1/5	1.5	1/1.38	7+D	230	11.30	20	43	252
FP12X1/5	1.5	1/1.38	12+D	365	15.20	25	59	254
FP19X1/5	1.5	1/1.38	19+D	540	17.80	25	67	254
FP2X2/5	2.5	1/1.78	2+E	160	9.00	20	34	252
FP3X2/5	2.5	1/1.78	3+E	200	10.50	20	40	252
FP4X2/5	2.5	1/1.78	4+E	250	11.70	20	43	252
FP7X2/5	2.5	1/1.78	7+D	285	13.70	20	54	252
FP12X2/5	2.5	1/1.78	12+D	470	17.90	25	67	254
FP19X2/5	2.5	1/1.78	19+D	720	21.40	32	79	255
FP2X4	4	7/0.85	2+E	260	11.30	20	43	252
FP3X4	4	7/0.85	3+E	315	12.10	25	47	254
FP4X4	4	7/0.85	4+E	380	13.30	25	54	254

E = Bare earth conductor.
D = Drain wire.

Temperature limits:
-40 to +90°C.

*Bending radius:
6 x overall diameter.

Core identification:
2 core - Brown, Blue.
3 core - Brown, Black, Grey.
4 core - Brown, Black, Grey, Blue.
7 core and above - White with Black numbers.

Should not be installed at temperatures below 0°C or above +40°C.

ENHANCED FIRE ALARM AND SECURITY WIRING CABLES

Plain annealed copper conductor, enhanced silicon rubber insulated, enhanced aluminium/polyester tape screen, tinned annealed copper earth wire, enhanced low smoke zero halogen outer sheath. Red or white. Manufactured to meet the Enhanced standard of BS5839-1 2002 +A2:2008 Clause 26.2e Enhanced and also the requirements of BS8434 - 2:2003 120 minutes and BS EN 50200 Class PH120. Fire resistant to BS7629-1:2008, BS6387:1994 clause 11 CWZ, halogen emissions to BS EN 50267-2-1:1999 and low smoke standard BS EN 61034-2:2005.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size (mm)	1 Hole Clip Ref	Gland Ref
ENH2X1/5	1.5	1/1.38	2+E	110	8.00	20	32	251
ENH3X1/5	1.5	1/1.38	3+E	130	8.40	20	34	251
ENH4X1/5	1.5	1/1.38	4+E	160	9.50	20	37	251
ENH2X2/5	2.5	1/1.78	2+E	160	9.00	20	34	252
ENH3X2/5	2.5	1/1.78	3+E	200	10.50	20	40	252
ENH4X2/5	2.5	1/1.78	4+E	250	11.70	20	43	252
ENH2x4	4	7/0.85	2+E	260	11.30	20	43	252
ENH3x4	4	7/0.85	3+E	315	12.10	25	47	254
ENH4x4	4	7/0.85	4+E	380	13.30	25	51	254

E = Bare earth conductor.

Temperature limits:
-40 to +90°C.

*Bending radius:
6 x overall diameter.

Core identification:
2 core - Brown, Blue.
3 core - Brown, Black, Grey.
4 core - Brown, Black, Grey, Blue.

Should not be installed at temperatures below 0°C or above +40°C.

FIREPROOF CABLES - SINGLES

Plain annealed copper conductor, mica fire resistant tape, low smoke zero halogen (LSZH) insulation. 600/1000 volts grade. Fire resistant to IEC 60331-21 and BS6387, CWZ when tested in steel conduit. Manufactured to meet the following standards - acid gas emission to BS EN 50267, flame retardant to BS EN 60332-1-2 and smoke emission to BS7211.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)
6491F1/5	1.5	7/0.53	1	32	3.30
6491F2/5	2.5	7/0.67	1	43	3.75
6491F4	4	7/0.85	1	55	4.30
6491F6	6	7/1.04	1	85	5.00
6491F10	10	7/1.35	1	146	6.80
6491F16	16	7/1.70	1	198	8.00

Temperature limits:
- 10 to + 90°C.

*Bending radius:
8 x Overall Diameter.

Standard colours available:
Brown, Blue, Grey, Black, Green/Yellow.

Should not be installed at temperatures below 0°C or above 40°C.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

FIREPROOF MAINS AND CONTROL CABLES LSZH

Plain annealed stranded copper conductor, mica fire resistant tape, thermosetting XLPE insulated, low smoke & zero halogen (LSZH) bedding, galvanised steel wire armour, low smoke & zero halogen (LSZH) outer sheath. Black. 600/1000 volts. Fire resistant to BS7846 F2 / BS6387 & CWZ. Acid gas emission to BS EN 50267 (IEC60754), smoke emission to BS EN 50268 (IEC 61034) and flame propagation to BS EN 50265, BS EN 50266 (IEC 60332-3).

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Outside Diameter (mm)	Gland Size (mm)	Nylon Cleat Size
6942F1/5	1.5	7/0.53	2	295	12.00	20/16	0.5
6943F1/5	1.5	7/0.53	3	324	12.50	20/16	0.6
6944F1/5	1.5	7/0.53	4	367	13.30	20S	0.6
6947F1/5	1.5	7/0.53	7	463	15.30	20S	0.7
6940/12F1/5	1.5	7/0.53	12	791	20.00	25	0.8
6940/19F1/5	1.5	7/0.53	19	1030	22.90	25	1.0
6940/27F1/5	1.5	7/0.53	27	1534	27.90	32	1.2
6940/37F1/5	1.5	7/0.53	37	1849	30.70	32	1.4
6942F2/5	2.5	7/0.67	2	352	13.10	20S	0.6
6943F2/5	2.5	7/0.67	3	392	13.70	20S	0.6
6944F2/5	2.5	7/0.67	4	454	14.70	20S	0.6
6947F2/5	2.5	7/0.67	7	584	17.00	20	0.7
6940/12F2/5	2.5	7/0.67	12	1003	22.50	25	0.9
6940/19F2/5	2.5	7/0.67	19	1525	27.00	32	1.1
6940/27F2/5	2.5	7/0.67	27	1990	31.60	32	1.4
6940/37F2/5	2.5	7/0.67	37	2435	34.80	40	1.4
6942F4	4	7/0.85	2	424	14.10	20S	0.6
6943F4	4	7/0.85	3	478	14.80	20S	0.6
6944F4	4	7/0.85	4	556	16.00	20	0.7
6945F4	4	7/0.85	5	725	18.12	20	0.8
6947F4	4	7/0.85	7	852	19.50	20	0.8
6942F6	6	7/1.04	2	504	15.20	20	0.7
6943F6	6	7/1.04	3	573	16.00	20	0.7
6944F6	6	7/1.04	4	783	18.20	20	0.8
6945F6	6	7/1.04	5	865	19.65	20	0.8
6942F10	10	7/1.35	2	620	16.90	20	0.7
6943F10	10	7/1.35	3	868	18.50	20	0.8
6944F10	10	7/1.35	4	1029	20.00	25	0.8
6945F10	10	7/1.35	5	1222	22.64	25	0.9
6942F16	16	7/1.70	2	954	19.50	25	0.8
6943F16	16	7/1.70	3	1136	20.80	25	0.9
6944F16	16	7/1.70	4	1367	22.50	25	0.9
6945F16	16	7/1.70	5	1812	26.55	25	1.1

Temperature limits:
-10 to +90°C.

*Bending radius:
8 x overall diameter.

Core identification:
2 core - Brown, Blue.
3 core - Brown, Black, Grey.
4 core - Brown, Black, Grey, Blue.
5 core and above 4mm^2 and 6mm^2 - White with Black numbers.
5 core - 10mm^2 and 16mm^2 - Brown, Black, Grey, Blue, Green/Yellow.

Should not be installed at temperatures below 0°C or above 40°C.

FIREPROOF MAINS CABLES LSZH

Plain annealed stranded copper conductor, mica fire resistant tape, thermosetting XLPE insulated, low smoke, zero halogen (LSZH) bedding, galvanised steel wire armour, low smoke, zero halogen (LSZH) outer sheath. Black. 600/1000 volts grade. Fire resistant to BS6387/BS7846 F2 & CWZ. Acid gas emission to BS EN 50267 (IEC60754), smoke emission to BS EN 50268 (IEC 61034) and flame propagation to BS EN 50265, BS EN 50266 (IEC 60332-3).

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size (mm)	Nylon Cleat Size
FP2X25	25	7/2.14	2	1100	21.40	25	0.9
FP3X25	25	7/2.14	3	1800	26.60	32	1.1
FP4X25	25	7/2.14	4	2150	28.80	32	1.2
FP5X25	25	7/2.14	5	2700	32.00	32	1.4
FP2X35	35	7/2.52	2	1550	24.30	25	1.0
FP3X35	35	7/2.52	3	2200	29.10	32	1.2
FP4X35	35	7/2.52	4	2650	31.60	32	1.4
FP2X50	50	19/1.78	2	1850	26.80	32	1.1
FP3X50	50	19/1.78	3	2450	29.60	32	1.2
FP4X50	50	19/1.78	4	3100	33.20	40	1.4
FP2X70	70	19/2.14	2	2450	30.00	32	1.4
FP3X70	70	19/2.14	3	3200	33.30	40	1.4
FP4X70	70	19/2.14	4	4400	38.90	40	1.6
FP2X95	95	19/2.52	2	3350	34.10	40	1.4
FP3X95	95	19/2.52	3	4450	38.10	40	1.6
FP4X95	95	19/2.52	4	5650	42.90	50S	1.8
FP2X120	120	37/2.03	2	3900	37.10	40	1.6
FP3X120	120	37/2.03	3	5300	41.50	50S	1.8
FP4X120	120	37/2.03	4	7250	48.30	50	2.0
FP2X150	150	37/2.25	2	4650	40.30	50S	1.8
FP3X150	150	37/2.25	3	6700	46.60	50	2.0
FP4X150	150	37/2.25	4	8550	52.60	50	TC9
FP2X185	185	37/2.52	2	5950	45.70	50	2.0
FP3X185	185	37/2.52	3	8050	50.90	50	TC9
FP4X185	185	37/2.52	4	10300	57.80	63S	TC10
FP2X240	240	61/2.25	2	7350	50.00	50	TC9
FP3X240	240	61/2.25	3	9950	56.20	63S	TC9
FP4X240	240	61/2.25	4	12900	64.20	63	TC11
FP2X300	300	61/2.52	2	8700	54.50	63S	TC9
FP3X300	300	61/2.52	3	12050	61.30	63	TC10
FP4X300	300	61/2.52	4	15550	70.00	75S	TC12
FP3X400	400	61/2.85	3	14800	67.70	75S	TC11
FP4X400	400	61/2.85	4	20250	79.30	90	TC14

Temperature limits:
-10 to +90°C.

*Bending radius:
8 x overall diameter.

Core identification:
2 core - Brown, Blue.
3 core - Brown, Black, Grey.
4 core - Brown, Black, Grey, Blue.
5 core - Brown, Black, Grey, Blue, Green/Yellow.

Should not be installed at temperatures below 0°C or above 40°C.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

FIREPROOF MAINS AND CONTROL CABLES LSZH - ENHANCED

Plain annealed stranded copper conductor, mica fire resistant tape, thermosetting XLPE insulated, polyester tape, low smoke zero halogen (LSZH) bedding, fire barrier tape, galvanised steel wire armour, low smoke zero halogen (LSZH) outer sheath.Black. 600/1000 grade volts. These are designed to meet the application of fire, direct impact and water jet as specified in BS8491. Manufactured to meet the following standards - circuit integrity: BS8519-2010 120 minutes/BS8491, acid gas emission to IEC 60754, BS EN 50267, flame propagation to IEC 60332-3, BS EN 50265, BS EN50266 and smoke emission to IEC 61034, BS EN 50268.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size (mm)	Nylon Cleat Size
FPE2X4	4	7/0.85	2	871	21.80	25	0.9
FPE3X4	4	7/0.85	3	966	22.70	25	1.0
FPE4X4	4	7/0.85	4	959	24.00	25	1.0
FPE2X6	6	7/1.04	2	1001	23.00	25	1.0
FPE3X6	6	7/1.04	3	1087	23.80	25	1.0
FPE4X6	6	7/1.04	4	1252	25.20	25	1.0
FPE2X10	10	7/1.35	2	1060	23.80	20	1.0
FPE3X10	10	7/1.35	3	1180	24.80	25	1.0
FPE4X10	10	7/1.35	4	1350	27.40	25	1.1
FPE2X16	16	7/1.7	2	1290	25.90	25	1.1
FPE3X16	16	7/1.7	3	1460	27.10	32	1.1
FPE4X16	16	7/1.7	4	1690	28.98	32	1.2

Temperature limits:
-10 to + 90°C.

*Bending radius:
8 x Overall Diameter.

Core identification:
2 core - Brown. Blue.
3 core - Brown, Black, Grey.
4 core - Brown, Black, Grey, Blue.

Should not be installed at temperatures below 0°C or above 40°C.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

FIREPROOF MAINS CABLES LSZH - ENHANCED

Plain annealed stranded copper conductor, mica fire resistant tape, thermosetting XLPE insulated, olyester tape, low smoke zero halogen (LSZH) bedding, fire barrier tape, galvanised steel wire armour, low smoke zero halogen (LSZH) outer sheath.Black. 600/1000 grade volts. These are designed to meet the application of fire, direct impact and water jet as specified in BS8491. Manufactured to meet the following standards - circuit integrity: BS8519-2010 120 minutes/BS8491, acid gas emission to IEC 60754, BS EN 50267, flame propagation to IEC 60332-3, BS EN 50265, BS EN50266 and smoke emission to IEC 61034, BS EN 50268.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size (mm)	Nylon Cleat Size
FPE2X25	25	7/2.14	2	1640	29.00	32	1.2
FPE3X25	25	7/2.14	3	2070	31.10	32	1.4
FPE4X25	25	7/2.14	4	2410	33.40	40	1.6
FPE2X35	35	7/2.52	2	2130	31.90	32	1.4
FPE3X35	35	7/2.52	3	2480	33.50	40	1.4
FPE4X35	35	7/2.52	4	2920	36.10	40	1.6
FPE2X50	50	19/1.78	2	2030	29.90	32	1.2
FPE3X50	50	19/1.78	3	2630	33.20	40	1.4
FPE4X50	50	19/1.78	4	3280	37.10	40	1.6
FPE2X70	70	19/2.14	2	2580	33.30	40	1.4
FPE3X70	70	19/2.14	3	3400	37.00	40	1.6
FPE4X70	70	19/2.14	4	4570	45.50	50	1.8
FPE2X95	95	19/2.52	2	3440	37.20	40	1.6
FPE3X95	95	19/2.52	3	4550	41.20	50S	1.8
FPE4X95	95	19/2.52	4	5720	46.40	50	2.0
FPE2X120	120	37/2.03	2	4050	39.90	50S	1.6
FPE3X120	120	37/2.03	3	5410	44.40	50S	1.8
FPE4X120	120	37/2.03	4	7270	51.20	50	TC9
FPE2X150	150	37/2.25	2	4740	43.10	50S	1.8
FPE3X150	150	37/2.25	3	6800	49.30	50	2.0
FPE4X150	150	37/2.25	4	8580	55.70	63S	TC9
FPE2X185	185	37/2.52	2	6050	48.10	50	2.0
FPE3X185	185	37/2.52	3	8140	53.70	63S	TC9
FPE4X185	185	37/2.52	4	10300	60.80	63	TC10
FPE2X240	240	61/2.25	2	7390	52.40	50	TC9
FPE3X240	240	61/2.25	3	10040	58.80	63	TC10
FPE4X240	240	61/2.25	4	12800	66.50	75S	TC11
FPE2X300	300	61/2.52	2	8760	56.50	63S	TC9
FPE3X300	300	61/2.52	3	12020	63.50	63	TC10
FPE4X300	300	61/2.52	4	15410	72.10	75	TC12
FPE3X400	400	61/2.85	3	14820	70.10	75S	TC12
FPE4X400	400	61/2.85	4	19910	81.30	90	TC14

Temperature limits:
-10 to + 90°C.

*Bending radius:
8 x Overall Diameter.

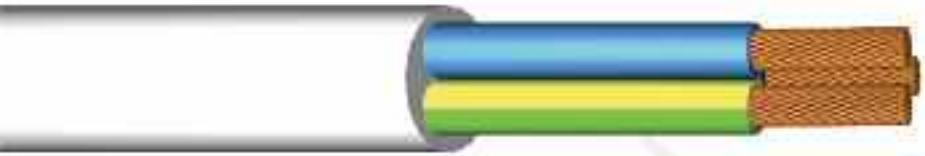
Core identification:
2 core - Brown. Blue.
3 core - Brown, Black, Grey.
4 core - Brown, Black, Grey, Blue.

Should not be installed at temperatures below 0°C or above 40°C.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

SECTION 7 Flexible Cables, PVC And Rubber



PVC INSULATED FLEXIBLE CORDS 218*Y - 318*Y

Plain annealed flexible copper conductors, PVC insulated, PVC outer sheath. Black or White. 300/500 volts grade to BS EN 50525-2-11. (Harmonised code HO5VV-F). Flame propagation to BS EN 50265.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size (mm)
**2182Y/5	0.5	16/0.2	2	36	5.40	20/16
**2182Y/75	0.75	24/0.2	2	45	5.80	20/16
**2183Y/5	0.5	16/0.2	3	44	5.60	20/16
**2183Y/75	0.75	24/0.2	3	55	6.10	20/16
3182Y/5	0.5	16/0.2	2	52	6.30	20/16
3183Y/5	0.5	16/0.2	3	54	6.30	20/16
3182Y/75	0.75	24/0.20	2	59	6.80	20/16
3183Y/75	0.75	24/0.20	3	70	7.20	20/16
3184Y/75	0.75	24/0.20	4	85	7.70	20/16
3185Y/75	0.75	24/0.20	5	110	8.50	20S
3182Y1	1	24/0.20	2	69	7.20	20/16
3183Y1	1	32/0.20	3	82	7.60	20/16
3184Y1	1	32/0.20	4	105	8.50	20S
3185Y1	1	32/0.20	5	130	9.10	20S
3182Y1/5	1.5	30/0.25	2	95	8.20	20/16
3183Y1/5	1.5	30/0.25	3	120	8.90	20S
3184Y1/5	1.5	30/0.25	4	150	10.00	20S
3185Y1/5	1.5	30/0.25	5	180	11.00	20
3182Y2/5	2.5	50/0.25	2	145	9.90	20S
3183Y2/5	2.5	50/0.25	3	180	10.80	20S
3184Y2/5	2.5	50/0.25	4	220	11.30	20
3185Y2/5	2.5	50/0.25	5	265	12.80	20
E3184Y/75WH	0.75	24/0.2	4	85	7.70	20/16
E3184Y1WH	1	32/0.2	4	105	8.50	20S
E3184Y1/5WH	1.5	30/0.25	4	150	10.00	20S

Temperature limits:
Fixed - -5 to +60°C.
Flexing - +5 to +60°C.

*Bending radius:
Fixed 2 x overall diameter.
Flexing 6 x overall diameter.

Core identification:
2 core - Blue, Brown.
3 core - Blue, Brown, Green/Yellow.

4 core - brown, black, grey, green/yellow.
5 core - Blue, Brown, Black, Grey, Green/Yellow.

Should not be installed at temperatures below 0°C.

**Light flexible cords 300/300 volts grade HO3VV-F

E3184Y Core identification: Brown, Black, Blue, Green/Yellow

Available in 100m reels.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

PVC INSULATED FLEXIBLE CORDS 309*Y

Plain annealed flexible copper conductors, heat resisting PVC insulation, heat resisting PVC outer sheath. White 300/500 volts grade to BS6141. Flame propagation to BS EN 50265.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size (mm)
3092Y/5	0.5	16/0.20	2	46	6.30	20/16
3093Y/5	0.5	16/0.20	3	66	6.50	20/16
3094Y/5	0.5	16/0.20	4	70	7.20	20/16
3092Y/75	0.75	24/0.20	2	56	6.80	20S
3093Y/75	0.75	24/0.20	3	68	7.20	20S
3094Y/75	0.75	24/0.20	4	85	7.70	20S
3095Y/75	0.75	24/0.20	5	104	8.50	20S
3092Y1	1	32/0.20	2	65	7.20	20S
3093Y1	1	32/0.20	3	77	7.60	20S
3094Y1	1	32/0.20	4	100	8.50	20S
3092Y1/5	1.5	30/0.25	2	80	8.20	20S
3093Y1/5	1.5	30/0.25	3	100	8.90	20S
3094Y1/5	1.5	30/0.25	4	130	10.00	20
3092Y2/5	2.5	50/0.25	2	135	10.00	20S
3093Y2/5	2.5	50/0.25	3	150	10.80	20
3094Y2/5	2.5	50/0.25	4	195	11.80	20

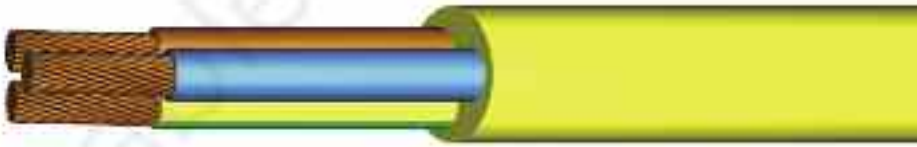
Temperature limits:
Fixed - -5 to +90°C.
Flexing - +5 to +90°C.

*Bending radius:
Fixed - 2 x overall diameter.
Flexing - 6 x overall diameter.

Core identification:
2 core - Blue, Brown.
3 core - Blue, Brown, Green/Yellow.

4 core - Grey, Brown, Black, Green/Yellow.

Should not be installed at temperatures below 0°C.



ARCTIC GRADE FLEXIBLE CORDS

Plain annealed flexible copper conductors, low temperature PVC insulation, low temperature PVC outer sheath. Blue or Yellow. 300/500 volts grade to BS6004 table 44. Flame propagation to BS EN 50265.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size (mm)
3183AG1/5	1.5	30/0.25	3	90	8.20	20S
3184AG1/5	1.5	30/0.25	4	130	9.55	20S
3183AG2/5	2.5	50/0.25	3	180	10.15	20S
3184AG2/5	2.5	50/0.25	4	220	11.30	20
3183AG4	4	56/0.30	3	240	11.40	20
3183AG6	6	76/0.30	3	315	13.20	20

Temperature limits:
Flexing - -40 to +70°C.

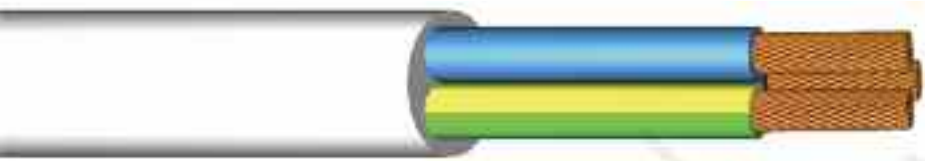
*Bending radius:
6 x overall diameter.

Core identification:
3 core - Blue, Brown, Green/Yellow.

4 core - Brown, Black, Grey Green/Yellow

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.



ZERO HALOGEN FLEXIBLE CORDS (HO5 ZIZI-F)

Plain annealed copper conductors, Low smoke and zero halogen (LSZH) insulated, low smoke and zero halogen (LSZH) outer sheath. Black or white. 300/500 volts grade BS EN 50525-3-11 Harmonised code HO5 ZIZI-F. Acid gas emission to BS EN 50267-2(IEC 60754-2), smoke emission to BS EN 50268 (IEC 61034) and flame propagation to BS EN 50265 (IEC 60332-1).

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size (mm)
3182B/75	0.75	24/0.2	2	59	6.80	20/16
3183B/75	0.75	24/0.2	3	70	7.20	20/16
3184B/75	0.75	24/0.2	4	85	7.70	20/16
3185B/75	0.75	24/0.2	5	110	8.50	20S
3182B1	1	32/0.2	2	69	7.20	20/16
3183B1	1	32/0.2	3	82	7.60	20/16
3184B1	1	32/0.2	4	105	8.50	20S
3185B1	1	32/0.2	5	130	9.10	20S
3186B1	1	32/0.2	6	136	9.80	20S
3187B1	1	32/0.2	7	150	9.90	20S
3182B1/5	1.5	30/0.25	2	95	8.20	20/16
3183B1/5	1.5	30/0.25	3	120	8.90	20S
3184B1/5	1.5	30/0.25	4	150	10.00	20S
3185B1/5	1.5	30/0.25	5	180	11.00	20
3186B1/5	1.5	30/0.25	6	201	10.10	20S
3187B1/5	1.5	30/0.25	7	366	10.90	20S
3182B2/5	2.5	50/0.25	2	145	9.90	20S
3183B2/5	2.5	50/0.25	3	180	10.80	20S
3184B2/5	2.5	50/0.25	4	220	11.30	20
3185B2/5	2.5	50/0.25	5	265	12.80	20
3183B4	4	56/0.30	4	217	10.92	20
3184B4	4	56/0.30	5	283	12.21	20

Temperature limits:
-15 to +70°C.

*Bending radius:
Fixed 4x overall diameter
Flexing 6x overall diameter

Core identification:
2 core - Brown, Blue.
3 core - Blue, Brown, Green/Yellow.
4 core - brown, black, grey, green/yellow.
5 core - Blue, Brown, Black, Grey, Green/Yellow.
6 core - Blue, Brown, Black, Red, White, Green/Yellow.
7 core - Centre white, outer 6 - Yellow, Black, Blue, Red, Green, Brown.

Should not be installed at temperatures below 0°C.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

TYPE YY CONTROL CABLES

Plain annealed flexible copper conductors, PVC insulated, PVC sheathed.
Grey. 300/500 volts grade, generally to BS6500 and VDE 0250.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size (mm)
YY2X/75	0.75	24/0.20	2	46	5.60	20/16
YY3X/75	0.75	24/0.20	3	52	5.70	20/16
YY4X/75	0.75	24/0.20	4	64	6.20	20/16
YY5X/75	0.75	24/0.20	5	77	7.00	20/16
YY7X/75	0.75	24/0.20	7	95	7.30	20/16
YY12X/75	0.75	24/0.20	12	155	9.50	20S
YY18X/75	0.75	24/0.20	18	221	11.10	20
YY25X/75	0.75	24/0.20	25	305	13.20	20
YY34X/75	0.75	24/0.20	34	460	16.70	25
YY50X/75	0.75	24/0.20	50	578	18.40	25
YY65X/75	0.75	24/0.20	65	850	23.50	32
YY2X1	1	32/0.20	2	55	6.00	20/16
YY3X1	1	32/0.20	3	66	6.10	20/16
YY4X1	1	32/0.20	4	82	6.70	20/16
YY5X1	1	32/0.20	5	93	7.50	20/16
YY7X1	1	32/0.20	7	121	8.10	20S
YY12X1	1	32/0.20	12	200	11.00	20S
YY18X1	1	32/0.20	18	318	12.70	20
YY25X1	1	32/0.20	25	415	15.50	25
YY34X1	1	32/0.20	34	575	18.30	25
YY41X1	1	32/0.20	41	665	19.00	25
YY50X1	1	32/0.20	50	815	21.30	32
YY65X1	1.0	32/0.20	65	1055	25.60	32
YY2X1/5	1.5	30/0.25	2	69	6.60	20/16
YY3X1/5	1.5	30/0.25	3	87	7.00	20/16
YY4X1/5	1.5	30/0.25	4	110	7.60	20/16
YY5X1/5	1.5	30/0.25	5	124	8.10	20S
YY7X1/5	1.5	30/0.25	7	176	9.20	20S
YY8X1/5	1.5	30/0.25	8	230	11.20	20
YY10X1/5	1.5	30/0.25	10	265	12.40	20
YY12X1/5	1.5	30/0.25	12	290	13.10	20
YY18X1/5	1.5	30/0.25	18	424	14.80	25
YY25X1/5	1.5	30/0.25	25	565	18.00	25
YY34X1/5	1.5	30/0.25	34	775	21.00	32
YY50X1/5	1.5	30/0.25	50	1095	24.20	32
YY65X1/5	1.5	30/0.25	65	1390	28.80	40

Temperature limits:
-5 to +70°C flexing.
-20 to +70°C fixed.

*Bending radius:
Static - 6 x overall diameter.
Flexing - 15 x overall diameter.

Core identification:
2 core - Black with White numbers.
3 core and above - Black with White numbers plus Green/Yellow.

Also available with coloured cores as follows:
2 core - Blue, Brown.
3 core - Blue, Brown, Green/Yellow.
4 core - brown, black, grey, green/yellow.
5 core - Blue, Brown, Black, Grey, Green/Yellow.
7 core - Blue, Brown, Black, Grey, White, Red, Green/Yellow.

Should not be installed at temperatures below -5°C.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

TYPE YY CONTROL CABLES

Plain annealed flexible copper conductors, PVC insulated, PVC sheathed. Grey. 300/500 volts grade, generally to BS6500 and VDE 0250.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size (mm)
YY2X2/5	2.5	50/0.25	2	106	7.80	20/16
YY3X2/5	2.5	50/0.25	3	126	8.10	20S
YY4X2/5	2.5	50/0.25	4	159	8.90	20S
YY5X2/5	2.5	50/0.25	5	178	9.70	20S
YY7X2/5	2.5	50/0.25	7	272	11.10	20S
YY8X2/5	2.5	50/0.25	8	350	13.50	20
YY12X2/5	2.5	50/0.25	12	403	13.80	20
YY18X2/5	2.5	50/0.25	18	597	17.50	25
YY25X2/5	2.5	50/0.25	25	885	22.00	32
YY34X2/5	2.5	50/0.25	34	1220	25.80	32
YY3X4	4	56/0.30	3	201	10.40	20S
YY4X4	4	56/0.30	4	283	10.70	20S
YY5X4	4	56/0.30	5	293	12.40	20
YY7X4	4	56/0.30	7	413	14.00	25
YY3X6	6	84/0.30	3	273	11.50	20
YY4X6	6	84/0.30	4	352	12.80	20
YY5X6	6	84/0.30	5	415	14.60	25
YY7X6	6	84/0.30	7	537	15.20	25
YY3X10	10	80/0.40	3	466	15.30	25
YY4X10	10	80/0.40	4	631	16.50	25
YY5X10	10	80/0.40	5	720	18.60	25
YY3X16	16	126/0.40	3	697	18.40	25
YY4X16	16	126/0.40	4	767	19.90	32
YY5X16	16	126/0.40	5	1151	22.40	32
YY3X25	25	196/0.40	3	930	21.50	32
YY4X25	25	196/0.40	4	1150	22.50	32
YY5X25	25	196/0.40	5	1679	27.90	40
YY4X35	35	276/0.40	4	1970	29.00	40
YY5X35	35	276/0.40	5	2206	31.30	40
YY4X50	50	396/0.40	4	2700	34.00	50S

Temperature limits:
-5 to +70°C flexing.
-20 to +70°C fixed.

*Bending radius:
Static - 6 x overall diameter.
Flexing - 15 x overall diameter.

Core identification:
2 core - Black with White numbers.
3 core and above - Black with White numbers plus Green/Yellow.

Also available with coloured cores as follows:
2 core - Blue, Brown.
3 core - Blue, Brown, Green/Yellow.
4 core - brown, black, grey, green/yellow.
5 core - Blue, Brown, Black, Grey, Green/Yellow.
7 core - Blue, Brown, Black, Grey, White, Red, Green/Yellow.

Should not be installed at temperatures below -5°C.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

TYPE SY CONTROL CABLES

Plain annealed flexible copper conductors, PVC insulated, extruded PVC bedding, galvanised steel wire braid armour, transparent PVC outer sheath. 300/500 volts grade generally to BS EN 50525-2-11.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size (mm)
SY2X/75	0.75	24/0.20	2	78	7.10	20/16
SY3X/75	0.75	24/0.20	3	91	7.60	20/16
SY4X/75	0.75	24/0.20	4	104	8.30	20/16
SY5X/75	0.75	24/0.20	5	121	8.90	20/16
SY7X/75	0.75	24/0.20	7	135	9.50	20/16
SY12X/75	0.75	24/0.20	12	214	11.90	20S
SY18X/75	0.75	24/0.20	18	293	13.20	20S
SY25X/75	0.75	24/0.20	25	418	13.70	20S
SY34X/75	0.75	24/0.20	34	610	19.00	20
SY2X1	1	32/0.20	2	85	7.70	20/16
SY3X1	1	32/0.20	3	95	8.20	20/16
SY4X1	1	32/0.20	4	120	9.00	20/16
SY5X1	1	32/0.20	5	123	9.20	20/16
SY7X1	1	32/0.20	7	171	10.10	20/16
SY12X1	1	32/0.20	12	276	12.90	20S
SY18X1	1	32/0.20	18	382	15.00	20
SY25X1	1	32/0.20	25	437	17.90	20
SY34X1	1	32/0.20	34	556	20.00	20
SY50X1	1	32/0.20	50	955	23.70	25
SY2X1/5	1.5	30/0.25	2	100	8.20	20/16
SY3X1/5	1.5	30/0.25	3	143	8.60	20/16
SY4X1/5	1.5	30/0.25	4	170	9.30	20/16
SY5X1/5	1.5	30/0.25	5	173	10.00	20/16
SY7X1/5	1.5	30/0.25	7	198	10.70	20/16
SY12X1/5	1.5	30/0.25	12	341	13.80	20S
SY18X1/5	1.5	30/0.25	18	490	16.40	20
SY25X1/5	1.5	30/0.25	25	606	19.20	20
SY34X1/5	1.5	30/0.25	34	835	21.60	25
SY50X1/5	1.5	30/0.25	50	1046	23.80	25
SY2X2/5	2.5	50/0.25	2	177	9.80	20/16
SY3X2/5	2.5	50/0.25	3	190	9.90	20/16
SY4X2/5	2.5	50/0.25	4	240	10.80	20/16
SY5X2/5	2.5	50/0.25	5	247	11.50	20S
SY7X2/5	2.5	50/0.25	7	327	13.00	20S
SY12X2/5	2.5	50/0.25	12	502	16.90	20
SY18X2/5	2.5	50/0.25	18	740	19.80	20
SY25X2/5	2.5	50/0.25	25	1065	23.20	25
SY34X2/5	2.5	50/0.25	34	1126	24.30	25

Temperature limits:
-5 to +70°C flexing.
-20 to +70°C fixed.

*Bending radius:
Static - 10 x overall diameter.
Flexing - 20 x overall diameter.

Core identification:
2 core - Black with White numbers.
3 core and above - Black with White numbers plus Green/Yellow.

Also available with coloured cores as follows:
2 core - Blue, Brown.
3 core - Blue, Brown, Green/Yellow.
4 core - brown, black, grey, green/yellow.
5 core - Blue, Brown, Black, Grey, Green/Yellow.

Should not be installed at temperatures below -5°C.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

TYPE SY CONTROL CABLES

Plain annealed flexible copper conductors, PVC insulated, extruded PVC bedding, galvanised steel wire braid armour, transparent PVC outer sheath. 300/500 volts grade generally to BS EN 50525-2-11.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size (mm)
SY3X4	4	56/0.30	3	323	12.20	20S
SY4X4	4	56/0.30	4	354	13.40	20S
SY5X4	4	56/0.30	5	392	15.00	20
SY7X4	4	56/0.30	7	486	16.00	20
SY3X6	6	84/0.30	3	343	13.40	20S
SY4X6	6	84/0.30	4	458	14.60	20S
SY5X6	6	84/0.30	5	572	16.70	20
SY7X6	6	84/0.30	7	640	18.00	20
SY3X10	10	80/0.40	3	563	17.30	20
SY4X10	10	80/0.40	4	776	19.10	20
SY5X10	10	80/0.40	5	855	21.00	25
SY3X16	16	126/0.40	3	813	20.50	25
SY4X16	16	126/0.40	4	900	22.40	25
SY5X16	16	126/0.40	5	1258	25.20	25
SY4X25	25	196/0.40	4	1597	28.20	32
SY5X25	25	196/0.40	5	2007	31.20	40
SY4X35	35	276/0.40	4	2046	31.30	40
SY5X35	35	276/0.40	5	2524	34.30	40
SY4X50	50	396/0.40	4	2888	37.00	40
SY4X70	70	356/0.50	4	4015	41.20	50S
SY4X95	95	485/0.50	4	5176	47.80	50

Temperature limits:
-5 to +70°C flexing.
-20 to +70°C fixed.

*Bending radius:
Static - 10 x overall diameter.
Flexing - 20 x overall diameter.

Core identification:
2 core - Black with White numbers.
3 core and above - Black with White numbers plus Green/Yellow.

Also available with coloured cores as follows:
2 core - Blue, Brown.
3 core - Blue, Brown, Green/Yellow.
4 core - brown, black, grey, green/yellow.
5 core - Blue, Brown, Black, Grey, Green/Yellow.

Should not be installed at temperatures below -5°C.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

TYPE CY CONTROL CABLES

Plain annealed flexible copper conductors, PVC insulated, mylar taped, tinned copper wire braid screen, PVC outer sheath. Grey. 300/500 volts grade generally to BS EN 50525-2-11.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size (mm) Brass A2
CY2X/5	0.5	16/0.20	2	41	5.00	20/16
CY3X/5	0.5	16/0.20	3	50	5.20	20/16
CY4X/5	0.5	16/0.20	4	66	6.20	20/16
CY5X/5	0.5	16/0.20	5	79	7.00	20/16
CY7X/5	0.5	16/0.20	7	102	7.20	20/16
CY2X/75	0.75	24/0.20	2	43	5.50	20/16
CY3X/75	0.75	24/0.20	3	52	5.80	20/16
CY4X/75	0.75	24/0.20	4	68	6.50	20/16
CY5X/75	0.75	24/0.20	5	80	7.10	20/16
CY7X/75	0.75	24/0.20	7	103	7.60	20/16
CY12X/75	0.75	24/0.20	12	161	9.90	20S
CY18X/75	0.75	24/0.20	18	238	11.70	20
CY25X/75	0.75	24/0.20	25	316	13.90	20
CY2X1	1	32/0.20	2	53	6.30	20/16
CY3X1	1	32/0.20	3	64	6.40	20/16
CY4X1	1	32/0.20	4	84	7.20	20/16
CY5X1	1	32/0.20	5	100	7.80	20/16
CY7X1	1	32/0.20	7	125	8.50	20/16
CY12X1	1	32/0.20	12	209	11.30	20S
CY18X1	1	32/0.20	18	308	13.30	20
CY25X1	1	32/0.20	25	420	16.23	25
CY34X1	1	32/0.20	34	650	19.50	25
CY2X1/5	1.5	30/0.25	2	61	6.50	20/16
CY3X1/5	1.5	30/0.25	3	78	6.90	20/16
CY4X1/5	1.5	30/0.25	4	104	7.70	20/16
CY5X1/5	1.5	30/0.25	5	128	8.60	20S
CY7X1/5	1.5	30/0.25	7	159	9.20	20
CY12X1/5	1.5	30/0.25	12	281	12.70	25
CY18X1/5	1.5	30/0.25	18	396	14.70	25
CY25X1/5	1.5	30/0.25	25	534	17.49	25
CY34X1/5	1.5	30/0.25	34	720	19.89	32
CY42X1/5	1.5	30/0.25	42	1015	23.80	25
CY2X2/5	2.5	50/0.25	2	102	8.00	20/16
CY3X2/5	2.5	50/0.25	3	117	8.40	20/16
CY4X2/5	2.5	50/0.25	4	168	9.190	20S
CY5X2/5	2.5	50/0.25	5	199	10.30	20S
CY7X2/5	2.5	50/0.25	7	252	11.20	20S
CY12X2/5	2.5	50/0.25	12	500	16.80	25
CY2X4	4	56/0.30	2	165	10.50	20S
CY3X4	4	56/0.30	3	186	10.30	20S
CY4X4	4	56/0.30	4	239	11.80	20S
CY5X4	4	56/0.30	5	301	13.00	20S
CY4X6	6	84/0.30	4	327	12.90	20S
CY5X6	6	84/0.30	5	543	16.70	25
CY4X10	10	80/0.40	4	553	17.20	25
CY4X16	16	126/0.40	4	846	21.00	32

Temperature limits:
Static - -20 to +80°C.
Flexing - -5 to +70°C.

*Bending radius:
Static - 6 x overall diameter.
Flexing - 15 x overall diameter.

Core identification:
2 core - Black with White numbers.
3 core and above - Black with White numbers plus Green/Yellow.

Also available with coloured cores as follows:
2 core - Blue, Brown.
3 core - Blue, Brown, Green/Yellow.
4 core - brown, black, grey, green/yellow.
5 core - Blue, Brown, Black, Grey, Green/Yellow.

Should not be installed at temperatures below -5°C.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

TYPE YY CONTROL CABLES LSZH

Plain annealed flexible copper conductors, low smoke and zero halogen (LSZH) insulated, low smoke and zero halogen (LSZH) sheathed. Grey. 300/500 volts grade, generally to BS EN 50525-2-11.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size (mm)
YY2X/75LSF	0.75	24/0.20	2	46	5.60	20/16
YY3X/75LSF	0.75	24/0.20	3	52	5.70	20/16
YY4X/75LSF	0.75	24/0.20	4	64	6.20	20/16
YY5X/75LSF	0.75	24/0.20	5	77	7.00	20/16
YY7X/75LSF	0.75	24/0.20	7	95	7.30	20/16
YY12X/75LSF	0.75	24/0.20	12	155	9.50	20S
YY25X/75LSF	0.75	24/0.20	25	305	13.20	20
YY34X/75LSF	0.75	24/0.20	34	460	16.70	25
YY2X1LSF	1	32/0.20	2	55	6.00	20/16
YY3X1LSF	1	32/0.20	3	66	6.10	20/16
YY4X1LSF	1	32/0.20	4	82	6.70	20/16
YY5X1LSF	1	32/0.20	5	93	7.50	20/16
YY2X1/5LSF	1.5	30/0.25	2	69	6.60	20/16
YY3X1/5LSF	1.5	30/0.25	3	87	7.00	20/16
YY4X1/5LSF	1.5	30/0.25	4	110	7.60	20/16
YY5X1/5LSF	1.5	30/0.25	5	124	8.10	20S
YY7X1/5LSF	1.5	30/0.25	7	176	9.20	20S
YY12X1/5LSF	1.5	30/0.25	12	290	13.10	20
YY18X1/5LSF	1.5	30/0.25	18	424	14.80	25
YY25X1/5LSF	1.5	30/0.25	25	565	18.00	25
YY34X1/5LSF	1.5	30/0.25	34	775	21.00	32
YY2X2/5LSF	2.5	50/0.25	2	106	7.80	20/16
YY3X2/5LSF	2.5	50/0.25	3	126	8.10	20S
YY4X2/5LSF	2.5	50/0.25	4	159	8.90	20S
YY5X2/5LSF	2.5	50/0.25	5	178	9.70	20S
YY7X2/5LSF	2.5	50/0.25	7	272	11.10	20
YY3X4LSF	4	56/0.30	3	201	10.40	20S
YY4X4LSF	4	56/0.3	4	283	10.70	20S
YY5X4LSF	4	56/0.3	5	293	12.40	20
YY7X4LSF	4	56/0.3	7	413	14.00	25
YY3X6LSF	6	84/0.30	3	273	11.50	20
YY4X6LSF	6	84/0.3	4	352	12.80	20
YY5X6LSF	6	84/0.30	5	415	14.60	25
YY7X6LSF	6	84/0.30	7	537	15.20	25
YY3X10LSF	10	80/0.40	3	466	15.30	25
YY4X10LSF	10	80/0.4	4	631	16.50	25
YY5X10LSF	10	80/0.40	5	720	18.60	25
YY3X16LSF	16	126/0.4	3	697	18.40	25
YY4X16LSF	16	126/0.4	4	767	19.90	32
YY5X16LSF	16	126/0.40	5	1151	22.40	32
YY3X25LSF	25	196/0.40	3	930	21.50	32

Temperature limits:
YY Cable
-5 to +70°C flexing.
-20 to +70°C fixed.
*Bending radius:
Static - 6 x Overall Diameter
Flexible - 15 x Overall Diameter.

Core identification:
2 Core - Black with White numbers.
3 Core and above
Black with White numbers plus Green/Yellow.
Also available with coloured cores as follows:
2 core - Blue, Brown.
3 core - Blue, Brown, Green/Yellow.
4 core - Brown, Black, Grey, Green/Yellow.
5 core - Blue, Brown, Black, Grey, Green/Yellow.

Should not be installed at temperatures below -5°C.

Temperature limits:
CY Cable
-5 to +70°C flexing.
-20 to +80°C fixed.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

TYPE SY CONTROL CABLES LSZH

Plain annealed flexible copper conductors, low smoke and zero halogen (LSZH) insulated, low smoke and zero halogen (LSZH) sheathed. Grey. 300/500 volts grade generally to BS EN 50525-2-11.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No Of Cores	Weight Kg/Km	Overall Diameter (mm)	Gland Size (mm)
SY3X1/5LSF	1.5	30/0.25	3	143	8.60	20/16
SY4X1/5LSF	1.5	30/0.25	4	170	9.30	20/16
SY3X2/5LSF	2.5	50/0.25	3	190	9.90	20/16
SY4X2/5LSF	2.5	50/0.25	4	240	10.80	20/16
SY5X2/5LSF	2.5	50/0.25	5	247	11.50	20s
SY3X4LSF	4	56/0.3	3	323	12.20	20s
SY4X4LSF	4	56/0.30	4	354	13.40	20s
SY5X4LSF	4	56/0.30	5	392	15.00	20
SY3X6LSF	6	84/0.30	3	343	13.40	20s
SY4X6LSF	6	84/0.30	4	458	14.60	20
SY5X6LSF	6	84/0.30	5	572	16.70	20

Temperature limits:
-5 to +70°C flexing.
-20 to +70°C fixed.

Bending radius:
Static - 10 x overall diameter.
Flexing - 20 x overall diameter.

Core identification
3 core and above - black with white numbers plus green/yellow also available with coloured cores as follows:
3 core - Blue, Brown, Green/Yellow 4 core - brown, black, grey, green/yellow.

Should not be installed at temperatures below - 5°C.

TYPE CY CONTROL CABLES LSZH

Plain annealed flexible copper conductors, low smoke and zero halogen (LSZH) insulated, mylar taped, tinned copper wire braid, low smoke and zero halogen (LSZH) outer sheath. Grey. 300/500 volts grade, generally to BS EN 50525-2-11.,

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size (mm)
CY2X/75LSF	0.75	24/0.20	2	43	5.50	20/16
CY3X/75LSF	0.75	24/0.20	3	52	5.80	20/16
CY4X/75LSF	0.75	24/0.20	4	68	6.50	20/16
CY5X/75LSF	0.75	24/0.20	5	80	7.10	20/16
CY7X/75LSF	0.75	24/0.2	7	103	7.60	20/16
CY2X1/5LSF	1.5	30/0.25	2	61	6.50	20/16
CY3X1/5LSF	1.5	30/0.25	3	78	6.90	20/16
CY4X1/5LSF	1.5	30/0.25	4	104	7.70	20/16
CY5X1/5LSF	1.5	30/0.25	5	128	8.60	20/16
CY12X1/5LSF	1.5	30/0.25	12	281	12.70	25
CY18X1/5LSF	1.5	30/0.25	18	396	14.70	25
CY25X1/5LSF	1.5	30/0.25	25	534	17.49	25
CY34X1/5LSF	1.5	30/0.25	34	720	19.89	32
CY2X2/5LSF	2.5	50/0.25	2	102	8.00	20/16
CY3X2/5LSF	2.5	50/0.25	3	117	8.40	20/16
CY4X2/5LSF	2.5	50/0.25	4	168	9.19	20S
CY4X4LSF	4	56/0.30	4	239	11.80	20S
CY4X6LSF	6	84/0.30	4	327	12.90	20S
CY5X6LSF	6	84/0.30	5	543	16.70	25
CY4X10LSF	10	80/0.40	4	553	17.20	25
CY4X16LSF	16	126/0.40	4	846	21.00	32

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

TRI-RATED EQUIPMENT WIRES

Plain annealed stranded circular copper conductors, circular high temperature PVC outer sheath. UL & CSA approved also to BS6231. 600/1000 volts grade. Flame propagation to BS EN 50265 and IEC 60332-1.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size (mm)
TRI0/5	0.5	16/0.20	12	2.70	-
TRI/75	0.75	24/0.20	15	2.90	-
TRI1	1	32/0.20	18	3.10	-
TRI1/5	1.5	30/0.25	23	3.30	20/16
TRI2/5	2.5	50/0.25	34	3.70	20/16
TRI4	4	56/0.30	50	4.30	20/16
TRI6	6	84/0.30	71	4.90	20/16
TRI10	10	80/0.40	123	6.30	20/16
TRI16	16	126/0.40	207	9.00	20S
TRI25	25	196/0.40	303	10.40	20S
TRI35	35	276/0.40	412	11.90	20
TRI50	50	396/0.40	607	14.70	25
TRI70	70	360/0.50	837	16.80	25
TRI95	95	475/0.50	1079	18.80	25
TRI120	120	608/0.50	1280	19.90	32
BI150	150	756/0.50	1619	22.90	32
BI185	185	925/0.50	1948	24.10	32
BI240	240	1221/0.50	2518	28.60	40
BI300	300	1525/0.50	3112	32.20	50S
BI400	400	2013/0.50	4051	36.00	50S

Temperature limits:
-30 to +105°C.

*Bending radius:
6 x Overall diameter.

Standard colours available:
0.5mm^2 - 2.5mm^2 - Brown, Black, Grey, Blue, Green/Yellow, Red, Yellow, White, Orange, Pink, Violet.

4.0mm^2 - 16mm^2 - Brown, Black, Grey, Blue, Green/Yellow, Red, Yellow, White.
25.0mm^2 - 120mm^2 - Brown, Black, Grey, Blue, Green/Yellow, Red, Yellow.

150mm^2 - Black, Green/Yellow.
185mm^2 - 400mm^2 - Black.

Should not be installed at temperatures below 0°C.

2491B/6701B LSZH FLEXIBLE SINGLE CORES

Flexible plain annealed copper conductor, low smoke zero halogen (LSZH) outer sheath to BS EN 50525-1:2011. 0.75mm/1.0mm rated at 300/500 volts grade BS EN 50525-3-41, harmonised code HO5Z-K. 1.5mm to 240mm rated at 450/750 volts grade, harmonised code HO7Z-K. Flame propagation to BS EN 50266-1:2001 (formerly BS4066:PT1).

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)
2491B/75	0.75	24/0.20	1	12	2.12
2491B1	1	32/0.20	1	14	2.48
2491B1/5	1.5	30/0.25	1	20	2.98
2491B2/5	2.5	50/0.25	1	30	3.63
2491B4	4	56/0.25	1	45	4.23
2491B6	6	84/0.30	1	65	4.83
6701B10	10	80/0.40	1	110	6.10
6701B16	16	126/0.40	1	160	7.10
6701B25	25	196/0.40	1	250	8.70
6701B35	35	276/0.40	1	340	9.90
6701B50	50	396/0.40	1	480	11.60
6701B70	70	360/0.50	1	670	13.30
6701B95	95	475/0.50	1	890	15.20
6701B120	120	608/0.50	1	1140	17.00
6701B150	150	756/0.50	1	1410	18.90
6701B185	185	925/0.50	1	1710	21.00
6701B240	240	1221/0.50	1	2270	23.90

Temperature limits:
- 15 to + 90°C
*Bending radius:
up to 35mm^2 - 3 x Overall Diameter
50mm^2 and above - 4 x Overall diameter.

Standard colours available:
1.5mm to 6mm - Black, Blue, Brown, Grey, Orange, White, Red, Yellow, Green/Yellow.
10mm^2 - 240mm^2 - Black, Blue, Brown, Grey.

Should not be installed at temperatures below 0°C.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

SOLAR ENERGY CABLES

Electrolytic annealed tinned flexible copper conductor, halogen free thermosetting rubber insulation, type EI6 according to EN 50363-1 and table 4 of the TUV standard, halogen free thermosetting rubber outer sheath, type EM8 according to EN 50363-1 and table 4 of the TUV standard. Black.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)
SOLAR1X1/5BK	1.5	29/0.25	1	40	4.90
SOLAR1X2/5BK	2.5	48/0.25	1	49	5.35
SOLAR1X4BK	4	48/0.3	1	66	6.00
SOLAR1X6BK	6	72/0.3	1	86	6.55
SOLAR1X10BK	10	126/0.3	1	132	7.60
SOLAR1X16BK	16	116/0.4	1	188	8.60
SOLAR1X25BK	25	180/0.4	1	294	10.80
SOLAR1X35BK	35	260/0.4	1	390	11.90

Characteristics.
Nominal voltage: AC: 0,6/1 kV; DC: 1,8 kV.
Ambient temperature range: -40 °C to + 90 ºC.
Maximum conductor temperature: 120 ºC.
Maximum short-circuit temperature: 250 °C (maximum 5 s).
*Minimum bending radius (fixed): 5 x cable Ø.
No flame propagation: EN 60332-1-2 / IEC 60332-1-2.
No fire propagation: EN 60332-3 / IEC 60332-3.
Halogen free: according to EN 50267 / IEC 60754
HCl content < 0,5%.
pH > 4,3.
conductivity < 10 !S/mm.
Smoke density: light transmittance > 60% (according to EN 61034/IEC 61034).

SINGLE CORE PVC FLEXIBLE MAINS CABLES

Plain annealed flexible copper conductor, PVC insulated PVC sheathed, 6mm to 35mm rated 450/750v 50mm and above rated 600/1000v, generally to BS-EN-50525-11. Flame propagation to BS4066 PT1 & IEC332 PT1.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size (mm)
6381Y6	6.0	84/0.30	1	105	7.70	20/16
6381Y10	10	80/0.40	1	151	8.80	20S
6381Y16	16	126/0.40	1	208	9.90	20S
6381Y25	25	196/0.40	1	303	11.40	20
6381Y35	35	276/0.40	1	401	12.70	20
6381Y50	50	396/0.40	1	560	14.60	25
6381Y70	70	360/0.50	1	748	16.10	25
6381Y95	95	475/0.50	1	990	18.60	25
6381Y120	120	608/0.50	1	1233	20.20	32
6381Y150	150	756/0.50	1	1528	22.50	32
6381Y185	185	925/0.50	1	1857	25.10	32
6381Y240	240	1221/0.50	1	2419	28.30	40
6381Y300	300	1525/0.50	1	3032	31.20	40
6381Y400	400	2013/0.50	1	3937	35.40	50S

Temperature limits:
-15 to +70°C.

*Bending radius:
Up to 50mm 3 x overall diameter.
Over 70mm 5 x overall diameter.

Standard core colours available:
Black, grey, blue, brown, green/yellow.

Should not be installed at temperatures below 0°C.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

DRINKING WATER CABLE

Plain annealed flexible copper conductors, cross linked EPDM sheath and jacket. Light blue. 450/750s grade. WRAS approved to BS6920, HD22.12.S1. This cable is designed for the operation of submersible pumps for drinking water, fishponds, swimming pools and in electrical installations in the food and drink manufacturing industry. They are designed for permanent immersion and are non toxic and water proof. Available in flatform version on request.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)
DRINK1X4	4	56/0.3	1	67	6.9
DRINK1X6	6	84/0.3	1	92	7.68
DRINK1X10	10	80/0.4	1	136	9.02
DRINK1X16	16	126/0.4	1	197	10.18
DRINK1X25	25	196/0.4	1	302	12.25
DRINK1X35	35	276/0.4	1	415	14.1
DRINK1X50	50	396/0.4	1	565	15.9
DRINK1X70	70	360/0.5	1	755	18.15
DRINK1X95	95	457/0.5	1	998	20.66
DRINK3X1/5R	1.50	30/0.25	3	96	10.0
DRINK3X2/5R	2.50	50/0.25	3	148	12.0
DRINK3X4R	4	56/0.3	3	210	13.8
DRINK3X6R	6	84/0.3	3	290	15.5
DRINK3X10R	10	80/0.4	3	500	21.0
DRINK3X16R	16	126/0.4	3	603	24.0
DRINK3X25R	25	196/0.4	3	1060	28.0
DRINK3X35R	35	276/0.4	3	1415	33.0
DRINK3X50R	50	396/0.4	3	1960	37.0
DRINK4X1/5R	1.50	30/0.25	4	125	11.5
DRINK4X2/5R	2.50	50/0.25	4	191	13.5
DRINK4X4R	4	56/0.3	4	265	15.2
DRINK4X6R	6	84/0.3	4	372	17.1
DRINK4X10R	10	80/0.4	4	635	23.0
DRINK4X16R	16	126/0.4	4	900	26.0
DRINK4X25R	25	196/0.4	4	1380	31.1
DRINK4X35R	35	276/0.4	4	1835	35.1
DRINK4X50R	50	396/0.4	4	2545	40.0

Temperature limits:
- 40 to + 80 degree C fixed
- 25 to + 80 degree C flexing

*Bending radius:
5 x overall diameter

Core identification:
3 core- Blue, Brown, Green/Yellow
4 core - Brown, Grey, Black, Green/Yellow

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

FLEXIBLE MAINS AND CONTROL CABLES HO7RN-F

Plain annealed flexible copper conductors, rubber insulated, heavy duty polychloroprene (PCP) outer sheath 450/750 volts grade. Black. Harmonised code type HO7RN-F. Flame propagation to EN 60332-1-2.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Mean Overall Diameter (mm)	
					Lower Limit	Upper Limit
3182P1	1	32/0.20	2	95	6.10	8.00
3183P1	1	32/0.20	3	115	6.50	8.50
3184P1	1	32/0.20	4	140	7.10	9.30
3182P1/5	1.5	30/0.25	2	132	7.60	9.80
3183P1/5	1.5	30/0.25	3	165	8.00	10.40
3184P1/5	1.5	30/0.25	4	200	9.00	11.60
3185P1/5	1.5	30/0.25	5	240	11.20	14.40
3187P1/5	1.5	30/0.25	7	385	14.60	18.20
3180/12P1/5	1.5	30/0.25	12	520	17.60	22.40
3180/19P1/5	1.5	30/0.25	19	700	21.00	26.00
3180/27P1/5	1.5	30/0.25	27	920	25.30	30.00
3180/37P1/5	1.5	30/0.25	37	1260	29.00	34.20
3182P2/5	2.5	50/0.25	2	193	9.00	11.60
3183P2/5	2.5	50/0.25	3	235	9.60	12.40
3184P2/5	2.5	50/0.25	4	290	10.70	13.80
3185P2/5	2.5	50/0.25	5	345	13.30	17.00
3187P2/5	2.5	50/0.25	7	520	17.20	21.00
3180/12P2/5	2.5	50/0.25	12	810	20.60	26.20
3181P4	4	50/0.25	1	94	7.20	9.00
3182P4	4	56/0.30	2	275	11.80	15.10
3183P4	4	56/0.30	3	320	12.70	16.20
3184P4	4	56/0.30	4	395	14.00	17.90
3185P4	4	56/0.30	5	485	15.60	19.90
3187P4	4	56/0.30	7	773	19.80	24.40
6381P6	6	84/0.30	1	130	7.90	9.80
6382P6	6	84/0.30	2	350	13.10	16.80
6383P6	6	84/0.30	3	495	14.10	18.00
6384P6	6	84/0.30	4	610	15.70	20.00
6385P6	6	84/0.30	5	760	17.50	22.90
6387P6	6	84/0.30	7	904	21.60	26.90
6381P10	10	80/0.40	1	230	9.50	11.90
6382P10	10	80/0.40	2	640	17.70	22.60
6383P10	10	80/0.40	3	880	19.10	24.20
6384P10	10	80/0.40	4	1060	20.90	26.50
6385P10	10	80/0.40	5	1300	22.90	29.10
6381P16	16	126/0.40	1	320	10.80	13.40
6382P16	16	126/0.40	2	850	20.20	25.70
6383P16	16	126/0.40	3	1090	21.80	27.60
6384P16	16	126/0.40	4	1345	23.80	30.10
6385P16	16	126/0.40	5	1680	26.40	33.30
6381P25	25	196/0.40	1	450	12.70	15.80
6382P25	25	196/0.40	2	1210	24.30	30.70
6383P25	25	196/0.40	3	1394	26.10	33.00
6384P25	25	196/0.40	4	1995	28.90	36.60
6385P25	25	196/0.40	5	2470	32.00	40.40
6381P35	35	276/0.40	1	605	14.30	17.90
6383P35	35	276/0.40	3	1850	29.30	37.10
6384P35	35	276/0.40	4	2645	32.50	41.10
6385P35	35	276/0.40	5	2930	34.00	43.00
6381P50	50	396/0.40	1	825	16.50	20.60
6383P50	50	396/0.40	3	2890	34.10	42.90
6384P50	50	396/0.40	4	3635	37.70	47.50
6385P50	50	396/0.40	5	4450	39.03	49.18

Temperature limits:
-25 to +60°C.
Can be supplied suitable for up to 90°C upon special request.

*Bending radius:
Static - 6 x overall diameter.
Flexing - 15 x overall diameter.

Core identification:
2 core - Blue, Brown.
3 core - Blue, Brown, Green/Yellow.
4 core - Grey, Black, Brown, Green/Yellow.
5 core - Grey, Black, Brown, Blue, Green/Yellow.
6 core and above - Black with White numbers plus Green/Yellow.

Should not be installed at temperatures below 0°C.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

FLEXIBLE MAINS AND CONTROL CABLES HO7RN-F

Plain annealed flexible copper conductors, rubber insulated, heavy duty polychloroprene (PCP) outer sheath 450/750 volts grade. Black. Harmonised code type HO7RN-F. Flame propagation to EN 60332-1-2.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Mean Overall Diameter (mm)	
					Lower Limit	Upper Limit
6381P70	70	360/0.50	1	1090	18.60	23.30
6383P70	70	360/0.50	3	3850	38.40	48.30
6384P70	70	360/0.50	4	4830	42.70	54.00
6385P70	70	360/0.50	5	5938	48.50	55.00
6381P95	95	475/0.50	1	1405	20.80	26.00
6383P95	95	475/0.50	3	4185	43.30	50.00
6384P95	95	475/0.50	4	6320	48.50	61.00
6385P95	95	475/0.50	5	6695	54.00	64.50
6381P120	120	608/0.50	1	1745	22.80	28.60
6383P120	120	608/0.50	3	5080	47.40	60.00
6384P120	120	608/0.50	4	6500	53.00	66.00
6385P120	120	608/0.50	5	7542	57.90	68.50
6381P150	150	756/0.50	1	1824	25.20	31.40
6383P150	150	756/0.50	3	6267	52.00	66.00
6384P150	150	756/0.50	4	8031	58.00	73.00
6381P185	185	925/0.50	1	2202	27.60	34.40
6383P185	185	925/0.50	3	7661	57.00	72.00
6384P185	185	925/0.50	4	9830	64.00	80.00
6381P240	240	1221/0.50	1	2847	30.60	38.30
6383P240	240	1221/0.50	3	9692	65.00	82.00
6384P240	240	1221/0.50	4	12444	72.00	91.00
6381P300	300	1525/0.50	1	3495	33.50	41.90
6381P400	400	2257/0.50	1	4880	45.50	56.50
6381P500	500	1769/0.60	1	5301	41.30	52.00
6381P630	630	2257/0.60	1	7460	45.50	56.50

Temperature limits:
-25 to +60°C.
Can be supplied suitable for up to 90°C upon special request.

*Bending radius:
Static - 6 x overall diameter.
Flexing - 15 x overall diameter.

Core identification:
2 core - Blue, Brown.
3 core - Blue, Brown, Green/Yellow.
4 core - Grey, Black, Brown, Green/Yellow.
5 core - Grey, Black, Brown, Blue, Green/Yellow.
6 core and above - Black with White numbers plus Green/Yellow.

Should not be installed at temperatures below 0°C.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

TOUGH RUBBER SHEATH FLEXIBLE CORDS

Plain annealed flexible copper conductors, ethylene propylene rubber insulated, tough rubber sheath. Black. 300/500 volts grade to BS6500 and BS7919.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size (mm)
3182/75	0.75	24/0.20	2	63	6.60	20/16
3183/75	0.75	24/0.20	3	78	7.20	20/16
3184/75	0.75	24/0.20	4	94	7.80	20/16
31821	1	30/0.20	2	77	7.10	20/16
31831	1	30/0.20	3	90	7.50	20/16
31841	1	30/0.20	4	110	8.20	20/16
31821/5	1.5	30/0.25	2	115	8.70	20S
31831/5	1.5	30/0.25	3	135	9.20	20S
31841/5	1.5	30/0.25	4	170	9.80	20S
31851/5	1.5	30/0.25	5	195	10.30	20S
31822/5	2.5	50/0.25	2	165	10.30	20S
31832/5	2.5	50/0.25	3	195	11.00	20S
31842/5	2.5	50/0.25	4	245	11.90	20
31852/5	2.5	50/0.25	5	290	12.30	20

Temperature limits:
+60°C.

*Bending radius:
6 x overall diameter.

Core identification:
2 core - Blue, Brown.
3 core - Blue, Brown, Green/Yellow.
4 core - Grey, Black, Brown, Green/Yellow.

Should not be installed at temperatures below 0°C.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

FLEXIBLE MAINS AND CONTROL CABLES EPR,CSP

Tinned annealed flexible copper conductors or plain copper conductor, ethylene propylene rubber (EPR) insulated, chlorosulphonated polyethylene (CSP) outer sheath. 300/500 volts grade to BS6500. Black or White. Heat and oil resistant and flame retardant (HOFR). Flame retardant to BS EN 60332-1-2 (BS EN 50265-2-1). Harmonised code H07BN4-F.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Mean Overall Diameter (mm)	
					Lower Limit	Upper Limit
3182TQ/75	0.75	24/0.20	2	58	5.70	7.40
3183TQ/75	0.75	24/0.20	3	72	6.20	8.10
3184TQ/75	0.75	24/0.20	4	86	6.80	8.80
3182TQ1	1	32/0.20	2	80	6.10	8.00
3183TQ1	1	32/0.20	3	90	6.50	8.50
3184TQ1	1	32/0.20	4	110	7.10	9.30
3181TQ1/5	1.5	30/0.25	1	38	5.70	7.10
3182TQ1/5	1.5	30/0.25	2	115	7.60	9.80
3183TQ1/5	1.5	30/0.25	3	135	8.00	10.40
3184TQ1/5	1.5	30/0.25	4	170	9.00	11.60
3185TQ1/5	1.5	30/0.25	5	200	11.20	14.40
3186TQ1/5	1.5	30/0.25	6	335	13.40	17.20
3187TQ1/5	1.5	30/0.25	7	366	14.60	18.20
3180/12TQ1/5	1.5	30/0.25	12	410	17.60	22.40
3180/16TQ1/5	1.5	30/0.25	16	570	19.80	24.30
3180/20TQ1/5	1.5	30/0.25	20	710	21.40	26.70
3180/27TQ1/5	1.5	30/0.25	27	920	25.30	30.00
3180/37TQ1/5	1.5	30/0.25	37	1260	29.00	34.20
3181TQ2/5	2.5	50/0.25	1	41	6.30	7.90
3182TQ2/5	2.5	50/0.25	2	160	9.00	11.60
3183TQ2/5	2.5	50/0.25	3	195	9.60	12.40
3184TQ2/5	2.5	50/0.25	4	245	10.70	13.80
3185TQ2/5	2.5	50/0.25	5	300	13.30	17.00
3187TQ2/5	2.5	50/0.25	7	424	17.20	21.00
3180/12TQ2/5	2.5	50/0.25	12	600	20.60	26.20
3180/16TQ2/5	2.5	50/0.25	16	780	23.80	28.40
3180/20TQ2/5	2.5	50/0.25	20	1050	26.40	31.20
3180/27TQ2/5	2.5	50/0.25	27	1390	30.10	35.40
3180/37TQ2/5	2.5	50/0.25	37	1720	35.00	40.90

Temperature limits:
-25 to +90°C.

*Bending radius:
Fixed - 6 x overall diameter.
Flexing - 15 x overall diameter.

Core identification:
2 core - Blue, Brown.
3 core - Blue, Brown, Green/Yellow.
4 core - Grey, Black, Brown, Green/Yellow.
5 core - Grey, Black, Brown, Blue, Green/Yellow.
6 core and above - Black with White numbers plus Green/Yellow.

Should not be installed at temperatures below -25°C.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

FLEXIBLE MAINS CABLES EPR,CSP

Tinned annealed flexible copper conductors or plain copper conductor, ethylene propylene rubber (EPR) insulated, chlorosulphonated polyethylene (CSP) outer sheath. Black. 450/750 volts grade to BS7919. Heat and oil resistant and flame retardant (HOFR). Flame retardant to BS EN 60332-1-2 (BS EN 50265-2-1). Harmonised code H07BN4-F.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Mean Overall Diameter (mm)	
					Lower Limit	Upper Limit
6381TQ4	4	56/0.30	1	105	7.20	9.00
6382TQ4	4	56/0.30	2	275	11.80	15.10
6383TQ4	4	56/0.30	3	335	12.70	16.20
6384TQ4	4	56/0.30	4	420	14.00	17.90
6385TQ4	4	56/0.30	5	515	15.60	19.90
6387TQ4	4	56/0.30	7	773	19.80	24.40
6380/12TQ4	4	56/0.30	12	1183	24.40	30.90
6381TQ6	6	84/0.30	1	130	7.90	9.80
6382TQ6	6	84/0.30	2	370	13.10	16.80
6383TQ6	6	84/0.30	3	450	14.10	18.00
6384TQ6	6	84/0.30	4	565	15.70	20.00
6385TQ6	6	84/0.30	5	690	17.50	22.90
6387TQ6	6	84/0.30	7	904	21.60	26.90
6388TQ6	6	84/0.30	8	1040	25.20	29.60
6381TQ10	10	80/0.40	1	200	9.50	11.90
6382TQ10	10	80/0.40	2	690	17.70	22.60
6383TQ10	10	80/0.40	3	835	19.10	24.20
6384TQ10	10	80/0.40	4	1020	20.90	26.50
6385TQ10	10	80/0.40	5	1240	22.90	29.10
6381TQ16	16	126/0.40	1	275	10.80	13.40
6382TQ16	16	126/0.40	2	910	20.20	25.70
6383TQ16	16	126/0.40	3	1120	21.80	27.60
6384TQ16	16	126/0.40	4	1380	23.80	30.10
6385TQ16	16	126/0.40	5	1695	26.40	33.30

Temperature limits:
-25 to +90°C.

*Bending radius:
Fixed - 6 x overall diameter.
Flexing - 7 x overall diameter.

Core identification:
2 core - Blue, Brown.
3 core - Blue, Brown, Green/Yellow.
4 core - Grey, Black, Brown, Green/Yellow.
5 core - Grey, Black, Brown, Blue, Green/Yellow.
6 core and above - Black with White numbers plus Green/Yellow.

Should not be installed at temperatures below -25°C.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

FLEXIBLE MAINS CABLES EPR,CSP

Tinned annealed flexible copper conductors or plain copper conductor, ethylene propylene rubber (EPR) insulated, chlorosulphonated polyethylene (CSP) outer sheath. Black. 450/750 volts grade to BS7919. Heat and oil resistant and flame retardant (HOFR). Flame retardant to BS EN 60332-1-2 (BS EN 50265-2-1). Harmonised code H07BN4-F.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Mean Overall Diameter (mm)	
					Lower Limit	Upper Limit
6381TQ25	25	196/0.40	1	400	12.70	15.80
6382TQ25	25	196/0.40	2	1290	24.30	30.70
6383TQ25	25	196/0.40	3	1600	26.10	33.00
6384TQ25	25	196/0.40	4	2140	28.90	36.60
6385TQ25	25	196/0.40	5	2470	32.00	40.40
6381TQ35	35	276/0.40	1	520	14.30	17.90
6382TQ35	35	276/0.40	2	1308	26.40	31.50
6383TQ35	35	276/0.40	3	2080	29.30	37.10
6384TQ35	35	276/0.40	4	2610	32.50	41.10
6385TQ35	35	276/0.40	5	3187	34.00	43.00
6381TQ50	50	396/0.40	1	730	16.50	20.60
6383TQ50	50	396/0.40	3	2890	34.10	42.90
6384TQ50	50	396/0.40	4	3650	37.70	47.50
6385TQ50	50	396/0.40	5	4450	39.03	49.18
6381TQ70	70	360/0.50	1	980	18.60	23.30
6383TQ70	70	360/0.50	3	3850	38.40	48.30
6384TQ70	70	360/0.50	4	4880	42.70	54.00
6385TQ70	70	360/0.50	5	5938	48.50	55.00
6381TQ95	95	475/0.50	1	1270	20.80	26.00
6383TQ95	95	475/0.50	3	4970	43.30	54.00
6384TQ95	95	475/0.50	4	6390	48.40	61.00
6385TQ95	95	475/0.50	5	7924	54.00	64.50
6381TQ120	120	608/0.50	1	1570	22.80	28.60
6383TQ120	120	608/0.50	3	6350	47.40	60.00
6384TQ120	120	608/0.50	4	7750	53.00	66.00
6385TQ120	120	608/0.50	5	7542	57.90	68.50
6381TQ150	150	756/0.50	1	1960	25.20	31.40
6383TQ150	150	756/0.50	3	7700	52.00	66.00
6384TQ150	150	756/0.50	4	9780	58.00	73.00
6381TQ185	185	925/0.50	1	2380	27.60	34.40
6383TQ185	185	925/0.50	3	9350	57.00	72.00
6384TQ185	185	925/0.50	4	11900	64.00	80.00
6381TQ240	240	1221/0.50	1	3100	30.60	38.30
6383TQ240	240	1221/0.50	3	12000	65.00	82.00
6384TQ240	240	1221/0.50	4	15330	72.00	91.00
6381TQ300	300	1525/0.50	1	3790	33.50	41.90
6383TQ300	300	1525/0.50	3	14910	72.00	90.00
6384TQ300	300	1525/0.50	4	19030	80.00	101.00
6381TQ400	400	2013/0.50	1	4880	37.40	46.80
6381TQ500	500	1769/0.60	1	6070	41.30	52.00
6381TQ630	630	2257/0.60	1	7460	45.50	56.50

Temperature limits:
-25 to +90°C.

*Bending radius:
Fixed - 5 x overall diameter.
Flexing - 7 x overall diameter.

Core identification:
2 core - Blue, Brown.
3 core - Blue, Brown, Green/Yellow.
4 core - Grey, Black, Brown, Green/Yellow.
5 core - Grey, Black, Brown, Blue, Green/Yellow.
6 core and above - Black with White numbers plus Green/Yellow.

Should not be installed at temperatures below -25°C.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

BRAIDED TOUGH RUBBER SHEATH FLEXIBLE CORDS

Flexible tinned annealed copper conductors, ethylene propylene rubber insulated, Heavy Duty Polychloroprene (PCP), tinned copper wire braid screen, Heavy Duty Polychloroprene (PCP) outer sheath. 300/500 volts grade to BS6500/75 and 450/750 Volts grade to BS6007/75 (where applicable). Black. Flame propagation to BS 4066 PT1 and IEC 332 PT1.
Heat and oil resistant and flame retardant (HOFR).

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size (mm)
3802TQ1	1	32/0.20	2	170	11.10	20/16
3803TQ1	1	32/0.20	3	200	11.40	20/16
3804TQ1	1	32/0.20	4	230	12.10	20/16
3802TQ1/5	1.5	30/0.25	2	225	12.30	20/16
3803TQ1/5	1.5	30/0.25	3	270	13.10	20S
3804TQ1/5	1.5	30/0.25	4	320	14.20	20S
3802TQ2/5	2.5	50/0.25	2	300	14.80	20S
3803TQ2/5	2.5	50/0.25	3	350	15.60	20
3804TQ2/5	2.5	50/0.25	4	420	17.00	20
3803TQ4	4	56/0.30	3	715	21.30	25
3804TQ4	4	56/0.30	4	865	23.60	25
6803TQ6	6	84/0.30	3	973	24.80	25
6804TQ6	6	84/0.30	4	1166	27.10	32
6803TQ10	10	90/0.40	3	1592	30.70	32
6804TQ10	10	90/0.40	4	1878	33.30	40
6803TQ16	16	126/0.40	3	1992	33.80	40
6804TQ16	16	126/0.40	4	2452	37.20	40

Temperature limits:
-25 to +90°C.

*Bending radius:
8 x overall diameter.

Core identification:
2 core - Blue, Brown.
3 core - Blue, Brown, Green/Yellow.
4 core - Grey, Black, Brown, Green/Yellow.

Should not be installed at temperatures below 0°C.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

COIL END LEAD FLEXIBLE MAINS CABLES

Flexible tinned annealed copper conductors composite ethylene propylene rubber insulation, chlorosulphonated polyethylene sheath (EPR-CSP) insulation to BS6195/69 Type 4.

A. 300/500 volts grade
C. 600/1000 volts grade
D. 1900/3300 volts grade
E. 3800/6600 volts grade
F. 6350/11000 volts grade

	Conductor				Radial Thickness Of Insulation Voltage Category				
CCC Code	Size (mm^2)	Stranding (mm)	Max Dia. Of Wires (mm)	Approx. Dia. Of Cond. (mm)	A (mm)	C (mm)	D (mm)	E (mm)	F (mm)
	0.5	16/0.20	0.21	0.93	0.8	1.4	-	-	-
	0.75	24/0.20	0.21	1.14	0.8	1.4	-	-	-
	1	32/0.20	0.21	1.32	0.8	1.4	-	-	-
TYPE 4 1/5	1.5	30/0.25	0.26	1.60	0.8	1.4	-	-	-
TYPE 4 2/5	2.5	50/0.25	0.26	2.00	0.9	1.4	2.8	-	-
TYPE 4 4	4	56/0.30	0.31	2.6	1.0	1.4	-	-	
TYPE 4 6	6	84/0.30	0.31	3.6	1.0	1.5	-	-	-
TYPE 4 10	10	80/0.40	0.41	4.6	1.2	1.5	-	-	-
TYPE 4 16	16	126/0.40	0.41	5.7	-	1.5	2.8	5.0	7.6
TYPE 4 25	25	196/0.40	0.41	7.1	-	1.6	2.8	5.0	7.6
TYPE 4 35	35	276/0.40	0.41	8.5	-	1.6	2.8	5.0	7.6
TYPE 4 50	50	396/0.40	0.41	10.3	-	1.7	2.8	5.0	7.6
TYPE 4 70	70	360/0.50	0.51	12.4	-	1.8	2.8	5.0	7.6
TYPE 4 95	95	475/0.50	0.51	14.5	-	2.0	3.0	5.0	7.6
TYPE 4 120	120	608/0.50	0.51	16.0	-	2.2	3.0	5.0	7.6
TYPE 4 150	150	756/0.50	0.51	18.0	-	2.3	3.0	5.0	7.6
TYPE 4 185	185	925/0.50	0.51	20.0	-	2.4	3.0	5.0	7.6
TYPE 4 240	240	1221/0.50	0.51	23.0	-	2.4	3.0	5.0	7.6
TYPE 4 300	300	1525/0.50	0.51	26.0	-	2.6	3.0	-	-
TYPE 4 400	400	2013/0.50	0.51	30.0	-	2.8	3.0	-	-
TYPE 4 500	500	3679/0.40	0.61	29.0	-	3.0	-	-	-

	Minimum Overall Diameter Voltage Category					Weight Voltage Category				
CCC Code	A (mm)	C (mm)	D (mm)	E (mm)	F (mm)	A (Kg/Km)	C (Kg/Km)	D (Kg/Km)	E (Kg/Km)	F (Kg/Km)
	3.3	4.5	-	-	-	12	17	-	-	-
	3.5	4.7	-	-	-	16	21	-	-	-
	3.7	4.9	-	-	-	19	24	-	-	-
TYPE 4 1/5	4	5.2	-	-	-	25	30	-	-	-
TYPE 4 2/5	4.6	5.6	8.5	-	-	37	41	76	-	-
TYPE 4 4	5.4	6.3	-	-	-	57	66	-	-	-
TYPE 4 6	6.5	7.5	-	-	-	80	93	-	-	-
TYPE 4 10	7.9	8.5	-	-	-	130	136	-	-	-
TYPE 4 16	-	9.6	12.4	17.2	22.9	-	206	255	384	566
TYPE 4 25	-	11.4	13.8	18.6	24.1	-	300	351	495	680
TYPE 4 35	-	12.8	15.2	20.0	25.5	-	406	458	613	810
TYPE 4 50	-	14.8	17.1	21.1	27.3	-	573	616	796	997
TYPE 4 70	-	17.2	19.2	24.2	29.4	-	793	820	1020	1237
TYPE 4 95	-	19.7	22.0	26.3	31.5	-	1028	1097	1287	1520
TYPE 4 120	-	21.9	23.5	27.8	33.3	-	1285	1340	1542	1804
TYPE 4 150	-	24.1	25.5	29.8	35.3	-	1562	1635	1853	2131
TYPE 4 185	-	26.3	27.5	32.1	37.3	-	1914	1973	2225	2503
TYPE 4 240	-	29.3	30.5	35.1	40.3	-	2431	2504	2782	3081
TYPE 4 300	-	33.0	33.8	-	-	-	3024	3098	-	-
TYPE 4 400	-	37.4	37.8	-	-	-	3948	4045	-	-
TYPE 4 500	-	34.8	-	-	-	-	4920	-	-	-

Temperature limits: -20 to +90°C.

*Bending radius: 6 x overall diameter.

Should not be installed at temperatures below -25°C.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

WELDING CABLES 0361TQ

Tinned annealed flexible circular copper conductors, ethylene propylene rubber (EPR) insulated, chlorosulphonated polyethylene (CSP) outer sheath. Orange. Ref 0361TQ. To BS638 Part 4. Flame retardant to BS EN 60332-1-2 (BS EN 50265-2-1).

CCC Code	Conductor Size (mm^2)	Stranding (mm)	Weight (Kg/Km)	Outside Diameter (mm)	Gland Size (mm)
0361TQ16OR	16	513/0.20	235	11.50	20S
0361TQ25OR	25	783/0.20	330	13.00	20
0361TQ35OR	35	1107/0.20	440	14.50	25
0361TQ50OR	50	1566/0.20	610	17.00	25
0361TQ70OR	70	2214/0.20	840	19.50	32
0361TQ95OR	95	2997/0.20	1120	22.00	32
0361TQ120OR	120	608/0.50	1410	24.00	32
0361TQ185OR	185	925/0.50	2100	29.00	40

Temperature limits:
-20 to +85°C.

*Bending radius:
8 x overall diameter.

RUBBER FLATFORM CABLES

Flexible plain copper conductors, thermoplastic rubber insulated (TPR) thermoplastic outer sheath (TPR). Black. 450/750V volts grade. Type H07RNH6-F.

CCC Current Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Dimensions (mm)	Max Ratings (Amps)
FLAT4X1/5R	1.5	30/0.25	4	110	17.01X5.00	22
FLAT12X1/5R	1.5	30/0.25	12	320	46.93X8.87	12
FLAT4X2/5R	2.5	50/0.25	4	170	19.98X7.43	30
FLAT7X2/5R	2.5	50/0.25	7	300	38.11X10.74	20
FLAT12X2/5R	2.5	50/0.25	12	490	53.93X8.88	20
FLAT4X4R	4	56/0.30	4	250	23.05X8.63	40
FLAT4X6R	6	84/0.30	4	330	28.55X9.56	52
FLAT4X10R	10	80/0.40	4	550	31.85X10.66	70
FLAT4X16R	16	126/0.40	4	800	38.77X13.51	95
FLAT4X25R	25	196/0.40	4	1350	49.10X11.00	127
FLAT4X35R	35	276/0.40	4	1800	55.20X15.01	157
FLAT4X50R	50	396/0.40	4	2400	63.10X17.20	190
FLAT4X70R	70	360/0.50	4	3250	71.10X19.01	242

Temperature limits:
-35 to +65°C.

*Bending radius:
10 x overall diameter.

Core identification:
4 core - Black, Grey, Brown, Green/Yellow.
7 and 12 core - Black cores with White numbers and one Green/Yellow.

Should not be installed at temperatures below 0°C.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

PVC FLATFORM CABLES

Flexible plain copper conductors, PVC insulated, special PVC outer sheath. Black. 450/750 volts grade type H07VVH6-F. CENELEC HD 359 S2 IEC 227 part 6.

CCC Current Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Dimensions (mm)	Max Ratings (Amps)
FLAT4X1/5V	1.5	30/0.25	4	150	15X5	20
FLAT12X1/5V	1.5	30/0.25	12	420	41X5	11
FLAT4X2/5V	2.5	50/0.25	4	210	19X6	27
FLAT12X2/5V	2.5	50/0.25	12	620	51X6	16
FLAT4X4V	4	56/0.30	4	300	21X7	36
FLAT4X6V	6	84/0.30	4	385	23X7	48
FLAT4X10V	10	80/0.40	4	620	29X9	63
FLAT4X16V	16	126/0.40	4	990	37X11	85
FLAT4X25V	25	196/0.40	4	1550	46X14	112
FLAT4X35V	35	276/0.40	4	2030	51X15	138
FLAT4X50V	50	396/0.40	4	2650	56X17	168
FLAT4X70V	70	360/0.50	4	3650	63X18	213
FLAT4X95V	95	475/0.50	4	4550	73X21	258

Temperature limits:
-25 to +70°C.

*Bending radius:
10 x overall diameter.

Core identification:
4 core - Black, Grey, Brown, Green/Yellow.

12 core - Black cores with white numbers and one Green/Yellow.

Should not be installed at temperatures below 0°C.

SILICON FLEXIBLE CABLES SIHF

Flexible tinned annealed copper conductors, silicone insulated, silicone outer sheath. 300/500 volts grade to VDE 0250 PT816.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size (mm)
BIHF2X/75	0.75	24/0.20	2	53.4	6.50	20/16
BIHF3X/75	0.75	24/0.20	3	63.7	6.90	20/16
BIHF4X/75	0.75	24/0.20	4	83.6	7.90	20/16
BIHF2X1	1	32/0.20	2	59.9	6.70	20/16
BIHF3X1	1	32/0.20	3	78.3	7.50	20/16
BIHF4X1	1	32/0.20	4	94.6	8.10	20S
BIHF2X1/5	1.5	30/0.25	2	82.0	7.60	20/16
BIHF3X1/5	1.5	30/0.25	3	98.0	8.00	20/16
BIHF4X1/5	1.5	30/0.25	4	122.0	8.80	20S
BIHF5X1/5	1.5	30/0.25	5	148.0	9.60	20S
BIHF2X2/5	2.5	50/0.25	2	135.0	8.90	20S
BIHF3X2/5	2.5	50/0.25	3	152.0	9.10	20S
BIHF4X2/5	2.5	50/0.25	4	188.0	10.10	20S

Temperature limits:
-60 to +180°C.

*Bending radius:
Fixed - 5 x overall diameter.
Flexing - 15 x overall diameter.

Core identification:
2 core - Blue, Brown.
3 core - Blue, Brown, Green/Yellow.
4 core - Grey, Black, Brown, Green/Yellow.
5 core and above - Grey, Black, Brown, Blue, Green/Yellow.
6 core and above - Black with White numbers plus Green/Yellow.

Should not be installed at temperatures below 0°C.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

SECTION 8 Instrumentation, Control & Communication Cables

INSTRUMENTATION AND CONTROL CABLES - PAS5308

PAS5308 PART 1, TYPE 1 CONSTRUCTION, OVERALL SCREENED

Plain annealed flexible copper conductors, polyethylene insulated, laid up to form pairs, collective aluminium/mylar tape screen complete with 0.5mm^2 drain wire, PVC outer sheath reduced propagation, Blue or Black. Flame propagation to BS4066 PT1, BS EN 50265 and IEC 60332-3-24.

PAS5308 PART 2, TYPE 1 CONSTRUCTION, OVERALL SCREENED

Plain annealed flexible copper conductors, PVC insulated, laid up to form pairs, collective aluminium/mylar tape screen complete with 0.5mm^2 drain wire, PVC outer sheath reduced propagation. Blue or Black. Flame propagation to BS4066 PT1, BS EN 50265 and IEC 60332-3-24.

CCC Code Pt1	CCC Code Pt2	Conductor Size (mm^2)	Stranding (mm)	No. Of Pairs	Weight (Kg/Km)	Outside Diameter (mm)	Brass A2 Gland
7100	7300	0.5	16/0.20	1	60	6.00	20/16
7101	7301	0.5	16/0.20	2	75	6.90	20/16
7102	7302	0.5	16/0.20	5	190	12.10	20
7103	7303	0.5	16/0.20	10	305	16.20	25
7104	7304	0.5	16/0.20	20	518	21.30	32
7105	7305	0.5	16/0.20	30	759	25.90	32
7106	7306	0.5	16/0.20	50	1251	32.90	50S
7107	7307	0.5	16/0.20	1 Triple	69	6.10	20/16
7136	7336	0.75	24/0.20	1	69	6.30	20/16
7137	7337	0.75	24/0.20	2	99	7.30	20/16
7138	7338	0.75	24/0.20	5	242	13.30	20
7139	7339	0.75	24/0.20	10	380	17.70	25
7140	7340	0.75	24/0.20	20	684	23.50	32
7141	7341	0.75	24/0.20	30	989	28.50	40
7142	7342	0.75	24/0.20	50	1670	36.40	50S
7143	7343	0.75	24/0.20	1 Triple	83	6.80	20/16
7173	7373	1.5	7/0.53	1	87	7.30	20/16
7174	7374	1.5	7/0.53	2	145	8.70	20S
7175	7375	1.5	7/0.53	5	345	15.40	25
7176	7376	1.5	7/0.53	10	575	20.60	32
7177	7377	1.5	7/0.53	20	1075	27.50	40
N/A	N/A	1.5	7/0.53	30	1720	33.70	50S
N/A	N/A	1.5	7/0.53	50	2750	43.60	63S
7178	7378	1.5	7/0.53	1 Triple	115	8.40	20S
72700	-	0.5	16/0.2	1	60	6.00	20/16
72701	-	0.5	16/0.2	2	75	6.90	20/16
72702	-	0.5	16/0.2	5	190	12.10	20
72703	-	0.5	16/0.2	10	305	16.20	25
72704	-	0.5	16/0.2	20	518	21.30	32
72705	-	0.5	16/0.2	30	759	25.90	32
72707	-	0.5	16/0.2	1 Triple	69	6.10	20/16

Temperature limits:
-20 to +65°C.

*Bending radius:
5 x overall diameter.

Core identification:
Part 1 colour code chart on page 88.

Part 2 colour code chart on page 89.

Should not be installed at temperatures below 0°C.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

INSTRUMENTATION AND CONTROL CABLES - PAS5308

PAS5308 PART 1, TYPE 1 CONSTRUCTION, INDIVIDUALLY SCREENED

Plain annealed flexible copper conductors, polyethylene insulated, laid up to form pairs, each pair individually aluminium/mylar foil tape screened, complete with 0.5mm^2 drain wire, collective aluminium/mylar foil tape screen complete with 0.5mm^2 drain wire, PVC outer sheath reduced propagation. Blue or Black. Flame propagation to BS4066 PT1, BS EN 50265 and IEC 60332-3-24.

PAS5308 PART 2, TYPE 1 CONSTRUCTION, INDIVIDUALLY SCREENED

Plain annealed flexible copper conductors, PVC insulated, laid up to form pairs, each pair individually aluminium/mylar foil tape screened complete with 0.5mm^2 drain wire, collective aluminium/mylar foil tape screen complete with 0.5mm^2 drain wire, PVC outer sheath reduced propagation. Blue or Black. Flame propagation to BS4066 PT1, BS EN 50265 and IEC 60332-3-24.

CCC Code Pt1	CCC Code Pt2	Conductor Size (mm^2)	Stranding (mm)	No. Of Pairs	Weight (Kg/Km)	Outside Diameter (mm)	Brass A2 Gland
7112	7312	0.5	16/0.20	2	161	11.00	20S
7113	7313	0.5	16/0.20	5	253	14.20	25
7114	7314	0.5	16/0.20	10	408	20.10	32
7115	7315	0.5	16/0.20	20	753	26.30	40
7116	7316	0.5	16/0.20	30	1153	31.30	40
7117	7317	0.5	16/0.20	50	1900	40.70	50
7149	*7349	0.75	24/0.20	2	184	11.80	20
7150	7350	0.75	24/0.20	5	299	15.30	25
7151	7351	0.75	24/0.20	10	489	21.70	32
7152	7352	0.75	24/0.20	20	920	28.80	40
7153	7353	0.75	24/0.20	30	1445	34.50	50S
7154	7354	0.75	24/0.20	50	2460	44.00	63S
7185	7385	1.5	7/0.53	2	242	13.70	25
7186	7386	1.5	7/0.53	5	408	17.80	25
7187	7387	1.5	7/0.53	10	714	25.50	32
7188	7388	1.5	7/0.53	20	1337	33.40	50S
-	-	1.5	7/0.53	30	2040	40.40	50
-	-	1.5	7/0.53	50	3260	52.20	63

Temperature limits:
-20 to +65°C.

*Bending radius:
5 x overall diameter.

Core identification:
Part 1 colour code chart on page 88.

Part 2 colour code chart on page 89.

Should not be installed at temperatures below 0°C.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

INSTRUMENTATION AND CONTROL CABLES - PAS5308

PAS5308 PART 1, TYPE 2 CONSTRUCTION, OVERALL SCREENED

Plain annealed flexible copper conductors, polyethylene insulated, laid up to form pairs, collective aluminium/mylar foil tape screen, complete with 0.5mm^2 drain wire, Polyethylene bedding, galvanised steel wire armour, PVC outer sheath reduced propagation. Blue or Black. Flame propagation to BS4066 Parts 1 and 3, BS EN 50265, BS EN 50266, IEC 60332-3-24.

PAS5308 PART 2, TYPE 2 CONSTRUCTION, OVERALL SCREENED

Plain annealed flexible copper conductors, PVC insulated, laid up to form pairs, collective aluminium/mylar foil tape screen complete with 0.5mm^2 drain wire, PVC bedding, galvanised steel wire armour, PVC outer sheath reduced propagation. Blue or Black. Flame propagation to BS4066 Parts 1 and 3, BS EN 50265, BS EN 50266, IEC 60332-3-24.

CCC Code		Conductor	Stranding	No. Of	Weight	Overall	Gland	Nylon
Pt1	Pt2	Size (mm2)	(mm)	Pairs	(Kg/Km)	Diameter (mm)	Size (mm)	Cleat Size
7118	7318	0.5	16/0.20	1	242	10.80	20/16	0.5
7119	7319	0.5	16/0.20	2	288	11.70	20S	0.5
7120	7320	0.5	16/0.20	5	535	17.30	20	0.7
7121	7321	0.5	16/0.20	10	868	22.30	25	0.9
7122	7322	0.5	16/0.20	20	1466	28.50	32	1.2
7123	7323	0.5	16/0.20	30	1944	33.30	32	1.4
7124	7324	0.5	16/0.20	50	3360	41.50	50S	1.8
7125	7325	0.5	16/0.20	1 Triple	259	11.00	20/16	0.5
7155	7355	0.75	24/0.20	1	270	11.10	20/16	0.5
7156	7356	0.75	24/0.20	2	330	12.30	20S	0.5
7157	7357	0.75	24/0.20	5	719	19.20	20	0.8
7158	7358	0.75	24/0.20	10	1150	24.70	25	1.0
7159	7359	0.75	24/0.20	20	1704	30.70	32	1.2
7160	7360	0.75	24/0.20	30	2570	36.90	40	1.6
7161	7361	0.75	24/0.20	50	4400	46.40	50S	2.0
7162	7362	0.75	24/0.20	1 Triple	288	11.40	20S	0.5
7231	-	1	1/1.13	1	250	11.80	20/16	0.5
7232	-	1	1/1.13	2	300	13.00	20s	0.6
7233	-	1	1/1.13	5	560	19.70	20	0.8
7234	-	1	1/1.13	10	970	24.30	25	1.0
7235	-	1	1/1.13	20	1240	31.20	40	1.4
7236	-	1	1/1.13	30	2180	36.20	50s	1.6
7237	-	1	1/1.13	50	3500	45.70	50	2.0
7189	7389	1.5	7/0.53	1	312	12.30	20S	0.5
7190	7390	1.5	7/0.53	2	397	13.70	20S	0.6
7191	7391	1.5	7/0.53	5	918	21.50	25	0.9
7192	7392	1.5	7/0.53	10	1466	27.80	32	1.1
7193	7393	1.5	7/0.53	20	2519	35.10	40	1.4
7194	7394	1.5	7/0.53	30	3352	41.90	50S	1.8
7195	7395	1.5	7/0.53	50	5310	53.40	63S	TC9
7196	7396	1.5	7/0.53	1 Triple	357	12.60	20S	0.5
7208	7408	2.5	7/0.67	1	395	13.10	20S	0.6
7209	7409	2.5	7/0.67	2	490	15.90	20	0.6
7210	7410	2.5	7/0.67	5	1430	26.50	20	1.1
7211	7411	2.5	7/0.67	10	2235	35.10	40	1.4
7212	7412	2.5	7/0.67	20	3935	46.70	50	2.0
7213	7413	2.5	7/0.67	1 Triple	407	13.70	20S	0.6

Temperature limits:
-20 to +65°C.

*Bending radius:
6 x overall diameter..

Core identification:
Part 1 colour code chart on page 88.

Part 2 colour code chart on page 89.

Should not be installed at temperatures below 0°C.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

INSTRUMENTATION AND CONTROL CABLES - PAS5308

PAS5308 PART 1, TYPE 2 CONSTRUCTION, INDIVIDUALLY SCREENED

Plain annealed flexible copper conductors, polyethylene insulated, laid up to form pairs, each pair individually aluminium/mylar foil tape screened, complete with 0.5mm^2 drain wire, collective aluminium/mylar foil tape screen, complete with 0.5mm^2 drain wire, polyethylene bedding, galvanised steel wire armour, PVC outer sheath reduced propagation. Blue or Black. Flame propagation to BS4066 Parts 1 and 3, BS EN 50265, BS EN 50266, IEC 60332-3-24.

PAS5308 PART 2, TYPE 2 CONSTRUCTION, INDIVIDUALLY SCREENED

Plain annealed flexible copper conductors, PVC insulated, laid up to form pairs, each pair individually aluminium/mylar foil tape screened, complete with 0.5mm^2 drain wire, collective aluminium/mylar foil tape screen complete with 0.5mm^2 drain wire, PVC bedding, galvanised steel wire armour, PVC outer sheath reduced propagation. Blue or Black. Flame propagation to BS4066 Parts 1 and 3, BS EN 50265, BS EN 50266, IEC 60332-3-24.

CCC Code Pt1	CCC Code Pt2	Conductor Size (mm^2)	Stranding (mm)	No. Of Pairs	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size (mm)	Nylon Cleat Size
7130	7330	0.5	16/0.20	2	460	16.80	20	0.7
7131	7331	0.5	16/0.20	5	730	19.90	20	0.8
7132	7332	0.5	16/0.20	10	1202	26.90	32	1.1
7133	7333	0.5	16/0.20	20	1870	34.30	40	1.4
7134	7334	0.5	16/0.20	30	2620	40.50	50S	1.6
7135	7335	0.5	16/0.20	50	4180	51.50	50	TC9
7167	7367	0.75	24/0..20	2	518	16.60	20	0.7
7168	7368	0.75	24/0.20	5	805	21.00	25	0.9
7169	7369	0.75	24/0.20	10	1323	28.50	32	1.2
7170	7370	0.75	24/0.20	20	2323	36.80	40	1.6
7171	7371	0.75	24/0.20	30	3312	42.90	50S	1.8
7172	7372	0.75	24/0.20	50	5520	54.00	63S	TC9
7201	7401	1.5	7/0.53	2	707	19.40	20	0.8
7202	7402	1.5	7/0.53	5	1185	24.40	25	1.0
7203	7403	1.5	7/0.53	10	1668	32.50	32	1.4
7204	7404	1.5	7/0.53	20	2956	41.60	50S	1.8
7205	7405	1.5	7/0.53	30	3650	50.80	50	TC9
7206	7406	1.5	7/0.53	50	5640	62.60	63	TC10

Temperature limits:
-20 to +65°C.

*Bending radius:
6 x overall diameter.

Core identification:
Part 1 colour code chart on page 88.

Part 2 colour code chart on page 89.

Should not be installed at temperatures below 0°C.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

INSTRUMENTATION AND CONTROL CABLES - PAS5308

PAS5308 PART 1, TYPE 1 CONSTRUCTION, OVERALL SCREENED LSZH

Plain annealed flexible copper conductors, polyethylene insulated, laid up to form pairs, collective aluminium/mylar tape screen complete with 0.5mm^2 drain wire, low smoke zero halogen (LSZH) sheath, Blue or Black, to PAS5308 Part 1, Type 1 LSZH. IEC 60332-3-22.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Pairs	Weight (Kg/Km)	Overall Diameter (mm)	Brass A2 Gland
72700	0.5	16/0.2	1	60	6.00	20/16
72701	0.5	16/0.2	2	75	6.90	20/16
72702	0.5	16/0.2	5	190	12.10	20
72703	0.5	16/0.2	10	305	16.20	25
72704	0.5	16/0.2	20	518	21.30	32
72705	0.5	16/0.2	30	759	25.90	32
72707	0.5	16/0.2	1 Triple	69	6.10	20/16
7246	0.75	24/0.20	1	69	6.30	20/16
7247	0.75	24/0.20	2	99	7.30	20/16
7248	0.75	24/0.20	5	242	13.30	20
7249	0.75	24/0.20	10	380	17.70	25
7250	0.75	24/0.20	20	684	23.50	32
7251	0.75	24/0.2	30	989	28.50	40
7243	0.75	24/0.2	1 Triple	83	6.80	20/16
7273	1.5	7/0.53	1	87	7.30	20/16
7274	1.5	7/0.53	2	145	8.70	20S
7275	1.5	7/0.53	5	345	15.40	25
7276	1.5	7/0.53	10	575	20.60	32
7277	1.5	7/0.53	20	1075	27.50	40
7278	1.5	7/0.53	1 Triple	115	8.40	20S

Temperature limits:
-20 to +65°C.

*Bending radius:
5 x overall diameter.

Core identification:
Part 1 colour code chart on page 88.

Part 2 colour code chart on page 89.

Should not be installed at temperatures below 0°C.

INSTRUMENTATION AND CONTROL CABLES - PAS5308

PAS5308 PART 1, TYPE 1 CONSTRUCTION, INDIVIDUALLY SCREENED LSZH

Plain annealed flexible copper conductors, polyethylene insulated, laid up to form pairs, each pair individually aluminium/mylar tape screened. Complete with 0.5mm^2 drain wire, collective aluminium/mylar tape screen complete with 0.5mm^2 drain wire, low smoke zero halogen (LSZH) outer sheath, Black or Blue, generally to PAS5308 Part 1, Type 1 LSZH. IEC 60332-3-22.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Pairs	Weight (Kg/Km)	Overall Diameter (mm)	Brass A2 Gland
72712	0.5	16/0.2	2	161	11.00	20S
72713	0.5	16/0.2	5	253	14.20	25
72714	0.5	16/0.2	10	408	20.10	32
72715	0.5	16/0.2	20	753	26.30	40
72716	0.5	16/0.2	30	1153	31.30	40
71149	0.75	24/0.20	2	184	11.80	20
71150	0.75	24/0.20	5	299	15.30	25
71151	0.75	24/0.20	10	489	21.70	32
71152	0.75	24/0.20	20	920	28.80	40
7253	0.75	24/0.2	30	1445	34.50	50S

Temperature limits:
-20 to +65°C.

*Bending radius:
5 x overall diameter.

Core identification:
Part 1 colour code chart on page 88.

Part 2 colour code chart on page 89.

Should not be installed at temperatures below 0°C.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

INSTRUMENTATION AND CONTROL CABLES - PAS5308

PAS5308 PART 1, TYPE 2 CONSTRUCTION, OVERALL SCREENED LSZH

Plain annealed flexible copper conductors, polyethylene insulated, laid up to form pairs, collective aluminium/mylar foil tape screen, complete with 0.5mm^2 drain wire, low smoke zero halogen bedding (LSZH), galvanised steel wire armour, low smoke zero halogen (LSZH) sheath, Black or Blue, generally to PAS5308 Part 1, Type 2 LSZH. IEC 60332-3-22.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Pairs	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size (mm)	Nylon Cleat Size
72718	0.5	16/0.2	1	242	10.80	20/16	0.5
72719	0.5	16/0.2	2	288	11.70	20S	0.5
72720BK	0.5	16/0.2	5	535	17.30	20	0.7
72721BK	0.5	16/0.2	10	868	22.30	25	0.9
72722BK	0.5	16/0.2	20	1466	28.50	32	1.2
7255	0.75	24/0.20	1	270	10.70	20/16	0.5
7256	0.75	24/0.20	2	330	11.90	20S	0.5
7257	0.75	24/0.20	5	719	18.80	20	0.8
7258	0.75	24/0.20	10	1150	24.30	25	1.0
7259	0.75	24/0.20	20	1704	30.30	32	1.2
7260	0.75	24/0.2	30	2570	36.90	40	1.6
7261	0.75	24/0.2	50	4400	46.40	50S	2.0
72362	0.75	24/0.2	1 Triple	288	11.40	20S	0.5
7289	1.5	7/0.53	1	312	11.90	20S	0.5
7290	1.5	7/0.53	2	397	13.30	20S	0.6
7291	1.5	7/0.53	5	918	21.10	25	0.9
7292	1.5	7/0.53	10	1466	27.40	32	1.1
7293	1.5	7/0.53	20	2519	35.50	40	1.4
7496	1.5	7/0.53	1 Triple	357	12.60	20S	0.5
7308	2.5	7/0.67	1	395	13.10	20S	0.6
7309	2.5	7/0.67	2	490	15.90	20	0.6
7310	2.5	7/0.67	5	1430	26.50	20	1.1

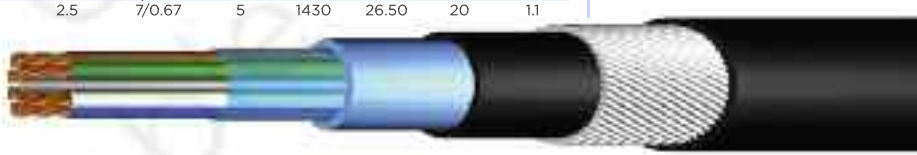
Temperature limits:
-20 to +65°C.

*Bending radius:
6 x overall diameter.

Core identification:
Part 1 colour code chart on page 88.

Part 2 colour code chart on page 89.

Should not be installed at temperatures below 0°C.



INSTRUMENTATION AND CONTROL CABLES - PAS5308

PAS5308 PART 1, TYPE 2 CONSTRUCTION, INDIVIDUALLY SCREENED LSZH

Plain annealed flexible copper conductors, polyethylene insulated, laid up to form pairs, each pair individually aluminium/mylar foil tape screened, complete with 0.5mm^2 drain wire, collective aluminium/mylar foil tape screen, complete with 0.5mm^2 drain wire, low smoke zero halogen (LSZH) bedding, galvanised steel wire armour, low smoke zero halogen (LSZH) sheath, Blue or Black, generally to PAS5308 Part 1, Type 2 LSZH. IEC 60332-3-22.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Pairs	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size (mm)	Nylon Cleat Size
7230	0.5	16/0.2	2	460	16.80	20	0.7
72131	0.5	16/0.2	5	730	19.90	20	0.8
72132	0.5	16/0.2	10	1202	26.90	32	1.1
7267	0.75	24/0.20	2	518	16.60	20	0.7
7268	0.75	24/0.20	5	805	21.00	25	0.9
7269	0.75	24/0.20	10	1323	28.50	32	1.2
7270	0.75	24/0.20	20	2323	36.80	40	1.6
7271	0.75	24/0.20	30	2570	36.9	40	1.6
72563	0.75	24/0.2	2 Triple	476	15.90	20	0.7
72566	0.75	24/0.2	5 Triple	670	17.80	20	0.8
72569	0.75	24/0.2	10 Triple	1456	29.00	32	1.2
7298	1.5	7/0.53	2	707	19.40	20	0.8
7299	1.5	7/0.53	5	1185	24.40	25	1.0
7297	1.5	7/0.53	10	1668	32.50	32	1.4
7296	1.5	7/0.53	20	2956	41.60	50S	1.8

Temperature limits:
-20 to +65°C.

*Bending radius:
6 x overall diameter.

Core identification:
Part 1 colour code chart on page 88.

Part 2 colour code chart on page 89.

Should not be installed at temperatures below 0°C.

INSTRUMENTATION AND CONTROL CABLES - PAS5308

PAS5308 PART 1, TYPE 3 CONSTRUCTION, OVERALL SCREENED

Plain annealed flexible copper conductors, polyethylene insulated, laid up to form pairs, collective aluminium/mylar tape screen, complete with 0.5mm^2 drain wire, polyethylene bedding, lead sheathed, galvanised steel wire armour, PVC outer sheath reduced propagation. Blue or Black. Flame propagation to BS4066 Parts 1 and 3, BS EN 50265, BS EN 50266, IEC 60332-1 and IEC 332-3C.

PAS5308 PART 2, TYPE 3 CONSTRUCTION, OVERALL SCREENED

Plain annealed flexible copper conductors, PVC insulated, laid up to form pairs, collective aluminium/mylar foil tape screen complete with 0.5mm^2 drain wire, PVC bedding, lead sheathed, galvanised steel wire armour, PVC outer sheath reduced propagation. Blue or Black. Flame propagation to BS4066 Parts 1 and 3, BS EN 50265, BS EN 50266, IEC 60332-1 and IEC 332-3C.

CCC Code Pt1	CCC Code Pt2	Conductor Size (mm^2)	Stranding (mm)	No. Of Pairs	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size (mm)	Nylon Cleat Size
7821	7921	0.75	24/0.20	1	700	15.70	20	0.7
7822	7922	0.75	24/0.20	2	795	16.80	20	0.7
7823	7923	0.75	24/0.20	5	1598	25.10	25	1.0
7824	7924	0.75	24/0.20	10	2280	29.40	32	1.2
7825	7925	0.75	24/0.20	20	3630	37.30	40	1.6
7826	7926	0.75	24/0.20	30	4385	43.10	50S	1.8
7827	7927	0.75	24/0.20	50	6895	53.10	63S	TC9
7971	-	1	1/1.13	1	710	15.80	20	0.7
7972	-	1	1/1.13	2	828	17.00	20	0.7
7973	-	1	1/1.13	5	1627	25.00	25	1.0
7974	-	1	1/1.13	10	2275	29.60	32	1.2
7975	-	1	1/1.13	20	3149	37.60	40	1.6
7976	-	1	1/1.13	30	4420	42.60	50S	1.8
7977	-	1	1/1.13	50	6964	53.50	63S	TC9
7851	7951	1.5	7/0.53	1	940	16.90	20	0.7
7852	7952	1.5	7/0.53	2	1051	19.00	20	0.8
7853	7953	1.5	7/0.53	5	1973	27.40	32	1.1
7854	7954	1.5	7/0.53	10	2823	33.20	32	1.4
7855	7955	1.5	7/0.53	20	4498	42.10	50S	1.8
7856	7956	1.5	7/0.53	30	6207	50.10	50	2.0
7857	7957	1.5	7/0.53	50	8961	61.00	63	TC10

Temperature limits:
-20 to +65°C.

*Bending radius:
5 x overall diameter.

Core identification:
Part 1 colour code chart on page 88.

Part 2 colour code chart on page 89.

Should not be installed at temperatures below 0°C.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

INSTRUMENTATION AND CONTROL CABLES - PAS5308

PAS5308 PART 1, TYPE 3 CONSTRUCTION, INDIVIDUALLY SCREENED

Plain annealed copper conductors, polyethylene insulated, laid up to form pairs, each pair individually aluminium/mylar foil tape screened complete with 0.5mm^2 drain wire, collective aluminium/mylar foil tape screen complete with 0.5mm^2 drain wire, polyethylene bedding, lead sheathed, galvanised steel wire armour, PVC outer sheath reduced propagation. Blue or Black.

PAS5308 PART 2, TYPE 3 CONSTRUCTION, INDIVIDUALLY SCREENED

Plain annealed flexible copper conductors, PVC insulated laid up to form pairs, each pair individually aluminium/mylar foil tape screened complete with 0.5mm^2 drain wire, collective aluminium/mylar foil tape screen complete with 0.5mm^2 drain wire, PVC bedding, lead sheathed, galvanised steel wire armour, PVC outer sheath reduced propagation. Blue or Black.

CCC Code Pt1	CCC Code Pt2	Conductor Size (mm2)	Stranding (mm)	No. Of Pairs	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size (mm)	Nylon Cleat Size
7830	7930	0.75	24/0.20	2	1280	21.50	25	0.9
7831	7931	0.75	24/0.20	5	1810	26.00	25	1.1
7832	7932	0.75	24/0.20	10	2720	32.70	32	1.4
7833	7933	0.75	24/0.20	20	4270	40.90	50S	1.8
7834	7934	0.75	24/0.20	30	6000	46.30	50S	2.0
7835	7935	0.75	24/0.20	50	8330	58.50	63S	TC10
N/A	N/A	1	1/1.13	2	1280	22.30	25	0.9
N/A	N/A	1	1/1.13	5	1820	27.20	25	1.1
N/A	N/A	1	1/1.13	10	2750	34.20	40	1.4
N/A	N/A	1	1/1.13	20	4350	43.80	50S	1.8
N/A	N/A	1	1/1.13	30	6110	51.40	50	TC9
N/A	N/A	1	1/1.13	50	8350	62.50	63	TC10
7870	7970	1.5	7/0.53	2	1680	25.50	25	1.1
7871	7971	1.5	7/0.53	5	2300	30.00	32	1.2
7872	7972	1.5	7/0.53	10	4000	40.10	50S	1.6
7873	7973	1.5	7/0.53	20	6300	50.20	50	2.0
7874	7974	1.5	7/0.53	30	8110	57.60	63S	TC10
7875	7975	1.5	7/0.53	50	11160	70.60	75S	TC12

Temperature limits:
-20 to +65°C.

*Bending radius:
15 x overall diameter.

Core identification:
Part 1 colour code chart on page 88.

Part 2 colour code chart on page 89.

Should not be installed at temperatures below 0°C.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

INSTRUMENTATION AND CONTROL CABLES PAS5308

PART 1 COLOUR CODING

Pair Number	A Wire	B Wire	Pair Number	A Wire	B Wire
1	BLACK	BLUE	26	WHITE	YELLOW
2	BLACK	GREEN	27	RED	YELLOW
3	BLUE	GREEN	28	ORANGE	YELLOW
4	BLACK	BROWN	29	BLACK	GREY
5	BLUE	BROWN	30	BLUE	GREY
6	GREEN	BROWN	31	GREEN	GREY
7	BLACK	WHITE	32	BROWN	GREY
8	BLUE	WHITE	33	WHITE	GREY
9	GREEN	WHITE	34	RED	GREY
10	BROWN	WHITE	35	ORANGE	GREY
11	BLACK	RED	36	YELLOW	GREY
12	BLUE	RED	37	BLACK	VIOLET
13	GREEN	RED	38	BLUE	VIOLET
14	BROWN	RED	39	GREEN	VIOLET
15	WHITE	RED	40	BROWN	VIOLET
16	BLACK	ORANGE	41	WHITE	VIOLET
17	BLUE	ORANGE	42	RED	VIOLET
18	GREEN	ORANGE	43	ORANGE	VIOLET
19	BROWN	ORANGE	44	YELLOW	VIOLET
20	WHITE	ORANGE	45	GREY	VIOLET
21	RED	ORANGE	46	BLACK	TURQUOISE
22	BLACK	YELLOW	47	BLUE	TURQUOISE
23	BLUE	YELLOW	48	GREEN	TURQUOISE
24	GREEN	YELLOW	49	BROWN	TURQUOISE
25	BROWN	YELLOW	50	WHITE	TURQUOISE

For individual screened pairs, identification will be Black/Blue numbered pairs.

Two pair collectively screened cables are in quad formation colour coded in rotation, Black, Blue, Green, Brown.

Single triple will be Blue , Black, Green.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

'All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

INSTRUMENTATION AND CONTROL CABLES PAS5308

PART 2 COLOUR CODING

Pair Number	A Wire	B Wire	Pair Number	A Wire	B Wire
1	WHITE	BLUE	26	RED/BLUE	BLUE
2	WHITE	ORANGE	27	RED/BLUE	ORANGE
3	WHITE	GREEN	28	RED/BLUE	GREEN
4	WHITE	BROWN	29	RED/BLUE	BROWN
5	WHITE	GREY	30	RED/BLUE	GREY
6	RED	BLUE	31	BLUE/BLACK	BLUE
7	RED	ORANGE	32	BLUE/BLACK	ORANGE
8	RED	GREEN	33	BLUE/BLACK	GREEN
9	RED	BROWN	34	BLUE/BLACK	BROWN
10	RED	GREY	35	BLUE/BLACK	GREY
11	BLACK	BLUE	36	YELLOW/BLUE	BLUE
12	BLACK	ORANGE	37	YELLOW/BLUE	ORANGE
13	BLACK	GREEN	38	YELLOW/BLUE	GREEN
14	BLACK	BROWN	39	YELLOW/BLUE	BROWN
15	BLACK	GREY	40	YELLOW/BLUE	GREY
16	YELLOW	BLUE	41	WHITE/ORANGE	BLUE
17	YELLOW	ORANGE	42	WHITE/ORANGE	ORANGE
18	YELLOW	GREEN	43	WHITE/ORANGE	GREEN
19	YELLOW	BROWN	44	WHITE/ORANGE	BROWN
20	YELLOW	GREY	45	WHITE/ORANGE	GREY
21	WHITE/BLUE	BLUE	46	ORANGE/RED	BLUE
22	WHITE/BLUE	ORANGE	47	ORANGE/RED	ORANGE
23	WHITE/BLUE	GREEN	48	ORANGE/RED	GREEN
24	WHITE/BLUE	BROWN	49	ORANGE/RED	BROWN
25	WHITE/BLUE	GREY	50	ORANGE/RED	GREY

For individual screened pairs, identification will be White/Blue numbered pairs.

Two pair collectively screened cables are in quad formation colour coded in rotation, Black, Blue, Green, Brown.

Single triple will be Blue, White, Orange.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

INSTRUMENTATION AND CONTROL CABLES TATA STANDARD

Plain annealed flexible copper conductors, PVC bedding, tinned annealed copper wire braid screen, PVC bedding, galvanised steel wire armour, PVC outer sheath. Grey. 300/500 volts grade to British Steel specification CES 20 part 4, Type 134. Flame propagation to BS EN 50265 and IEC 60332-1.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Outside Diameter (mm)	Gland Size (mm)	Nylon Cleat Size
BSC1342C	0.75	24/0.2	2	420	13.40	20S	0.6
BSC1343C	0.75	24/0.2	3	452	13.80	20S	0.6
BSC1344C	0.75	24/0.2	4	490	14.40	20S	0.6
BSC1347C	0.75	24/0.2	7	579	15.90	20S	0.7
BSC13412C	0.75	24/0.2	12	906	19.50	20	0.8
BSC13419C	0.75	24/0.2	19	1091	21.50	20	0.9
BSC13427C	0.75	24/0.2	27	1562	25.50	25	1.1
BSC13437C	0.75	24/0.2	37	1872	28.10	32	1.2

Temperature limits: -20 to +70°C.

*Bending radius: 6 x overall diameter.

Should not be installed at temperatures below 0°C.

INTRUMENTATION AND CONTROL CABLES TATA STANDARD

Tinned annealed flexible copper conductors, PVC insulated and laid up to form pairs, collective aluminium/mylar foil tape screen, complete with 0.5mm^2 drain wire, PVC bedding, galvanised steel wire armour, PVC outer sheath. Orange. 300/500 volts grade. Type 143. Flame propagation to BS EN 50265 and IEC 60332-1.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Pairs	Weight (Kg/Km)	Outside Diameter (mm)	Gland Size (mm)	Nylon Cleat Size
BSC1431P	0.75	24/0.20	1	260	10.70	20/16	0.5
BSC1432P	0.75	24/0.20	2	320	16.00	20S	0.5
BSC1435P	0.75	24/0.20	5	672	16.20	20	0.8
BSC14310P	0.75	24/0.20	10	1112	24.30	25	1.0
BSC14320P	0.75	24/0.20	20	1665	30.30	32	1.2
BSC14330P	0.75	24/0.20	30	2525	36.50	40	1.6
BSC14350P	0.75	24/0.20	50	4137	46.00	50	2.0

Temperature limits: -20 to +70°C.

*Bending radius: 6 x overall diameter.

Should not be installed at temperatures below 0°C.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

INTERNAL TELEPHONE CABLES TYPE CW1308

Solid annealed copper conductors, PVC insulated, polyester taped, PVC sheathed. To BPO CW(M) 1308. Sheath colour: White. Flame propagation to BS4066 PT1 and IEC 332 PT1.

CCC Code	Stranding (mm)	No. Of Pairs	Weight (Kgs/Km)	Overall Diameter (mm)	Gland Size (mm)
13000	1/0.50	2	18	3.60	20/16
13001	1/0.50	3	24	4.50	20/16
**13001LSF	1/0.5	3	24	4.50	20/16
13002	1/0.50	4	35	5.80	20/16
13004	1/0.50	6	47	6.80	20/16
13005	1/0.50	10	70	8.30	20/16
13006	1/0.50	10+E	102	8.60	20S
13013	1/0.50	12	80	9.10	20S
13007	1/0.50	15	95	9.80	20S
13008	1/0.50	20+E	126	10.70	20
13009	1/0.50	25+E	163	11.40	20
13010	1/0.50	30+E	200	12.20	20
13012	1/0.50	40+E	273	15.00	25
13014	1/0.50	50+E	365	17.50	25
13016	1/0.50	60+E	412	20.00	32
13018	1/0.50	80+E	501	22.50	32
13020	1/0.50	100+E	687	24.00	32
13022	1/0.50	160+E	1135	30.50	40
13023	1/0.50	320+E	2306	39.50	50

E. denotes earth core. Cream insulated.

Temperature limits: -20 to +70°C.

*Bending radius: 5 x overall diameter.

Should not be installed at temperatures below 0°C.

**LSZH,LSZH option for 3pair

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

CORE IDENTIFICATION FOR CW1308 CABLES

Pair Number	A Wire	B Wire
1	WHITE/BLUE	BLUE/WHITE
2	WHITE/ORANGE	ORANGE/WHITE
3	WHITE/GREEN	GREEN/WHITE
4	WHITE/BROWN	BROWN/WHITE
5	WHITE/GREY	GREY/WHITE
6	RED/BLUE	BLUE/RED
7	RED/ORANGE	ORANGE/RED
8	RED/GREEN	GREEN/RED
9	RED/BROWN	BROWN/RED
10	RED/GREY	GREY/RED
11	BLACK/BLUE	BLUE/BLACK
12	BLACK/ORANGE	ORANGE/BLACK
13	BLACK/GREEN	GREEN/BLACK
14	BLACK/BROWN	BROWN/BLACK
15	BLACK/GREY	GREY/BLACK
16	YELLOW/BLUE	BLUE/YELLOW
17	YELLOW/ORANGE	ORANGE/YELLOW
18	YELLOW/GREEN	GREEN/YELLOW
19	YELLOW/BROWN	BROWN/YELLOW
20	YELLOW/GREY	GREY/YELLOW
21	VIOLET/BLUE	BLUE/VIOLET
22	VIOLET/ORANGE	ORANGE/VIOLET
23	VIOLET/GREEN	GREEN/VIOLET
24	VIOLET/BROWN	BROWN/VIOLET
25	VIOLET/GREY	GREY/VIOLET
26	PINK/BLUE	BLUE/PINK
27	PINK/ORANGE	ORANGE/PINK
28	PINK/GREEN	GREEN/PINK
29	PINK/BROWN	BROWN/PINK
30	PINK/GREY	GREY/PINK

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

COMMUNICATION CABLES - TELEPHONE ENATS 09-6

Solid tinned annealed copper conductors, PVC insulated, twisted to form pairs, PVC bedding, galvanised steel wire armour, PVC outer sheath. Black. To ENATS 09-6: Issue 5 Section 3.6. Flame propagation to BS4066 PT1 and IEC 332 PT1.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Pairs	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size (mm)	Nylon Cleat Size
13050	0.28	1/0.6	**2	170	9.00	20/16	0.5
13051	0.28	1/0.6	5	238	12.07	20S	0.6
13052	0.28	1/0.6	10	454	15.91	20	0.7
13053	0.28	1/0.6	20	496	17.18	20	0.7
13054	0.28	1/0.6	30	697	18.10	20	0.8
13055	0.28	1/0.6	50	1243	26.60	32	1.1
13056	0.28	1/0.6	100	1825	29.80	32	1.2

** 2 pair laid up in quad formation.

Temperature limits: -20 to +70°C.

*Bending radius: 6 x overall diameter.

Core identification: See colour chart on page 96.

Should not be installed at temperatures below 0°C.

Solid tinned annealed copper conductors, PVC insulated, twisted to form pairs, PVC bedding, galvanised steel wire armour, PVC outer sheath. Black. To ENATS 09-6: Issue 5 Section 3.6. Flame propagation to BS4066 PT1 and IEC 332 PT1.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Pairs	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size (mm)	Nylon Cleat Size
13081	0.63	1/0.9	**2	206	10.31	20S	0.5
13083	0.63	1/0.9	5	333	14.10	20S	0.6
13084	0.63	1/0.9	10	586	17.38	20	0.7
13085	0.63	1/0.9	15	796	19.50	20	0.8
13086	0.63	1/0.9	20	939	22.48	25	0.9
13087	0.63	1/0.9	25	1245	21.30	25	0.9
13088	0.63	1/0.9	30	1400	23.90	25	1.0
13089	0.63	1/0.9	40	1686	28.20	32	1.2
13090	0.63	1/0.9	50	1952	32.87	32	1.4
-	0.63	1/0.9	60	2183	35.00	40	1.4
-	0.63	1/0.9	75	2342	37.00	40	1.6
13091	0.63	1/0.9	100	3613	41.80	50S	1.8

Solid tinned annealed copper conductors, PVC insulated, twisted to form pairs, collective aluminium/mylar foil tape screen complete with 0.5mm^2 drain wire, PVC bedding, galvanised steel wire armour, PVC outer sheath. Black. To ENATS 09-6: Issue 5 Section 3.6. Flame propagation to BS4066 PT1 and IEC 332 PT1.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Pairs	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size (mm)	Nylon Cleat Size
13101	0.63	1/0.9	**2	213	10.40	20/16	0.5
13103	0.63	1/0.9	5	379	14.00	20S	0.6
13104	0.63	1/0.9	10	650	17.80	20	0.8
13105	0.63	1/0.9	15	805	20.00	20	0.8
13106	0.63	1/0.9	20	955	21.70	25	0.9
13107	0.63	1/0.9	25	1256	24.30	25	1.0
13108	0.63	1/0.9	30	1413	25.90	25	1.1
13109	0.63	1/0.9	40	1700	28.60	32	1.2
13110	0.63	1/0.9	50	2110	31.50	32	1.4
-	0.63	1/0.9	100	3628	42.00	50S	1.8

** 2 pair laid up in quad formation.

Temperature limits: -20 to +70°C.

*Bending radius: 6 x overall diameter.

Core identification: See colour chart on page 96.

Should not be installed at temperatures below 0°C.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

COMMUNICATION CABLES - TELEPHONE ENATS 09-6

Solid plain annealed copper conductors, PVC insulated, twisted to form pairs, PVC bedding, galvanised steel wire armour, PVC outer sheath. Black. To ENATS 09-6: Issue 8 2012 table E3B Section 4.5. Flame propagation to BS4066 PT1 and IEC 332 PT1.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Pairs	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size (mm)	Nylon Cleat Size
13381	0.5	1/0.8	**2	208	10.17	20S	0.5
13383	0.5	1/0.8	5	353	13.92	20S	0.6
13384	0.5	1/0.8	10	606	17.49	20	0.7
13385	0.5	1/0.8	15	630	18.90	20	0.8
13386	0.5	1/0.8	20	854	21.06	25	0.9
13387	0.5	1/0.8	25	1159	23.20	25	1.0
13388	0.5	1/0.8	30	1266	26.47	32	1.1
13389	0.5	1/0.8	40	1549	28.82	32	1.2
13390	0.5	1/0.8	50	1923	33.50	32	1.4
13391	0.5	1/0.8	100	3000	43.40	50S	1.8

Solid plain annealed copper conductors, PVC insulated, twisted to form pairs, collective aluminium/mylar foil tape screen complete with 0.5mm^2 drain wire, PVC bedding, galvanised steel wire armour, PVC outer sheath. Black. To ENATS 09-6: Issue 6 Section 4.5. Flame propagation to BS4066 PT1 and IEC 332 PT1.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Pairs	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size (mm)	Nylon Cleat Size
13401	0.5	1/0.8	**2	223	10.30	20S	0.5
13403	0.5	1/0.8	5	349	13.74	20S	0.6
13404	0.5	1/0.8	10	599	18.14	20	0.8
13405	0.5	1/0.8	15	795	19.40	20	0.8
13406	0.5	1/0.8	20	900	22.34	25	0.9
13407	0.5	1/0.8	25	1159	23.50	25	1.0
13408	0.5	1/0.8	30	1332	25.21	25	1.0
13409	0.5	1/0.8	40	1435	28.00	32	1.2
13410	0.5	1/0.8	50	1926	31.44	32	1.4
13411	0.5	1/0.8	100	3041	44.70	50S	1.8

Solid plain annealed copper, polyethylene insulated, low smoke and zero halogen (LSZH) bedding, galvanised steel wire armour, low smoke and zero halogen (LSZH) sheath. Black. Generally to ENATS 09-6: Issue 6 Section 4.5.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Pairs	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size (mm)	Nylon Cleat Size
13501	0.5	1/0.8	**2	200	9.50	20/16	-
13503	0.5	1/0.8	5	326	13.70	20S	0.6
13504	0.5	1/0.8	10	598	17.47	20	0.7
13506	0.5	1/0.8	20	783	20.70	25	0.9
13510	0.5	1/0.8	50	1823	20.74	25	0.9
13511	0.5	1/0.8	100	3041	41.00	50S	1.8

Solid plain annealed copper conductors, polyethylene insulated, twisted to form pairs, collective aluminium/mylar foil tape screen complete with 0.5mm^2 drain, wire, low smoke zero halogen (LSZH) bedding, galvanised steel wire armour, low smoke and zero halogen (LSZH) sheath. Black. Generally to ENATS 09-6: Issue 6 Section 4.5.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Pairs	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size (mm)	Nylon Cleat Size
13601	0.5	1/0.8	**2	260	10.90	20S	0.5
13603	0.5	1/0.8	5	328	14.33	20S	0.6
13604	0.5	1/0.8	10	602	17.22	20	0.7
13606	0.5	1/0.8	20	790	20.80	25	0.9

**2 pair laid up in quad formation.

Temperature limits:
-20 to +70°C.

*Bending radius: 8 x overall diameter.

Core identification:
See colour chart on page 96.

Should not be installed at temperatures below 0°C or above 40°C.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

UTILITY INDUSTRY PVC CONTROL CABLES, ENATS 09-6

Stranded plain annealed copper conductor, PVC insulated, PVC bedding, galvanised steel wire armour, PVC outer sheath. Black. 600/1000 volts grade to BS7870-8.1: 2003. Flame retardant to IEC 60332-3-24c.

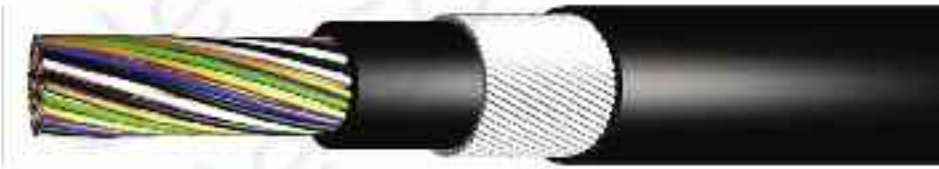
CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size (mm)	Nylon Cleat Size
6942X2/5ESI	2.5	7/0.67	2	329	12.20	20S	0.5
6943X2/5ESI	2.5	7/0.67	3	396	13.50	20S	0.6
6944X2/5ESI	2.5	7/0.67	4	423	14.40	20	0.6
6947X2/5/7	2.5	7/0.67	7	672	17.20	20	0.7
6940/12X2/5/7	2.5	7/0.67	12	967	21.30	25	0.9
6940/19X2/5/7	2.5	7/0.67	19	1482	25.40	25	1.1
6940/27X2/5/7	2.5	7/0.67	27	1920	29.30	32	1.2
6940/37X2/5/7	2.5	7/0.67	37	2185	33.10	40	1.4

Temperature limits:
-30 to +70°C

*Bending radius:
6 x Overall Diameter

Core identification:
White numbered cores.

Should not be installed at temperatures below 0°C or above 40°C.



COMMUNICATION CABLES - TELEPHONE ENATS 09-6

Solid plain annealed copper conductor, polyethylene insulated, polyethylene bedding, galvanised steel wire armour, PVC outer sheath. Black. To ENATS 09-6 issue 8 table E2A/E2.B section 2 - induced voltage between the pairs up to 15kv.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Pairs	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size (mm)	Nylon Cleat Size
13187	0.5	1/0.8	7	798	22.50	25	0.9
13188	0.5	1/0.8	19	1559	32.10	32	1.4
-	0.5	1/0.8	37	2541	41.70	50S	1.8

Temperature limits:
-20 to +70°C.

*Bending radius:
8 x Overall Diameter Core identification:
7 pair: centre - red & yellow.

outer layer - black & violet, orange & grey**, green & brown, orange & blue**, green & brown, orange & white**.

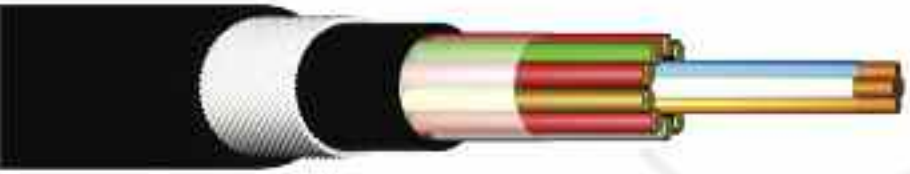
19 pair: centre - centre and first layer as
7 pair. outer layer - black & violet, odd pairs red & yellow, even pairs green & brown, blue & white.
37 pair: centre, first and second layer as 19 pair. outer layer - black & violet, odd pairs red & yellow, even pairs green & brown, blue & white.

**denotes carrier pairs.

Should not be installed at temperatures below 0°C or above 40°C.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.



CORE IDENTIFICATION ACCORDING TO ENATS 3.6 AND 4.5

SECTION 3.6 COLOUR CODING

Pair Number	A Wire	B Wire	Pair Number	A Wire	B Wire
1	BLACK	BLUE	26	WHITE	YELLOW
2	BLACK	ORANGE	27	WHITE	VIOLET
3	BLACK	GREEN	28	BLUE	RED
4	BLACK	BROWN	29	BLUE	YELLOW
5	BLACK	GREY	30	BLUE	VIOLET
6	BLUE	WHITE	31	GREEN	RED
7	BLUE	ORANGE	32	GREEN	YELLOW
8	BLUE	GREEN	33	GREEN	VIOLET
9	BLUE	BROWN	34	RED	GREY
10	BLUE	GREY	35	RED	ORANGE
11	ORANGE	WHITE	36	RED	YELLOW
12	ORANGE	GREEN	37	RED	BROWN
13	ORANGE	BROWN	38	RED	VIOLET
14	ORANGE	GREY	39	GREY	YELLOW
15	GREEN	WHITE	40	GREY	VIOLET
16	GREEN	BROWN	41	ORANGE	YELLOW
17	GREEN	GREY	42	ORANGE	VIOLET
18	BROWN	WHITE	43	YELLOW	BROWN
19	BROWN	GREY	44	YELLOW	VIOLET
20	GREY	WHITE	45	BROWN	VIOLET
21	BLACK	WHITE	46	TURQUOISE	BLACK
22	BLACK	RED	47	TURQUOISE	BLUE
23	BLACK	YELLOW	48	TURQUOISE	RED
24	BLACK	VIOLET	49	TURQUOISE	ORANGE
25	WHITE	RED	50	TURQUOISE	YELLOW

All two pair cables are in quad formation and colour coded in rotation - Blue, Orange, Green, Brown.

SECTION 4.5 COLOUR CODING

Pair Number	A Wire	B Wire
1	WHITE	BLUE
2	WHITE	ORANGE
3	WHITE	GREEN
4	WHITE	BROWN
5	WHITE	GREY
6	RED	BLUE
7	RED	ORANGE
8	RED	GREEN
9	RED	BROWN
10	RED	GREY
11	BLACK	BLUE
12	BLACK	ORANGE
13	BLACK	GREEN
14	BLACK	BROWN
15	BLACK	GREY
16	YELLOW	BLUE
17	YELLOW	ORANGE
18	YELLOW	GREEN
19	YELLOW	BROWN
20	YELLOW	GREY

Each unit is lapped with coloured tape for identification as follows

UNIT 1	BLUE
UNIT 2	ORANGE
UNIT 3	GREEN
UNIT 4	BROWN
UNIT 5	GREY
UNIT 6	WHITE
UNIT 7	RED
UNIT 8	BLACK
UNIT 9	YELLOW
UNIT10	VIOLET

If sub-units are used, binders for corresponding sub-units shall be the same colour.

All two pair cables are in quad formation and colour coded in rotation - White, Red, Blue, Orange.

For 30 pair cables the formation will be 3 X 10 pair units numbered - 1, 2 and 3.

For 40 pair cables the formation will be 2 X 20 pair units numbered - 1 and 2.

For 50 pair cables the formation will be 5 X 10 pair units numbered - 1, 2 3, 4 and 5.

For 100 pair cables the formation will be 5 X 20 pair units numbered - 1, 2, 3, 4 and 5.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

COMMUNICATION CABLES PETROLEUM JELLY FILLED

Solid plain annealed copper conductors, cellular polyethylene insulated, petroleum jelly filled, PE outer sheath. Black. To CW1128A. Flame propagation to BS4066 PT1 and IEC 332 PT1.

CCC Code	Stranding (mm)	No. Of Pairs	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size (mm)	Nylon Cleat Size
	1/0.50	5	48	6.83	20/16	-
13031	1/0.50	10	82	7.41	20/16	-
13032	1/0.50	20	182	11.48	20	0.5
13034	1/0.50	50	317	15.50	25	0.7
13035	1/0.50	100	613	21.78	32	0.9

Solid plain annealed copper conductors, cellular polyethylene insulated, petroleum jelly filled solid polyethylene bedding, galvanised steel wire armour, PE outer sheath. Black. To BPO CW 1128A/1198A. (Concentric construction). Flame propagation to BS4066 PT1 and IEC 332 PT1.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Pairs	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size (mm)	Nylon Cleat Size
13040	0.196	1/0.5	5	199	10.63	20S	0.5
13041	0.196	1/0.5	10	276	12.40	20S	0.5
13042	0.196	1/0.5	20	461	16.23	20	0.7
13043	0.196	1/0.5	50	920	21.66	25	0.9
13044	0.196	1/0.5	100	1416	26.58	32	1.1

Temperature limits:
0 to +40°C
maximum continuous temperature of standard jelly compound.

*Bending radius: 10 x overall diameter.

Solid plain annealed copper conductors, cellular polyethylene insulated, petroleum jelly filled, collective aluminium/mylar tape screen, polyethylene bedding, galvanised steel wire armour, PVC outer sheath. Grey. To BS3573 and CW1128/1198. Flame propagation to BS4066 PT1 and IEC 332 PT1.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Pairs	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size (mm)	Nylon Cleat Size
13150	0.63	1/0.9	5	392	16.70	20	0.7
13151	0.63	1/0.9	10	620	19.90	20	0.8
13153	0.63	1/0.9	20	1078	24.80	25	1.0
13154	0.63	1/0.9	50	2155	34.50	40	1.6

Cables may be manufactured using 5-pair sub-units coloured as 1-5 and 6-10.

If sub-units are used binders for corresponding sub-units shall be the same colour.

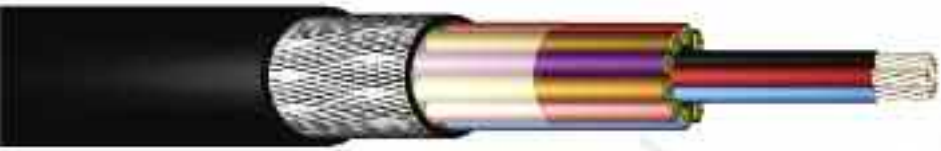
COLOUR SCHEME FOR BS3573 - UNIT CONSTRUCTION

Pair Number	A Wire	B Wire
1	WHITE	BLUE
2	WHITE	ORANGE
3	WHITE	GREEN
4	WHITE	BROWN
5	WHITE	GREY
6	RED	BLUE
7	RED	ORANGE
8	RED	GREEN
9	RED	BROWN
10	RED	GREY

UNIT 1	BLUE
UNIT 2	ORANGE
UNIT 3	GREEN
UNIT 4	BROWN
UNIT 5	GREY
UNIT 6	WHITE
UNIT 7	RED
UNIT 8	BLACK
UNIT 9	YELLOW
UNIT 10	VIOLET

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.



DEFENCE STANDARD 61-12 CONTROL CABLES

Tinned annealed flexible copper conductors, PVC insulated, non-hygroscopic binder tape, tinned annealed copper wire braid screen, PVC outer sheath. Black. 440 volts grade. To Ministry of Defence Standard DEF 61-12 (Part 4 for 7/0.2 conductors, Part 5 for 16/0.2 conductors). Flame propagation to BS4066 PT1 and IEC 332 PT1.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size (mm)
722C	0.22	7/0.20	2	23	4.10	16
723C	0.22	7/0.20	3	27	4.30	16
724C	0.22	7/0.20	4	32	4.60	16
726C	0.22	7/0.20	6	55	5.90	16
728C	0.22	7/0.20	8	69	6.00	16
7212C	0.22	7/0.20	12	83	7.20	16
7218C	0.22	7/0.20	18	110	8.50	20
7225C	0.22	7/0.20	25	150	9.80	20
7236C	0.22	7/0.20	36	200	11.20	20
7250C	0.22	7/0.20	50	270	13.00	25
7260C	0.22	7/0.20	60	310	13.80	25
1622C	0.50	16/0.20	2	69	6.90	16
1623C	0.50	16/0.20	3	79	7.20	16
1624C	0.50	16/0.20	4	92	7.70	16
1626C	0.50	16/0.20	6	120	8.70	20
1628C	0.50	16/0.20	8	146	8.90	20
16210C	0.50	16/0.20	**10	190	11.80	20
16212C	0.50	16/0.20	12	198	11.00	20
16218C	0.50	16/0.20	18	250	12.50	20
16225C	0.50	16/0.20	25	320	14.60	25
16236C	0.50	16/0.20	36	450	16.70	25
16250C	0.50	16/0.20	50	564	18.50	32
16260C	0.50	16/0.20	60	670	20.30	32

** Laid up in a pair configuration.

Temperature limits:
-55 to +70°C.

*Bending radius:
6 x overall diameter.

Core identification:
See colour chart on page 99.

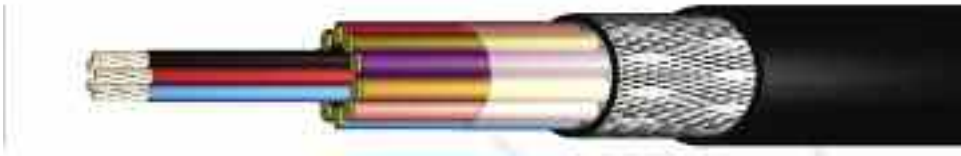
Should not be installed at temperatures below 0°C.

Tinned annealed flexible copper conductors, low smoke and zero halogen (LSZH) insulation, non-hygroscopic binder tape, tinned annealed copper wire braid screen, low smoke and zero halogen (LSZH) outer sheath. Black. 440 volt grade. Generally to ministry of Defence Standard DEF61-12 Part 5 LSF.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size (mm)
LSF724C	0.22	7/0.20	4	32	4.60	16
LSF726C	0.22	7/0.20	6	55	5.90	16
LSF728C	0.22	7/0.20	8	69	6.00	16
LSF7212C	0.22	7/0.20	12	83	7.20	16
LSF1622C	0.50	16/0.20	2	69	6.90	16
LSF1623C	0.5	16/0.20	3	79	7.20	16
LSF1624C	0.5	16/0.20	4	92	7.70	16
LSF1626C	0.5	16/0.20	6	120	8.70	20
LSF16212C	0.5	16/0.20	12	198	11.00	20
LSF16218C	0.5	16/0.20	18	250	12.50	20
LSF16225C	0.5	16/0.20	25	320	14.60	25

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

'All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.



DEFENCE STANDARD 61-12 CONTROL CABLES

COLOUR CODING

Core Number	Colour
1	RED
2	BLUE
3	GREEN
4	YELLOW
5	WHITE
6	BLACK
7	BROWN
8	VIOLET
9	ORANGE
10	PINK
11	TURQUOISE
12	GREY
13	RED/BLUE
14	GREEN/RED
15	YELLOW/RED
16	WHITE/RED
17	RED/BLACK
18	YELLOW/BLUE
19	YELLOW/BLUE
20	WHITE/BLUE
21	BLUE/BLACK
22	ORANGE/BLUE
23	GREEN/BLUE
24	GREY/BLUE
25	YELLOW/GREEN
26	WHITE/GREEN
27	GREEN/BLACK
28	ORANGE/GREEN
29	GREY/GREEN
30	YELLOW/BROWN
31	WHITE/BROWN
32	BROWN/BLACK
33	GREY/BROWN
34	YELLOW/VIOLET
35	VIOLET/BLACK
35	VIOLET/BLACK
36	WHITE/VIOLET

Where 2 colours are shown the core is striped e.g. Red/Blue - the core is striped Red with Blue.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

COMPENSATING AND THERMOCOUPLE CABLES

NON-ARMOURED

Plain annealed flexible conductors, PVC insulated, laid up to form pairs, collective aluminium mylar foil tape screen, complete with 0.5mm^2 drain wire, PVC outer sheath. Thermocouple wires calibrated to BS4937, ANSI 96.1 and IEC 584.3. Flame propagation to BS4066 PT1 and IEC 332 PT1.

No Of Pairs	Conductor Size (mm^2)	Stranding (mm)	Overall Diameter (mm)	Gland Size (mm)	Jx CCC Code	Kcb CCC Code (Was Vx)	Kx CCC Code	Tx CCC Code
1	0.75	24/0.20	6.70	20/16	7500	7530	7570	7550
2	0.75	24/0.20	7.70	20/16	7501	7531	7571	7551
5	0.75	24/0.20	13.70	25	7503	7533	7573	7553
10	0.75	24/0.20	18.10	25	7505	7537	7575	7557
20	0.75	24/0.20	23.90	32	7507	7539	7577	7559

Temperature limits:
-30 to +105°C.

*Bending radius:
5 x overall diameter.

Core identification:
See colour chart on page 101.

Should not be installed at temperatures below 0°C.

ARMOURED

Plain annealed flexible conductors, PVC insulated, laid up to form pairs, collective aluminium mylar foil tape screen, complete with 0.5mm^2 drain wire, PVC bedding, galvanised steel wire armour, PVC outer sheath. Thermocouple wires calibrated to BS4937, ANSI 96.1 and IEC 584.3. Flame propagation to BS4066 PT1 and IEC 332 PT1.

No Of Pairs	Conductor Size (mm^2)	Stranding (mm)	Overall Diameter (mm)	Gland Size (mm)	Jx CCC Code	Kcb CCC Code (Was Vx)	Kx CCC Code	Tx CCC Code
1	0.75	24/0.20	11.10	20/16	7600	7640	7700	7660
2	0.75	24/0.20	12.30	20/16	7601	7641	7701	7661
5	0.75	24/0.20	19.20	20	7603	7643	7703	7663
10	0.75	24/0.20	24.70	25	7605	7645	7705	7665
20	0.75	24/0.20	30.70	32	7607	7647	7707	7667

Temperature limits:
-30 to +105°C.

*Bending radius:
6 x overall diameter.

Core identification:
See colour chart on page 99.

Should not be installed at temperatures below 0°C.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

COMPENSATING AND THERMOCOUPLE CABLES

COLOUR CODING

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

TRAFFIC SIGNALLING CABLES

TRAFFIC CONTROL CABLE WITH ARMOUR

Plain annealed solid copper conductors, PVC insulated, PVC bedding, galvanised steel wire armour, PVC outer sheath, colour orange, generally to BS6346/87

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size (mm)
TRAF4X1	1.0	1/1.13	4	325	13.30	20S
TRAF8X1	1.0	1/1.13	8	413	15.60	20S
TRAF12X1	1.0	1/1.13	12	567	17.90	20
TRAF16X1	1.0	1/1.13	16	774	19.90	20
TRAF20X1	1.0	1/1.13	20	905	22.00	25
TRAF4X1/5	1.5	1/1.38	4	363	12.50	20S
TRAF8X1/5	1.5	1/1.38	8	534	15.80	20
TRAF12X1/5	1.5	1/1.38	12	704	18.50	20
TRAF16X1/5	1.5	1/1.38	16	836	20.00	20
TRAF20X1/5	1.5	1/1.38	20	1040	21.50	25
TRAF27X1/5	1.5	1.138	27	1280	23.75	
TRAF8X1ESWA*	1.0	1/1.13	8	533	16.30	20

Temperature limits:
-15 to +70°C.

*Bending radius:
6 x overall diameter.

Core identification:
4 core - Red, Blue, Yellow, Green.

8 core - Brown, Yellow, Green/Blue, Red, White, Blue, Black, Orange.
* includes additional 6mm^2 integral earth conductor.

12 core - Brown, Yellow, Green/Blue, Red, White, Blue, Black, Orange, Red/White, Grey, Red/Blue Violet.

16 core - Brown, Yellow, Green/Blue, Red, White, Blue, Black, Orange, Red/White, Grey, Red/Blue, Violet, Brown/Red, Yellow/Red, Grey/Red, Black/Red.

20 core - Brown, Yellow, Green/Blue, Red, White, Blue, Black, Orange, Red/White, Grey, Red/Blue, Violet, Brown/Red, Yellow/Red, Grey/Red, Black/Red, Violet/Red, Orange/Red, Green/Red, Blue/White.

Should not be installed at temperatures below 0°C.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

'All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

TRAFFIC SIGNALLING CABLES

TRAFFIC CONTROL CABLE NON ARMOURED

Plain annealed solid copper conductors, PVC insulated, PVC sheathed, colour orange, generally to BS6346/87, 600/1000v grade.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	Brass A2 Gland
TRAF8X1NA	1.0	1/1.13	8	218	12.60	20
TRAF12X1NA	1.0	1/1.13	12	305	13.50	25
TRAF8X1E*	1.0	1/1.13	8	523	14.49	25
TRAF12X1E*	1.0	1/1.13	12	785	15.50	25

Temperature limits:
-15 to +70°C.

*Bending radius:
6 x overall diameter.

Core identification:
4 core - Red, Blue, Yellow, Green.

8 core - Brown, Yellow, Green, Red, White, Blue, Black, Orange.
* includes additional 6mm^2 integral earth conductor.

12 core - Brown, Yellow, Green, Red, White, Blue, Black, Orange, Red/White, Grey, Red/Blue Violet.

16 core - Brown, Yellow, Green, Red, White, Blue, Black, Orange, Red/White, Grey, Red/Blue, Violet, Brown/Red, Yellow/Red, Grey/Red, Black/Red.

20 core - Brown, Yellow, Green, Red, White, Blue, Black, Orange, Red/White, Grey, Red/Blue, Violet, Brown/Red, Yellow/Red, Grey/Red, Black/Red, Violet/Red, Orange/Red, Green/Red, Blue/White.

Should not be installed at temperatures below 0°C.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

TRAFFIC SIGNALLING CABLES

LOOP FEEDER CABLE NON ARMOURED

Plain annealed solid copper conductors, polyethylene insulated, polyethylene outer sheath, colour orange, 600/1000v grade.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size (mm)
LOOP2X1/5	1.5	1/1.38	2 (1pr)	80	9.00	20S
LOOP4X1/5	1.5	1/1.38	4 (2pr)	123	9.10	20S
LOOP2X2/5	2.5	1/1.78	2 (1pr)	110	9.30	20S
LOOP4X2/5	2.5	1/1.78	4 (2pr)	180	10.70	20S

Temperature limits:
-15 to +70°C.

*Bending radius:
6 x overall diameter.

Core identification:
2 core - Brown, Blue
4 core - Brown, Black, Grey, Blue.

Should not be installed at temperatures below 0°C.

LOOP FEEDER CABLE ARMOURED

Plain annealed solid copper conductors, polyethylene insulated, polyethylene bedding, galvanised steel wire armour, polyethylene outer sheath. Generally to BS6346/87. Outer sheath colour: Orange. 600/1000 volts grade.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size (mm)
LOOP2X1/5SWA	1.5	1/1.38	2 (1pr)	235	11.80	20S
LOOP4X1/5SWA	1.5	1/1.38	4 (2pr)	300	12.70	20S
LOOP2X2/5SWA	2.5	1/1.78	2 (1pr)	279	12.50	20S
LOOP4X2/5SWA	2.5	1/1.78	4 (2pr)	383	15.00	20

Temperature limits:
-15 to +70°C.

*Bending radius:
6 x overall diameter.

Core identification:
2 core - Brown, Blue
4 core - Brown, Black, Grey, Blue.

Should not be installed at temperatures below 0°C.

LOOP DETECTOR CABLE

Tinned flexible copper conductor, ethylene propylene rubber insulated (EPR), polychloroprene sheathed (PCP), 600/100v generally to BS6500 + BS6195, sheath colour black.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size (mm)
LOOP1/5	1.5	30/.025	1	53.8	7.00	20S
LOOP2/5	2.5	50/0.25	1	64.0	7.90	20S

Temperature limits:
-30 to +85°C.

*Bending radius: 6 x overall diameter.

Should not be installed at temperatures below -25°C.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

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SECTION 9 Data Cables

DATA, COAXIAL AND LAN CABLES

BELDEN EQUIVALENTS:	
8138/SWA/LSF	8 PAIR 28AWG COLLECTIVE SCREEN PLUS STEEL WIRE ARMOUR,LSF SHEATH.
8444LSF	4 CORE 22AWG UNSCREENED, LSOH SHEATH
8471	1 PAIR 16AWG UNSCREENED, PVC SHEATH.
8471/LSF	1 PAIR 16AWG UNSCREENED, PVC SHEATH.
8473LSF	1 PAIR 14AWG UNSCREENED, LSZH SHEATH
8719	1 PAIR 16AWG COLLECTIVE SCREEN, PVC SHEATH.
8719/LSF	1 PAIR 16AWG COLLECTIVE SCREEN, LSF SHEATH.
8723/LSF	2 PAIR 22AWG INDIVIDUAL SCREEN ,LSOH SHEATH.
8723DUCT	2 PAIR 22AWG INDIVIDUAL SCREEN, BLACK DUCT GRADE SHEATH
8723/SWA/LSF	2 PAIR 22AWG INDIVIDUAL SCREEN PLUS STEEL WIRE ARMOUR, LSF SHEATH.
8760	1 PAIR 18AWG COLLECTIVE SCREEN. PVC SHEATH.
8760/LSF	1 PAIR 18AWG COLLECTIVE SCREEN. LSOH SHEATH.
8761	1 PAIR 22AWG INDIVIDUAL SCREEN, PVC SHEATH.
8761/LSF	1 PAIR 22AWG INDIVIDUAL SCREEN, LSOH SHEATH.
8762	1 PAIR 20AWG COLLECTIVE SCREEN, PVC SHEATH.
8762/LSF	1 PAIR 20AWG COLLECTIVE SCREEN, LSOH SHEATH.
8770LSF	3 CORE 18AWG COLLECTIVE SCREEN, LSOH SHEATH
8777LSF	3 PAIR 22AWG INDIVIDUAL SCREEN, LSOH SHEATH
9182LSF	1 PAIR 22AWG COLLECTIVE SCREEN, LSOH SHEATH
9182	1 PAIR 22AWG COLLECTIVE SCREEN, PVC SHEATH.
9368LSF	2 PAIR 18AWG INDIVIDUAL SCREEN, LSOH SHEATH
9402LSF	2 PAIR 20 AWG INDIVIDUAL SCREEN, LSZH SHEATH
9501	1 PAIR 24AWG COLLECTIVE SCREEN, PVC SHEATH.
9501/LSF	1 PAIR 24AWG COLLECTIVE SCREEN, LSOH SHEATH.
9502	2 PAIR 24AWG COLLECTIVE SCREEN, PVC SHEATH.
9502/LSF	2 PAIR 24AWG COLLECTIVE SCREEN, LSOH SHEATH.
9503LSF	3 PAIR 24AWG COLLECTIVE SCREEN, LSOH SHEATH.
9504	4 PAIR 24AWG COLLECTIVE SCREEN, PVC SHEATH.
9504LSF	4 PAIR 24AWG COLLECTIVE SCREEN, LSOH SHEATH.
9505LSF	5 PAIR 24AWG COLLECTIVE SCREEN, LSOH SHEATH.
9506LSF	6 PAIR 24AWG COLLECTIVE SCREEN, LSOH SHEATH.
9510LSF	10 PAIR 24 AWG, COLLECTIVE SCREEN, LSZH SHEATH
9538LSF	8 CORE 24AWG COLELCTIVE SCREEN, LSOH SHEATH
9540LSF	10 CORE 24AWG COLLECTIVE SCREEN, LSOH SHEATH.
9729	2 PAIR 24AWG INDIVIDUAL SCREEN, PVC SHEATH.
9729LSF	2PR 24 AWG,INDIVIDUAL SCREEN, LSZH SCREEN
9841LSF	1 PAIR 24AWG COLLECTIVE SCREEN, LSOH SHEATH.
9841SWA	1PR 24 AWG OVERALL FOIL SCREEN,TC BRAID SHIELD, SWA, PVC SHEATH
9842LSF	2 PAIR 24AWG COLLECTIVE SCREEN, LSOH SHEATH.
9842SWALSF	2 PAIR 24AWG COLLECTIVE SCREEN,TCWB,SWA,LSZH SHEATH
COAXIAL CABLES	
CT100	75 OHM DOUBLE SCREENED, LOW LOSS COAX, AIR SPACED, PVC SHEATH.
CT100LSF	75 OHM DOUBLE SCREENED, LOW LOSS COAX, AIR SPACED, LSOH SHEATH.
CCF100BK	75 OHM DOUBLE SCREENED, LOW LOSS COAX, FOAM FILLED, PVC SHEATH.
CCF125BR	75 OHM DOUBLE SCREENED, LOW LOSS COAX, FOAM FILLED, PVC SHEATH.
CT125	75 OHM DOUBLE SCREENED, LOW LOSS COAX, AIR SPACED, PVC SHEATH.
CT125BR	75 OHM DOUBLE SCREENED, LOW LOSS COAX, FOAM FILLED, PVC SHEATH.
CT125RBS	75 OHM DOUBLE SCREENED, LOW LOSS COAX, AIR SPACED, DIRECT BURIAL SHEATH.
RG6BRR100	RG6 FOAM FOAM FILLED COAX CCS 100M REEL BROWN
RG6WHR100	RG6 FOAM FILLED COAX CSS 100M REEL WHITE
RG6BKR100	RG6 FOAM FILLED COAX CSS 100M REEL BLACK
RG6BKR250	RG6 FOAM FILLED COAX CSS 250M REEL BLACK
RG6BKTINR100	RG6 TWIN FOAM FILLED COAX CSS 100M REEL BLACK
RG6BKTINR250	RG6 TWIN FOAM FILLED COAX CSS 250M REEL BLACK
RG59BU	75 OHM BRAIDED SCREEN, SOLID PE DIELECTRIC, PVC SHEATH.
RG59LSF	75 OHM BRAIDED SCREEN, SOLID PE DIELECTRIC, LSOH SHEATH.
RG59SWA	75 OHM BRAIDED SCREEN, SOLID PE DIELECTRIC PLUS STEEL WIRE ARMOUR, PVC SHEATH.
RG62AU	93 OHM BRAIDED SCREEN, PE TUBE AND THREAD, PVC SHEATH.
RG62SWA	93 OHM BRAIDED SCREEN, PE TUBE AND THREAD PLUS SWA, PVC SHEATH.
LAN CABLES	
4UTPCAT5E	ENHANCED UNSCREENED 4 PAIR CAT 5 E, GREY PVC SHEATH.
4UTPCAT5EBU	ENHANCED UNSCREENED 4 PAIR CAT 5 E, BLUE PVC SHEATH.
4UTPCAT5EOR	ENHANCED UNSCREENED 4 PAIR CAT 5 E, ORANGE PVC SHEATH.
4UTPCAT5ELSF	ENHANCED UNSCREENED 4 PAIR CAT 5 E, LSF VIOLET SHEATH.
4UTPCAT5EORLSF	ENHANCED UNSCREENED 4 PAIR CAT 5 E, LSF ORANGE SHEATH.
4FTPCAT5E	ENHANCED SCREENED 4 PAIR CAT 5 E, GREY PVC SHEATH.
4FTPCAT5ELSF	ENHANCED SCREENED 4 PAIR CAT 5 E, LSF VIOLET SHEATH.
4UTPCAT5EDUCT	ENHANCED UNSCREENED 4 PAIR CAT 5 E, DUCT GRADE SHEATH.
4FTPCAT5EDUCT	ENHANCED SCREENED 4 PAIR CAT 5 E, DUCT GRADE SHEATH.
4FTPCAT5ESWAPVC	ENHANCED SCREENED 4 PAIR CAT 5 E PLUS SWA, PVC SHEATH.
4FTPCAT5ESWALSF	ENHANCED SCREENED 4 PAIR CAT 5 E PLUS SWA, LSF BLACK SHEATH.
4UTPCAT6	UNSCREENED 4 PAIR CAT 6, GREY PVC SHEATH.
4UTPCAT6LSF	UNSCREENED 4 PAIR CAT 6, LSF VIOLET SHEATH.
4UTPCA6SWA	ENHANCED UNSCREENED 4 PAIR CAT 6 PLUS SWA, LSF BLACK SHEATH
4UTPCAT6DUCT	ENHANCED UNSCREENED 4 PAIR CAT 6 DUCT GRADE SHEATH
KNX1PAIRGN	1x1x1/0.8 LSZH GREEN KNX/E1B
KNX2PAIRGN	2x2x1/0.8 LSZH GREEN KNX/E1B

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

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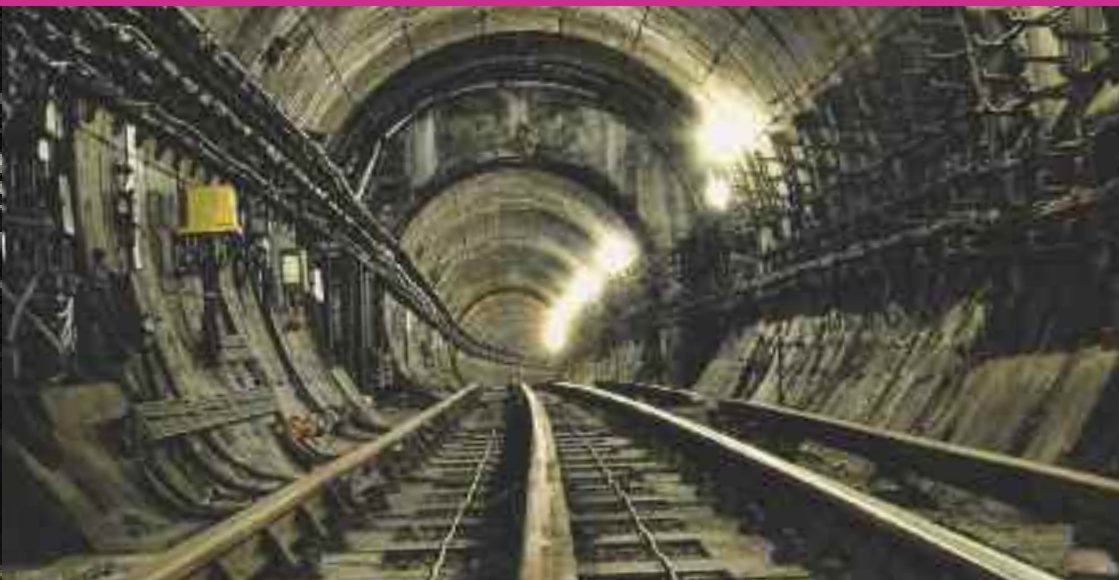
SECTION 10 Railway Cables



RAILWAY SIGNALLING CABLES

Stranded or flexible tinned copper conductors to BS6360, EPR insulated to BS7655-2.3 for types B1, LSZH insulated for types A1, A2, A3. Heavy duty PCP RS2 sheath for types A1 & B1, LSZH sheath for types A2 & A3. Manufactured to Network Rail specification NR/PS/SIG/00005 (formerly RT/E/PS/00005).

CCC Code	Rail Code	Rail Type	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size
A11X/75BR	6/120002	A1 Brown	0.75	7/0.37	1	16	2.95	N/A
A11X/75RD	6/120003	A1 Red	0.75	7/0.37	1	16	2.95	N/A
A11X/75OR	6/120004	A1 Orange	0.75	7/0.37	1	16	2.95	N/A
A11X/75GY	6/120005	A1 Grey	0.75	7/0.37	1	16	2.95	N/A
A11X/75VIR	6/120006	A1 Violet	0.75	7/0.37	1	16	2.95	N/A
A11X/75BK	6/120007	A1 Black	0.75	7/0.37	1	16	2.95	N/A
A11X115BK	6/120008	A1 Black	1.15	16/0.30	1	20	3.25	N/A
A21X/75	6/120020	A2	0.75	7/0.37	1	30	4.50	N/A
A21X115	6/120024	A2	1.15	16/0.30	1	35	4.80	20/16
A32X/75	6/120040	A3	0.75	7/0.37	2	67	7.75	20/16
A34X/75	6/120041	A3	0.75	7/0.37	4	108	9.20	20S
A36X/75	6/120042	A3	0.75	7/0.37	6	160	11.10	20S
A310X/75	6/120043	A3	0.75	7/0.37	10	259	14.35	25
A314X/75	6/120044	A3	0.75	7/0.37	14	495	15.75	25
A336X/75	6/120045	A3	0.75	7/0.37	36	752	24.20	32
A348X/75	6/120046	A3	0.75	7/0.37	48	963	27.50	40
B11X2/5	6/120061	B1	2.5	7/0.67	1	34	8.05	20/16
B11X10	6/120062	B1	10	7/1.35	1	205	10.60	20S
B11X35	6/120063	B1	35	19/1.53	1	495	14.50	25
B22X1/5	6/120081	B2	1.5	7/0.53	2	135	10.75	20S
B22X2/5	6/120082	B2	2.5	7/0.67	2	170	11.80	20
B22X10	6/120083	B2	10	7/1.35	2	443	16.85	25
B22X16	6/120113	B2	16	7/1.70	2	625	18.80	25
B22X35	6/120084	B2	35	19/1.53	2	1232	25.05	32
B22X70	6/120085	B2	70	19/2.14	2	2043	28.80	75
B22X95	6/120086	B2	95	19/2.52	2	2945	33.20	90
B24X/75	6/120087	B2	0.75	7/0.37	4	150	11.50	20S
B24X1/5	6/120088	B2	1.5	7/0.53	4	220	12.30	20
B24X2/5	6/120089	B2	2.5	7/0.67	4	295	13.35	20
B24X10	-	B2	10	7/1.35	4	675	19.00	32
B27X/75	6/120090	B2	0.75	7/0.37	7	225	13.25	20
B27X1/5	6/120091	B2	1.5	7/0.53	7	370	14.20	25
B27X2/5	6/120092	B2	2.5	7/0.67	7	500	15.50	25
B210X/75	6/120093	B2	0.75	7/0.37	10	280	16.20	25
B210X1/5	6/120094	B2	1.5	7/0.53	10	401	17.50	25
B210X2/5	6/120095	B2	2.5	7/0.67	10	680	19.20	25
B212X/75	6/120096	B2	0.75	7/0.37	12	321	16.65	25
B26PX/75	6/120111	B2	0.75	7/0.37	6pr	469	22.15	32
B212X1/5	6/120097	B2	1.5	7/0.53	12	410	18.00	25
B212X2/5	6/120098	B2	2.5	7/0.67	12	730	19.80	25
B219X/75	6/120099	B2	0.75	7/0.37	19	425	19.15	25
B219X1/5	6/120100	B2	1.5	7/0.53	19	615	20.80	32
B219X2/5	6/120101	B2	2.5	7/0.67	19	815	22.95	32
B227X/75	6/120102	B2	0.75	7/0.37	27	606	22.60	32
B227X1/5	6/120103	B2	1.5	7/0.53	27	897	25.00	32
B227X2/5	6/120104	B2	2.5	7/0.67	27	1200	27.65	40
B237X/75	6/120105	B2	0.75	7/0.37	37	786	22.60	32
B237X1/5	6/120106	B2	1.5	7/0.53	37	1126	28.25	40
B237X2/5	6/120107	B2	2.5	7/0.67	37	1600	31.25	40
B248X/75	6/120108	B2	0.75	7/0.37	48	972	28.95	40
B248X1/5	6/120109	B2	1.5	7/0.53	48	1280	31.60	40
B248X2/5	6/120110	B2	2.5	7/0.67	48	1960	35.10	50S

Temperature limits:
-25 to +85°C.

*Bending radius:
8 x overall diameter.

Core identification:

Black with white numbers.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

RAILWAY SIGNALLING CABLES

Stranded or flexible tinned copper conductors to BS6360, EPR insulated to BS7655-3.2. Heavy duty PCP RS2 sheath for types C1 + C2, LSZH sheath for types D1, D2, E1+E2. Manufactured to Network Rail specification NR/PS/SIG/00005 (formerly RT/E/PS/00005).

CCC Code	Rail Code	Rail Type	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size
C11X2/5	6/120130	C1	2.5	50/0.25	1	174	12.60	25
C22X2/5	6/120140	C2	2.5	50/0.25	2	342	16.85	25
C24X2/5	6/120141	C2	2.5	50/0.25	4	445	18.65	25
C27X2/5	6/120142	C2	2.5	50/0.25	7	590	20.50	50
C210X2/5	6/120143	C2	2.5	50/0.25	10	784	25.55	40
C212X2/5	6/120144	C2	2.5	50/0.25	12	868	26.25	40
C216X2/5	6/120145	C2	2.5	50/0.25	16	980	28.65	40
D11X/75	6/120211	D1	0.75	7/0.37	1	25	7.30	20/16
D11X1/5	6/120212	D1	1.5	7/0.53	1	30	7.65	20/16
D11X2/5	6/120213	D1	2.5	7/0.67	1	34	8.05	20/16
D11X10	6/120214	D1	10	7/1.35	1	205	10.60	20S
D11X35	6/120215	D1	35	19/1.53	1	495	14.50	25
D22X1/5	6/120216	D2	1.5	7/0.53	2	135	10.75	20S
D22X2/5	6/120217	D2	2.5	7/0.67	2	170	11.80	20
D22X10	6/120218	D2	10	7/1.35	2	443	16.85	25
D22X16	6/1220226	D2	16	7/1.70	2	625.0	20.90	32
D22X35	6/120219	D2	35	19/1.53	2	1232	25.05	40
D24X1/5	6/120223	D2	1.5	7/0.53	4	200.0	13.20	25
D27X1/5	6/120228	D2	1.5	7/0.53	7	370.0	15.80	25
D210X1/5	6/120231	D2	1.5	7/0.53	10	401.0	19.40	32
D212X1/5	6/120234	D2	1.5	7/0.53	12	410.0	17.30	32
D219X1/5	6/120237	D2	1.5	7/0.53	19	615.0	23.10	32
D227X/75	6/120238	D2	0.75	7/0.37	27	606	22.60	32
D227X1/5	6/120239	D2	1.5	7/0.53	27	897	25.00	32
D227X2/5	6/120240	D2	2.5	7/0.67	27	1200	27.65	40
D237X/75	6/120241	D2	0.75	7/0.37	37	786	25.55	32
D237X1/5	6/120242	D2	1.5	7/0.53	37	1126	28.25	40
D237X2/5	6/120243	D2	2.5	7/0.67	37	1600	31.25	40
D248X/75	6/120244	D2	0.75	7/0.37	48	972	28.95	40
D248X1/5	6/120245	D2	1.5	7/0.53	48	1280	31.60	40
D248X2/5	6/120246	D2	2.5	7/0.67	48	1960	35.10	50S
E11X2/5	6/120172	E1	2.5	50/0.25	1	174	12.60	20
E22X2/5	6/120170	E2	2.5	50/0.25	2	342	16.85	25
E24X2/5	6/120171	E2	2.5	50/0.25	4	445	18.65	25
E27X2/5	6/120173	E2	2.5	50/0.25	7	590	21.20	32
E210X2/5	6/120174	E2	2.5	50/0.25	10	784	25.55	32
E212X2/5	6/120175	E2	2.5	50/0.25	12	868	26.25	40

Temperature limits:
-25 to +85°C.

*Bending radius:
8 x overall diameter.

Core identification:

Black with white numbers.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

RAILWAY TRAIN PROTECTION WARNING CABLES

Flexible tinned copper conductors to BS6360, EPR insulated to BS7655-2.3, separate drain wire,single aluminium tape screen (polyester backed). Black Heavy duty PCP RS2 sheath to BS7655 for type C3, LSZH sheath for type E3. Manufactured to Network Rail specification NR/PS/SIG/OOOO5 (formerly RT/E/PS/00005).

CCC Code	Rail Code	Rail Type	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size
C3TPWS	6/160086	C3TPWS	2.5	50/0.25	1PR	250	17.50	25
E3TPWS	6/160090	E3TPWS	2.5	50/0.25	1PR	250	17.50	25

Temperature limits:
-25 to +85°C.

*Bending radius:
8 x overall diameter.

RAILWAY POINT HEATER CABLES

Flexible tinned copper conductor to B6360, EPR insulation type GP4 to BS7655, black PCP type EM2 sheath to BS7655. Manufactured to Network Rail specification NR/SP/ELP/40045 (formerly R/E/PS/40045).

CCC Code	Rail Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size
3184PH1/5	6/150002	1.5	30/0.25	4	220	14.32	25
3188PH1/5	6/153114	1.5	30/0.25	8	460	18.44	25
3188PH2/5	6/153110	2.5	50/0.25	8	510	23.36	32
6388PH4	6/153103	4	56/0.30	8	830	23.60	32
6388PH6	6/153111	6	84/0.30	8	1040	25.60	32
6388PH10	6/153112	10	75/0.40	8	1799	31.70	40
6388PH16	6/153113	16	118/0.40	8	2480	36.20	50S

Temperature limits:
-30 to +70°C.

Core identification:
4 core - Yellow, Yellow, Blue, Blue.
8 core - Yellow, Yellow, Blue, Blue, Brown, Brown, Black, Black.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

CLEVELAND CABLE COMPANY

A WORLD POWER IN CABLE SUPPLY

Railway Cables

RAILWAY DATALINK CABLE

Solid copper conductor, polyethylene insulation, aluminium/polyethylene laminated moisture barrier, polyethylene LSOH sheath black or blue. To BR1932.

CCC Code	Rail Code	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size
DATALINK2X1/27	0006/166065	1/1.27	2	136	12.47	25
DATALINK2X1/27	0006/166065	1/1.27	2	136	12.47	25
DATALINK2x1/27BU	0006/166065	1/1.27	2	136	12.47	25
DATALINK2x1/27OR	0006/166065	1/1.27	2	136	12.47	25
DATALINK2x1/27GY	0006/166065	1/1.27	2	136	12.47	25
DATALINK2x1/27BR	0006/166065	1/1.27	2	136	12.47	25
DATALINK2x1/27VI	0006/166065	1/1.27	2	136	12.47	25
DATALINK2x1/27LSF	0006/166065	1/1.27	2	136	12.47	25
DATALINK2x1/27LSFBU	0006/166065	1/1.27	2	136	12.47	25

Temperature limits:
PE sheath -40 to + 70°C.
LSOH sheath -10 to + 50°C.

*Bending radius:
15 x overall diameter.

Core identification:
Blue, Red.

TUBESAFE CABLE

Plain annealed stranded copper conductors, mica fire resistant tape, cross linked halogen free polymeric insulation (LSZH)0600/1000 volts grade. Fire resistant single core wiring cable meeting LU 1-085 APR3360. manufactured to meet the following standards - circuit integrity test IEC 60331-3, 950 DEGREE C, 600/1000V. Flame propagation - BS EN 60332-1-2, 60332-3-25. Smoke emission to BS EN 61034 and emissions to BS EN 60754-1.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)
6491B2/5BUTUBESFR100	2.5	7/0.67	1	38	4.1
6491B4BUTUBESFR100	4	7/0.85	1	54	4.6
6491B6BUTUBESFR100	6	7/1.04	1	75	5.1
6491B10BUTUBESAFE	10	7/1.35	1	124	6.7
6491B16BUTUBESAFE	16	7/1.70	1	183	7.6
6491B25BKTUBESAFE	25	7/2.14	1	285	9.4
6491B35BKTUBESAFE	35	7/2.52	1	382	11.0
6491B50BKTUBESAFE	50	19/1.78	1	520	12.4
6491B70BKTUBESAFE	70	19/2.14	1	717	14.2
6491B95BKTUBESAFE	95	19/2.52	1	992	16.5
6491B120BKTUBESAFE	120	37/2.03	1	1228	18.1
6491B150BKTUBESAFE	150	37/2.25	1	1522	20.3
6491B185BKTUBESAFE	185	37/2.52	1	1880	21.1
6491B240BKTUBESAFE	240	61/2.25	1	2492	26.2
6491B300BKTUBESAFE	300	61/2.52	1	3089	28.6

2.5 6.0 10.0 BU/BR/EY R500 R100
4 BU/BR/EY/BK/GY R500 R100
16 BK/BU/BR/EY BULK
10 BU BR EY BULK
25 35 50 70 BK EY BULK
95 - 300 BK BULK
2.5

Temperature limits:
-10 to +90°C.

*Bending radius:
6 x overall diameter.

Core identification:
Standard colurs available - 2.5mm, 6.0mm 10.0mm 16.0mm blue, brown, green/yellow.

4mm blue, brown, black, grey, green/yellow

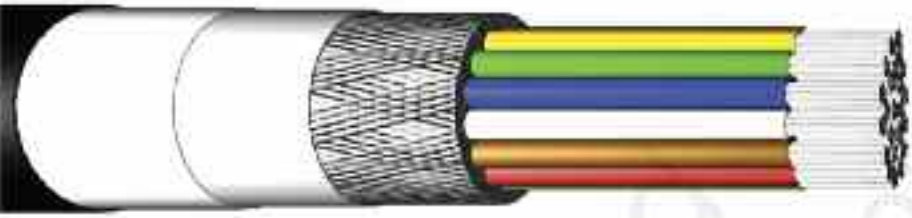
25.0mm to 70mm black, green/yellow

95.0mm to 300.0mm black

Packing, 2.5mm to 6mm 100m or 500m reels

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.



RAILWAY AXLE COUNTING CABLE NON ARMOURED

Solid tinned annealed copper conductors, polyethylene insulation (type 03 to BS6234), petroleum jelly filled (XPS and XQS types only), glass fibre weave, aluminium/polymer laminate tape, polyethylene sheath XPS type (type 03C to BS6234) or LSZH XPZ type. Manufactured to Network Rail specification RT/E/PS/0031. Spec AzLM axle counter cable NRL2SIG30060.

CCC Code	Rail Code	Cable Type	Conductor Size (mm^2)	Standing (mm)	No. Of Pairs	Weight (Kg/Km)	Overall Diameter (mm)
XPS0902	006/170007	XPS	0.63	1/0.9	2	215	13.80
XPS0910	006/170008	XPS	0.63	1/0.9	10	530	24.70
XPS0912	006/170009	XPS	0.63	1/0.9	12	584	26.40
XPS0919	006/170034	XPS	0.63	1/0.9	19	810	31.40
XPS0924	006/170035	XPS	0.63	1/0.9	24	982	34.50
XPS1402	006/170036	XPS	1.5	1/1.4	2	320	16.40
XPS1410	006/170037	XPS	1.5	1/1.4	10	910	31.40
XPS1412	006/170038	XPS	1.5	1/1.4	12	1016	33.80
XPS1419	006/170039	XPS	1.5	1/1.4	19	1460	40.80
XPS1424	006/170040	XPS	1.5	1/1.4	24	1787	45.00
XPZ0902	006/170023	XPZ	0.63	1/0.9	2	200	13.80
XPZ0910	006/170024	XPZ	0.63	1/0.9	10	424	24.70
XPZ0912	006/170025	XPZ	0.63	1/0.9	12	468	26.40
XPZ0919	006/170026	XPZ	0.63	1/0.9	19	632	31.40
XPZ0924	006/170027	XPZ	0.63	1/0.9	24	746	34.50
XPZ1402	006/170028	XPZ	1.5	1/1.4	2	314	16.40
XPZ1410	006/170029	XPZ	1.5	1/1.4	10	807	31.40
XPZ1412	006/170030	XPZ	1.5	1/1.4	12	909	33.80
XPZ1419	006/170031	XPZ	1.5	1/1.4	19	1284	40.80
XPZ1419	006/170032	XPZ	1.5	1/1.4	24	1548	45.00

Temperature limits:
- 25 to + 85°C.

*Bending radius:
7.5 x overall diameter

Core identification:
Table 6 core colours:

Pair	Core Colours		Pair	Core Colours	
1	White	Blue	13	Yellow	Green
2	White	Orange	14	Yellow	Brown
3	White	Green	15	Yellow	Grey
4	White	Brown	16	Violet	Blue
5	White	Grey	17	Violet	Orange
6	Red	Blue	18	Violet	Green
7	Red	Orange	19	Violet	Brown
8	Red	Green	20	Violet	Grey
9	Red	Brown	21	Turquoise	Blue
10	Red	Grey	22	Turquoise	Orange
11	Yellow	Blue	23	Turquoise	Green
12	Yellow	Orange	24	Turquoise	Brown

Table 7 layer make-up:

	Pair Nos. In Each Layer	
NO. OF PAIRS	CENTRE	1ST LAYER
2	1 & 2	-
10	1 & 2	3 -> 10
12	1 -> 3	4 -> 12
19	1	2 -> 7
24	1 & 2	3 -> 10

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

FIXED TELEPHONE NETWORK (FTN) COPPER TRACKSIDE CABLES

Solid plain annealed copper conductors to BS6360, polyethylene insulation, petroleum jelly filled, corrugated steel armour, polyethylene outer sheath. Manufactured to Network Rail specification NR/PS/TEL/00015 (formerly RT/E/PS/00015).

CCC Code	Rail Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Pairs	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size
13781	6/168061	0.63	1/0.9	2	250	19.00	20
13784	6/168063	0.63	1/0.9	10	520	23.80	25
13786	6/168064	0.63	1/0.9	20	820	27.60	32
13788	6/168065	0.63	1/0.9	30	915	30.90	32
13790	6/168066	0.63	1/0.9	50	1550	35.70	32

Temperature limits:
-25 to +85°C.

Core identification:
2 PAIR (laid up in quad formation).

Bending radius:
10 x overall diameter.

Pair Number	A Wire	B Wire
1	WHITE	BLUE
2	WHITE	ORANGE
3	WHITE	GREEN
4	WHITE	BROWN
5	WHITE	GREY
6	RED	BLUE
7	RED	ORANGE
8	RED	GREEN
9	RED	BROWN
10	RED	GREY

20 PAIR (laid up in 4x5 pair)

	Sub-Unit (Code A)			Sub-Unit (Code B)	
PAIR NUMBER	A WIRE	B WIRE	Pair Number	A Wire	B Wire
1	WHITE	BLUE	1	RED	BLUE
2	WHITE	ORANGE	2	RED	ORANGE
3	WHITE	GREEN	3	RED	GREEN
4	WHITE	BROWN	4	RED	BROWN
5	WHITE	GREY	5	RED	GREY

Each unit is lapped with coloured tape for identification as follows:

Unit Number	Unit Code	Colour Of Bindings
1	A	BLUE
2	B	BLUE
3	C	ORANGE
4	D	ORANGE

30 PAIR (laid up in 3x10 pair)
50 PAIR (laid up in 5x10 pair)

	Sub-Unit (Code A)	
Pair Number	A Wire	B Wire
1	WHITE	BLUE
2	WHITE	ORANGE
3	WHITE	GREEN
4	WHITE	BROWN
5	WHITE	GREY
6	RED	BLUE
7	RED	ORANGE
8	RED	GREEN
9	RED	BROWN
10	RED	GREY

Each unit is lapped with coloured tape for identification as follows:

UNIT NUMBER	COLOUR OF BINDINGS
1	BLUE
2	ORANGE
3	GREEN
4	BROWN
5	GREY

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

RAILWAY POWER AND TRACK FEEDER CABLES

POWER CABLES

Solid plain aluminium sectoral conductors XLPE insulated, PVC outer sheath, Black to BR880 06/142639. 600/1000 volts grade to BS 5467.

CCC Code	Rail Code	Conductor Size (mm^2)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size
SAC2X16NA	6/142419	16	2	420	14.30	25
SAC2X25NA	6/142519	25	2	455	16.60	25
SAC2X35NA	6/142609	35	2	525	18.00	25
SAC2X50NA	6/142629	50	2	620	20.40	32
SAC2X70NA	6/142639	70	2	840	22.80	32
SAC2X95NA	6/142644	95	2	1020	26.20	40
SAC4X70NA	6/151469	70	4	1750	30.60	40

Temperature limits: +90°C.

*Bending radius: 8 x overall diameter.

Core identification: 2 core - Brown, Blue. 4 core - Blue, Brown, Black, Grey.

TRACK FEEDER CABLES

Uncompacted circular stranded aluminium to BS6360 or uncompacted. Circular stranded tinned copper to BS6360. CSP sheathed type RS4 to BS6899, black. Manufactured to Network Rail specification NR/PS/ELP/21101 (formerly RT/E/S/21101).

CCC Code	Rail Code	Polarity	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	Gland Size
TRACK150	6/116601	NEGATIVE	150 AL	37/2.25	1	540	19.40	25
TRACK161	6/132340	NEGATIVE	161 CU	91/1.53	1	1887	24.80	32
TRACK240	6/132990	NEGATIVE	240 AL	61/2.25	1	1076	28.30	40
TRACK500	6/132840	POSITIVE	500 AL	61/3.20	1	2245	40.20	50
TRACK500CU	6/132992	NEGATIVE	500 CU	91/2.65	1	5291	40.60	50
TRACK630CU	6/116612	POSITIVE	630 CU	127/2.52	1	6692	44.20	63S
TRACK800	6/132991	NEGATIVE	800 AL	127/2.85	1	3255	48.50	63S
TRACK1000	6/116610	POSITIVE	1000 AL	127/3.20	1	3943	53.00	63
TRACK240LSF	-	NEGATIVE	240 AL	61/2.25	1	1076	28.30	40
TRACK800LSF	-	NEGATIVE	800 AL	127/2.85	1	3255	48.50	63S
TRACK1000LSF	-	POSITIVE	1000 AL	127/3.2	1	3943	53.00	63

Temperature limits: -25°C to +85°C.

*Bending radius: Aluminium conductor - 10x overall diameter. Copper conductor - 8x overall diameter.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

RAILWAY ENHANCED UNARMOURED CABLES "CLASS 2"

Stranded copper or solid aluminium conductors, BS EN 60228. XLPE insulated to BS 7655-1.3. Longitudinal identification tape. Glass-fibre Weave rodent barrier. Water Blocking tape placed under and over the fibreglass tape, with overlap. PVC Black sheath to BS7655-4.2, BS EN 60811-1. Thermosetting insulated, unarmoured cable 600/1000 V, IEC 60502-1.

CCC Code	Rail Code	Conductor Size (Mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter
FGT2X10WBCU	006/186019	10	2	700	23
FGT2X16WBCU	006/186020	16	2	880	25
FGT2X25WBCU	006/186021	25	2	900	24
FGT2X35WBCU	006/186022	35	2	1160	26
FGT2X50WBCU	006/186023	50	2	1430	28
FGT2X70WBCU	006/186024	70	2	1920	31
FGT2X95WBCU	006/186025	95	2	2480	33
FGT2X120WBCU	006/186026	120	2	2980	36

CCC Code	Rail Code	Conductor Size (Mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter
FGT2X16WBSAC	006/186035	16	2	670	25.5
FGT2X25WBSAC	006/186036	25	2	820	27.5
FGT2X35WBSAC	006/186037	35	2	980	29.5
FGT2X50WBSAC	006/186038	50	2	820	27.5
FGT2X70WBSAC	006/186039	70	2	1020	29.5
FGT2X95WBSAC	006/186040	95	2	1230	32.5
FGT2X120WBSAC	006/186041	120	2	1460	34.5
FGT2X150WBFAC	-	150	2	1680	36**
FGT2X185WBFAC	-	185	2	1950	39**

** Stranded Aluminium Conductor

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

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RAILWAY ENHANCED UNARMOURED CABLES "CLASS 2"

Stranded copper or solid aluminium conductors, BS EN 60228. XLPE insulated to BS 7655-1.3. Longitudinal identification tape. Glass-fibre Weave rodent barrier. Water Blocking tape placed under and over the fibreglass tape, with overlap. PVC Black sheath to BS7655-4.2, BS EN 60811-1. Thermosetting insulated, unarmoured cable 600/1000 V, IEC 60502-1.

CCC Code	Rail Code	Conductor Size (Mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter
FGT4X10WBCU	-	10	4	1010	28.50
FGT4X16WBCU	-	16	4	1300	30.50
FGT4X25WBCU	-	25	4	1550	30.50
FGT4X35WBCU	-	35	4	1950	32.00
FGT4X50WBCU	-	50	4	2480	34.50
FGT4X70WBCU	-	70	4	3390	39.5
FGT4X95WBCU	-	95	4	4460	43.5
FGT4X120WBCU	-	120	4	5420	47

CCC Code	Rail Code	Conductor Size (Mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter
FGT4X16WBSAC	-	16	4	890	30
FGT4X25WBSAC	-	25	4	1090	32.5
FGT4X35WBSAC	-	35	4	1310	35
FGT4X50WBSAC	-	50	4	1250	33.5
FGT4X70WBSAC	-	70	4	1680	38
FGT4X95WBSAC	-	95	4	2090	42
FGT4X120WBSAC	-	120	4	2510	45

Stranded copper or solid aluminium conductors, BS EN 60228. XLPE insulated to BS 7655-1.3. Longitudinal identification tape. Glass-fibre Weave rodent barrier. Water Blocking tape placed under and over the fibreglass tape, with overlap. LSZH Black sheath to bs7655-6.1, BS EN 60811-1. Thermosetting insulated, unarmoured cable 600/1000 V, IEC 60502-1. Tested in accordance with BS EN 61034-2. Manufactured to Network Rail specification NR/L2/ELP/27408

CCC Code	Rail Code	Conductor Size (Mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter
FGT4X10LSFWBCU	-	10	4	1010	28.50
FGT4X16LSFWBCU	-	16	4	1300	30.50
FGT4X25LSFWBCU	-	25	4	1550	30.50
FGT4X35LSFWBCU	-	35	4	1950	32.00
FGT4X50LSFWBCU	-	50	4	2480	34.50
FGT4X70LSFWBCU	-	70	4	3390	39.5
FGT4X95LSFWBCU	-	95	4	4460	43.5
FGT4X120LSFWBCU	-	120	4	5420	47

CCC Code	Rail Code	Conductor Size (Mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter
FGT4X16LSFWBSAC	-	16	4	890	30
FGT4X25LSFWBSAC	-	25	4	1090	32.5
FGT4X35LSFWBSAC	-	35	4	1310	35
FGT4X50LSFWBSAC	-	50	4	1250	33.5
FGT4X70LSFWBSAC	-	70	4	1680	38
FGT4X95LSFWBSAC	-	95	4	2090	42
FGT4X120LSFWBSAC	-	120	4	2510	45

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

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LSZH (Low Smoke & Zero Halogen) Cables Class 2

Stranded copper or solid aluminium conductors, BS EN 60228. XLPE insulated to BS 7655-1.3. Longitudinal identification tape. Glass-fibre Weave rodent barrier. Water Blocking tape placed under and over the fibreglass tape, with overlap. LSZH Black sheath to bs7655-6.1, BS EN 60811-1. Thermosetting insulated, unarmoured cable 600/1000 V, IEC 60502-1. Tested in accordance with BS EN 61034-2. Manufactured to Network Rail specification NR/L2/ELP/27408

CCC Code	Rail Code	Conductor Size (Mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter
FGT2X10LSFWBCU	006/186027	10	2	700	23
FGT2X16LSFWBCU	006/186028	16	2	880	25
FGT2X25LSFWBCU	006/186029	25	2	880	24
FGT2X35LSFWBCU	006/186030	35	2	1060	26
FGT2X50LSFWBCU	006/186031	50	2	1390	28
FGT2X70LSFWBCU	006/186032	70	2	1840	31
FGT2X95LSFWBCU	006/186033	95	2	2380	33
FGT2X120LSFWBCU	006/186034	120	2	2880	36

CCC Code	Rail Code	Conductor Size (Mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter
FGT2X16LSFWBSAC	006/186042	16	2	680	25
FGT2X25LSFWBSAC	006/186043	25	2	810	27
FGT2X35LSFWBSAC	006/186044	35	2	970	29
FGT2X50LSFWBSAC	006/186045	50	2	810	27
FGT2X70LSFWBSAC	006/186046	70	2	1010	29
FGT2X95LSFWBSAC	006/186047	95	2	1220	32
FGT2X120LSFWBSAC	006/186048	129	2	1450	34
FGT2X150LSFWBFAC	-	150	2	1680	36**
FGT2X185LSFWBFAC	-	185	2	1950	39**

Temperature limits: -15 to +90 ºC Core Identification: 2 core - Brown, Black
*Bending radius:
Circular copper conductors: Ø <25mm = 4 x overall diameter
Circular copper conductors: Ø >25mm = 6 x overall diameter
Solid aluminium or shaped copper conductors: 8 x overall diameter

** Stranded Aluminium Conductor

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

SINGLE CORE MDPE SHEATHED 25/44KV RAIL CABLE

Annealed round stranded compacted copper conductor class 2 BE EN 60228, semiconductive tape applied helically with overlap, conductor non-metallic extruded screen. XLPE type GP8 insulation to BS 7655-1.3, extruded semiconducting non-metallic core screen, semiconductive tape applied helically with overlap, copper wire metallic screen applied helically over the core and wrapped with a copper tape(83mm), MDPE black outer sheath with graphite coating. Rated at 25/44 (52) kv. To NR/PS/ELP/00008.

CCC Code	Rail Code	Conductor Size (Mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter
25KVXLPE1X120BK	006/148035	120	1	3300	50.0
25KVXLPE1X400BK	006/148030	400	1	6400	62.0
25KVXLPE1X630BK	006/148024	630	1	8900	68.0
25KVXLPE1X800BK	006/148025	800	1	11220	73.5

SINGLE CORE LSZH SHEATHED 25/44KV RAIL CABLE

Annealed round stranded compacted copper conductor class 2 BE EN 60228, semiconductive tape applied helically with overlap, conductor non-metallic extruded screen. XLPE type GP8 insulation to BS 7655-1.3, extruded semiconducting non-metallic core screen, semiconductive waterblocking tape applied helically with overlap, copper wire metallic screen applied helically over the core and wrapped with a copper tape(83mm), synthetic separation tape applied helically with overlap, LSF black outer sheath. Rated at 25/44 (52) kv.Generally to NR/PS/ELP/00008.

CCC Code	Rail Code	Conductor Size (Mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter
25KVLSZH1X400BK	006/187803	400	1	6600	62.0
25KVLSZH1X630BK	-	630	1	9300	68.0

SINGLE CORE MDPE SHEATHED 19/33KV RAIL CABLE

Annealed round stranded compacted copper conductor class 2 BE EN 60228 or round solid aluminium conductor class 1, conductor non-metallic extruded screen. XLPE type GP8 insulation to BS 7655-1.3, extruded semiconducting non-metallic core screen, copper wire metallic screen applied helically over the core and wrapped with a copper tape(50mm), waterblocking tape applied helically with overlap MDPE black outer sheath with graphite coating. Rated at 19/33 (36) kv. To NR/PS/ELP/00008.

CCC Code	Rail Code	Conductor Size (Mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter
33KVAL1X185/122514	006/122514	185	1	2180	53.2
33KVAL1X240/122517	006/122517	240	1	2400	47.7
33KVCU1X300/122511	006/122511	300	1	4500	57.9

SECTION 11 Marine And Offshore Cables

1st Character - Fire Performance/Voltage Rating
2nd Character - Cable Construction
3rd Character - No. of Cores, Pairs, Trips or Quads
4th & 5th Characters - Conductor Cross Sectional Areas

1st Character

F	Fire resistant, reduced halogen	150/250V	**M**	Flame retardant, reduced halogen	3.8/6.6kv
G	Fire resistant, LSF	150/250V	**N**	Flame retardant, reduced halogen	1.9/3.3kv
H	Flame retardant, reduced halogen	8.7/15kv	**P**	Flame retardant, reduced halogen	6.35/11kv
J	Flame retardant, reduced halogen	150/250V	**W**	Flame retardant, LSF	600/1000V
K	Flame retardant, LSF	150/250V	**X**	Flame retardant, reduced halogen	600/1000V
L	Flame retardant, reduced halogen	600/1000V	**Y**	Flame resistant, low smoke and fume	600/1000V

Example given:
GNF02
Would be:
G - Fire Resistant LSF
N - Fire Resistant, Grey, GSWB, Coll Scr
F - 1 Pair
02 - 1.5mm²

2nd Character

	Basic construction	Sheath colour	Armour	Screen
A	Flame retardant	Black (600/1000V), Red (HV)	Bronze braid	See Note 2
B	Flame retardant	Black (600/1000V), Red (HV)	GSWB	See Note 2
C	Fire resistant	Black (600/1000V)	Bronze braid	See Note 2
D	Fire resistant	Black (600/1000V)	GSWB	See Note 2
E	Flame retardant	Green/Yellow	None	None
F	Flame retardant	Black	None	None
G	Flame retardant	Light Blue	GSWB	Collective
H	Flame retardant	Light Blue	GSWB	Individual
J	Flame retardant	Grey	GSWB	Collective
K	Flame retardant	Grey	GSWB	Individual
L	Fire resistant	Light Blue	GSWB	Collective
M	Fire resistant	Light Blue	GSWB	Individual
N	Fire resistant	Grey	GSWB	Collective
P	Fire resistant	Grey	GSWB	Individual
Y	Flame retardant	Orange	GSWB	Co-axial

Notes:
1. Shaded entries signify non-preferred core sizes

2. HV Cables above 1.9/3.3Kv rating have tinned copper tape and semi-conducting insulating screen

Common Types:
600/1000 v
LB** - 658*B
EPR/CSP/GSWB/CSP
BLUE WB** - 658*D
EPR/ZH/GSWB/ZH
XD** - FS 658*B
MT/EPR/ZH/GSWB/CSP
YD** - FS 658*D
MT/EPR/ZH/GSWB/ZH

3rd Character

1	Single Core	**B**	19 Core	**J**	7 Pair	**S**	3 Triple
2	2 Core	**C**	27 Core	**K**	12 Pair	**T**	7 Triple
3	3 Core	**D**	37 Core	**L**	20 Pair	**U**	12 Triple
4	4 Core	**F**	1 Pair	**M**	27 Pair	**X**	1 Quad
7	7 Core	**H**	3 Pair	**N**	37 Pair	**Y**	3 Quad
A	12 Core	**I**	5 Pair	**R**	1 Triple	**Z**	7 Quad

150/250 v
JG** - EPR/COL/CSP/GSWB/CSP BLUE
JJ** - EPR/COL/CSP/GSWB/CSP GREY
FG** - MT/EPR/ZH/CSP/GSWB/CSP BLUE
FJ** - MT/EPR/ZH/CSP/GSWB/CSP GREY
JH** - EPR/IND/CSP/GSWB/CSP BLUE
JK** - EPR/IND/CSP/GSWB/CSP GREY
FM** - MT/EPR/IND/ZH/GSWB/CSP BLUE
FP** - MT/EPR/IND/ZH/GSWB/CSP GREY
KG** - EPR/COL/ZH/GSWB/ZH BLUE
KJ** - EPR/COL/ZH/GSWB/ZH GREY
GL** - MT/EPR/COL/ZH/GSBW/ZH BLUE
GN** - MT/EPR/COL/ZH/GSBW/ZH GREY
KH** - EPR/IND/ZH/GSWB/ZH BLUE
KK** - EPR/IND/ZH/GSWB/ZH GREY
GM** - MT/EPR/IND/ZH/GSWB/ZH BLUE
GP** - MT/EPR/IND/ZH/GSWB/ZH GREY

4th Character

00	0.75 mm² Flexible (class 5) stranded tinned copper cores	**50**	50 mm² Stranded tinned copper cores
01	1.0 mm² Flexible (class 5) stranded tinned copper cores	**70**	70 mm² Stranded tinned copper cores
02	1.5 mm² Flexible (class 5) stranded tinned copper cores	**95**	95 mm² Stranded tinned copper cores
03	2.5 mm² Stranded tinned copper cores	**OA**	120 mm² Stranded tinned copper cores
04	4 mm² Stranded tinned copper cores	**OB**	150 mm² Stranded tinned copper cores
05	4 mm² Stranded tinned copper cores	**OC**	185 mm² Stranded tinned copper cores
06	6 mm² Stranded tinned copper cores	**OD**	240 mm² Stranded tinned copper cores
10	10 mm² Stranded tinned copper cores	**OE**	300 mm² Stranded tinned copper cores
16	16 mm² Stranded tinned copper cores	**OF**	400 mm² Stranded tinned copper cores
25	25 mm² Stranded tinned copper cores	**OG**	500 mm² Stranded tinned copper cores
35	35 mm² Stranded tinned copper cores	**OH**	630 mm² Stranded tinned copper cores

Class 5 flexible conductor applicable to instrumentation cable only

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MARINE AND OFFSHORE CABLES

Tinned annealed stranded copper conductors, ethylene propylene rubber (EPR) insulated, low smoke, zero halogen (LSF) SW4 outer sheath. Black. 600/1000 volts grade to BS6883, IEC60332-1, IEC60332-3-22, IEC60754-1,2 and IEC61034-1,2.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	UKOOA Code
6571TQ1/5	1.5	7/0.53	1	49	5.50	WF102
6572TQ1/5	1.5	7/0.53	2	125	8.90	WF202
6573TQ1/5	1.5	7/0.53	3	150	9.40	WF302
6574TQ1/5	1.5	7/0.53	4	180	10.30	WF402
6575TQ1/5	1.5	7/0.53	5	190	11.00	WF502
6576TQ1/5	1.5	7/0.53	6	240	12.20	-
6577TQ1/5	1.5	7/0.53	7	275	12.50	WF702
6578TQ1/5	1.5	7/0.53	8	295	13.30	-
6570/10TQ1/5	1.5	7/0.53	10	360	16.20	-
6570/12TQ1/5	1.5	7/0.53	12	440	16.40	WFA02
6570/19TQ1/5	1.5	7/0.53	19	740	19.30	WFB02
6570/27TQ1/5	1.5	7/0.53	27	970	23.50	WFC02
6570/30TQ1/5	1.5	7/0.53	30	1015	24.30	-
6570/37TQ1/5	1.5	7/0.53	37	1220	26.00	WFD02
6571TQ2/5	2.5	7/0.67	1	63	6.00	WF103
6572TQ2/5	2.5	7/0.67	2	160	9.80	WF203
6573TQ2/5	2.5	7/0.67	3	190	10.40	WF303
6574TQ2/5	2.5	7/0.67	4	240	11.40	WF403
6575TQ2/5	2.5	7/0.67	5	280	12.60	WF503
6576TQ2/5	2.5	7/0.67	6	470	16.90	-
6577TQ2/5	2.5	7/0.67	7	355	13.70	WF703
6578TQ2/5	2.5	7/0.67	8	398	15.30	-
6570/10TQ2/5	2.5	7/0.67	10	519	17.70	-
6570/12TQ2/5	2.5	7/0.67	12	650	18.30	WFA03
6570/19TQ2/5	2.5	7/0.67	19	860	21.70	WFB03
6570/27TQ2/5	2.5	7/0.67	27	1220	26.30	WFC03
6570/30TQ2/5	2.5	7/0.67	30	1270	27.10	-
6570/37TQ2/5	2.5	7/0.67	37	1610	29.50	WFD03
6571TQ4	4	7/0.85	1	90	6.90	WF104
6572TQ4	4	7/0.85	2	240	12.00	WF204
6573TQ4	4	7/0.85	3	280	12.70	WF304
6574TQ4	4	7/0.85	4	360	13.90	WF404
6575TQ4	4	7/0.85	5	425	15.30	WF504
6577TQ4	4	7/0.85	7	530	17.70	WF704
6571TQ6	6	7/1.04	1	115	7.50	WF106
6572TQ6	6	7/1.04	2	305	13.10	WF206
6573TQ6	6	7/1.04	3	370	13.90	WF306
6574TQ6	6	7/1.04	4	475	15.40	WF406

Core identification:
White with Black numbers.

Single cores available in either Black or Green/Yellow outer sheath.

Temperature limits:
-40°C (fixed installation) to +90°C.

*Bending radius:
4 x overall diameter.

Should not be installed at temperatures below -15°C.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

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MARINE AND OFFSHORE CABLES

Tinned annealed stranded copper conductors, ethylene propylene rubber (EPR) insulated, low smoke, zero halogen (LSF) SW4 outer sheath. Black. 600/1000 volts grade to BS6883, IEC60332-1, IEC60332-3-22, IEC60754-1,2 and IEC61034-1,2.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	UKOOA Code
6571TQ10	10	7/1.35	1	165	9.00	WF110
6572TQ10	10	7/1.35	2	470	16.00	WF210
6573TQ10	10	7/1.35	3	595	17.20	WF310
6574TQ10	10	7/1.35	4	745	18.90	WF410
6571TQ16	16	7/1.70	1	230	10.10	WF116
6572TQ16	16	7/1.70	2	655	18.30	WF216
6573TQ16	16	7/1.70	3	830	19.50	WF316
6574TQ16	16	7/1.70	4	1045	21.70	WF416
6571TQ25	25	19/1.35	1	380	12.40	WF125
6572TQ25	25	19/1.35	2	1090	22.90	WF225
6573TQ25	25	19/1.35	3	1340	24.40	WF325
6574TQ25	25	19/1.35	4	1680	27.10	WF425
6571TQ35	35	19/1.53	1	490	13.60	WF135
6572TQ35	35	19/1.53	2	1310	25.30	WF235
6573TQ35	35	19/1.53	3	1630	27.10	WF335
6574TQ35	35	19/1.53	4	2130	30.10	WF435
6571TQ50	50	19/1.78	1	640	15.50	WF150
6572TQ50	50	19/1.78	2	1720	29.00	WF250
6573TQ50	50	19/1.78	3	2210	30.90	WF350
6574TQ50	50	19/1.78	4	2840	34.60	WF450
6571TQ70	70	19/2.14	1	870	17.50	WF170
6573TQ70	70	19/2.14	3	3080	35.30	WF370
6574TQ70	70	19/2.14	4	3950	39.20	WF470
6571TQ95	95	37/1.78	1	1150	19.60	WF195
6573TQ95	95	37/1.78	3	4060	40.30	WF395
6574TQ95	95	37/1.78	4	5170	45.10	WF495
6571TQ120	120	37/2.03	1	1440	21.40	WF10A
6573TQ120	120	37/2.03	3	5130	44.40	WF30A
6571TQ150	150	37/2.25	1	1770	23.80	WF10B
6571TQ185	185	37/2.52	1	2200	26.30	WF10C
6571TQ240	240	61/2.25	1	2780	29.50	WF10D
6571TQ300	300	61/2.52	1	3450	32.60	WF10E
6571TQ400	400	91/2.36	1	4400	36.70	WF10F
6571TQ500	500	91/2.65	1	5600	40.50	WF10G
6571TQ630	630	127/2.52	1	6910	44.40	WF10H

Single core cables are available in Black or Green/Yellow outer sheath.

Temperature limits:
-40°C (fixed installation) to +90°C.

*Bending radius:
up to 25mm - 4 x overall diameter.
above 25mm - 6 x overall diameter.

Core identification:
White with Black numbers.

Should not be installed at temperatures below -15°C.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

MARINE AND OFFSHORE CABLES

Tinned annealed stranded copper conductors, ethylene propylene rubber (EPR) insulated, low smoke, zero halogen bedding, galvanised steel wire braid armour, low smoke, zero halogen (LSF) SW4 outer sheath. Black. 600/1000 volts grade to BS6883, IEC60332-1, IEC60332-3-22, IEC60754-1,2 and IEC61034-1,2.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	UKOOA Code
6582TQ1/5	1.5	7/0.53	2	300	13.30	WB202
6583TQ1/5	1.5	7/0.53	3	325	13.80	WB302
6584TQ1/5	1.5	7/0.53	4	395	15.00	WB402
6585TQ1/5	1.5	7/0.53	5	407	15.20	-
6586TQ1/5	1.5	7/0.53	6	425	16.50	-
6587TQ1/5	1.5	7/0.53	7	525	17.20	WB702
6580/12TQ1/5	1.5	7/0.53	12	790	21.70	WBA02
6580/19TQ1/5	1.5	7/0.53	19	1090	24.70	WBB02
6580/27TQ1/5	1.5	7/0.53	27	1515	29.30	WBC02
6580/37TQ1/5	1.5	7/0.53	37	1870	33.20	WBD02
6582TQ2/5	2.5	7/0.67	2	350	14.20	WB203
6583TQ2/5	2.5	7/0.67	3	400	15.00	WB303
6584TQ2/5	2.5	7/0.67	4	470	16.10	WB403
6585TQ2/5	2.5	7/0.67	5	485	16.90	WB503
6586TQ2/5	2.5	7/0.67	6	550	18.20	-
6587TQ2/5	2.5	7/0.67	7	635	18.50	WB703
6580/12TQ2/5	2.5	7/0.67	12	990	23.90	WBA03
6580/19TQ2/5	2.5	7/0.67	19	1390	27.60	WBB03
6580/27TQ2/5	2.5	7/0.67	27	1990	33.20	WBC03
6580/37TQ2/5	2.5	7/0.67	37	2500	36.70	WBD03
6582TQ4	4	7/0.85	2	480	16.60	WB204
6583TQ4	4	7/0.85	3	530	17.30	WB304
6584TQ4	4	7/0.85	4	585	18.40	WB404
6585TQ4	4	7/0.85	5	700	20.20	WB504
6587TQ4	4	7/0.85	7	897	22.70	WB704

Temperature limits:
-40°C (fixed installation) to +90°C.

*Bending radius:
6 x overall diameter.

Core identification:
White with Black numbers.

Should not be installed at temperatures below -15°C.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

MARINE AND OFFSHORE CABLES

Tinned annealed stranded copper conductors, ethylene propylene rubber (EPR) insulated, low smoke, zero halogen bedding, galvanised steel wire braid armour, low smoke, zero halogen (LSF) outer sheath. Black. 600/1000 volts grade to BS6883, IEC60332-1, IEC60332-3-22, IEC60754-1,2 and IEC61034-1,2.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	UKOOA Code
6582TQ6	6	7/1.04	2	570	17.90	WB206
6583TQ6	6	7/1.04	3	635	18.70	WB306
6584TQ6	6	7/1.04	4	760	20.10	WB406
6582TQ10	10	7/1.35	2	750	21.00	WB210
6583TQ10	10	7/1.35	3	930	22.40	WB310
6584TQ10	10	7/1.35	4	1080	24.00	WB410
6582TQ16	16	7/1.70	2	1020	23.70	WB216
6583TQ16	16	7/1.70	3	1190	24.90	WB316
6584TQ16	16	7/1.70	4	1450	26.90	WB416
6582TQ25	25	19/1.35	2	1500	29.00	WB225
6583TQ25	25	19/1.35	3	1800	30.70	WB325
6584TQ25	25	19/1.35	4	2500	33.60	WB425
6582TQ35	35	19/1.53	2	1810	31.00	WB235
6583TQ35	35	19/1.53	3	2400	34.00	WB335
6584TQ35	35	19/1.53	4	2880	36.20	WB435
6582TQ50	50	19/1.78	2	2510	36.00	WB250
6583TQ50	50	19/1.78	3	3000	38.10	WB350
6584TQ50	50	19/1.78	4	3670	41.00	WB450
6582TQ70	70	19/2.14	2	2940	36.00	WB270
6583TQ70	70	19/2.14	3	3980	42.80	WB370
6584TQ70	70	19/2.14	4	4840	46.10	WB470
6582TQ95	95	37/1.78	2	3813	40.90	WB295
6583TQ95	95	37/1.78	3	5290	48.50	WB395
6584TQ95	95	37/1.78	4	6310	52.60	WB495
6582TQ120	120	37/2.03	2	4692	44.90	WB20A
6583TQ120	120	37/2.03	3	6480	52.90	WB30A
6584TQ120	120	37/2.03	4	7770	57.40	WB40A
6582TQ150	150	37/2.25	2	5634	48.90	WB20B
6583TQ150	150	37/2.25	3	7700	57.90	WB30B
6584TQ150	150	37/2.25	4	9400	63.10	WB40B
6583TQ185	185	37/2.52	3	9550	63.80	WB30C
6584TQ185	185	37/2.52	4	11520	69.60	WB40C
6583TQ240	240	61/2.25	3	12300	71.50	WB30D
6584TQ240	240	61/2.25	4	14840	78.30	WB40D
6583TQ300	300	61/2.52	3	14850	78.80	WB30E
6584TQ300	300	61/2.52	4	17938	84.90	WB40E

Temperature limits:
-40°C (fixed installation)
to +90°C.

*Bending radius:
6 x overall diameter.

Core identification:
White with Black numbers.

Should not be installed at temperatures below -15°C.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

MARINE AND OFFSHORE CABLES

Tinned annealed stranded copper conductors, ethylene propylene rubber (EPR) insulated, low smoke, zero halogen bedding tinned phosphor bronze braid armour, low smoke, zero halogen (LSF) SW4 outer sheath. Black. 600/1000 volts grade to IEC90092-353, IEC60331-21, IEC60332-2, IEC60332-2-22, IEC60751-2,2 and IEC61034-1,2.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	UKOOA Code
6591TQ6	6	7/1.04	1	245	11.70	WA106
6591TQ10	10	7/1.35	1	320	13.40	WA110
6591TQ16	16	7/1.70	1	395	14.50	WA116
6591TQ25	25	19/1.35	1	565	17.30	WA125
6591TQ35	35	19/1.53	1	740	18.40	WA135
6591TQ50	50	19/1.78	1	940	20.30	WA150
6591TQ70	70	19/2.14	1	1270	22.70	WA170
6591TQ95	95	37/1.78	1	1600	25.00	WA195
6591TQ120	120	37/2.03	1	1930	27.20	WA1OA
6591TQ150	150	37/2.25	1	2330	29.50	WA1OB
6591TQ185	185	37/2.52	1	3000	33.10	WA1OC
6591TQ240	240	61/2.25	1	3710	36.60	WA1OD
6591TQ300	300	61/2.52	1	4480	40.00	WA1OE
6591TQ400	400	91/2.36	1	5340	43.90	WA1OF
6591TQ500	500	91/2.65	1	6540	48.10	WA1OG
6591TQ630	630	127/2.52	1	8000	52.30	WA1OH

Temperature limits:
-40°C (fixed installation)
to +90°C.

*Bending radius:
6 x overall diameter.

Core identification:
White.

Should not be installed at temperatures below -15°C.

FIRE RESISTANT, EPR INSULATED BRAIDED ARMOURED SHIPWIRING CABLE 1.5MM TO0 10MM MARINE AND OFFSHORE CABLES

Tinned annealed stranded copper conductors, MICA glass taped, ethylene propylene rubber (EPR) insulated low smoke, zero halogen (LSF) bedding, galvanised steel wire braid armour, low smoke, zero halogen (SW4) outer sheath to BS7655-2,6.Black. 600/1000 volts grade to BS7917/6883, IEC60332-1, IEC60332-3-22, IEC61034-1,2, IEC60754-1,2 and IEC60331-21

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)	UKOOA Code
6582TQ1/5MGT	1.5	7/0.53	2	300	13.30	YD202
6583TQ1/5MGT	1.5	7/0.53	3	325	13.80	YD302
6584TQ1/5MGT	1.5	7/0.53	4	395	15.00	YD402
6587TQ1/5MGT	1.5	7/0.53	7	525	17.20	YD702
6580/12TQ1/5MGT	1.5	7/0.53	12	790	21.70	YDA02
6580/19TQ1/5MGT	1.5	7/0.53	19	1090	24.70	YDB02
6580/27TQ1/5	1.5	7/0.53	27	1515	29.30	YDC02
6582TQ2/5MGT	2.5	7/0.67	2	350	14.20	YD203
6583TQ2/5MGT	2.5	7/0.67	3	400	15.00	YD303
6584TQ2/5MGT	2.5	7/0.67	4	470	16.10	YD403
6587TQ2/5MGT	2.5	7/0.67	7	635	18.50	YD703
6580/12TQ2/5MGT	2.5	7/0.67	12	990	23.90	YDA03
6580/19TQ2/5MGT	2.5	7/0.67	19	1390	27.60	YDB03
6580/27TQ2/5	2.5	7/0.67	27	1990	33.20	YDC03
6583TQ4MGT	4	7/0.85	3	530	17.30	YD304
6584TQ4MGT	4	7/0.85	4	585	18.40	YD404
6583TQ6MGT	6	7/1.04	3	635	18.70	YD306
6584TQ6MGT	6	7/1.04	4	760	20.10	YD406
6583TQ10MGT	10	7/1.35	3	930	22.40	YD310
6584TQ10MGT	10	7/1.35	4	1080	24.00	YD410
6583TQ16MGT	16	7/1.70	3	1190	24.90	YD316
6584TQ16MGT	16	7/1.70	4	1450	26.90	YD416

Temperature limits:
-15 to +90°C.
-40°C fixed installation.

*Bending radius:
6 x overall diameter.

Core identification:
White with Black numbers.

Should not be installed at temperatures below -15°C.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

EPR INSULATED OVERALL SCREENED SHIPWIRING CABLE TO BS6883 AND UKOOA

Tinned stranded circular copper conductor to BS6360 class 2 EPR, GP4 insulation to BS7655: section 1.2 colour coded cores twisted to form a pair, triple or quad wrapped with polyester tape. Collective screened with aluminium backed polyester tape complete with tinned copper drain wire. Flame retardant halogen free bedding, PET tape and rubberised polyamide tape inner covering, galvanised steel wire braid armour, PET tape and rubberised polyamide tape over armour, flame retardant, halogen free, enhanced oil resisting thermosetting compound (LSF) SW4 outer sheath to BS7655 section 2.6. 150/250 volts grade manufactured to BS6883 and UKOOA design flame retardant to IEC60332-1 and IEC60332-3-22. Halogen free to IEC60754-1,2 and low smoke to IEC61034-1,2.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Pairs	Weight (Kg/Km)	Sheath Colour	UKOOA Code
KJH00	0.75	24/0.2	3Pair	420	GREY	KJH00
KJI00	0.75	24/0.2	5Pair	562	GREY	KJI00
KJJ00	0.75	24/0.2	7Pair	660	GREY	KJJ00
KJK00	0.75	24/0.2	12Pair	1000	GREY	KJK00
KJL00	0.75	24/0.2	20Pair	1570	GREY	KJL00
KGH00	0.75	24/0.2	3Pair	420	BLUE	KGH00
KGJ00	0.75	24/0.2	7Pair	660	BLUE	KGJ00
KGK00	0.75	24/0.2	12Pair	1000	BLUE	KGK00
KGL00	0.75	24/0.2	20Pair	1570	BLUE	KGL00
KJS00	0.75	24/0.2	3Triple	510	GREY	KJS00
KGS00	0.75	24/0.2	3Triple	510	BLUE	KGS00
KJT00	0.75	24/0.2	7Triple	820	GREY	KJT00
KGT00	0.75	24/0.2	7Triple	820	BLUE	KGT00
KJU00	0.75	24/0.2	12Triple	1290	GREY	KJU00
KGU00	0.75	24/0.2	12Triple	1290	BLUE	KGU00
KJU01	1	32/0.2	12Triple	1200	GREY	KJU01
KJG02	1.50	30/0.25	2Pair	400	GREY	KJG02
KJH02	1.50	30/0.25	3Pair	520	GREY	KJH02
KJI02	1.50	30/0.25	5Pair	760	GREY	KJI02
KJJ02	1.50	30/0.25	7Pair	850	GREY	KJJ02
KJ10P02	1.50	30/0.25	10Pair	1232	GREY	KJ10P02
KJK02	1.50	30/0.25	12Pair	1470	GREY	KJK02
KJL02	1.50	30/0.25	20Pair	2130	GREY	KJL02
KGH02	1.50	30/0.25	3Pair	520	BLUE	KGH02
KGJ02	1.50	30/0.25	7Pair	850	BLUE	KGJ02
KGK02	1.50	30/0.25	12Pair	1470	BLUE	KGK02
KGL02	1.50	30/0.25	20Pair	2130	BLUE	KGL02
KJS02	1.50	30/0.25	3Triple	680	GREY	KJS02
KJT02	1.50	30/0.25	7Triple	1100	GREY	KJT02
KJU02	1.50	30/0.25	12Triple	1200	GREY	KJU02
KJF03	2.50	7/0.67	1Pair		BLACK	KJF03

Temperature limits:
-40°C (fixed installation)
to +90°C.

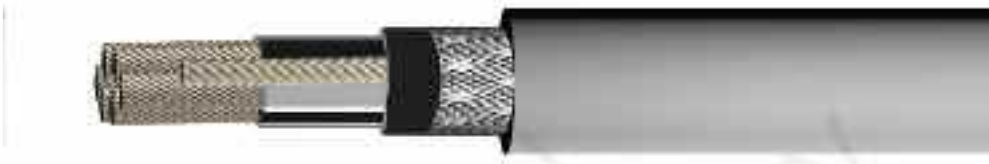
*Bending radius:
6 x overall diameter.

Core identification:
pairs - black , white numbered
triples - black, white, red numbered.
quad - black, white, red, blue numbered.

Should not be installed at temperatures below -15°C.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.



EPR INSULATED INDIVIDUALLY SCREENED SHIPWIRING CABLE TO BS6883 AND UKOOA

Tinned stranded circular copper conductor to BS6360 class 2 EPR, GP4 insulation to BS7655: section 1.2 colour coded cores twisted to form a pair, triple or quad wrapped with polyester tape.Each pair individually screened with aluminium backed polyester tape complete with tinned copper drain wire. Flame retardant halogen free bedding, PET tape and rubberised polyamide tape inner covering, galvanised steel wire braid armour, PET tape and rubberised polyamide tape over armour, flame retardant, halogen free, enhanced oil resisting thermosetting compound (LSF) SW4 outer sheath to BS7655 section 2.6. 150/250 volts grade manufactured to BS6883 and UKOOA design flame retardant to IEC60332-1 and IEC60332-3-22. Halogen free to IEC60754-1,2 and low smoke to IEC61034-1,2.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Pairs	Weight (Kg/Km)	Sheath Colour	UKOOA Code
KKF00	0.75	24/0.2	1Pair	230	GREY	KKF00
KHF00	0.75	24/0.2	1Pair	230	BLUE	KHF00
KKX00	0.75	24/0.2	1Quad	310	GREY	KKX00
KHX00	0.75	24/0.2	1Quad	310	BLUE	KHX00
KKH00	0.75	24/0.2	3Pair	430	GREY	KKH00
KKJ00	0.75	24/0.2	7Pair	720	GREY	KKJ00
KKK00	0.75	24/0.2	12Pair	1110	GREY	KKK00
KKL00	0.75	24/0.2	20Pair	1670	GREY	KKL00
KHH00	0.75	24/0.2	3Pair	430	BLUE	KHH00
KHJ00	0.75	24/0.2	7Pair	720	BLUE	KHJ00
KHK00	0.75	24/0.2	12Pair	1110	BLUE	KHK00
KHL00	0.75	24/0.2	20Pair	1670	BLUE	KHL00
KKF01	1	32/0.20	1Pair	240	GREY	KKF01
KHF01	1	32/0.20	1Pair	240	BLUE	KHF01
KKR01	1	32/0.2	1Triple	300	GREY	KKR01
KKX01	1	32/0.20	1Quad	340	GREY	KKX01
KHX01	1	32/0.20	1Quad	340	BLUE	KHX01
KKF02	1.50	30/0.25	1Pair	290	GREY	KKF02
KKG02	1.50	30/0.25	2Pair	370	GREY	KKG02
KHF02	1.50	30/0.25	1Pair	290	BLUE	KHF02
KKX02	1.50	30/0.25	1Quad	370	GREY	KKX02
KHX02	1.50	30/0.25	1Quad	370	BLUE	KHX02
KKH02	1.50	30/0.25	3Pair	560	GREY	KKH02
KKJ02	1.50	30/0.25	7Pair	980	GREY	KKJ02
KKK02	1.50	30/0.25	12Pair	1700	GREY	KKK02
KKL02	1.50	30/0.25	20Pair	2430	GREY	KKL02
KHH02	1.50	30/0.25	3Pair	560	BLUE	KHH02
KHJ02	1.50	30/0.25	7Pair	980	BLUE	KHJ02
KHK02	1.50	30/0.25	12Pair	1700	BLUE	KHK02
KHL02	1.50	30/0.25	20Pair	2430	BLUE	KHL02
KKR02	1.50	30/0.25	1Triple	330	GREY	KKR02
KKU02	1.50	30/0.25	12Triple	2210	GREY	KKU02
KKF03	2.50	7/0.67	1Pair	330	GREY	KKF03

Temperature limits:
-40°C (fixed installation)
to +90°C.

*Bending radius:
6 x overall diameter.

Core identification:
pairs - black , white numbered
triples - black, white, red numbered.
quad - black, white, red, blue numbered.

Should not be installed at temperatures below -15°C.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

FIRE RESISTANT, EPR INSULATED OVERALL SCREENED SHIPWIRING CABLE TO BS6883, BS7917 AND UKOOA

Tinned stranded circular copper conductor to BS6360 class 2 EPR, GP4 insulation to BS7655: section 1.2 Mica glass tape insulation, EPR, GP4 insulation to BS7655: section 1.2 colour coded cores twisted to form a pair, triple or quad wrapped with polyester tape. Collective screened with aluminium backed polyester tape complete with tinned copper drain wire. Flame retardant halogen free bedding, PET tape and rubberised polyamide tape inner covering, galvanised steel wire braid armour, PET tape and rubberised polyamide tape over armour, flame retardant, halogen free, enhanced oil resisting thermosetting compound. (LSF) SW4 outer sheath to BS7655 section 2.6. 150/250 volts grade manufactured to BS7917/BS6883 and UKOOA design flame retardant to IEC60332-1 and IEC60332-3-22. Halogen free to IEC60754-1,2 and low smoke to IEC61034-1,2. Fire resistant to IEC60331-21.

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Pairs	Weight (Kg/Km)	Sheath Colour	UKOOA Code
GNH00	0.75	24/0.2	3Pair	450	GREY	GNH00
GNJ00	0.75	24/0.2	7Pair	740	GREY	GNJ00
GNK00	0.75	24/0.2	12Pair	1120	GREY	GNK00
GNL00	0.75	24/0.2	20Pair	1720	GREY	GNL00
GLH00	0.75	24/0.2	3Pair	450	BLUE	GLH00
GLJ00	0.75	24/0.2	7Pair	740	BLUE	GLJ00
GLK00	0.75	24/0.2	12Pair	1120	BLUE	GLK00
GLL00	0.75	24/0.2	20Pair	1720	BLUE	GLL00
GNS00	0.75	24/0.2	3Triple	550	GREY	GNS00
GNT00	0.75	24/0.2	7Triple	930	GREY	GNT00
GNU00	0.75	24/0.2	12Triple	1450	GREY	GNU00
GLS00	0.75	24/0.2	3Triple	550	BLUE	GLS00
GLT00	0.75	24/0.2	7Triple	930	BLUE	GLT00
GLU00	0.75	24/0.2	12Triple	1450	BLUE	GLU00
GNH02	1.50	30/0.25	3Pair	570	GREY	GNH02
GNI02	1.50	30/0.25	5Pair	820	GREY	GNI02
GNJ02	1.50	30/0.25	7Pair	920	GREY	GNJ02
GN(10P)02	1.50	30/0.25	10Pair	1380	GREY	GN(10P)02
GNK02	1.50	30/0.25	12Pair	1560	GREY	GNK02
GNL02	1.50	30/0.25	20Pair	2260	GREY	GNL02
GLH02	1.50	30/0.25	3Pair	570	BLUE	GLH02
GLJ02	1.50	30/0.25	7Pair	920	BLUE	GLJ02
GLK02	1.50	30/0.25	12Pair	1560	BLUE	GLK02
GLL02	1.50	30/0.25	20Pair	2260	BLUE	GLL02
GNS02	1.50	30/0.25	3Triple	690	GREY	GNS02
GNT02	1.50	30/0.25	7Triple	1180	GREY	GNT02
GNU02	1.50	30/0.25	12Triple	2020	GREY	GNU02
GLS02	1.50	30/0.25	3Triple	690	BLUE	GLS02
GLT02	1.50	30/0.25	7Triple	1180	BLUE	GLT02
GLU02	1.50	30/0.25	12Triple	2020	BLUE	GLU02

Temperature limits:
-40°C (fixed installation)
to +90°C.

*Bending radius:
6 x overall diameter.

Core identification:
pairs - black , white numbered
triples - black, white, red numbered.
quad - black, white, red, blue numbered.

Should not be installed at temperatures below -15°C.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

FIRE RESISTANT, EPR INSULATED INDIVIDUALLY SCREENED SHIPWIRING CABLE TO BS6883, BS7917 AND UKOOA

Tinned stranded circular copper conductor to BS6360 class 2 Mica glass tape insulation, EPR, GP4 insulation to BS7655: section 1.2 colour coded cores twisted to form a pair, triple or quad wrapped with polyester tape.Each pair individually screened with aluminium backed polyester tape complete with tinned copper drain wire. Flame retardant halogen free bedding, PET tape and rubberised polyamide tape inner covering, galvanised steel wire braid armour, PET tape and rubberised polyamide tape over armour, flame retardant, halogen free, enhanced oil resisting thermosetting compound (LSF) SW4 outer sheath to BS7655 section 2.6. 150/250 volts grade manufactured to BS7917/BS6883 and UKOOA design flame retardant to IEC60332-1 and IEC60332-3-22. Halogen free to IEC60754-1,2 and low smoke to IEC61034-1,2. Fire resistant to IEC60331-21 IEC60331 (BS7917).

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Pairs	Weight (Kg/Km)	Sheath Colour	UKOOA Code
GPF00	0.75	24/0.2	1Pair	260	GREY	GPF00
GMF00	0.75	24/0.2	1Pair	260	BLUE	GMF00
GPX00	0.75	24/0.2	1Quad	330	GREY	GPX00
GMX00	0.75	24/0.2	1Quad	330	BLUE	GMX00
GPH00	0.75	24/0.2	3Pair	480	GREY	GPH00
GMH00	0.75	24/0.2	3Pair	480	BLUE	GMH00
GPJ00	0.75	24/0.2	7Pair	800	GREY	GPJ00
GMJ00	0.75	24/0.2	7Pair	800	BLUE	GMJ00
GPK00	0.75	24/0.2	12Pair	1240	GREY	GPK00
GMK00	0.75	24/0.2	12Pair	1240	BLUE	GMK00
GPL00	0.75	24/0.2	20Pair	2040	GREY	GPL00
GML00	0.75	24/0.2	20Pair	2040	BLUE	GML00
GPM00	0.75	24/0.2	27Pair	2330	GREY	GPM00
GMM00	0.75	24/0.2	27Pair	2330	BLUE	GMM00
GPR00	0.75	24/0.2	1Triple	280	GREY	GPR00
GMR00	0.75	24/0.2	1Triple	280	BLUE	GMR00
GPS00	0.75	24/0.2	3Triple	590	GREY	GPS00
GMS00	0.75	24/0.2	3Triple	590	BLUE	GMS00
GPT00	0.75	24/0.2	7Triple	990	GREY	GPT00
GMT00	0.75	24/0.2	7Triple	990	BLUE	GMT00
GPU00	0.75	24/0.2	12Triple	1640	GREY	GPU00
GMU00	0.75	24/0.2	12Triple	1640	BLUE	GMU00
GPF01	1	32/0.20	1Pair	270	GREY	GPF01
GMF01	1	32/0.20	1Pair	270	BLUE	GMF01
GPX01	1	32/0.20	1Quad	360	GREY	GPX01
GMX01	1	32/0.20	1Quad	360	BLUE	GMX01
GPH01	1	32/0.20	3Pair	520	GREY	GPH01
GMH01	1	32/0.20	3Pair	520	BLUE	GMH01
GPJ01	1	32/0.20	7Pair	920	GREY	GPJ01
GMJ01	1	32/0.20	7Pair	920	BLUE	GMJ01
GPK01	1	32/0.20	12Pair	1540	GREY	GPK01
GMK01	1	32/0.20	12Pair	1540	BLUE	GMK01
GML01	1	32/0.20	20Pair	2450	BLUE	GML01
GPL01	1	32/0.20	20Pair	2450	GREY	GPL01
GPM01	1	32/0.20	27Pair	2690	GREY	GPM01
GMM01	1	32/0.20	27Pair	2690	BLUE	GMM01
GPR01	1	32/0.20	1Triple	310	GREY	GPR01

Temperature limits:
-40°C (fixed installation)
to +90°C.

*Bending radius:
6 x overall diameter.

Core identification:
pairs - black , white numbered
triples - black, white, red numbered.
quad - black, white, red, blue numbered.

Should not be installed at temperatures below -15°C.

Table information continued on the next page...

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

FIRE RESISTANT, EPR INSULATED INDIVIDUALLY SCREENED SHIPWIRING CABLE TO BS6883, BS7917 AND UKOOA

Tinned stranded circular copper conductor to BS6360 class 2 Mica glass tape insulation, EPR, GP4 insulation to BS7655: section 1.2 colour coded cores twisted to form a pair, triple or quad wrapped with polyester tape.Each pair individually screened with aluminium backed polyester tape complete with tinned copper drain wire. Flame retardant halogen free bedding, PET tape and rubberised polyamide tape inner covering, galvanised steel wire braid armour, PET tape and rubberised polyamide tape over armour, flame retardant, halogen free, enhanced oil resisting thermosetting compound (LSF) SW4 outer sheath to BS7655 section 2.6. 150/250 volts grade manufactured to BS7917/BS6883 and UKOOA design flame retardant to IEC60332-1 and IEC60332-3-22. Halogen free to IEC60754-1,2 and low smoke to IEC61034-1,2. Fire resistant to IEC60331-21 IEC60331 (BS7917).

CCC Code	Conductor Size (mm^2)	Stranding (mm)	No. Of Pairs	Weight (Kg/Km)	Sheath Colour	UKOOA Code
GMR01	1	32/0.2	1 Triple	310	BLUE	GMR01
GPS01	1	32/0.2	3 Triple	630	GREY	GPS01
GMS01	1	32/0.2	3 Triple	630	BLUE	GMS01
GPT01	1	32/0.2	7 Triple	1100	GREY	GPT01
GMT01	1	32/0.2	7 Triple	1100	BLUE	GMT01
GPU01	1	32/0.2	12 Triple	1840	GREY	GPU01
GMU01	1	32/0.2	12 Triple	1840	BLUE	GMU01
GPF02	1.50	30/0.25	1 Pair	300	GREY	GPF02
GMF02	1.50	30/0.25	1 Pair	300	BLUE	GMF02
GPG02	1.50	30/0.25	2 Pair	410	GREY	GPG02
GPX02	1.50	30/0.25	1 Quad	410	GREY	GPX02
GMX02	1.50	30/0.25	1 Quad	410	BLUE	GMX02
GPH02	1.50	30/0.25	3 Pair	600	GREY	GPH02
GMH02	1.50	30/0.25	3 Pair	600	BLUE	GMH02
GPJ02	1.50	30/0.25	7 Pair	1030	GREY	GPJ02
GMJ02	1.50	30/0.25	7 Pair	1030	BLUE	GMJ02
GPK02	1.50	30/0.25	12 Pair	1750	GREY	GPK02
GMK02	1.50	30/0.25	12 Pair	1750	BLUE	GMK02
GPL02	1.50	30/0.25	20 Pair	2640	GREY	GPL02
GML02	1.50	30/0.25	20 Pair	2640	BLUE	GML02
GNL02	1.50	30/0.25	20 Pair	2640	GREY	GNL02
GPM02	1.50	30/0.25	27 Pair	2970	GREY	GPM02
GMM02	1.50	30/0.25	27 Pair	2970	BLUE	GMM02
GPR02	1.50	30/0.25	1 Triple	330	GREY	GPR02
GMR02	1.50	30/0.25	1 Triple	330	BLUE	GMR02
GPS02	1.50	30/0.25	3 Triple	730	GREY	GPS02
GMS02	1.50	30/0.25	3 Triple	730	BLUE	GMS02
GPT02	1.50	30/0.25	7 Triple	1220	GREY	GPT02
GMT02	1.50	30/0.25	7 Triple	1220	BLUE	GMT02
GPU02	1.50	30/0.25	12 Triple	2150	GREY	GPU02
GMU02	1.50	30/0.25	12 Triple	2150	BLUE	GMU02
GPF03	2.50	7/0.67	1 Pair	340	GREY	GPF03
GMF03	2.50	7/0.67	1 Pair	340	BLUE	GMF03

Temperature limits:
-40°C (fixed installation)
to +90°C.

*Bending radius:
6 x overall diameter.

Core identification:
pairs - black , white numbered
triples - black, white,
red numbered.
quad - black, white, red,
blue numbered.

Should not be installed at temperatures below -15°C.

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

RFOU POWER AND INSTRUMENTATION CABLE

Tinned stranded copper conductor to IEC 60228 class 2, ethylene propylene (EPR) insulated, halogen free mud resistant bedding, tinned copper wire braid armour, SHF zero halogen and mud resistant sheath. Black. 600/1000 volt grade to IEC 60092-353, IEC 60754-1,2 IEC 60332-3/A and IEC 61034-1,2. Mud resistant to NEK 606. Lloyds and DNV approved.

CCC Code	Conductor Size	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)
RFOU2X1/5	1.50	7/0.53	2	317	14.40
RFOU3X1/5	1.50	7/0.53	3	349	15.00
RFOU4X1/5	1.50	7/0.53	4	397	15.90
RFOU7X1/5	1.50	7/0.53	7	370	18.20
RFOU12X1/5	1.50	7/0.53	12	545	23.60
RFOU2X2/5	2.50	7/0.67	2	373	15.50
RFOU3X2/5	2.50	7/0.67	3	417	16.10
RFOU4X2/5	2.50	7/0.67	4	479	17.10
RFOU7X2/5	2.50	7/0.67	7	657	19.90
RFOU12X2/5	2.50	7/0.67	12	1115	25.50
RFOU2X4	4	7/0.85	2	460	17.10
RFOU3X4	4	7/0.85	3	521	17.80
RFOU4X4	4	7/0.85	4	616	19.00
RFOU2X6	6	7/1.04	2	546	18.30
RFOU3X6	6	7/1.04	3	627	19.10
RFOU4X6	6	7/1.04	4	616	20.90
RFOU2X10	10	7/1.35	2	724	20.20
RFOU3X10	10	7/1.35	3	857	21.10
RFOU4X10	10	7/1.35	4	1009	22.50
RFOU2X16	16	7/1.70	2	957	22.70
RFOU3X16	16	7/1.70	3	1148	23.60
RFOU4X16	16	7/1.70	4	1370	25.60
RFOU3X25	25	19/1.35	3	1609	27.60
RFOU4X25	25	19/1.35	4	1770	27.90
RFOU3X35	35	19/1.53	3	2079	30.90
RFOU4X35	35	19/1.53	4	2271	30.80

CCC Code	Conductor Size	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)
*RFOUI1X2X/75GY	0.75	24/0.20	1 Pair	206	11.40
*RFOUI1X2X0.75BU	0.75	24/0.20	1 Pair	206	11.40
*RFOUC2X2X/75GY	0.75	24/0.20	2 Pair	413	17.10
*RFOUC2X2X/75BU	0.75	24/0.2	2 PAIR	413	17.10
RFOUC4X2X/75GY	0.75	24/0.20	4 PAIR	340	16.80
*RFOUI1X3X/75GY	0.75	24/0.20	1 Triple	223	11.80
*RFOUI1X2X1/5GY	1.50	7/0.53	1 Pair	248	12.30
*RFOUC2X2X1/5GY	1.50	7/0.53	2 Pair	501	18.70
*RFOUI1X3X1/5GY	1.50	7/0.53	1 Triple	273	12.80
*RFOUI4X2X1/5GY	1.5	7/0.53	4 PAIR	610	22.60
*RFOUI8X2X1/5GY	1.5	7/0.53	8 PAIR	1140	32.80
*RFOUI12X2X1/5GY	1.5	7/0.53	12 PAIR	1445	35.0

Temperature limits:
-25 to +90°C.
-40°C (fixed installation).

*Bending radius:
6 x overall diameter.

Core identification:
2 cores - brown, blue
3 cores - brown, black, grey
4 cores - blue, brown, black, grey
5 cores and above - white numbered

*Instrument cable rated at 150/250v

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

BFOU POWER AND INSTRUMENTATION CABLE

Tinned stranded copper conductor to IEC 60228 class 2, mica glass tape insulation, ethylene propylene (EPR) insulated, halogen free mud resistant bedding, tinned copper wire braid armour, SHF zero halogen and mud resistant sheath. Black. 600/1000 volt grade to IEC 60092-353, IEC 60754-1,2 IEC 60332-3/A and IEC 61034-1,2. Mud resistant to NEK 606. Lloyds and DNV approved.

CCC Code	Conductor Size	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)
BFOU2X1/5	1.50	7/0.53	2	317	14.40
BFOU3X1/5	1.50	7/0.53	3	349	15.00
BFOU4X1/5	1.50	7/0.53	4	397	15.90
BFOU5X1/5	1.50	7/0.53	5	496	16.50
BFOU7X1/5	1.50	7/0.53	7	370	18.20
BFOU12X1/5	1.50	7/0.53	12	545	23.60
BFOU2X2/5	2.50	7/0.67	2	373	15.50
BFOU3X2/5	2.50	7/0.67	3	417	16.10
BFOU4X2/5	2.50	7/0.67	4	479	17.10
BFOU5X2/5	2.50	7/0.67	5	598	18.50
BFOU7X2/5	2.50	7/0.67	7	657	19.90
BFOU12X2/5	2.50	7/0.67	12	1115	25.50
BFOU2X4	4	7/0.85	2	460	17.10
BFOU3X4	4	7/0.85	3	521	17.80
BFOU4X4	4	7/0.85	4	616	19.00
BFOU2X6	6	7/1.04	2	546	18.30
BFOU3X6	6	7/1.04	3	627	19.10
BFOU4X6	6	7/1.04	4	616	20.90
BFOU2X10	10	7/1.35	2	724	20.20
BFOU3X10	10	7/1.35	3	857	21.10
BFOU4X10	10	7/1.35	4	1009	22.50
BFOU2X16	16	7/1.70	2	957	22.70
BFOU3X16	16	7/1.70	3	1148	23.60
BFOU4X16	16	7/1.70	4	1370	25.60
BFOU4X25	25	19/1.35	4	1770	27.00
RFOU4X35	35	19/1.53	4	2271	30.80

CCC Code	Conductor Size	Stranding (mm)	No. Of Cores	Weight (Kg/Km)	Overall Diameter (mm)
*BFOUI1X2X/75GY	0.75	24/0.20	1 Pair	206	11.40
*BFOUI1X2X0.75BU	0.75	24/0.20	1 Pair	206	11.40
*BFOUC2X2X/75GY	0.75	24/0.20	2 Pair	413	17.10
*BFOUI1X3X/75GY	0.75	24/0.20	1 Triple	223	11.80
*BFOUI1X2X1/5GY	1.50	7/0.53	1 Pair	248	12.30
*BFOUC2X2X1/5GY	1.50	7/0.53	2 Pair	501	18.70
*BFOUI1X3X1/5GY	1.50	7/0.53	1 Triple	273	12.80
*BFOUI4X2X1/5GY	1.5	7/0.53	4 PAIR	610	22.60
*BFOUI8X2X1/5GY	1.5	7/0.53	8 PAIR	1140	32.80
*BFOUI12X2X1/5GY	1.5	7/0.53	12 PAIR	1445	35.0

Temperature limits:
-25 to +90°C.
-40°C (fixed installation).

*Bending radius:
6 x overall diameter.

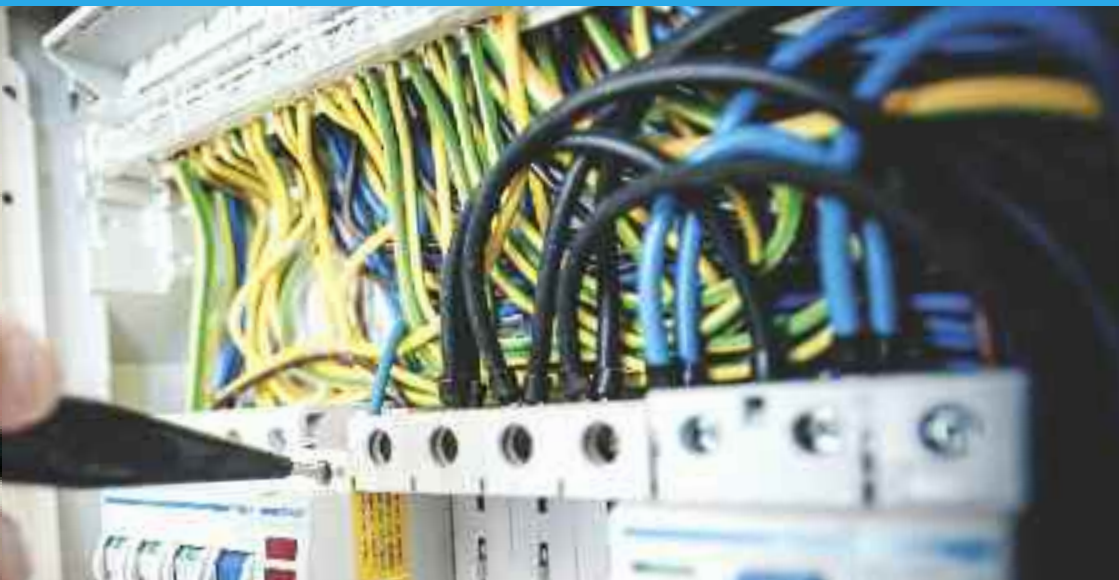
Core identification:
2 cores - brown, blue
3 cores - brown, black, grey
4 cores - blue, brown, black, grey
5 cores and above - white numbered

*Instrument cable rated at 150/250v

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

SECTION 12 Installation Accessories



Legrand Accessories

To supplement the ladder, tray, trunking and wire mesh range, we also stock a full range of Flat Bends, Inside Risers, Outside Risers, Equal Tees and 'Ancillary Items' stocked in all of these ranges.

CF1

CF2

CF3

CF4

CF5

CF7

CF8

CF9

CF10

CF11

CF12

CF13

CF14

CF15

CF16

CF17

CF18

CF19

CF20

CF21

CF22

CF23

CF24

CF25

CF26

CF27

CF28

CF29

CF34

CF35

CF36

CF37

CF38/1
CF38/2

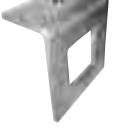
CF39

CF40

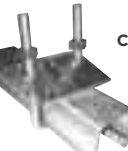
CF41*

CF42*

CF43*



CF44*



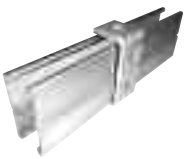
CF45*

CF46*

AVAILABLE IN HOT DIP GALVANISED OR STAINLESS STEEL

Legrand Accessories

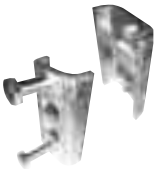
To supplement the ladder, tray, trunking and wire mesh range, we also stock a full range of Flat Bends, Inside Risers, Outside Risers, Equal Tees and 'Ancillary Items' stocked in all of these ranges.



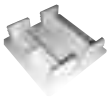
CF47

PL1 PVC
GL1 Galv

CA1
Available in 150, 300, 450, 600, 750mm



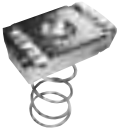
CF51



Pvc 2

Pvc 1

Long Spring Channel Nuts



M6	ZL6
M8	ZL8
M10	ZL10
M12	ZL12

Short Spring Channel Nuts

M6	ZS6
M8	ZS8
M10	ZS10
M12	ZS12

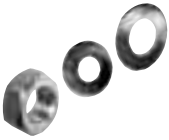
Plain Channel Nuts

M6	ZN6
M8	ZN8
M10	ZN10
M12	ZN12

M10x40
Cone Pointed Set Screws

M6x12, 16, 20, 25, 30, 35, 40 and 50mm
Roofing Nuts and Bolts

M6 x 8, M10 and M12 x 20, 25, 30, 35, 40 and 50mm
Hex Head Set Screws

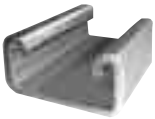


M6 x 8, M10 and M12
Hex Nuts, Flat and Spring Washers

M6, M8, M10 M12 x 3MTR Lengths of Threaded Rod

Channel Sections

Channel 41x21



Channel-
Pre Galvanised to BS EN 10326
HDG to BS EN ISO 1461
Stainless Steel to
BS EN 10088 Grade 1-4404

Channel 41x41

Channel-
Pre Galvanised to BS EN 10326
HDG to BS EN ISO 1461
Stainless Steel to
BS EN 10088 Grade 1-4404

Channel 41x41 Back to Back

Channel-
Pre Galvanised to BS EN 10326
HDG to BS EN ISO 1461
Stainless Steel to
BS EN 10088 Grade 1-4404

AVAILABLE IN HOT DIP GALVANISED OR STAINLESS STEEL
*These items require a separate M10X40 cone bolt

Flexible Mains Leads For The Power Industry

Tailor made power leads to customers own specification any cable size any length. We have the largest stock and range of H07RN-F and EPR CSP cables in the UK including all sizes and core configurations 1mm² up to 630mm². Additionally we hold the full range of control cables both braided and unbraided up to 35mm². Any of these cables can be incorporated into customised leads. We can also offer multiple outlets to your specification.

Multicore leads can be expertly fitted with 110 volt, 240 volt or 440 volt plugs or connectors, single phase or 3 phase, 13 amp, 16 amp, 32 amp, 63 amp or 125 amp. Single core leads can be supplied pre lugged or fitted with ITT PowerLock or Phase 3 Powersafe connectors, 400 amp to 630amps.

Leads are prepared in our own workshop by fully trained operatives. All assemblies are fully tested at each stage of the process and accurate records are retained to ensure complete traceability on completion. Every customer is guaranteed the highest quality materials throughout.

Our huge stocks of cables allows us to provide customers with instant availability on any special requirements. We would normally expect to complete and despatch any order within two working days.

Please see the following list for examples of leads we can provide. We can also bespoke leads to suit customers individual requirements.

HO7RN-F Flex Temporary Power Leads

Available in 3 and 5 core from 2.5mm up to 50mm and single core from 50mm upto 240mm in standard lengths 5, 10, 15, 20 and 25 metres or bespoke to customers individual requirments. We can also produce in lug to lug or powerlock to lug.

Clipsal Cable Code	Cable Type	Length (m)	End 1	End 2	Amperes	Poles	Protection Type	Voltage
[illegible]	3 X 2.5 HO7RN-F	5	Plug	Connector	16A	3p	IP44	230V
[illegible]	5 X 2.5 HO7RN-F	5	Plug	Connector	16A	5p	IP44	415V
[illegible]	3 X 4.0 HO7RN-F	5	Plug	Connector	32A	3p	IP44	230V
[illegible]	5 X 4.0 HO7RN-F	5	Plug	Connector	32A	5p	IP44	415V
[illegible]	3 X 10 HO7RN-F	5	Plug	Connector	63A	3p	IP67	230V
[illegible]	5 X 16 HO7RN-F	5	Plug	Connector	63A	5p	IP67	415V
[illegible]	3 X 25 HO7RN-F	5	Plug	Connector	125A	3p	IP67	230V
[illegible]	5 X 25 HO7RN-F	5	Plug	Connector	125A	5p	IP67	415V
[illegible]	3 X 50 HO7RN-F	5	Plug	Connector	125A	3p	IP67	230V
[illegible]	1 X 50 HO7RN-F	5	Line Source 1	Line Drain 1	400A	1p	IP67	•
[illegible]	1 X 50 HO7RN-F	5	Line Source 2	Line Drain 2	400A	1p	IP67	
[illegible]	1 X 50 HO7RN-F	5	Line Source 3	Line Drain 3	400A	1p	IP67	
[illegible]	1 X 50 HO7RN-F	5	Line Source N	Line Drain N	400A	1p	IP67	
[illegible]	1 X 50 HO7RN-F	5	Line Source E	Line Drain E	400A	1p	IP67	
[illegible]	1 X 70 HO7RN-F	5	Line Source 1	Line Drain 1	400A	1p	IP67	
[illegible]	1 X 70 HO7RN-F	5	Line Source 2	Line Drain 2	400A	1p	IP67	
[illegible]	1 X 70 HO7RN-F	5	Line Source 3	Line Drain 3	400A	1p	IP67	
[illegible]	1 X 70 HO7RN-F	5	Line Source N	Line Drain N	400A	1p	IP67	
[illegible]	1 X 70 HO7RN-F	5	Line Source E	Line Drain E	400A	1p	IP67	
[illegible]	1 X 95 HO7RN-F	5	Line Source 1	Line Drain 1	400A	1p	IP67	
[illegible]	1 X 95 HO7RN-F	5	Line Source 2	Line Drain 2	400A	1p	IP67	
[illegible]	1 X 95 HO7RN-F	5	Line Source 3	Line Drain 3	400A	1p	IP67	
[illegible]	1 X 95 HO7RN-F	5	Line Source N	Line Drain N	400A	1p	IP67	230V to 415V
[illegible]	1 X 95 HO7RN-F	5	Line Source E	Line Drain E	400A	1p	IP67	
[illegible]	1X120 HO7RN-F	5	Line Source 1	Line Drain 1	400A	1p	IP67	
[illegible]	1X120 HO7RN-F	5	Line Source 2	Line Drain 2	400A	1p	IP67	
[illegible]	1X120 HO7RN-F	5	Line Source 3	Line Drain 3	400A	1p	IP67	
[illegible]	1X120 HO7RN-F	5	Line Source N	Line Drain N	400A	1p	IP67	
[illegible]	1X120 HO7RN-F	5	Line Source E	Line Drain E	400A	1p	IP67	
[illegible]	1X150 HO7RN-F	5	Line Source 1	Line Drain 1	400A	1p	IP67	
[illegible]	1X150 HO7RN-F	5	Line Source 2	Line Drain 2	400A	1p	IP67	
[illegible]	1X150 HO7RN-F	5	Line Source 3	Line Drain 3	400A	1p	IP67	
[illegible]	1X150 HO7RN-F	5	Line Source N	Line Drain N	400A	1p	IP67	
[illegible]	1X150 HO7RN-F	5	Line Source E	Line Drain E	400A	1p	IP67	
[illegible]	1X240 HO7RN-F	5	Line Source 1	Line Drain 1	630A	1p	IP67	
[illegible]	1X240 HO7RN-F	5	Line Source 2	Line Drain 2	630A	1p	IP67	
[illegible]	1X240 HO7RN-F	5	Line Source 3	Line Drain 3	630A	1p	IP67	
[illegible]	1X240 HO7RN-F	5	Line Source N	Line Drain N	630A	1p	IP67	
[illegible]	1X240 HO7RN-F	5	Line Source E	Line Drain E	630A	1p	IP67	•
[illegible]	3 X 2.5 SY	5	Plug	Connector	16A	3p	IP44	230V
[illegible]	3 X 2.5 SY	10	Plug	Connector	16A	3p	IP44	230V
[illegible]	3 X 2.5 SY	15	Plug	Connector	16A	3p	IP44	230V
[illegible]	3 X 2.5 SY	20	Plug	Connector	16A	3p	IP44	230V
[illegible]	3 X 2.5 SY	25	Plug	Connector	16A	3p	IP44	230V
[illegible]	3 X 4.0 SY	5	Plug	Connector	32A	3p	IP44	230V
[illegible]	3 X 4.0 SY	10	Plug	Connector	32A	3p	IP44	230V
[illegible]	3 X 4.0 SY	15	Plug	Connector	32A	3p	IP44	230V
[illegible]	3 X 4.0 SY	20	Plug	Connector	32A	3p	IP44	230V
[illegible]	3 X 4.0 SY	25	Plug	Connector	32A	3p	IP44	230V
[illegible]	5 X 2.5 SY	5	Plug	Connector	16A	5p	IP44	415V
[illegible]	5 X 2.5 SY	10	Plug	Connector	16A	5p	IP44	415V
[illegible]	5 X 2.5 SY	15	Plug	Connector	16A	5p	IP44	415V
[illegible]	5 X 2.5 SY	20	Plug	Connector	16A	5p	IP44	415V
[illegible]	5 X 2.5 SY	25	Plug	Connector	16A	5p	IP44	415V
[illegible]	5 X 4.0 SY	5	Plug	Connector	32A	5p	IP44	415V
[illegible]	5 X 4.0 SY	10	Plug	Connector	32A	5p	IP44	415V
[illegible]	5 X 4.0 SY	15	Plug	Connector	32A	5p	IP44	415V
[illegible]	5 X 4.0 SY	20	Plug	Connector	32A	5p	IP44	415V
[illegible]	5 X 4.0 SY	25	Plug	Connector	32A	5p	IP44	415V

SY Flex Temporary Power Leads

Available in 3, 4 or 5 core from 2.5mm up to 50mm in standard lengths as below or bespoke to customers individual requirements

Cleveland Cable Code	Cable Type	Length (m)	End 1	End 2	Amperes	Poles	Protection Type	Voltage
SY3X2/5EXT10M/16	3 X 2.5 SY	10	Plug	Connector	16A	5P	IP44	230V
SY3X2/5EXT15M/16	3 X 2.5 SY	15	Plug	Connector	16A	5P	IP44	230V
SY3X2/5EXT20M/16	3 X 2.5 SY	20	Plug	Connector	16A	5P	IP44	230V
SY3X2/5EXT25M/16	3 X 2.5 SY	25	Plug	Connector	16A	5P	IP44	230V
SY3X4EX10M/32	3 X 4.0 SY	10	Plug	Connector	32A	5P	IP44	230V
SY3X4EXT15M/32	3 X 4.0 SY	15	Plug	Connector	32A	5P	IP44	230V
SY3X4EXT20M/32	3 X 4.0 SY	20	Plug	Connector	32A	5P	IP44	230V
SY3X4EXT25M/32	3 X 4.0 SY	25	Plug	Connector	32A	5P	IP44	230V
SY5X2/5EX10M/16	5 X 2.5 SY	10	Plug	Connector	16A	5P	IP44	415V
SY5X2/5EXT15M/16	5 X 2.5 SY	15	Plug	Connector	16A	5P	IP44	415V
SY5X2/5EXT20M/16	5 X 2.5 SY	20	Plug	Connector	16A	5P	IP44	415V
SY5X2/5EXT25M/16	5 X 2.5 SY	25	Plug	Connector	16A	5P	IP44	415V
SY5X4EX10M/32	5 X 4.0 SY	10	Plug	Connector	32A	5P	IP44	415V
SY5X4EXT15M/32	5 X 4.0 SY	15	Plug	Connector	32A	5P	IP44	415V
SY5X4EXT20M/32	5 X 4.0 SY	20	Plug	Connector	32A	5P	IP44	415V
SY5X4EXT25M/32	5 X 4.0 SY	25	Plug	Connector	32A	5P	IP44	415V

Type Sy Control Cables

Plain annealed flexible copper conductors, PVC insulated, extruded PVC bedding, galvanised steel wire braid armour, transparent PVC outer sheath. 300/500 volts grade generally to BS6500 and VDE 0250 Part 5.

Temperature limits:
-25 to +60°C

Bending radius:
Static - 10 x overall diameter.
Flexing - 20 x overall diameter.

Core identification:
2 core - Black with white numbers.
3 core and above - Black with white numbers plus Green/Yellow.

Should not be installed at temperatures below -5°C.

Core identification:
2 core - Blue, Brown.
3 core - Blue, Brown, Green/Yellow.
4 core - Grey, Black, Brown, Green/Yellow.
5 core - Grey, Black, Brown, Blue, Green/Yellow.
6 core and above - Black with White numbers plus Green/Yellow.
Should not be installed at temperatures below 0°C.

STOCK OF ALL SIZES
0.75mm² - 95mm²

Flexible Mains And Control Cables H07RN-F

Plain annealed flexible copper conductors, rubber insulated, heavy duty polychloroprene (PCP) outer sheath 450/750 volts grade. Black. Harmonised code type H07RN-F. Flame propagation to En 60332-1-2.

Temperature limits:
-25 to +60°C
Bending radius:
Static - 6 x overall diameter.
Flexing - 15 x overall diameter.

Also available with coloured cores as follows:
2 core - Blue, Brown.
3 core - Blue, Brown, Green/Yellow.
4 core - Blue, Brown, Black, Green/Yellow or Brown, Black, Grey, Green/Yellow.
5 core - Blue, Brown, Black, Grey, Green/Yellow.

As per Cenelec HD 308, four core cable is available in 2 alternative identification methods.

STOCK OF ALL SIZES
1mm² - 630mm²

TYPE SY CONTROL CABLES

Plain annealed flexible copper conductors, PVC insulated, extruded PVC bedding, galvanised steel wire braid armour, transparent PVC outer sheath. 300/500 volts grade generally to BS6500 and VDE 0250 class 5.

Temperature limits:
-25 to +60°C.

*Bending radius:
Static - 10 x overall diameter.
Flexing - 20 x overall diameter.

Core Identification:

2 core - Black with white numbers.
3 core and above - Black with white numbers plus Green/Yellow.

Should not be installed at temperatures below -5°C.

Core identification:
2 core - Blue, Brown.
3 core - Blue, Brown, Green/Yellow.
4 core - Grey, Black, Brown, Green/Yellow.
5 core - Grey, Black, Brown, Blue, Green/Yellow.
6 core and above - Black with White numbers plus Green/Yellow.

Should not be installed at temperatures below 0°C.

STOCK OF ALL SIZES 1mm² - 630mm²

FLEXIBLE MAINS AND CONTROL CABLES HO7RN-F

Plain annealed flexible copper conductors, rubber insulated, heavy duty polychloroprene (PCP) outer sheath 450/750 volts grade. Black. Harmonised code type HO7RN-F. Flame propagation to EN 60332-1-2.

Temperature limits:
-25 to +60°C.

*Bending radius:
Static - 6 x overall diameter.
Flexing - 15 x overall diameter.

Also available with coloured cores as follows:
2 core - Blue, Brown.
3 core - Blue, Brown, Green/Yellow.
4 core - Blue, Brown, Black, Green/Yellow or Brown, Black, Grey, Green/Yellow.
5 core - Blue, Brown, Black, Grey, Green/Yellow.

As per Cenelec HD 308, four core cable is available in 2 alternative identification methods.

STOCK OF ALL SIZES 0.75mm² - 95mm²

Please note that gland and cleat sizes are intended to be indicative and may vary according to different manufacturers tolerances.

*All bending radii shown are indicative only as each individual manufacturer has their own criteria for their product. Specification of the minimum bending radius (MBR) of cables is not referred to in cable standards. This is a manufacturer declaration, based on their own judgement and experience of the capabilities of their cable, it is not a specification defined in standards.

Straight connection joint

FILOform

The Filoform range of cast resin Straight Joints are approved in accordance with DIN EN 50393 (VDE 0278:393):2006-11, and are suitable for use with both armoured and unarmoured cables up to and including 1kv. The joints are suitable for use on most cable types, including PILC, XLPE, PVC and EPR, and can be supplied complete with armour earth kit and mechanical connectors as standard.
The standard Straight Joints can be upgraded to suit 3.3kv by using a separate supplementary kit.

Designed for UK armoured cables to allow plenty of room to work.

****Image shown 95mm 4 core SWA cross cored connection****

Item number	Description	Cable Diameter (mm)	Dimensions (mm)
CM0	Straight 6 (Injection Moulded)	Ø 5 - 20	L200 x Ø35
CM1	Straight 16 (Injection Moulded)	Ø 8 - 30	L250 x Ø45
CM2	Straight 25 (Injection Moulded)	Ø 10 - 34	L320 x Ø60
CM2.5	Straight 35/70 (Injection Moulded)	Ø 26 - 53	L355 x Ø72
CM3	Straight 95 (Injection Moulded)	Ø 30 - 48	L450 x Ø75
CM4	Straight 120 (Injection Moulded)	Ø 37 - 67	L547 x Ø108
CM5	Straight 185 (Vacume Formed)	Ø 62 - 68	L700 x Ø140
CM6	Straight 300 (Vacume Formed)	Ø 45 - 70	L800 x Ø160
CM7	Straight 400 (Vacume Formed)	Ø 70 - 105	L1345 x Ø155

****3.3KV joints available. Please contact our technical department on 0044 1189 88687388**

Features

- Type tested according to: EN 50393:2006-11
- Hydrolysis resistant polyurethane resin in a transparent 2 component bag
- Strong transparent shells
- Fully waterproof, no resin leakage
- Cable spacers included
- Complete kit, sealing tape, sandpaper, and protective gloves also included
- Installation instructions with clear drawings
- Quick and easy installation
- Connectors and earthing kits available on request
- Type tested according to: IEC 60455-3-8:2013

FiloShrink End Caps

FILOform

The Filoshrink range of Cable End Caps are manufactured from a high quality EPDM, offering an exceptional environmental and mechanical seal for cables.
The EPDM is factory loaded onto a removable core, which, when correctly positioned over the cable end, is then removed. This allows the Cap to shrink onto the cable sheath without the need for heat or any specialist tooling. Unlike adhesive-lined Heatshrink caps, the Filoshrink Cap can be simply and effectively removed when ready to joint the cable ends. In the meantime, the intense grabbing power of the EPDM continues to shrink onto the cable long after the core is removed offering exceptional protection from the ingress of moisture.

Size of conductor	1 core Armoured	2 core Armoured	3 core Armoured	4 core Armoured	5 core Armoured
1.5mm²	POA	CE 1	CE 1	CE 1	POA
2.5mm²	POA	CE 1	CE 1	CE 1	POA
4mm²	POA	CE 1	CE 1	CE 1	POA
6mm²	POA	CE 1	CE 1	CE 2	POA
10mm²	POA	CE 1	CE 2	CE 2	POA
16mm²	POA	CE 2	CE 2	CE 2	POA
25mm²	POA	CE 2	CE 2	CE 3	POA
35mm²	POA	CE 2	CE 3	CE 3	POA
50mm²	CE 1	CE 2	CE 3	CE 3	POA
70mm²	CE 2	CE 3	CE 3	CE 3	POA
95mm²	CE 2	CE 3	CE 3	CE 3	POA
120mm²	CE 2	CE 3	CE 3	CE 4	POA
150mm²	CE 2	CE 3	CE 3	CE 4	POA
185mm²	CE 3	CE 3	CE 4	CE 4	POA
240mm²	CE 3	CE 4	CE 4	CE 4	POA
300mm²	CE 3	CE 4	CE 4	CE 4	POA
400mm²	CE 3	CE 4	CE 4	CE 4	POA

Item number	After recovery Inner diameter (mm) min	After supplied Inner diameter (mm) max	Description	Length (mm)
FiloShrinkCE-1	11.6	20.9	Cold-shrink end cap type 1	55
FiloShrinkCE-2	16.0	28.0	Cold-shrink end cap type 2	60
FiloShrinkCE-3	23.0	54.0	Cold-shrink end cap type 3	60
FiloShrinkCE-4	45.5	80.0	Cold-shrink end cap type 3	65

Features

- Simple and fast installation, no tools required.
- Accommodates size ranges from 11.6mm – 80mm.
- Seals tight, retains resiliency and pressure even after prolonged years of ageing and exposure.
- Water-resistant.
- No mastic or tape required.
- No torches or heat required.
- Resists fungus.
- Resists acids and alkalis.
- Resists ozone.
- Easily removed.
- No training required for installation.

Centriforce
innovative products from recycled plastic

CABLE COVERS AND UTILITIES PROTECTION

Stokbord® Cable Covers

Heavy duty cable covers manufactured from high impact polyethylene. Ideal alternative to concrete covers and steel plate.

- Suitable for HV electric and fibre optic cables
- Highly visible with excellent impact resistance – design to prevent damage from plant and hand tools
- Easy to handle and install (fully jointed, laid overlapping and fixed with plastic pegs).



Standard sizes

1000mm x 300mm x 12mm
1000mm x 244mm x 12mm
1000mm x 152mm x 12mm

Stokbord cable covers can also be produced in thicknesses from 6mm to 25mm and in widths up to 1500mm

Approved by utility companies throughout the world. Stokbord cable covers meet the impact resistance requirements of BS7484, 1995 Paragraph 4, Appendix A and complies with ENATS 12-23

Centritile® Heavy Duty Warning Tape

A more flexible product produced from high impact recycled polyethylene and supplied on a roll.

- High visibility, heavy duty warning tape for low voltage, 11Kv cables, gas and water piping
- Easy installation – simply unroll.



Available in different colours to denote applications:

Electric	Red/Brown with yellow tape and black lettering
Fibre optic	Green with black lettering
Gas	Yellow with black lettering
Water	Blue with black lettering

Standard sizes

40m x 150mm x 2.5mm
40m x 200mm x 2.5mm

Centritile warning tape can also be produced up to 4mm thickness and 900mm width.

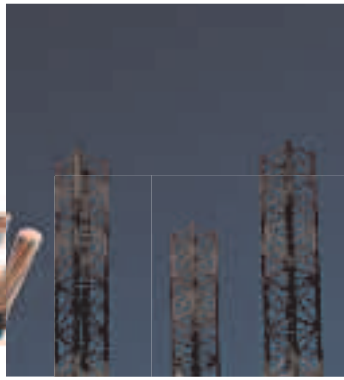
Approved by utility companies throughout the world, Centritile warning tape complies with ENATS 12-23.

CABLE GLANDS, CABLE CLEATS & ACCESSORIES

Armoured cable glands from CMP

RIGHT FIRST TIME INSTALLATION

CMP Products armoured cable glands offer 'right first time' installation, ensuring safe, fast and reliable connections every time.



Multiple solutions for industrial and explosive atmospheres

Triton CDS triple seal
E1FW double seal
CW single seal
BW no seal

www.cmp-products.com

INNOVATION

GLAND SELECTION GUIDELINES

There are many factors to be considered when selecting cable glands for industrial installations. Neglecting to give due attention to these factors could cause unnecessary difficulties at a crucial point in time where most inconvenience and expense can result. It is most desirable to avoid discovering that, once all other equipment is on site or installed, the glands have not been ordered or are the wrong size or type.

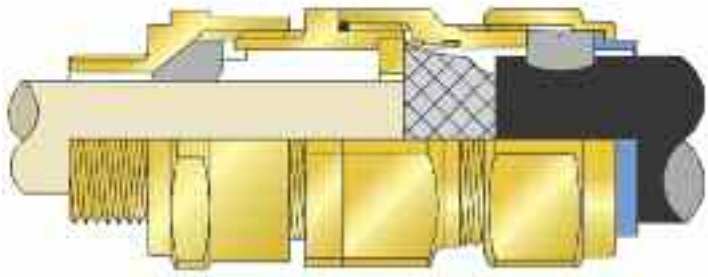
Good practice would be to allocate some planning and preparation time to cable gland selection. This will help avoid the possible disruption which could result at a critical point of the installation process. In the event of a project schedule of cables being available Cleveland Cable Company are happy to offer a gland selection and sizing service. Please contact any of our depots for further information or assistance.

Here is a summary of some aspects to carefully consider when selecting cable glands.

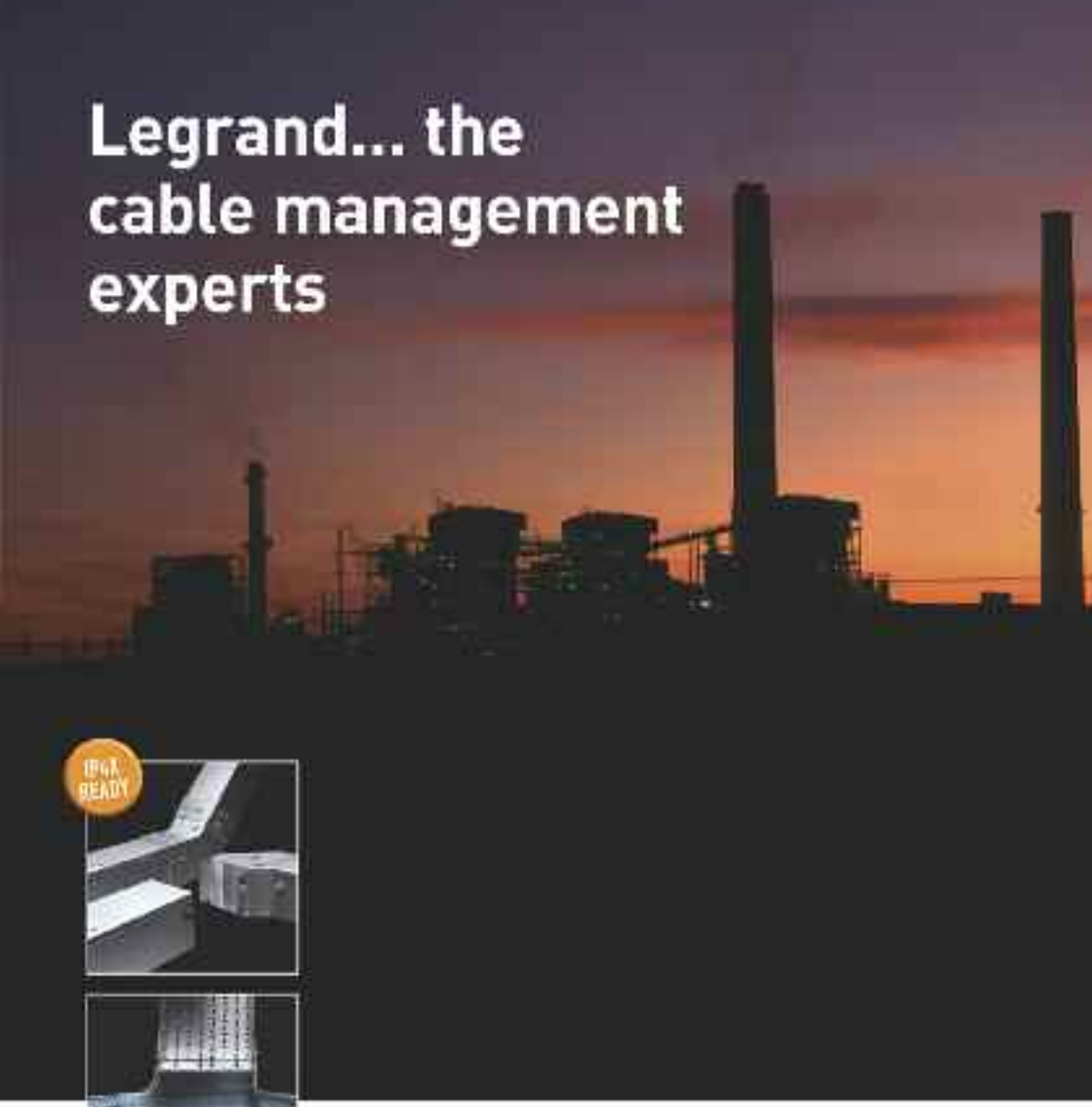
- Identify the type of cable to be used.
- Check the construction, size and material properties of the cable.
- Check the type and material of the cable armour (*)
- Check the short circuit fault current rating of the cable armour (**)
- Check the actual diameter of the inner bedding (where present) against this catalogue.
- Check the actual diameter of the lead covering (where present) against this catalogue.
- Check the actual size of the overall cable diameter against this catalogue.
- Check the size and type or armour or braid (where present) against this catalogue.
- Check any special environmental requirements in relation to corrosion protection.
- Check the material of the mating electrical enclosures to eliminate dis-similar metals.
- Consider whether any protective plating is required to be applied to the cable gland.
- Check the type and size of the cable entry hole in the mating electrical equipment.
- Check the ingress protection rating of the electrical equipment or site standard.
- Check whether a single or double seal cable gland is required.
- Check whether an entry thread seal is required for IP66 (or IP67/IP68) conditions.
- Check whether fixing accessories such as locknuts and serrated washers are required.
- Check whether earth tags are required. (**)
- Check whether shrouds are required.
- Select a corresponding cable gland type from this catalogue.
- For installations in Hazardous Areas, special considerations should be taken into account to ensure compliance with national or international codes of practice.
- Check whether a thread conversion adaptor or reducer is required to make the installation.
- Select corresponding adaptors or reducers from this catalogue.
- Check whether any stopper plugs are required to close unused cable entries.
- Select corresponding stopper plugs from this catalogue.

Note (*): If the cable armour is of a non standard material, i.e. Aluminium Wire Armour, it may be necessary to consider an alternative cable gland material, e.g. Aluminium.

Note (**): For certain medium voltage and high voltage cables where the fault current carrying capacity of the cable armour is greater than that of the standard earth tag it may be necessary to consider a cable gland utilising the a heavy Cast Integral Earth Lug (CIEL) option which can be identified in the body of this catalogue.



Legrand... the cable management experts



With a 15% share of the global market, the Legrand Group is the world specialist in cable management systems... and with our Swifts, Salamandre and Arena-Walsall ranges, our cable management division is an established leader in the UK.

Innovative designs, built on customer feedback, incorporating numerous features that will save you both time and money... making the right choice for your cable management installations has never been easier.

Find out more at your local Cleveland Cables branch today.

POWERED BY SPECIALISTS

legrand

CABLOFIL

A FULL RANGE, FOR ALL INSTALLATION ENVIRONMENTS

MORE THAN PRODUCT, A GLOBAL SOLUTION

With great investment in Research and Development over the last 30 years, Cablofil has developed a range of products aimed at consistently satisfying the demands of the electrical installer.

A SYSTEM

A KNOW HOW

A SERVICE

30 YEARS EXPERIENCE

AVAILABLE WORLD-WIDE

For 30 years, Cablofil has revolutionised Electrical and Telecommunication Cable support systems. Cablofil is one of the safest and most economical cable support systems available. Made from welded steel wires, Cablofil meets the strictest of safety standards, and satisfies the customer's need for reliability and fast economical installation.

Performance, protection

Performance, protection and value

Launched in 1970 and with 18 patents of which 8 introduced in 3 years, the R&D team have one goal: to offer installers and consultants a product that combines performance and value.

QUALITY CERTIFICATION

furse

World Leading Earthing & Lightning Protection

As a world leader in earthing and lightning protection Furse are committed to providing customers with a Total Solution – from innovative product design and manufacturing, through to literature, training and customer services.

Our product range complies with the requirements of relevant British and World standards, and our design and manufacturing quality control systems are independently assessed and approved to ISO9001. Furse can also offer a level of competitiveness, service and technical support that is the envy of competitors both in the UK and overseas.

Our extensive range includes the following:

Earth Rods

Copperweld, solid copper and stainless steel.

Earth Pits

Lightweight, high performance plastic and regular duty concrete pits.

Fittings

Clamps, bonds, clips and accessories in copper and aluminium alloys and plastics suitable for flat tape and solid circular conductor systems.

Conductors

An extensive range of copper and aluminium conductors available bare and PVC covered.

Specialist Products

Including weldable and adhesive conductor clips and earth rod seals.

Furse\WELD Process

An exothermic welding process with a simple self contained method of forming high quality electrical connections which do not require external power or heat source, making the process completely portable.

Thomas&Betts

Superlec ltd
Electrical Distributors

- ALARM SYSTEMS
- CABLES & ACCESSORIES
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- LAMPS & LIGHTING
- LED PRODUCTS
- SITE EQUIPMENT
- SWITCHGEAR & CONTROL
- SWITCHES & SOCKETS
- VENTILATION FANS & DUCTING
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ALL OF YOUR DOMESTIC ELECTRICAL NEEDS ON ONE WEBSITE

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1. DEFINITIONS

'The Vendor' means Cleveland Cable Co. Ltd, whose registered office is situated at Riverside Park, Middlesbrough, TS2 1QW.

'The Goods' shall mean any or all of the goods or materials or services which from time to time the vendor contracts to supply subject to these conditions.

'The Purchaser' means the person, firm or company who places an order with the Vendor or otherwise agrees to buy from the Vendor any of the goods.

2. APPLICATION

2.1 These conditions shall apply to contracts, whether written or oral, for the sale of Goods by the Vendor.

2.2 Any conditions of purchase or other terms provided by the Purchaser shall be of no effect whatsoever nor shall any variation or alteration of these conditions be of any effect unless made in writing and signed on behalf of the Vendor by a director.

2.3 No binding contract shall be created by the placing of an order by the Purchaser unless and until the Vendors written acknowledgement of order shall have been posted or delivered or in the event that no such acknowledgement is sent, the date of despatch of the Goods to the purchaser.

3. QUOTATIONS

Any quotation in whatever form given to the Purchaser is given subject to these conditions as an invitatio n to treat and does not constitute an offer to sell. The validity of any quotation issued by the Vendor shall expire seven (7) days after the date of its issue.

4. PRICES

4.1 Subject to anything to the contrary contained in any quotation issued by the Vendor, prices for the Goods are as referred to in the Vendor's price list from time to time and, unless otherwise stated, are exclusive of value added tax and any other similar tax. The Vendor reserves the right to after any of its prices without notice and the relevant list price should be that ruling at the date of acceptance of the Purchasers off to buy.

4.2 Prices quoted, unless otherwise expressly stated in writing by the Vendor, are exclusive of carriage, packing, handling and any insurance charges.

4.3 The Purchaser shall have no right of set-off whether statutory or otherwise.

4.4 All prices payable must be settled in the currency of the English realm.

5. PAYMENT & DEFAULT by PURCHASER

5.1 Subject to sub-clause 5.2 and 5.3 the Purchaser shall pay the Vendor in full for the Goods within 30 days of the invoice or delivery whichever is the earlier.

5.2 In the event that the Purchaser fails to make payment by the due date or otherwise commits a breach of these conditions, the Vendor may in its absolute discretion and without prejudice to any other rights which it may have:

(i) Suspend all future deliveries or supplies to the Purchaser under the contract in question or under any other contract(s) and/or terminate any such contract(s) without liability upon it part;

(ii) Require payment in advance for any future deliveries;

(iii) (In the case of non payment on or before the due date or on demand as mentioned in sub-clause 5.3 below) Charge interest on the amount due on a day to day basis at the rate of 2% per month compounded quarterly from the time of delivery until the date of actual payment whether before or after judgement.

5.3 The Vendor shall also have all rights referred to in paragraph 5.2 hereof (without prejudice to any other rights which it may have) and may demand immediate payment of all sums whether or not due in the event that any distress or execution shall be levied upon any goods of the Purchaser or if the Purchaser offers to make any arrangement with its creditors or commits an act of bankruptcy or if a petition in bankruptcy be presented against the Purchaser or if any resolution or petition to wind up the Purchaser (other than for the purpose of amalgamation or reconstruction without insolvency) shall be presented or passed or if any petition for an administration order is presented or if a receiver or manager shall be appointed over the whole or any part of the Purchaser's business.

6. DELIVERY

6.1 Delivery will be made by the Vendor at its works in the United Kingdom but for the convenience of the Purchaser it will, if requested, endeavour to arrange an agent for the Purchaser but at the purchasers expense for the carriage of the Goods to a destination specified by the Purchaser and (if so required and at the Purchaser's expense) for their insurance.

6.2 Whatever delivery takes place it will be the Purchasers responsibility to provide any necessary machinery and labour to off-load the goods and to ensure delive ry can take place at the agreed time and place. The Purchaser shall be liable to indemnify the Vendor for any loss or expense incurred as a result of a breach of these obligations. Without prejudice to the a foregoing if the Vendor agrees to provide labour for the loading free of charge then the Vendor will not be liable for any loss or damage howsoever arising through any act, omission or negligence of any of its employees.

6.3 Although given in good faith, delivery times for the supply of Goods specified by the Vendor in its quotation or otherwise are intended as estimates only and are not therefore to be treated as being of the essence of the contract or binding on the Vendor. The Vendor will not be liable to the Purchaser for any loss or damage (direct or indirect) occasioned by it failure (whether as a result of its negligence or otherwise) to deliver the Goods by the date or within the time stated and in no case shall delay be a ground for rejecting the same.

6.4 The right to deliver any part or parts of the Goods when they become available is expressly reserved by the Vendor and these conditions shall apply to any such part or parts mutatis mutandis.

6.5 It is the Purchasers responsibility to check that materials are correct and in good condition at the time of receipt. Claims for deficiencies of any nature will not be considered after delivery has been accepted and transport notes signed accordingly.

7. RISK

7.1 In the event that the Goods are to be delivered by the Vendor to a place nominated by the Purchaser, the risk therein shall pass to the Purchaser at the time they are dispatched with the carrier for delivery.

7.2 In the event that the Goods are to be collected by or on behalf of the Purchaser from the Vendors works, the risk therein shall pass to the Purchaser when the Purchaser takes control of the Goods which will be taken to be the time at which the delivery advice note is signed as received in the absence of evidence to the contrary.

8. CANCELLATION

The Vendor shall be under no obligation whatsoever to accept any cancellation of an order once accepted nor any return of the Goods once dispatched, However, if the Vendor at its complete discretion agrees to accept any such cancellation or return, it may levy such charges as it, in its absolute discretion, sees fit.

9. TITLE

9.1 The provision of this clause shall apply until such time as the price of the Goods have been paid in full or until payment has been made of all other sums owing to the Vendor at the date of this contract on any account whatsoever arising whichever occurrence shall be the latter.

9.2 The property of the Goods shall remain with the Vendor and the Purchaser shall hold the Goods as fiduciary agent and bailee for the Vendor.

9.3 The Purchaser shall store the Goods in such a man ner that they can be identified as the property of the Vendor and shall ensure that the Goods are not incorporated in or mixed in or used as part of other Goods.

9.4 Subject to sub-clauses 9.3, 9.5 and 9.6 the Purchaser shall be at liberty to sell or use the Goods in the ordinary course of it business and the Vendor grants the Purchaser a licence for this purpose. .9.5 The Purchaser shall account to the Vendor for the proceeds of any sale of the Goods, whether sold on their own or in conjunction with other goods and until such account is made the Purchaser will hold the proceeds of sale upon trust for the Vendor. The Purchaser shall ensure any monies received for the Goods are not mixed with other monies or paid into any overdrawn bank account.

9.6 The power of sale given to the Purchaser by sub-clause 9.4 above will automatically terminate if the Purchaser goes into receivership or if a petition is prepared for its winding up or passes a resolution for voluntary winding up or if a petition for an administration order is presented or (if applicable) bankruptcy. Further the Vendor may terminate the said power of sale at any time by written notice if the Purchaser is in default of payment of any sum due to the Vendor of the licence given by the Vendor.

Conditions of Sale (cont.)

9.7 At any time after termination pursuant to 9.6 above, the Vendor may repossess the Goods and the Purchaser hereby grants to the Vendor an irrevocable licence to enter upon the premises of the Purchaser for the purpose of so doing.

9.8 The Vendor shall be entitled to appropriate any payment made by the Purchaser in settlement of such invoices or accounts as the Vendor in its absolute discretion thinks fit notwithstanding any purported appropriate to the contrary by the Purchaser.

9.9 Each of the foregoing sub-clauses shall, so far as the context permits, be read and construed independently of the other sub-clauses so that if one or more of them shall be held to be invalid this shall not affect the validity of the remaining sub-clauses.

10. WARRANTY

10.1 The Vendor warrants it has title of the Goods and right to sell the same.

10.2 No representation or warranty is given as to the suitability or fitness of the Goods for any purpose and the Purchaser shall satisfy itself in this respect and shall be totally responsible therefore.

11. EXCLUSION of LIABILITY

11.1 The Vendor shall be under no liability whatsoever for any defect in, failure of, or unsuitability for any purpose of the Goods or any part thereof whether the same be due to the act of omission, negligence or default of the Vendor or its servants or agents, and all conditions, warrants and other terms whether expressed or implied statutory or otherwise, inconsistent with the provisions of this condition are hereby expressly excluded provided that nothing herein contained shall be construed as excluding or restricting the liability of the Vendor for death or personal injury resulting from the negligence of the Vendor.

11.2 Where the Purchaser deals as a consumer within the meaning of that expression as defined in Section 12 of the Unfair Contract Terms Act 1977 none of the statutory rights of the Purchaser are excluded by these terms, conditions and the statutory rights of the Purchaser in the case of a consumer shall remain in full force and effect and are in no way affected by any of the provisions of these terms and conditions.

11.3 In no circumstances, shall the Vendor be liable for any loss or damage suffered by the Purchaser of the following nature however caused and whether foreseeable or contemplatable:-

(i) Economic loss which shall include loss of profits, business revenue, goodwill and anticipated saving.

(ii) Any claim made against the Purchaser by any third party.

11.4 Each of the Foregoing sub-clauses shall, so far as the context permits, be read and construed independently of the other sub-clauses so that if one or more of them shall be held to be invalid this shall not affect the validity of the remaining sub-clauses.

12. PATENT INFRINGEMENT

12.1 The Vendor warrants only that the Goods themselves will not infringe any patent rights published (at the date of the contract) in the United Kingdom and the Vendor shall indemnify the Purchaser against damage and costs awarded for any such infringement provided that:

(a) This indemnity shall not apply to any infringement which is due to the Vendor having followed any instructions or plans given by the Purchaser or to the use such goods in a manner or for a purpose of in a foreign country not specified or disclosed to the Vendor.

(b) This indemnity is conditional upon the Purchaser giving to the Vendor the earliest possible notice in writing of any claim being made or action threatened against the Purchaser and upon the Purchaser permitting the Vendor to conduct ant litigation that may ensue and all the negotiations for settlement of the claim.

12.2 The Purchaser warrants that any instructions or plans furnished or given by it shall not be such as will cause the Vendor to infringe any letters, patent, copyright, registered design, right of confidence or trade mark in execution of the Purchaser's order and agrees to indemnify the Vendor against all claims, costs or other expenses incurred by the Vendor in respect thereof.

13. GENERAL LIEN

13.1 The Vendor shall have a general lien over all goods of the Purchaser in its possession for all monies due to the Vendor or liabilities incurred by the Vendor upon whatever account shall also be entitled to apply any monies of the Purchaser held by one contract to the discharge of monies due to it under any other contract. The Vendor shall be entitled to charge rent and other expenses incurred during all periods which a lien on goods is being asserted. Further, if the Vendor exercises its right of lien over any goods then if monies due are not paid within one month after it has first retained such goods or if the circumstances mentioned in clause 5.3 arise, the Vendor shall have the power, without giving notice, to sell the whole or part of such goods to cover the monies due and expenses of sale.

13.2 For the avoidance of doubt it is hereby declared that nothing in this clause shall affect the rights given to the Vendor by sections 38-48 of the Sale of Goods Act 1979.

14. CATALOGUES, ADVERTISEMENTS & DRAWINGS etc

14.1 Whilst the Vendor believes that all specifications, illustrations, performance data and other information contained in any drawings, catalogues and advertisements are as accurate as reasonable possible, they do not constitute a description of the Goods, shall not be taken to be representations made by the vendor and are not warranted to be accurate.

14.2 The copyright in all matters referred to in paragraph 12.1 above shall at all times remain vested in the Vendor and the Purchaser shall not reproduce or use any of them without the Vendor's prior written consent.

14.3 Any sample seen by the Purchaser is simply an indication of what attributes the bulk should have, no warranty or representation is given or may be implied that the bulk will be identical to the sample in any attribute.

15. ALTERATIONS & MODIFICATIONS

The Vendor may carry out from time to time and without prior notice to the Purchaser alterations or improvements in construction or design, specification, materials or manner of manufacture of the Goods.

16. DEFACING of the GOODS

The Purchaser shall not deface, tamper with or remove in all or part any trade mark, logo or insignia which may be embossed upon or affixed to the Goods (nor affix any other trade mark, logo or insignia thereon) without prior consent of the Vendor and shall not otherwise deface and/or interfere with, alter or modify any of the Goods.

17. INSTRUCTIONS for USE and INSTALLATION

The purchaser will comply with such instructions for use and installation in respect of the Goods as may be issued by the Vendor from time to time and will install the Goods using competent tradesman in accordance with generally accepted levels of good practice.

18. FORCE MAJEURE

Without prejudice to the generality of any of the foregoing conditions the Vendor shall not be liable for any loss or damage caused by the non-performance or delay in the performance of any of its obligations hereunder if the same is occasioned by any cause whatsoever which is beyond the Vendors control, including but not limited to Acts of God, war, civil disturbances, requisitioning, import or export regulations, strike, lock-out or trade dispute, difficulties in obtaining materials, breakdown of machinery, fire or accident. Should any such event occur the Vendor may cancel or suspend this contract without incurring any liability for any loss or damage thereby occasioned.

19. NOTICES

Any notice required to be served pursuant to these conditions shall be served as follows:-

Notices to the Vendor: to its office, or such other address as it may from time to time notify to the Purchaser;

Notices to the Purchaser: to such address as the Purchaser may notify to the Vendor or, in default of notification, to the address to which the Goods are or were to be delivered, or if the Purchaser is a company, at the Vendors option to the Purchaser's registered office.

20. GOVERNING LAW

This contract is governed by the laws of England and the Purchaser agrees to submit to the prejudice of the English law courts.

CLEVELAND CABLE COMPANY

Middlesbrough Branch
Tel: Sales 01642 241133 / Admin 254234
Fax: Sales 01642 226171 / Admin 226474
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Website: www.clevelandcable.com

Bristol Branch
Tel: 01179 382222
Fax: 01179 382220
Email: bristol@clevelandcable.com

Glasgow Branch
Tel: 0141 646 5000
Fax: 0141 646 5001
Email: glasgow@clevelandcable.com

Milton Keynes Branch
Tel: 01908 221414
Fax: 01908 221661
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London Branch
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Fax: 0191 263 0601
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