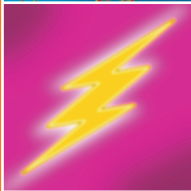
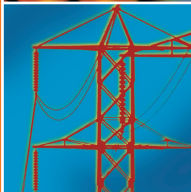
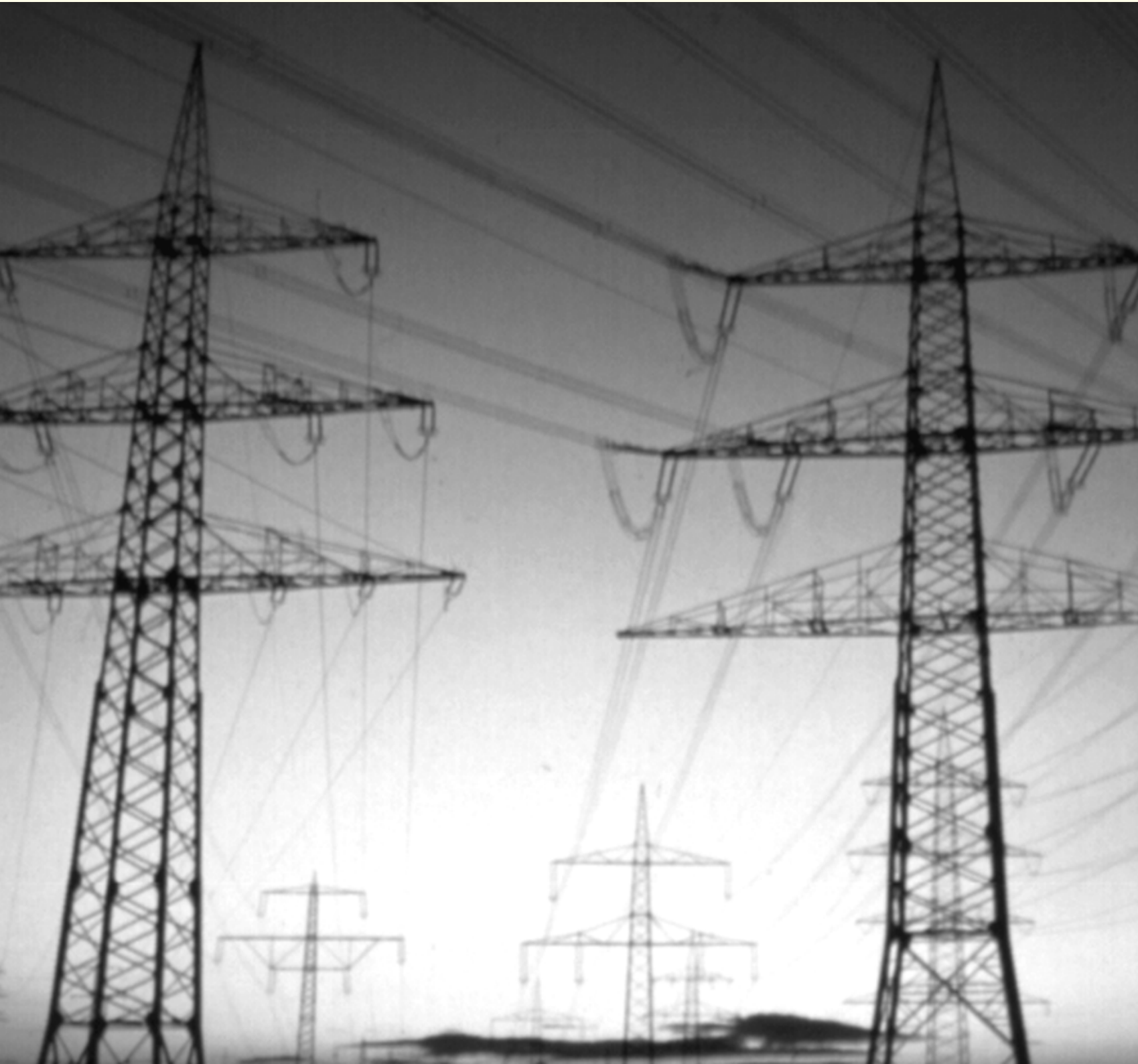




SAUDI CABLE COMPANY POWER CABLE DIVISION

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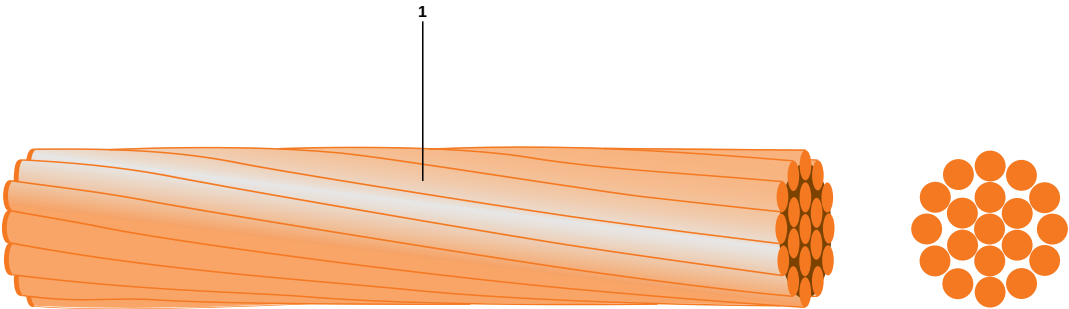
OVERHEAD
LINES

Saudi Cable Company



شركة الكابلات السعودية

1. Bare Copper Conductor



DESCRIPTION

Hard-drawn copper conductors are usually manufactured to meet the latest revisions of the following specifications:

DIN 48201, Part 1 or BS:125.

Sizes and stranding in accordance with above specifications shall be found in the following tables.

Any other sizes and stranding will be manufactured by request according to any international or customer specification. Permissible variations of shipping lengths and random lengths, if not otherwise agreed, shall be in accordance with relevant standards.

FEATURES

- 1. Highest conductivity per unit area of all commercial metals used to conduct electricity.
- 2. Good fatigue resistance and not subject to breaks due to nicks or cuts when terminating.
- 3. Totally recyclable with high scrap value.

APPLICATION

Copper conductors are used in overhead electrical transmission and distribution systems.

Note: In the interest of product improvement, SCC reserve the right to alter cable specifications.

BARE HARD-DRAWN COPPER CONDUCTORS

DIMENSIONS AND WEIGHTS

Din 48 201 Part 1

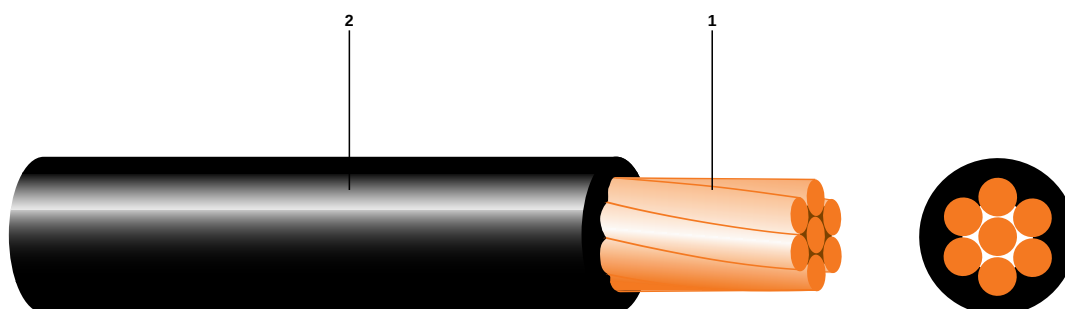
Catalogue number	Conductor			Characteristics			Packaging	
	Cross sectional area Nominal mm ²	Number and nominal dia. of wires no.xmm	Overall diameter Approx mm	DC resistance at 20°C ohms/km	Ampacity amps	Calculated breaking load KN	Net weight Approx kg/km	Standard packing m±5%
DXX1-08X	10	7x1.35	4.1	1.8230	90	4.02	90	4500
DXX1-09X	16	7x1.70	5.1	1.1798	125	6.37	143	5000
DXX1-10X	25	7x2.10	6.3	0.7679	160	9.71	218	3600
DXX1-11X	35	7x2.50	7.5	0.5319	200	13.78	309	2500
DXX1-13X	50	7x3.00	9.0	0.3694	250	19.81	445	2000
DXX1-14X	50	19x1.80	9.0	0.3888	250	19.42	436	2500
DXX1-16X	70	19x2.10	10.5	0.2843	310	26.38	594	2400
DXX1-17X	95	19x2.50	12.5	0.1997	380	37.36	841	2500
DXX1-18X	120	19x2.80	14.0	0.1588	440	46.87	1056	2000
DXX1-21X	150	37x2.25	15.8	0.1272	510	58.93	1329	1000
DXX1-22X	185	37x2.50	17.5	0.1028	585	72.76	1641	1000
DXX1-24X	240	61x2.25	20.3	0.0733	700	97.18	2191	1000
DXX1-26X	300	61x2.50	22.5	0.0625	800	119.98	2705	1000
DXX1-27X	400	61x2.89	26.0	0.0568	960	160.28	3615	500
DXX1-28X	500	61x3.23	29.1	0.0375	1110	200.24	4515	500

BS:125

Catalogue number	Conductor			Characteristics			Packaging	
	Cross sectional area Nominal mm ²	Number and nominal dia. of wires no.xmm	Overall diameter Approx mm	DC resistance at 20°C ohms/km	Ampacity amps	Calculated breaking load KN	Net weight Approx kg/km	Standard packing m±5%
DXX1-08X-0B1	10	7x1.35	4.05	1.8230	90	89.8	91.9	4500
DXX1-09X-0B2	14	7x1.60	4.80	1.2980	113	126.1	128.9	5000
DXX1-09X-0B3	16	3x2.65	5.69	1.1040	125	148.3	152.0	2500
DXX1-10X-0B1	25	7x2.14	6.42	0.7255	162	225.7	230.7	3600
DXX1-11X-0B2	32	3x3.75	8.05	0.5514	183	296.9	304.3	2000
DXX1-11X-0B1	35	7x2.50	7.50	0.5319	200	308.0	314.9	2500
DXX1-13X-0B1	50	7x3.00	9.00	0.3694	250	443.5	453.4	2000
DXX1-15X-0B1	70	7x3.55	10.65	0.2637	310	621.0	634.7	1500
DXX1-17X-0B1	100	7x4.30	12.90	0.1804	385	911.2	934.3	1000
DXX1-18X-0B1	125	19x2.90	14.50	0.1463	425	1130.0	1158.0	1000
DXX1-20X-0B1	150	19x3.20	16.00	0.1201	510	1376.0	1410.0	1000
DXX1-22X-0B1	185	19x3.55	17.75	0.09759	585	1693.0	1735.0	1000

Ampacity values are based on a wind speed of 0.6 m/s and solar irradiation giving an initial ambient temperature of 35°C and a final stranded conductor temperature of 70°C. In special circumstances involving still air, the values must be reduced on average by about 30%.

1. Stranded Copper Conductor
2. PVC Insulation



DESCRIPTION

PVC insulated hard drawn copper conductors for overhead transmission lines, to BS:6485 type 8 and type 16.

CONSTRUCTION

Conductor

Plain circular stranded hard drawn copper conductors conforming to DIN 48201, Part 1

Insulation

Black heat resistive PVC type 5 rated 85°C to BS:6746, including 2.5% carbon black, for protection against ultra-violet radiation from the sun's rays. (PVC type 1 rated 70°C to BS:6746 also available upon request).

APPLICATION

These cables have been designed primarily to give protection to telecommunication lines where crossed by power lines and to safeguard the public from low voltage lines in case of accidental contacts for short periods. They are available in the following two types:

Type 8

For use only where the operating voltage of the power line does exceed 650 V_{rms} between any two conductors or 250 V_{rms} between any conductor and earth.

Type 16

For use where the operating voltage of the power line exceeds 650 V_{rms} between any two conductors or 250 V_{rms} between any conductor and earth, but does not normally exceed 11KV_{rms} between conductors or 6.6KV_{rms} between any conductor and earth.

TO ORDER

Order by catalogue number, quantity and packaging required.

Example

DFA1-14B 20km (10x2000m) non-returnable reels.

Note: If 70°C rated PVC insulation is desired, change the second letter to 'A' for type '8' and 'E' for type '16' in the catalogue number.

Example

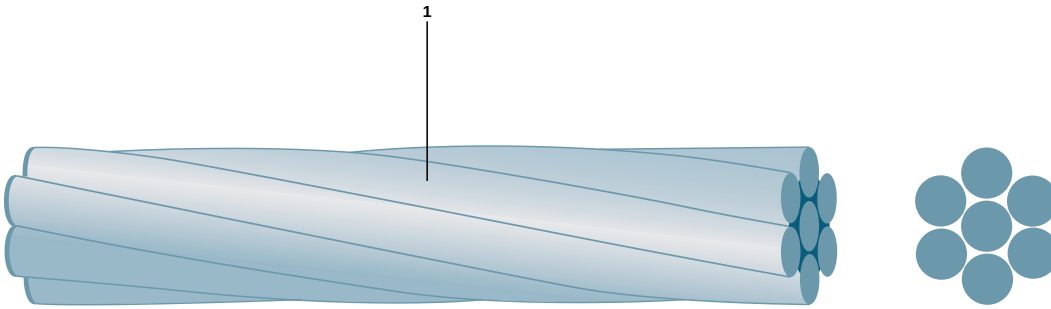
The catalogue number for a 70 mm² (19x2.1mm), 70°C rated PVC insulated type 16 copper conductor will be DEA1-16B.

Note: In the interest of product improvement, SCC reserve the right to alter cable specifications.

DIMENSIONS AND WEIGHTS

Catalogue number	Conductor		Insulation		Packaging	
	Nominal cross sectional area mm ²	Number and diameter of wires no.xmm	Min. thickness of insulation at any point mm	Overall diameter Approx mm	Net weight Approx kg/km	Standard packing m±5%
Conductor to Din 48 201 Part 1, PVC insulation to BS:6485 type 8						
DFA1-08B	10	7x1.35	0.8	6.1	117	2000/3000
DFA1-09B	16	7x1.70	0.8	7.1	177	2000/3000
DFA1-10B	25	7x2.10	0.8	8.3	268	1500/2000
DFA1-11B	35	7x2.50	0.8	9.5	368	1500/2000
DFA1-13B	50	7x3.00	0.8	11.0	519	1000/2000
DFA1-14B	50	19x1.80	0.8	11.0	503	1000/2000
DFA1-16B	70	19x2.10	0.8	12.5	685	1000/2000
DFA1-17B	95	19x2.50	0.8	14.5	951	500/1000
DFA1-18B	120	19x2.80	0.8	16.0	1180	500/1000
DFA1-20B	150	19x3.20	0.8	18.0	1523	500/1000
DFA1-21B	150	37x2.25	0.8	17.8	1462	500/1000
DFA1-22B	185	37x2.50	0.8	19.5	1790	500
Conductor to Din 48 201 Part 1, PVC insulation to BS:6485 type 16						
DMA1-08B	10	7x1.35	1.6	7.6	142	2000/3000
DMA1-09B	16	7x1.70	1.6	8.7	205	2000/3000
DMA1-10B	25	7x2.10	1.6	9.9	303	1500/2000
DMA1-11B	35	7x2.50	1.6	11.1	409	1500/2000
DMA1-13B	50	7x3.00	1.6	12.6	564	1000/2000
DMA1-14B	50	19x1.80	1.6	12.6	584	1000/2000
DMA1-16B	70	19x2.10	1.6	14.1	723	1000/2000
DMA1-17B	95	19x2.50	1.6	16.1	995	500/1000
DMA1-18B	120	19x2.80	1.6	17.6	1228	500/1000
DMA1-20B	150	19x3.20	1.6	19.6	1577	500/1000
DMA1-21B	150	37x2.25	1.6	19.3	1515	500/1000
DMA1-22B	185	37x2.50	1.6	21.1	1845	500

1. Bare Aluminium Conductor

**DESCRIPTION**

All aluminium conductors (AAC) are usually manufactured to meet the latest revisions of the following specifications:

- | | |
|--|----------------|
| - American Society for Testing Materials | ASTM B231 |
| - British Standards Institution | BS:215: Part 1 |
| - German Specifications | DIN 48 201 |
| - International Electro Technical Commission | IEC:207 |

Sizes and strandings in accordance with above specifications may be found in the following tables.

Any other sizes and stranding will be manufactured by request according to any international or customer specification. Permissible variations of shipping lengths and random lengths, if not otherwise agreed, shall be in accordance with relevant standards.

FEATURES

1. Good corrosion resistance.
2. Easily handled and installed.
3. Very light in weight for overhead lines.

APPLICATION

AAC conductors are widely used for aerial distribution lines, feeders and bus bars of substations.

Note: In the interest of product improvement, SCC reserve the right to alter cable specifications.

DIMENSIONS AND WEIGHTS

ASTM B 231-85 Class AA

Catalogue number	Conductor					Characteristics			Packaging	
	Size		Cross sectional area Nominal mm ²	No. and nominal dia. of wires no.xmm	Overall diameter Approx mm	Max DC resistance at 20°C ohms/km	Ampacity amps	Calculated breaking load KN	Net weight kg/km	Standard packing m±5%
	Circular mils	AWG								
QXX1-1CX	66360	2	33.65	7x2.47	7.42	0.8568	185	6.0	93	8000
QXX1-1RX	83690	1	42.37	7x2.78	8.33	0.6804	215	7.3	117	6000
QXX1-1DX	105600	1/0	53.48	7x3.12	9.36	0.5390	245	8.7	147	6000
QXX1-1EX	133100	2/0	67.44	7x3.50	10.51	0.4275	285	11.0	186	5000
QXX1-1FX	167800	3/0	84.99	7x3.93	11.8	0.3392	330	13.4	234	4000
QXX1-1GX	211600	4/0	107.3	7x4.42	13.25	0.2688	380	17.0	295	2000
QXX1-1YX	250000	--	126.7	7x4.80	14.4	0.2276	425	20.1	349	2000
QXX1-1HX	266800	--	135.3	7x4.96	14.88	0.2131	440	21.4	373	2000
QXX1-2DX	397500	--	201.6	19x3.68	18.38	0.1430	570	31.9	555	2000
QXX1-2KX	450000	--	228.0	19x3.91	19.54	0.1264	620	35.0	628	2000
QXX1-2CX	477000	--	241.5	19x4.02	20.12	0.1194	640	37.1	666	2000
QXX1-2LX	500000	--	253.3	19x4.12	20.6	0.1138	660	38.9	698	2000
QXX1-2FX	556500	--	281.8	19x4.35	21.73	0.1023	700	43.2	777	2000
QXX1-3ZX	600000	--	303.8	37x3.23	22.63	0.0949	740	47.0	838	2000
QXX1-3DX	636000	--	322.2	37x3.33	23.31	0.0895	760	49.8	888	2000
QXX1-3KX	650000	--	329.6	37x3.37	23.58	0.0875	770	51.0	908	2000
QXX1-3LX	700000	--	354.4	37x3.49	24.45	0.0814	810	54.8	977	2000
QXX1-3EX	715500	--	362.7	37x3.53	24.73	0.0795	820	56.1	999	2000
QXX1-3MX	750000	--	380.1	37x3.62	25.32	0.0758	850	58.8	1048	2000
QXX1-3FX	795000	--	402.9	37x3.72	26.07	0.0716	880	62.3	1110	2000
QXX1-3QX	900000	--	456.2	37x3.96	27.74	0.0632	950	68.5	1257	2000
QXX1-3HX	954000	--	483.5	37x4.08	28.55	0.0596	980	72.6	1333	1500
QXX1-3SX	1000000	--	506.7	37x4.18	29.23	0.0567	1010	76.1	1397	1500
QXX1-3JX	1033500	--	523.4	37x4.24	29.71	0.0551	1030	78.6	1444	1500
QXX1-4FX	1113000	--	564.1	61x3.43	30.88	0.0511	1080	86.3	1555	1500
QXX1-4GX	1192500	--	604.0	61x3.55	31.96	0.0477	1120	92.4	1665	1500
QXX1-4HX	1272000	--	644.4	61x3.67	33.01	0.0447	1170	98.6	1777	1500
QXX1-4JX	1351500	--	684.3	61x3.78	34.02	0.0421	1210	105.0	1888	1000
QXX1-4KX	1431000	--	725.4	61x3.89	35.02	0.0397	1260	108.0	1998	1000
QXX1-4ZX	1510500	--	765.7	61x4.00	35.98	0.0377	1290	114.0	2110	1000
QXX1-4LX	1590000	--	805.1	61x4.10	36.9	0.0358	1330	120.0	2222	1000
QXX1-4TX	1750000	--	886.9	61x4.30	38.7	0.0325	1410	132.0	2445	1000

Ampacity values are based on:

1. Maximum conductor temperature 75°C
2. Ambient air temperature 40°C
3. Wind velocity 2 feet/sec.
4. Solar absorption 0.5
5. Emissivity (bare) 0.5

DIMENSIONS AND WEIGHTS

BS:215 Part 1:1970

Catalogue number	Code word	Conductor			Characteristics			Packaging	
		Cross sectional area Nominal mm ²	Number and nominal dia. of wires no.xmm	Overall diameter Approx mm	DC resistance at 20°C ohms/km	Ampacity amps	Calculated breaking load KN	Net weight Approx kg/km	Standard packing m±5%
QXX1-10X-0B1	Midge	22	7x2.06	6.1	1.2277	128	4.0	64	11000
QXX1-11X-0B1	Mosquito	35	7x2.59	7.7	0.7741	190	5.8	101	7000
QXX1-13X-0B1	Ant	50	7x3.10	8.3	0.5419	225	8.2	145	6000
QXX1-16X-0B1	Fly	60	7x3.40	10.2	0.4505	240	9.9	174	5000
QXX1-16X-0B2	Bluebottle	70	7X3.66	10.9	0.3883	270	11.2	201	4000
QXX1-17X-0B1	Wasp	100	7X4.39	13.1	0.2702	345	16.0	290	2500
QXX1-20X-0B1	Hornet	150	19x3.25	16.2	0.18255	464	25.7	434	2500
QXX1-22X-0B1	Chafer	200	19x3.78	18.9	0.1349	550	32.4	587	2500
QXX1-24X-0B1	Cockroach	250	19x4.22	21.1	0.1083	629	40.4	731	2500
QXX1-25X-0B1	Butterfly	300	19X4.65	23.2	0.08916	766	48.7	888	2500
QXX1-27X-0B1	Centipede	400	37X3.78	26.4	0.06944	991	63.1	1145	2500

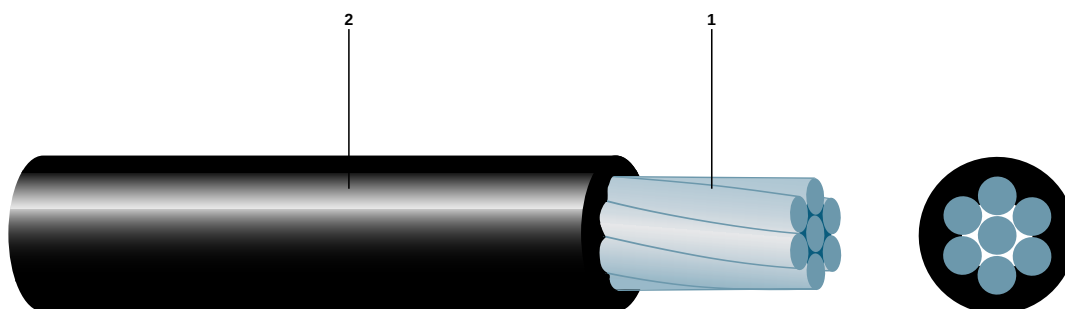
Din 48 201, April 1981

Catalogue number	Conductor			Characteristics			Packaging	
	Cross sectional area Nominal mm ²	Number and nominal dia. of wires no.xmm	Overall diameter Approx mm	DC resistance at 20°C ohms/km	Ampacity amps	Calculated breaking load KN	Net weight Approx kg/km	Standard packing m±5%
QXX1-09X	16	7x1.70	5.1	1.8018	110	2.8	43	16000
QXX1-10X	25	7x2.10	6.3	1.1808	145	4.1	67	11000
QXX1-11X	35	7x2.50	7.5	0.8332	180	5.7	94	8000
QXX1-13X	50	7x3.00	9.0	0.5786	225	7.9	135	6000
QXX1-14X	50	19x1.80	9.0	0.5950	225	8.4	133	7500
QXX1-16X	70	19x2.10	10.5	0.4371	270	11.3	181	11000
QXX1-17X	95	19x2.50	12.5	0.3085	340	15.6	256	8000
QXX1-18X	120	19x2.80	14.0	0.2459	390	18.7	321	7000
QXX1-21X	150	37x2.25	15.7	0.1960	455	25.3	404	5000
QXX1-22X	185	37x2.50	17.5	0.1587	520	30.5	499	4000
QXX1-24X	240	61x2.25	20.3	0.1191	625	39.5	666	5000
QXX1-26X	300	61x2.50	22.5	0.0965	710	47.7	823	4000
QXX1-27X	400	61x2.89	26.0	0.0722	955	60.8	1099	3000
QXX1-28X	500	61x3.23	29.1	0.0578	990	74.6	1373	2500
QXX1-29X	625	91x2.96	32.6	0.0462	1140	95.2	1727	2000
QXX1-31X	800	91x3.35	36.8	0.0361	1340	118.3	2212	1400
QXX1-32X	1000	91x3.74	41.1	0.0290	1540	145.7	2757	1200

Ampacity Values are based on:

- | | | | | | |
|----------------------------------|------|---------------------|-------------|----------------------|-----|
| 1. Maximum conductor temperature | 75°C | 3. Wind velocity | 2 feet/sec. | 5. Emissivity (bare) | 0.5 |
| 2. Ambient air temperature | 40°C | 4. Solar absorption | 0.5 | | |

1. Stranded Aluminium Conductor
2. PVC Insulation



DESCRIPTION

PVC insulated hard drawn aluminium conductors for overhead transmission lines, to BS:6485 type 8 and type 16.

CONSTRUCTION

Conductor

Plain circular stranded hard drawn aluminium conductors conforming to DIN 48201.

Insulation

Black heat resistive PVC type 5 rated 85°C to BS:6746, including 2.5% carbon black, for protection against ultra-violet radiation from the sun's rays. (PVC type 1 rated 70°C to BS:6746 also available upon request).

APPLICATION

These cables have been designed primarily to give protection to telecommunication lines where crossed by power lines and to safeguard the public from low voltage lines in case of accidental contacts for short periods. They are available in the following two types:

Type 8

For use only where the operating voltage of the power line does exceed 650 V_{rms} between any two conductors or 250 V_{rms} between any conductor and earth.

Type 16

For use where the operating voltage of the power line exceeds 650 V_{rms} between any two conductors or 250 V_{rms} between any conductor and earth, but does not normally exceed 11KV_{rms} between conductors or 6.6KV_{rms} between any conductor and earth.

TO ORDER

Order by catalogue number and quantity and packaging required.

Example

QFA1-14B 20Km (10x2000m) non-returnable reels.

Note: If 70°C rated PVC insulation is desired, change the second letter to 'A' for type '8' and 'E' for type '16' in the catalogue number.

Example

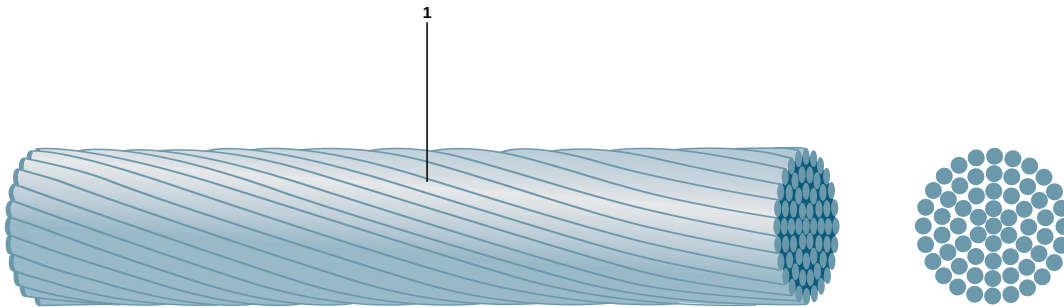
The catalogue number for a 150 mm² (37x2.5mm), 70°C rated PVC insulated type 8 aluminium conductor will be QAA1-21B.

Note: In the interest of product improvement, SCC reserve the right to alter cable specifications.

DIMENSIONS AND WEIGHTS

Catalogue number	Conductor		Insulation		Packaging	
	Nominal cross sectional area mm ²	Number and diameter of wires no.xmm	Min. thickness of insulation at any point mm	Overall diameter Approx mm	Net weight Approx kg/km	Standard packing m±5%
Din 48 201, April 1981 + PVC insulation BS6485 type 8.						
QFA1-09B	16	7x1.70	0.8	7.1	77	2000/3000
QFA1-10B	25	7x2.10	0.8	8.3	116	1500/2000
QFA1-11B	35	7x2.50	0.8	9.5	154	1500/2000
QFA1-13B	50	7x3.00	0.8	11.0	209	1000/2000
QFA1-14B	50	19x1.80	0.8	11.0	199	1000/2000
QFA1-16B	70	19x2.10	0.8	12.5	271	1000/2000
QFA1-17B	95	19x2.50	0.8	14.5	365	500/1000
QFA1-18B	120	19x2.80	0.8	16.0	445	500/1000
QFA1-21B	150	37x2.25	0.8	17.8	536	500/1000
QFA1-22B	185	37x2.50	0.8	19.5	648	500
Din 48 201, April 1981 + PVC insulation BS6485 type 16.						
QMA1-09B	16	7x1.70	1.6	8.7	106	2000/3000
QMA1-10B	25	7x2.10	1.6	9.9	142	1500/2000
QMA1-11B	35	7x2.50	1.6	11.1	194	1000/2000
QMA1-13B	50	7x3.00	1.6	12.6	254	1000/2000
QMA1-14B	50	19x1.80	1.6	12.6	244	1000/2000
QMA1-16B	70	19x2.10	1.6	14.1	310	1000/2000
QMA1-17B	95	19x2.50	1.6	16.1	409	500/1000
QMA1-18B	120	19x2.80	1.6	17.6	493	500/1000
QMA1-21B	150	37x2.25	1.6	19.3	590	500/1000
QMA1-22B	185	37x2.50	1.6	21.1	706	500

1. Stranded All Aluminium Alloy Conductor



DESCRIPTION

All aluminium alloy conductors (AAAC) are usually manufactured to meet the latest revisions of the following specifications:

- | | |
|--|------------------------------|
| - American Society for Testing Materials | ASTM B399. |
| - British Standards Institution | BS:3242. |
| - German Specifications | DIN 48 201 part 6 / IEC:208. |

Sizes and strandings in accordance with above specifications shall be found in the following tables.

Any other sizes and strandings will be manufactured by request according to any international or customer specification. Permissible variations of shipping lengths and random lengths, if not otherwise agreed, shall be in accordance with relevant standards.

FEATURES

AAAC conductors are, in many cases, more profitable compared with ACSR conductors because of the many advantages they offer, when the conductivity of both conductors is the same, the AAAC conductor is to be recommended for the following reasons:

1. Bigger loading capacity.
2. Better short circuit resistance.
3. Smaller electrical losses.
4. Smaller AC-resistance independent of the current.
5. Smaller self-reactance of the conductor.
6. In some cases the outer diameter is smaller causing a reduction of the wind load.
7. Lighter and easier to handle.
8. Better protection against corrosion.
9. Harder than the ACSR conductor and not easily scratched.
10. Simpler and more reliable joints.

APPLICATIONS

AAAC conductors are widely used in long-distance transmission lines designed to operate at extra high voltage levels.

Note: In the interest of product improvement, SCC reserve the right to alter cable specifications.

DIMENSIONS AND WEIGHTS

Bare Stranded Conductor to ASTM:B-399

Catalogue number	Conductor					Characteristics			Packaging	
	Size		Cross sectional area	No. and nominal dia. of wires	Overall diameter	Max DC resistance at 20°C	Ampacity	Calculated breaking load	Net weight	Standard packing
	Circular mils	AWG	Nominal mm ²	no.xmm	Approx mm	ohms/km	amps	KN	kg/km	m±5%
UXX1-1CX	66360	2	33.65	7x2.47	7.4	0.9946	144	10.7	93	8000
UXX1-1DX	105600	1/0	53.49	7x3.12	9.3	0.6262	192	17.0	147	6000
UXX1-1EX	133100	2/0	67.45	7x3.50	10.5	0.4966	223	20.5	186	5000
UXX1-1FX	167800	3/0	85.00	7x3.93	11.8	0.3941	258	25.9	234	4000
UXX1-1GX	211600	4/0	107.30	7x4.42	13.2	0.3123	298	32.7	296	2000
UXX1-2DX	400000	--	202.70	19x3.69	18.4	0.1653	446	59.8	559	2000
UXX1-2KX	450000	--	228.00	19x3.91	19.5	0.1469	480	67.3	629	2000
UXX1-2LX	500000	--	253.30	19x4.12	20.6	0.1322	513	74.7	698	2000
UXX1-3FX	550000	--	278.60	37x3.10	21.6	0.1202	546	83.9	768	2000
UXX1-3ZX	600000	--	303.80	37x3.23	22.6	0.1102	576	91.5	838	2000
UXX1-3KX	650000	--	329.10	37x3.37	23.5	0.1018	605	99.1	907	2000
UXX1-3LX	700000	--	354.50	37x3.49	24.4	0.0945	633	102.0	977	2000
UXX1-3MX	750000	--	380.20	37x3.62	25.3	0.0881	661	110.0	1048	2000
UXX1-3FX	800000	--	405.10	37x3.73	26.1	0.0827	687	117.0	1117	2000
UXX1-3QX	900000	--	456.30	37x3.96	27.7	0.0734	739	132.0	1258	2000
UXX1-3SX	1000000	--	506.70	37x4.18	29.2	0.0661	787	146.0	1397	1500

Bare Stranded Conductor to BS:3242:1970

Catalogue number	Conductor				Characteristics			Packaging	
	Code word	Cross sectional area	Number and nominal dia. of wires	Overall diameter	Max DC resistance at 20°C	Ampacity	Calculated breaking load	Net weight	Standard packing
		Nominal mm ²	no.xmm	Approx mm	ohms/km	amps	KN	Approx kg/km	m±5%
UXX1-10X-0B1	Almond	25	7x2.34	7.0	1.09400	135	8.4	82	8000
UXX1-10X-0B2	Cedar	30	7x2.54	7.6	0.92810	150	9.9	97	8000
UXX1-11X-0B2	Fir	40	7x2.95	8.8	0.68800	181	13.4	131	6000
UXX1-14X-0B1	Hazel	50	7x3.30	9.9	0.54980	208	16.8	164	6000
UXX1-17X-0B1	Oak	100	7x4.65	13.9	0.27690	320	33.3	325	2500
UXX1-20X-0B1	Ash	150	19x3.49	17.0	0.18300	418	50.6	497	4000
UXX1-22X-0B1	Elm	175	19x3.76	18.8	0.15680	460	59.1	580	3000
UXX1-27X-0B1	Upas	300	37x3.53	24.7	0.09155	645	101.5	997	3000

Ampacity values are based on:

1. Maximum conductor temperature 75°C
2. Ambient air temperature 40°C
3. Wind velocity 2 feet/sec.
4. Solar absorption 0.5
5. Emissivity (bare) 0.5

DIMENSIONS AND WEIGHTS

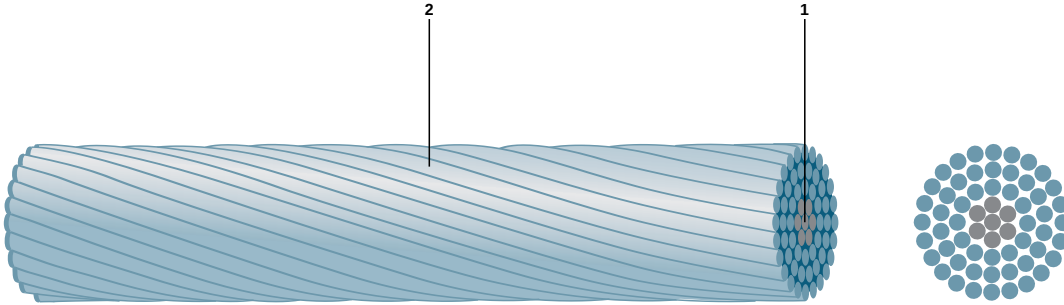
DIN 48 201, April 1981/ IEC 208

Catalogue number	Conductor			Characteristics			Packaging	
	Cross sectional area Nominal mm ²	Number and nominal dia. of wires no.xmm	Overall diameter Approx mm	Max DC resistance at 20°C ohms/km	Ampacity amps	Calculated breaking load KN	Net weight Approx kg/km	Standard packing m±5%
UXX1-09X	16	7x1.70	5.1	2.0719	90	4.4	44	16000
UXX1-10X	25	7x2.10	6.3	1.3578	118	6.7	67	11000
UXX1-11X	35	7x2.50	7.5	0.9580	146	9.6	94	8000
UXX1-13X	50	7x3.00	9.0	0.6653	185	13.8	135	6000
UXX1-14X	50	19x1.80	9.0	0.6842	182	13.5	133	7500
UXX1-16X	70	19x2.10	10.5	0.5027	221	18.3	181	11000
UXX1-17X	95	19x2.50	12.5	0.3547	275	26.0	256	8000
UXX1-19X	120	19x2.80	14.0	0.2827	318	32.6	322	7000
UXX1-21X	150	37x2.25	15.7	0.2254	366	41.0	406	5000
UXX1-22X	185	37x2.50	17.5	0.1825	419	50.7	501	4000
UXX1-24X	240	61x2.25	20.2	0.1370	502	67.7	670	5000
UXX1-26X	300	61x2.50	22.5	0.1110	571	83.6	827	4000
UXX1-27X	400	61x2.89	26.0	0.0830	685	111.7	1105	3000
UXX1-28X	500	61x3.23	29.1	0.0665	784	139.6	1381	2500
UXX1-29X	625	91x2.96	32.6	0.0532	875	174.9	1733	2000
UXX1-31X	800	91x3.35	36.9	0.0415	1014	224.0	2219	1400
UXX1-32X	1000	91x3.74	41.1	0.0333	1149	279.2	2766	1200

Ampacity values are based on:

1. Maximum conductor temperature 75°C
2. Ambient air temperature 40°C
3. Wind velocity 2 feet/sec.
4. Solar absorption 0.5
5. Emissivity (bare) 0.5

1. Galvanised Steel Core Wires
2. Stranded Aluminium Wires



DESCRIPTION

Aluminium conductors steel reinforced (ACSR) have been widely used in the field of overhead transmission and distribution lines as they possess an ideal combination of conductivity and strength to permit longest possible spans and minimum sag between towers.

In the corrosive areas like coastal areas, a greased ACSR is used in order to prevent the corrosion due to the contacts between the steel core and the aluminium wires. SCC provides greased conductors on request.

Aluminium conductors steel reinforced (ACSR) are usually manufactured to meet the latest revisions of the following specifications:

- | | |
|--|---------------------|
| - American Society for Testing Materials | ASTM B 232. |
| - German Specifications | DIN 48204 / IEC:209 |
| - British Standards Institutions | BS:215. |

Any other sizes and strandings will be manufactured by request according to any international or customer specification. Permissible variations of shipping lengths and random lengths, if not otherwise agreed, shall be in accordance with relevant standards.

FEATURES

1. Possibility of optimising tensile strengths and ampacities to match performance and installation criteria.
2. Cost effective solutions for long distance transmission of electrical energy at extra high voltage.

Note: In the interest of product improvement, SCC reserve the right to alter cable specifications.

DIMENSIONS AND WEIGHTS

ASTM B232-86				Nominal area			Aluminium wires
Catalogue number	Code word	Conductor size (Aluminium)		Aluminium mm ²	Steel mm ²	Complete conductor mm ²	Number and nominal diameter of wires no.xmm
		Circular mils	AWG				
SXX1-M6X	Turkey	26240	6	13.29	2.19	15.48	6x1.68
SXX1-M4X	Swan	41740	4	21.16	3.55	24.71	6x2.12
SXX1-M5X	Swanate	41740	4	21.14	5.36	26.50	7x1.96
SXX1-M2X	Sparrow	66360	2	33.61	5.61	39.22	6x2.67
SXX1-M3X	Sparate	66360	2	33.65	8.55	42.20	7x2.47
SXX1-M1X	Robin	83690	1	42.39	7.10	49.49	6x3.00
SXX1-P1X	Raven	105600	1/0	53.48	8.90	62.38	6x3.37
SXX1-P2X	Quail	133100	2/0	67.42	11.23	78.65	6x3.78
SXX1-P3X	Pigeon	167800	3/0	85.03	14.19	99.22	6x4.25
SXX1-P4X	Penguin	211600	4/0	107.20	17.87	125.10	6x4.77
SXX1-B1X	Waxwing	266800	--	135.20	7.42	142.10	18x3.09
SXX1-B2X	Partridge	266800	--	135.20	22.00	157.20	26x2.57
SXX1-B3X	Ostrich	300000	--	152.00	24.71	176.70	26x2.73
SXX1-B4X	Merlin	336400	--	170.50	9.48	180.00	18x3.47
SXX1-B5X	Linnet	336400	--	170.50	27.81	198.30	26x2.89
SXX1-B6X	Oriol	336400	--	170.50	39.81	210.30	30x2.69
SXX1-B7X	Chickadee	397500	--	201.40	11.16	212.60	18x3.77
SXX1-B8X	Brant	397500	--	201.40	26.11	227.50	24x3.27
SXX1-B9X	Ibis	397500	--	201.40	32.77	234.20	26x3.14
SXX1-C1X	Lark	397500	--	201.40	46.97	248.40	30x2.92
SXX1-C2X	Pelican	477000	--	241.70	13.42	255.10	18x4.14
SXX1-C3X	Flicker	477000	--	241.70	31.34	273.00	24x3.58
SXX1-C4X	Hawk	477000	--	241.70	39.42	281.10	26x3.44
SXX1-C5X	Hen	477000	--	241.70	56.39	298.10	30x3.20
SXX1-C6X	Osprey	556500	--	282.00	15.66	297.70	18x4.47
SXX1-C7X	Parakeet	556500	--	282.00	36.54	318.50	24x3.87
SXX1-C8X	Dove	556500	--	282.00	45.93	327.90	26x3.72
SXX1-C9X	Eagle	556500	--	282.00	65.81	347.90	30x3.46
SXX1-D1X	Peacock	605000	--	306.60	39.78	346.40	24x4.03
SXX1-D2X	Squab	605000	--	306.60	49.89	356.50	26x3.87
SXX1-D3X	Woodduck	605000	--	306.60	71.52	378.10	30x3.61
SXX1-D4X	Teal	605000	--	306.60	69.89	376.50	30x3.61
SXX1-D6X	King bird	636000	--	322.30	17.91	340.20	18x4.78
SXX1-D7X	Rook	636000	--	322.30	41.76	364.10	24x4.14
SXX1-D8X	Gros beak	636000	--	322.30	52.43	374.70	26x3.97
SXX1-D9X	Scoter	636000	--	322.30	75.19	397.50	30x3.70
SXX1-E1X	Egret	636000	--	322.30	73.55	395.80	30x3.70
SXX1-D5X	Swift	636000	--	322.30	8.95	331.10	36x3.38
SXX1-E2X	Flamingo	666600	--	337.70	43.78	381.50	24x4.23
SXX1-E3X	Gannet	666600	--	337.70	54.98	392.70	26x4.07
SXX1-E4X	Stilt	715500	--	362.60	46.99	409.60	24x4.39
SXX1-E5X	Starting	715500	--	362.60	59.03	421.60	26x4.21
SXX1-E6X	Redwing	715500	--	362.60	82.58	445.20	30x3.92
SXX1-E7X	Cuckoo	795000	--	402.80	52.19	455.00	24x4.62
SXX1-E8X	Drake	795000	--	402.80	65.61	468.40	26x4.44

Steel wires	Nominal diameter		Characteristics		Packaging	
Number and nominal diameter of wires	Steel core	Complete conductor	Max DC resistance at 20°C	Calculated breaking load	Net weight	Standard packing
no.xmm	mm	mm	ohms/km	KN	kg/km	m±5%
1x1.68	1.68	5.03	2.1590	5.29	53.7	17500
1x2.12	2.12	6.35	1.3560	8.28	85.4	11000
1x2.61	2.16	6.53	1.3570	10.50	99.7	13000
1x2.67	2.67	8.03	0.8536	12.70	135.9	7100
1x3.30	3.30	8.25	0.8525	16.20	158.8	8400
1x3.00	3.00	8.99	0.6768	15.80	171.3	6000
1x3.37	3.37	10.11	0.5364	19.50	216.1	4500
1x3.78	3.78	11.35	0.4255	23.60	272.5	3600
1x4.25	4.25	12.75	0.3374	29.40	343.0	3000
1x4.77	4.77	14.30	0.2676	37.10	433.0	2400
1x3.09	3.09	15.47	0.2132	30.60	432.0	5500
7x2.00	6.00	16.31	0.2143	50.20	456.0	7850
7x2.12	6.36	17.27	0.1906	56.40	615.0	8800
1x3.47	3.47	17.37	0.1691	38.60	543.0	4300
7x2.25	6.74	18.29	0.1699	62.70	689.0	6100
7x2.69	8.07	18.82	0.1703	77.10	784.0	3550
1x3.77	3.77	18.87	0.1434	44.20	643.0	3600
7x2.18	6.54	19.61	0.1438	65.10	762.0	4800
7x2.44	7.32	19.89	0.1438	72.40	814.0	5100
7x2.92	8.77	20.47	0.1442	90.50	927.0	3000
1x4.14	4.14	20.68	0.1193	52.30	771.0	3000
7x2.39	7.16	21.49	0.1199	76.40	915.0	4000
7x2.67	8.02	21.79	0.1199	86.90	978.0	4300
7x3.20	9.61	22.43	0.1202	106.00	1112.0	2500
1x4.47	4.47	22.33	0.1022	61.00	899.0	2500
7x2.58	7.73	23.20	0.1027	88.20	1067.0	3400
7x2.89	8.67	23.54	0.1027	101.00	1140.0	3700
7x3.46	10.38	24.21	0.1030	124.00	1298.0	2150
7x2.69	8.07	24.20	0.0945	95.90	1161.0	3150
7x3.01	9.03	24.53	0.0945	108.00	1240.0	3400
7x3.61	10.82	25.25	0.0947	129.00	1411.0	1950
19x2.16	10.82	25.25	0.0947	133.00	1399.0	1950
1x4.78	4.78	23.88	0.0894	69.80	1027.0	2250
7x2.76	8.27	24.81	0.0899	101.00	1219.0	3000
7x3.09	9.27	25.15	0.0899	112.00	1302.0	3300
7x3.70	11.09	25.89	0.0901	135.00	1478.0	1850
19x2.22	11.10	25.88	0.0901	140.00	1470.0	1850
1x3.38	3.38	23.63	0.0894	61.20	958.0	2250
7x2.82	8.47	25.40	0.0858	106.00	1277.0	2800
7x3.16	9.49	25.75	0.0858	117.00	1364.0	3100
7x2.92	8.77	26.32	0.0799	113.00	1372.0	2600
7x3.28	9.83	26.70	0.0799	126.00	1466.0	2900
19x2.35	11.76	27.46	0.0801	154.00	1653.0	3300
7x3.08	9.24	27.73	0.0719	124.00	1522.0	2400
7x3.45	10.36	28.14	0.0719	140.00	1628.0	2600

DIMENSIONS AND WEIGHTS

ASTM B232-86

Catalogue number	Code word	Conductor size (Aluminium)		Nominal area			Aluminium wires
				Aluminium	Steel	Complete conductor	Number and nominal diameter of wires
		Circular mils	AWG	mm ²	mm ²	mm ²	no.xmm
SXX1-F1X	Coot	795000	--	402.8	11.19	414.0	36x3.77
SXX1-E9X	Tern	795000	--	402.8	27.84	430.6	45x3.38
SXX1-F2X	Condor	795000	--	402.8	52.19	455.0	54x3.08
SXX1-F3X	Mallard	795000	--	402.8	91.87	494.7	30x4.14
SXX1-F4X	Ruddy	900000	--	456.1	31.54	487.6	45x3.59
SXX1-F5X	Canary	900000	--	456.1	59.10	515.2	54x3.28
SXX1-F7X	Catbird	954000	--	483.4	13.43	496.8	36x4.14
SXX1-F6X	Rail	954000	--	483.4	33.44	516.8	45x3.70
SXX1-F8X	Cardinal	954000	--	483.4	62.65	546.1	54x3.38
SXX1-G1X	Tanager	1033500	--	523.5	14.54	538.0	36x4.30
SXX1-F9X	Ortolan	1033500	--	523.7	36.18	559.9	45x3.85
SXX1-G2X	Curlew	1033500	--	523.7	67.87	591.5	54x3.51
SXX1-G3X	Bluejey	1113000	--	563.9	39.03	602.9	45x4.00
SXX1-G4X	Finch	1113000	--	563.9	71.55	635.5	54x3.65
SXX1-G5X	Bunting	1192500	--	604.3	41.76	646.1	45x4.14
SXX1-G6X	Grackle	1192500	--	604.3	76.58	680.9	54x3.77
SXX1-G9X	Skylark	1272000	--	643.3	17.87	661.2	36x4.77
SXX1-G7X	Bittern	1272000	--	644.5	44.57	689.1	45x4.27
SXX1-G8X	Pheasant	1272000	--	644.5	81.68	726.2	54x3.90
SXX1-H1X	Dipper	1351500	--	684.8	47.32	732.1	45x4.40
SXX1-H2X	Martin	1351500	--	684.8	86.71	771.5	54x4.02
SXX1-H3X	Bobolink	1431000	--	725.1	50.14	775.2	45x4.53
SXX1-H4X	Plover	1431000	--	725.1	91.87	817.0	54x4.14
SXX1-H5X	Nuthatch	1510500	--	765.4	52.88	818.3	45x4.65
SXX1-H6X	Parrot	1510500	--	765.4	96.84	862.2	54x4.25
SXX1-H7X	Lapwing	1590000	--	805.7	55.69	861.4	45x4.78
SXX1-H8X	Falcon	1590000	--	805.7	102.10	907.8	54x4.36

Note: Ampacities of ACSR conductors acc. to ASTM specifications are provided in a separate section.

Steel wires	Nominal diameter		Characteristics		Packaging	
Number and nominal diameter of wires	Steel core	Complete conductor	Max DC resistance at 20°C	Calculated breaking load	Net weight	Standard packing
no.xmm	mm	mm	ohms/km	KN	kg/km	m±5%
1x3.77	3.77	26.42	0.0716	74.5	1198	3500
7x2.25	6.75	27.00	0.0719	98.2	1333	2200
7x3.08	9.24	27.42	0.0719	125.0	1524	2750
19x2.48	12.41	28.96	0.0721	171.0	1838	2000
7x2.40	7.19	28.74	0.0635	109.0	1510	2000
7x3.28	9.84	29.51	0.0635	142.0	1725	2400
1x4.14	4.14	28.95	0.0596	87.9	1437	3000
7x2.47	7.40	29.59	0.0599	115.0	1600	1900
7x3.38	10.13	30.38	0.0599	150.0	1829	2250
1x4.30	4.30	30.12	0.0551	95.2	1556	2700
7x2.57	7.70	30.78	0.0553	123.0	1734	1700
7x3.51	10.54	31.62	0.0553	163.0	1981	2100
7x2.66	7.99	31.97	0.0514	133.0	1867	1600
19x2.19	10.95	32.84	0.0516	174.0	2129	1900
7x2.76	8.27	33.08	0.0479	142.0	2000	1500
19x2.27	11.33	33.99	0.0482	186.0	2281	1800
1x4.77	4.77	33.40	0.0448	116.7	1917	2250
7x2.85	8.54	34.16	0.0450	152.0	2134	1400
19x2.34	11.70	35.10	0.0452	194.0	2433	1700
7x2.93	8.80	35.21	0.0423	161.0	2266	1300
19x2.41	12.05	36.17	0.0425	206.0	2585	1600
7x3.02	9.06	36.23	0.0400	171.0	2400	1250
19x2.48	12.41	37.21	0.0401	218.0	2738	1500
7x3.10	9.30	37.22	0.0379	178.0	2533	1150
19x2.55	12.74	38.23	0.0380	230.0	2890	1400
7x3.18	9.55	38.20	0.0360	188.0	2666	1100
19x2.62	13.08	39.24	0.0361	242.0	3041	1350

DIMENSIONS AND WEIGHTS

DIN 48 204, April 1984 / IEC 209

Catalogue number	Nominal area mm ²	Calculated area			Aluminium wires	Steel wires	Overall diameter	
		Aluminium	Steel	Complete conductor	Number and nominal diameter of wires no.xmm	Number and nominal diameter of wires no.xmm	Steel core mm	Complete conductor mm
		mm ²	mm ²	mm ²				
SXX1-M5X-OD1	16/2.5	15.3	2.55	17.85	6x1.80	1x1.80	1.80	5.40
SXX1-M4X-OD1	25/4	23.8	4.00	27.80	6x2.25	1x2.25	2.25	6.80
SXX1-M2X-OD1	35/6	34.3	5.70	40.00	6x2.70	1x2.70	2.70	8.10
SXX1-M1X-OD1	44/32	44.0	31.70	75.70	14x2.00	7x2.40	7.20	11.20
SXX1-A2X-OD1	50/8	48.3	8.00	56.30	6x3.20	1x3.20	3.20	9.60
SXX1-A2X-OD3	50/30	51.2	29.80	81.00	12x2.33	7x2.33	6.99	11.70
SXX1-A4X-OD1	70/12	69.9	11.40	81.30	26x1.85	7x1.44	4.32	11.70
SXX1-A7X-OD1	95/15	94.4	15.30	109.70	26x2.15	7x1.67	5.01	13.60
SXX1-A7X-OD2	95/55	96.5	56.30	152.80	12x3.20	7x3.20	9.60	16.00
SXX1-A9X-OD1	105/75	105.7	75.50	181.50	14x3.10	19x2.25	11.25	17.50
SXX1-B2X-OD1	120/20	121.6	19.80	141.40	26x2.44	7x1.90	5.70	15.50
SXX1-B2X-OD2	120/70	122.0	71.30	193.30	12x3.60	7x3.60	10.80	18.00
SXX1-B2X-OD3	125/30	127.9	29.80	157.70	30x2.33	7x2.33	6.99	16.10
SXX1-B3X-OD1	150/25	148.9	24.20	173.10	26x2.70	7x2.10	6.31	17.10
SXX1-B4X-OD1	170/40	171.8	40.10	221.90	30x2.70	7x2.70	8.10	18.90
SXX1-B5X-OD1	185/30	183.8	29.80	213.60	26x3.00	7x2.33	6.99	19.00
SXX1-C1X-OD1	210/35	209.1	34.10	243.20	26x3.20	7x2.49	7.47	20.30
SXX1-C1X-OD2	210/50	212.1	49.50	261.60	30x3.00	7x3.00	9.00	21.21
SXX1-C2X-OD1	230/30	230.9	29.80	260.70	24x3.50	7x2.33	6.99	21.00
SXX1-C4X-OD1	240/40	243.0	39.50	282.50	26x3.45	7x2.68	8.04	21.90
SXX1-C5X-OD1	265/35	263.7	34.10	297.80	24x3.74	7x2.49	7.47	22.40
SXX1-D8X-OD1	300/50	304.3	49.50	353.70	26x3.86	7x3.00	9.00	24.50
SXX1-D8X-OD2	305/40	304.6	39.50	344.10	54x2.68	7x2.68	8.04	24.10
SXX1-E3X-OD1	340/30	339.3	29.80	369.10	48x3.00	7x2.33	6.99	25.00
SXX1-E6X-OD1	380/50	382.0	49.5	431.5	54x3.00	7x3.00	9.00	27.0
SXX1-E7X-OD1	385/35	386.0	34.1	420.1	48x3.20	7x2.49	7.47	26.7
SXX1-F5X-OD1	435/55	434.3	56.3	490.6	54x3.20	7x3.20	9.60	28.8
SXX1-F6X-OD1	450/40	448.7	39.5	488.2	48x3.45	7x2.68	8.04	28.7
SXX1-F8X-OD1	490/65	490.3	63.6	553.9	54x3.40	7x3.40	10.20	30.6
SXX1-F9X-OD1	495/35	494.1	34.1	528.2	45x3.74	7x2.49	7.47	29.9
SXX1-G3X-OD1	510/45	510.2	45.3	555.5	48x3.68	7x2.87	8.61	30.7
SXX1-G4X-OD1	550/70	550.0	71.3	621.3	54x3.60	7x3.60	10.80	32.4
SXX1-G4X-OD2	560/50	561.7	49.5	611.2	48x3.86	7x3.00	9.00	32.2
SXX1-G4X-OD3	570/40	571.2	39.5	610.7	45x4.02	7x2.68	8.04	32.2
SXX1-G5X-OD1	650/45	653.5	45.3	698.8	45x4.30	7x2.87	8.61	34.0
SXX1-G6X-OD1	680/85	678.6	86.0	764.6	54x4.00	19x2.40	12.00	36.0

Characteristics			Characteristics	
DC resistance at 20°C	Ampacity	Calculated breaking load	Weight	Standard packing
ohms/km	amps*	KN	Approx kg/km	m±5%
1.8790	95	5.95	62	10000
1.2030	126	9.20	97	10000
0.8352	159	12.65	140	7000
0.6573	195	45.00	372	2500
0.5946	197	17.10	196	5100
0.5644	213	43.80	378	4500
0.4130	248	26.80	284	5000
0.3058	300	35.75	383	5500
0.2992	317	79.35	712	5000
0.2736	340	108.45	891	5000
0.2374	352	45.65	494	4000
0.2364	368	100.00	901	4000
0.2259	365	57.60	591	4000
0.1939	400	55.25	605	3500
0.1682	441	76.75	794	3500
0.1571	457	66.20	746	5500
0.1380	495	74.90	850	3000
0.1363	505	93.90	981	3000
0.1249	525	73.10	877	3000
0.1188	544	86.40	987	4300
0.1094	571	83.05	1002	2500
0.0949	626	107.00	1236	3000
0.0950	623	99.40	1160	3000
0.0851	663	92.90	1180	3000
0.0758	716	123.10	1453	2000
0.0748	718	104.80	1344	2000
0.0666	774	136.45	1653	2400
0.0643	786	120.75	1561	2000
0.0590	832	153.10	1866	2000
0.0585	831	121.80	1646	2000
0.0565	850	136.65	1778	2000
0.0526	872	170.60	2092	1900
0.0514	878	148.95	1954	2000
0.0507	884	136.20	1888	2000
0.0443	854	155.50	2171	1900
0.0426	987	206.25	2566	1500

*Based on:

1. Maximum conductor temperature 75°C
2. Ambient air temperature 40°C
3. Wind velocity 2 feet/sec.
4. Solar absorption 0.5
5. Emissivity (bare) 0.5

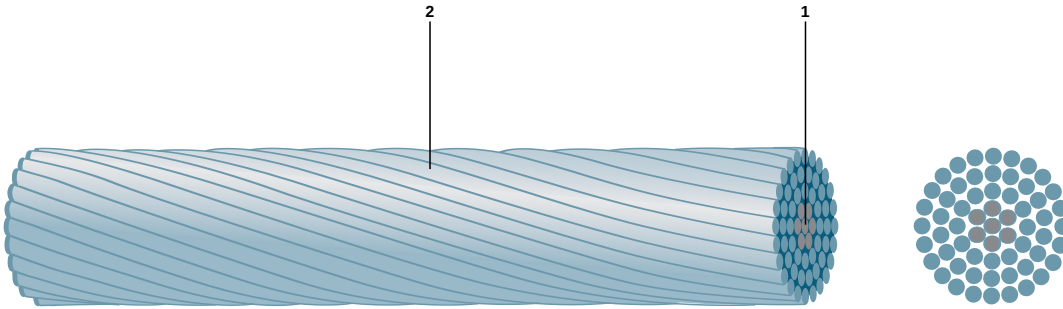
DIMENSIONS AND WEIGHTS

ACSR Conductors to BS:215 Part 2:1970

Catalogue number	Code word	Nominal aluminium area mm ²	Calculated area			Aluminium wires	Steel wires
			Aluminium	Steel	Complete conductor	Number and nominal diameter of wires	Number and nominal diameter of wires
			mm ²	mm ²	mm ²	no.xmm	no.xmm
SXX1-M4X-0B1	Gopher	25	26.24	4.38	30.62	6x2.36	1x2.36
SXX1-M5X-0B1	Weasel	30	31.61	5.27	36.68	6x2.59	1x2.59
SXX1-M6X-0B1	Ferret	40	42.41	7.07	49.48	6x3.00	1x3.00
SXX1-P1X-0B1	Rabbit	50	52.88	8.82	61.70	6x3.35	1x3.35
SXX1-A4X-0B1	Horse	70	73.37	42.83	116.20	12x2.79	7x2.79
SXX1-A8X-0B1	Dog	100	105.00	13.50	118.50	6x4.72	7x1.57
SXX1-B3X-0B1	Wolf	150	158.10	36.80	194.90	30x2.59	7x2.59
SXX1-B3X-0B2	Dingo	150	158.70	8.80	167.50	18x3.35	1x3.35
SXX1-B6X-0B1	Lynx	175	183.40	42.80	226.20	30x2.79	7x2.79
SXX1-B6X-0B2	Caracal	175	184.30	10.20	194.50	18x3.61	1x3.61
SXX1-C1X-0B1	Panther	200	212.10	49.40	261.50	30x3.00	7x3.00
SXX1-B7X-0B1	Jaguar	200	210.60	11.70	222.30	18x3.86	1x3.86
SXX1-F2X-0B1	Zebra	400	428.90	55.60	484.50	54x3.18	7x3.18

Overall diameter		Characteristics			Packaging	
Steel core	Complete conductor mm	Max DC resistance at 20°C ohms/km	Ampacity amps*	Calculated breaking load KN	Weight Approx kg/km	Standard packing m±5%
2.36	7.08	1.0930	134	9.61	106	4500
2.59	7.77	0.9077	179	11.45	128	4500
3.00	9.00	0.6766	182	15.20	172	4500
3.35	10.05	0.5426	208	18.35	214	4500
8.37	13.95	0.3936	267	61.20	538	4000
4.71	14.15	0.2733	321	32.70	394	2000
7.77	18.13	0.1828	418	69.20	726	3500
3.35	16.75	0.1815	412	35.70	506	4300
8.37	19.53	0.1576	459	79.80	842	3200
3.61	18.05	0.1563	452	41.10	587	3000
9.00	21.00	0.1363	504	92.25	974	3000
3.86	19.30	0.1367	491	46.55	671	3000
9.54	28.62	0.0674	770	131.90	1621	2500

1. Aluminium-clad Steel Core Wires
2. Stranded Aluminium Wires



DESCRIPTION

Aluminium conductors aluminium clad steel reinforced (ACSR/AW) are usually manufactured in accordance with the latest revision of the following specification:

- American Society of Testing Materials ASTM B549.

Any other sizes and stranding will be manufactured by request according to any international or customer specification. Permissible variations of shipping lengths and random lengths, if not otherwise agreed, shall be in accordance with relevant standards.

FEATURES

A major improvement is built into any ACSR Conductor when aluminium clad steel core wire or strand is used. The resulting conductor (ACSR/AW) has better corrosion resistance, lighter weight and lower power losses than ACSR. The design and dimensions of ACSR/AW are identical to those of ordinary ACSR. The only difference is in the core where aluminium clad steel wires are used instead of galvanized steel wires.

ACSR/AW conductors with high conductivity serve as energy saving conductors due to reduced electrical power losses over the long term use. As for tensile strength and weight comparing ACSR with ACSR/AW, the ACSR is approx. 3% (i.e. 1kg/mm²) higher in tensile strength and ACSR/AW is approx. 5-6% lighter in weight.

APPLICATION

ACSR/AW is used for the transmission of electric power over long distances. It is also used as a messenger to support overhead electrical cables.

Note: In the interest of product improvement, SCC reserve the right to alter cable specifications.

ALUMINIUM CONDUCTOR ALUMINIUM CLAD STEEL REINFORCED (ACSR/AW)

DIMENSIONS AND WEIGHTS

			Number and nominal diameter of wires				Characteristics		Packaging
Catalogue number	Code word	Circular mil area or AWG aluminium	Aluminium no.xmm	Aluminium clad steel wire no.xmm	Overall diameter Approx mm	Max. DC resistance at 20°C ohm/km	Calculated breaking load KN	Net weight Approx kg/km	Standard packing m±5%
VXX1-M4X	Swan/AW	4	6x2.12	1x2.12	6.4	1.285	7.92	81	11000
VXX1-M5X	Swanate/AW	4	7x1.96	1x2.61	6.5	1.251	10.14	93	13000
VXX1-M2X	Sparrow/AW	2	6x2.67	1x2.67	8	0.8078	12.28	129	7100
VXX1-M3X	Sparate/AW	2	7x2.47	1x3.30	8.3	0.7861	15.62	148	8400
VXX1-M1X	Robin/AW	1	6x3.00	1x3.00	9	0.6398	15.37	164	6000
VXX1-P1X	Rawen/AW	1/0	6x3.37	1x3.37	10.1	0.5076	18.90	206	4500
VXX1-P2X	Quail/AW	2/0	6x3.78	1x3.78	11.4	0.4026	22.87	259	3600
VXX1-P3X	Pigeon/AW	3/0	6x4.25	1x4.25	12.7	0.3198	28.05	326	3000
VXX1-P4X	Penguin/AW	4/0	6x4.77	1x4.77	14.3	0.2535	34.20	412	2400
VXX1-B1X	Waxwing/AW	266800	18x3.09	1x3.09	15.5	0.2096	30.35	422	5500
VXX1-B2X	Partridge/AW	266800	26x2.57	7x2.00	16.3	0.2033	48.06	521	7850
VXX1-B3X	Ostrich/AW	300000	26x2.73	7x2.12	17.3	0.1808	53.97	585	3800
VXX1-B4X	Merlin/AW	336400	18x3.47	1x3.47	17.4	0.1661	37.99	532	4300
VXX1-B5X	Linnet/AW	336400	26x2.89	7x2.25	18.3	0.1611	60.12	657	6100
VXX1-B6X	Oriole/AW	336400	30x2.69	7x2.69	18.8	0.1581	74.54	736	3550
VXX1-B7X	Chickadee/AW	397500	18x3.77	1x3.77	18.9	0.1406	43.51	629	3600
VXX1-B8X	Brant/AW	397500	24x3.27	7x2.18	19.6	0.1378	62.57	731	4800
VXX1-B9X	Ibis/AW	397500	26x3.14	7x2.44	19.9	0.1366	70.22	775	5100
VXX1-C1X	Lark/AW	397500	30x2.92	7x2.92	20.5	0.1338	87.35	870	3000
VXX1-C2X	Pelican/AW	477000	18x4.14	1x4.14	20.7	0.1171	50.99	755	3000
VXX1-C3X	Flicker/AW	477700	24x3.58	7x2.39	21.5	0.1149	74.31	877	4000
VXX1-C4X	Hawk/AW	477000	26x3.44	7x2.67	21.8	0.1136	84.45	931	4300
VXX1-C5X	Hen/AW	477000	30x3.20	7x3.20	22.4	0.1115	104.12	1043	2500
VXX1-C6X	Osprey/AW	556500	18x4.47	1x4.47	22.3	0.1004	58.96	874	2500
VXX1-C7X	Parakeet/AW	556500	24x3.87	7x2.58	23.2	0.09846	85.75	1024	3400
VXX1-C8X	Dove/AW	556500	26x3.72	7x2.89	23.5	0.09745	97.54	1085	3700
VXX1-C9X	Eagle/AW	556500	30x3.46	7x3.46	24.2	0.09558	119.30	1219	2150
VXX1-D1X	Peacock/AW	605000	24x4.03	7x2.69	24.2	0.09056	93.31	1113	3150
VXX1-D2X	Squab/AW	605000	26x3.87	7x3.01	24.5	0.0897	104.97	1179	3400
VXX1-D4X	Teal/AW	605000	30x3.61	19x2.16	25.3	0.08806	126.60	1314	1950
VXX1-D6X	Kingbird/AW	636000	18x4.78	1x4.78	23.9	0.08629	66.84	1007	2250
VXX1-D7X	Rook/AW	636000	24x4.14	7x2.76	24.8	0.08616	97.98	1169	3000
VXX1-D8X	Grosbeak/AW	636000	26x3.97	7x3.09	25.2	0.08527	110.40	1240	3300
VXX1-E1X	Egret/AW	636000	30x3.70	19x2.22	25.9	0.08376	133.18	1282	1850
VXX1-E2X	Flamingo/AW	666600	24x4.23	7x2.82	24.4	0.08285	102.75	1226	2800
VXX1-E3X	Gannet/AW	666600	26x4.07	7x3.16	25.8	0.0813	115.70	1300	3100

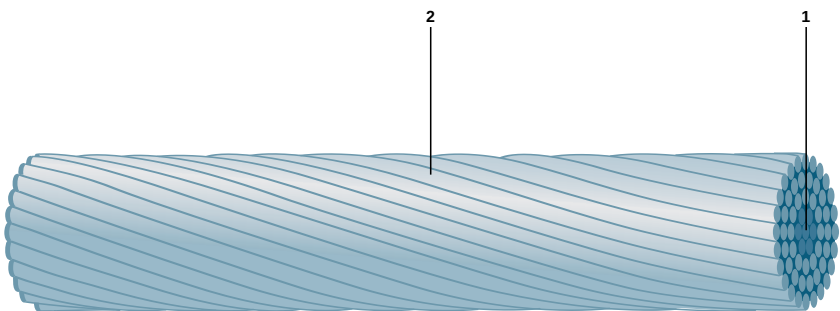
ALUMINIUM CONDUCTOR ALUMINIUM CLAD STEEL REINFORCED (ACSR/AW)

DIMENSIONS AND WEIGHTS

Catalogue number	Code word	Circular mil area or AWG aluminium	Number and nominal diameter of wires		Overall diameter Approx mm	Max. DC resistance at 20°C ohm/km	Characteristics		Packaging
			Aluminium no.xmm	Aluminium clad steel wire no.xmm			Calculated breaking load KN	Net weight Approx kg/km	Standard packing m±5%
VXX1-E5X	Starling/AW	715500	26x4.21	7x3.28	26.7	0.07579	122.28	1395	2900
VXX1-E6X	Redwing/AW	715500	30x3.92	19x2.35	27.5	0.07448	148.58	1554	3300
VXX1-E7X	Cuckoo/AW	795000	24x4.62	7x3.08	27.7	0.06890	122.46	1461	2400
VXX1-E9X	Tern/AW	795000	45x3.38	7x2.25	27.0	0.07031	95.45	1300	2200
VXX1-F2X	Condor/AW	795000	54x3.08	7x3.08	27.7	0.06887	123.84	1462	2750
VXX1-E8X	Drake/AW	795000	26x4.44	7x3.45	28.1	0.06818	134.56	1551	2600
VXX1-F3X	Mallard/AW	795000	30x4.14	19x2.48	29.0	0.06700	165.13	1728	3000
VXX1-F4X	Ruddy/AW	900000	45x3.59	7x2.40	28.7	0.06208	106.66	1472	2000
VXX1-F5X	Canary/AW	900000	54x3.28	7x3.28	29.5	0.06090	138.12	1654	2400
VXX1-F6X	Rail/AW	954000	45x3.70	7x2.47	29.6	0.05860	113.07	1561	1900
VXX1-F8X	Cardinal/AW	954000	54x3.38	7x3.38	30.4	0.05748	146.36	1753	2250
VXX1-F9X	Ortolan/AW	1033500	45x3.85	7x2.57	30.8	0.05404	120.95	1693	1700
VXX1-G2X	Curlew/AW	1033500	54x3.52	7x3.52	31.6	0.05299	136.46	1901	2100
VXX1-G3X	Bluejay/AW	1113500	45x4.00	7x2.66	32.0	0.05020	130.25	1823	1600
VXX1-G4X	Finch/AW	1113500	54x3.65	19x2.19	32.8	0.04951	167.04	2045	1900
VXX1-G5X	Bunting/AW	1192500	45x4.14	7x2.76	33.1	0.05685	139.41	1951	1500
VXX1-G6X	Grackle/AW	1192500	54x3.77	19x2.27	34.0	0.04623	178.89	2190	1800
VXX1-G7X	Bittern/AW	1272000	45x4.27	7x2.85	34.2	0.04397	148.71	2081	1400
VXX1-G8X	Pheasant/AW	1272000	54x3.90	19x2.34	35.1	0.04334	188.80	2337	1700
VXX1-H1X	Dipper/AW	1351500	45x4.40	7x2.93	35.2	0.04137	157.57	2209	1300
VXX1-H2X	Martin/AW	1351500	54x4.02	19x2.14	36.2	0.04078	200.47	2482	1600
VXX1-H3X	Bobolink/AW	1431000	45x4.53	7x3.02	36.3	0.03908	167.31	2340	1250
VXX1-H4X	Plover/AW	1431000	54x4.14	19x2.48	37.2	0.03852	212.39	2629	1500
VXX1-H5X	Nuthatch/AW	1510500	45x4.65	7x3.10	37.2	0.03701	176.52	2471	1150
VXX1-H6X	Parrot/AW	1510500	54x4.26	19x2.55	38.2	0.03639	224.58	2780	1400
VXX1-H7X	Lapwing/AW	1590000	45x4.77	7x3.18	38.2	0.03521	185.61	2596	1100
VXX1-H8X	Falcon/AW	1590000	54x4.36	19x2.62	39.2	0.03468	236.02	2920	1350
VXX1-M8X	Chukar/AW	1780000	84x3.70	19x2.22	40.7	0.03149	219.37	2999	1200
VXX1-M9X	Bluebird/AW	2156000	84x4.07	19x2.44	44.8	0.02593	262.54	3629	1000
VXX1-P5X	Kiwi/AW	2167000	72x4.41	7x2.94	44.1	0.02613	218.62	3371	1200
VXX1-P6X	Thrasher/AW	2515000	76x4.43	19x2.07	45.8	0.02461	246.07	3684	1200
VXX1-P7X	Joree/AW	2515000	76x4.62	19x2.16	47.8	0.02242	267.71	4008	750

Note: Ampacities of ACSR/AW conductors are provided in a separate section.

- 1. Aluminium Alloy Core Wires
- 2. Stranded Aluminium Wires



Note: The slightly darker colour of aluminium alloy core wires is meant for illustration only. In actual conductor, all wires appear of the same colour.



DESCRIPTION

Aluminium Conductor Alloy Reinforced (ACAR), conforming to ASTM 524, is another form of stranded composite conductor consisting of 1350-H19 strands reinforced by a core and/or by otherwise distributed wires of higher strength 6201-T81 alloy.

These conductors are formed by several wires of aluminium and stranded in concentric layers. The wire or wires which form the core are made of aluminium alloy and the external layer or layers are of aluminium. Normally these conductors have a core of 7 or 19 wires, surrounded by concentric layers of aluminium wires. The diameters of the alloy and aluminium wires can be alike or different among themselves.

By varying the relative proportions of aluminium and alloy, the ideal conductor can be produced for any particular application. In this way, if a high tensile strength conductor is required, the number of alloy wires can be increased until the required strength is reached. When a conductor with high current carrying capacity and comparatively low strength is required, this is attained with a higher aluminium content.

FEATURES

In comparison with copper, ACAR conductors have considerable technical and economical advantages in the installation of overhead lines. Their main characteristics, low weight combined with high breaking strength, make it possible to have large span runs, without having to revert to excessive mechanical stresses or to heavy metallic towers.

Due to the greater diameter of the conductors, electric losses by the corona effect are greatly reduced.

By making use of these properties an economical electric energy transmission is attained at very high voltages and distances.

APPLICATION

Overhead lines operating at medium, high and very high voltage.

Note: In the interest of product improvement, SCC reserve the right to alter cable specifications.

DIMENSIONS AND WEIGHTS

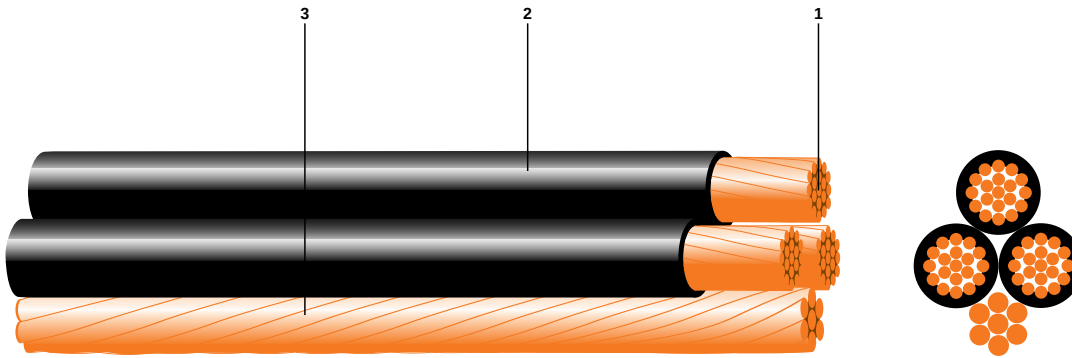
Catalogue number	Conductor size		Nominal cross sect. area mm ²	Number & nominal diameter of wire			Characteristics			Packaging	
	Cir. mills	AWG		Aluminium no.xmm	Aluminium alloy no.xmm	Overall diameter Approx mm	Max. DC resistance ohm/km	Ampacity amps	Calculated breaking load KN	Net weight Approx kg/km	Standard packing m±5%
WXX1-1BX	41740	4	21.2	4x1.96	3x1.96	5.9	1.4515	144	4.97	58	5800
WXX1-1CX	66360	2	33.6	4x2.47	3x2.47	7.5	0.9140	184	7.80	93	3500
WXX1-1DX	105600	1/0	53.5	4x3.12	3x3.12	9.4	0.5729	253	12.00	148	4600
WXX1-1EX	133100	2/0	67.4	4x3.50	3x3.50	10.5	0.4553	284	14.70	185	2650
WXX1-1FX	167800	3/0	85.0	4x3.93	3x3.93	11.8	0.3611	311	18.20	235	2900
WXX1-1KX	195700	4/0	99.1	4x4.25	3x4.25	12.8	0.3088	333	21.30	273	2450
WXX1-1GX	211600		107.0	4x4.42	3x4.42	13.3	0.2855	353	23.00	296	2200
WXX1-1LX	246900		125.0	4x4.77	3x4.77	14.3	0.2451	381	26.80	345	1950
WXX1-2GX	250000		127.0	12x2.91	7x2.91	14.6	0.2405	388	27.50	349	5250
WXX1-2HX	300000		152.0	12x3.19	7x3.19	16.0	0.2001	448	32.70	419	4400
WXX1-2CX	350000		177.0	12x3.45	7x3.45	17.3	0.1711	490	37.40	490	3750
WXX1-2JX	400000		203.0	12x3.69	7x3.69	18.5	0.1495	547	42.50	558	3200
WXX1-2KX	450000		228.0	12x3.91	7x3.91	19.6	0.1322	580	47.10	628	2900
WXX1-2LX	500000		253.0	12x4.12	7x4.12	20.6	0.1200	617	52.30	698	2600
WXX1-2MX	550000		279.0	12x4.32	7x4.32	21.6	0.1090	651	57.60	768	2400
WXX1-2NX	600000		304.0	12x4.51	7x4.51	22.6	0.1002	685	62.70	838	2200
WXX1-3KX	650000		329.0	18x3.37	19x3.37	23.6	0.0940	719	74.00	908	3900
WXX1-3LX	700000		355.0	18x3.49	19x3.49	24.4	0.0877	746	79.30	978	3600
WXX1-3MX	750000		380.0	18x3.62	19x3.62	25.3	0.0815	780	84.90	1047	3400
WXX1-3NX	800000		405.0	18x3.73	19x3.73	26.1	0.0768	815	90.10	1117	3200
WXX1-3PX	850000		431.0	18x3.85	19x3.85	27.0	0.0721	849	95.1	1187	3000
WXX1-3QX	900000		456.0	18x3.96	19x3.96	27.7	0.0681	882	100.7	1257	2800
WXX1-3RX	950000		481.0	18x4.07	19x4.07	28.5	0.0645	915	106.3	1327	2500
WXX1-3SX	1000000		507.0	18x4.18	19x4.18	29.3	0.0612	942	112.2	1396	2500
WXX1-3TX	1080600		547.4	18x4.34	19x4.34	30.4	0.0567	996	120.9	1510	2400
WXX1-3UX	1200000		608.0	18x4.57	19x4.57	32.0	0.0512	1022	134.1	1677	2100
WXX1-4MX	1250000		633.0	54x3.64	7x3.64	32.8	0.0462	1047	107.5	1746	3300
WXX1-3VX	1250000		633.0	18x4.67	19x4.67	32.7	0.0490	1047	140.0	1746	2000
WXX1-3WX	1300000		659.0	18x4.76	19x4.76	33.3	0.0471	1070	145.4	1816	1950
WXX1-4NX	1300000		659.0	54x3.71	7x3.71	33.4	0.0445	1070	111.0	1816	3200
WXX1-4PX	1400000		709.0	54x3.85	7x3.85	34.7	0.0412	1115	118.0	1955	3000
WXX1-4QX	1500000		760.0	54x3.98	7x3.98	35.8	0.0387	1160	126.1	2095	2800
WXX1-4RX	1600000		811.0	54x4.11	7x4.11	37.0	0.0362	1091	134.4	2235	2600
WXX1-4SX	1700000		861.0	54x4.24	7x4.24	38.2	0.0340	1202	143.1	2375	2450
WXX1-4TX	1750000		887.0	54x4.30	7x4.30	38.7	0.0330	1240	147.2	2445	2400
WXX1-4UX	1800000		912.0	54x4.36	7x4.36	39.2	0.0321	1267	151.3	2515	2300
WXX1-4VX	1900000		963.0	54x4.48	7x4.48	40.3	0.0305	1307	159.7	2665	2200
WXX1-4WX	2000000		1013.0	42x4.60	19x4.60	41.4	0.0297	1385	195.6	2793	2100

Ampacity Values are based on:

- Maximum conductor temperature 75°C
- Ambient air temperature 40°C
- Wind velocity 2 feet/sec.
- Solar absorption 0.5
- Emissivity (bare) 0.5

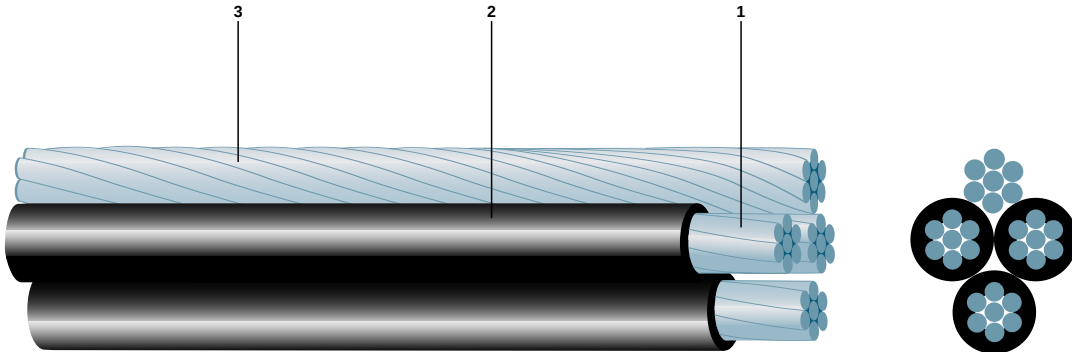
COPPER CONDUCTORS, PVC INSULATED
WEATHER PROOF SERVICE DROP CABLES 0.6KV

1. Stranded Copper Conductor
2. PVC Insulation
3. Bare Stranded Copper Conductor Neutral



ALUMINIUM CONDUCTORS, PVC INSULATED
WEATHER-PROOF SERVICE DROP CABLES 0.6KV

1. Stranded Aluminium Conductor
2. PVC Insulation
3. Bare Stranded Aluminium Conductors Neutral



DESCRIPTION

One or more XLPE insulated copper or aluminium conductors spiralled around one bare hard-drawn copper or aluminium neutral conductor (*) for use in circuits not exceeding 600 volts phase to phase and at conductor temperature not exceeding 90°C. Cables generally conform to CEA : S-66-524.

CONSTRUCTION

Phase and Neutral Conductors

- 1) Copper : Circular stranded annealed copper conductors conforming to IEC:228, class 2.
- 2) Aluminium : Circular stranded hard-drawn aluminium conductors conforming to DIN 48201 Part 5 and IEC:207.

Core Identification

Black insulation with white printed number or letters.

(*)Also available with insulated hard drawn neutral messenger and also bare or insulated messenger as aluminium alloy (AAAC), ACSR, ACSR/AW, etc, full size or reduced as specified.

FEATURES

1. XLPE resists fumes, acids and alkalis.
2. Excellent resistance to weathering by sunlight and ozone.
3. Superior physical and electrical properties.
4. Good resistance to thermal overloads.
5. Easily installed in long length.

APPLICATION

Service drop cables are used for overhead secondary distribution on poles or for connecting feeders to residential premises. They are available in two conductor (duplex), three conductor (triplex) and four conductor (quadruplex) configurations for single phase and three phase applications.

Note: In the interest of product improvement, SCC reserve the right to alter cable specifications.

COPPER CONDUCTORS XLPE INSULATED AND BARE COPPER NEUTRAL WEATHER-PROOF SERVICE DROP CABLES 0.6KV

DIMENSIONS AND WEIGHTS

		Phase			Neutral				Packaging	
Catalogue number	Cross sectional area	Minimum number of wires	Insulation Thickness	Cross sectional area	Minimum number of wires	Overall diameter	Ampacity	Net weight	Standard packing	
	Nominal mm ²		Nominal mm							Nominal mm ²
2 Conductor (Duplex)										
CNC2-08B	10	7	1.2	10	7	10.7	70	198	1000	
ENC2-09B	16	7	1.2	16	7	12.8	92	307	1000	
ENC2-10B	25	7	1.2	25	7	15.3	123	469	1000	
ENC2-11B	35	7	1.2	35	7	17.6	160	650	1000	
ENC2-14B	50	19	1.5	50	19	21.2	218	898	1000	
ENC2-16B	70	19	1.5	70	19	24.5	275	1247	1000	
ENC2-17B	95	19	1.5	95	19	28.3	292	1736	500	
ENC2-19B	120	37	1.5	120	19	31.4	346	2170	500	
3 conductor (Triplex)										
CNC3-08B	10	7	1.2	10	7	13.7	70	305	1000	
ENC3-09B	16	7	1.2	16	7	15.8	92	471	1000	
ENC3-10B	25	7	1.2	25	7	18.5	123	719	1000	
ENC3-11B	35	7	1.2	35	7	20.7	160	991	1000	
ENC3-14B	50	19	1.5	50	19	25.0	218	1359	1000	
ENC3-16B	70	19	1.5	70	19	28.7	275	1900	500	
ENC3-17B	95	19	1.5	95	19	32.4	292	2631	500	
ENC3-19B	120	37	1.5	120	19	35.7	346	3285	500	
4 conductor (Quadruplex)										
CNC4-08B	10	7	1.2	10	7	16.3	60	413	1000	
ENC4-09B	16	7	1.2	16	7	18.8	80	634	1000	
ENC4-10B	25	7	1.2	25	7	22.0	118	970	1000	
ENC4-11B	35	7	1.2	35	7	24.6	142	1332	1000	
ENC4-14B	50	19	1.5	50	19	29.8	188	1821	500	
ENC4-16B	70	19	1.5	70	19	34.2	220	2553	500	
ENC4-17B	95	19	1.5	95	19	38.6	272	3526	500	
ENC4-19B	120	37	1.5	120	19	42.5	316	4579	500	

Ampacity values are based on:

1. Maximum conductor temperature 90°C
2. Ambient air temperature 40°C

ALUMINIUM CONDUCTORS XLPE INSULATED WITH ALUMINIUM NEUTRAL WEATHER-PROOF SERVICE DROP CABLES 0.6KV

DIMENSIONS AND WEIGHTS

		Phase			Neutral			Packaging		
Catalogue number	Cross sectional area Nominal mm ²	Minimum number of wires	Insulation Thickness Nominal mm	Cross sectional area Nominal mm ²	Minimum number of wires	Overall diameter Approx mm	Ampacity amps	Net weight Approx kg/km	Standard packing m±5%	
2 Conductor (Duplex)										
QNC2-09B	16	7	1.2	16	7	12.9	85	115	1000	
QNC2-10B	25	7	1.2	25	7	15.3	110	168	1000	
QNC2-11B	35	7	1.2	35	7	17.7	150	229	1000	
QNC2-14B	50	19	1.5	50	19	21.4	205	322	1000	
QNC2-16B	70	19	1.5	70	19	24.4	235	428	1000	
QNC2-17B	95	19	1.5	95	19	28.4	265	291	500	
QNC2-18B	120	19	1.5	120	19	31.4	305	734	500	
3 conductor (Triplex)										
QNC3-09B	16	7	1.2	16	7	15.6	85	185	1000	
QNC3-10B	25	7	1.2	25	7	18.0	110	267	1000	
QNC3-11B	35	7	1.2	35	7	20.4	150	364	1000	
QNC3-14B	50	19	1.5	50	19	25.2	205	519	1000	
QNC3-16B	70	19	1.5	70	19	28.2	285	674	500	
QNC3-17B	95	19	1.5	95	19	32.2	265	928	500	
QNC3-18B	120	19	1.5	120	19	35.3	305	1145	500	
4 conductor (Quadruplex)										
QNC4-09B	16	7	1.2	16	7	19.0	75	256	1000	
QNC4-10B	25	7	1.2	25	7	22.0	100	367	1000	
QNC4-11B	35	7	1.2	35	7	24.9	135	499	1000	
QNC4-14B	50	19	1.5	50	19	30.3	185	710	500	
QNC4-16B	70	19	1.5	70	19	33.9	210	920	500	
QNC4-17B	95	19	1.5	95	19	38.8	252	1263	500	
QNC4-18B	120	19	1.5	120	19	42.5	270	1556	500	

Ampacity values are based on:

1. Maximum conductor temperature 90°C
2. Ambient air temperature 40°C

INSTALLATION CONSIDERATIONS AND PARAMETERS FOR OVERHEAD CONDUCTORS

Sag-tension calculations for overhead lines

The theory of sag tension calculation is based on the fact that when a wire of uniform cross-section is suspended between two points at the same level, the wire sags down and assumes the shape of a “catenary”. The line between the two points must be so tensioned so that the safe maximum stress of the conductor is never exceeded at any future date, despite changing environmental conditions. Maximum stress in overhead lines occurs when the line temperature is at a minimum, when the line is covered in ice and when the line is subject to strong wind forces.

When a conductor is to be freely suspended, one should know not only what type of supporting devices are to be used but also the sag needed between the supports to compensate for loading forces. Without this information, transmission lines may snap during cold and windy conditions due to improper tensioning.

Factors which will influence the degree of sag generated for a given span are:

1. Weight of the conductor.
2. Weight of ice during bad weather.
3. The effects of wind force.
4. Changes in temperature (expansion vs. contraction).
5. Weight of messengers, if any.
6. Difference in altitudes of end supports.
7. Breaking strength of the conductor.

In developing equations to compute sag vs. span, several assumptions and conditions have been made to simplify calculations. First of all, when hanging cable wire between two supports, the weight of the cable is assumed to be distributed uniformly along the cable itself. The curve formed by the free hanging cable is known as a “catenary”.

According to the electricity rules, the line should be so designed that under severe conditions {at -5.55°C (22°F), with an ice covering of 0.953 cm. radial thickness and subjected to a wind velocity of 80.45 km. per hour} the maximum sag should be such that the height of the line above the ground will not be less than a certain specified clearance limit. Moreover at that instant the maximum stress in the line should not be more than the safe stress limit of the material after allowing a safety factor of 2.

At the time of erection these severe conditions generally do not prevail, and the temperature is usually higher. The designer should know both the sag and the tension in the line to be allowed, so that under no conditions should the safety of the line be at stake. Generally, for obtaining sag and length calculations for the conductor under erection, conditions are arrived at by back calculation, assuming the severest conditions.

Methods of measuring and checking conductor sags when erecting overhead lines.

When erecting overhead lines it is essential to check whether the required sag value has been provided. For this, a span of an average length is considered for a line of five spans or less. When there are more than five spans, then two spans, one near the front or pulling end, and another near the back end of the line, are considered.

Initial and final sag tension charts (also known as stringing sag table) are usually provided by the supplier along with the conductor. The value of the correct sag can also be found from this chart.

The following methods are usually employed for checking the sag:

1. Sight Method.
2. Stop Watch or Return Wave Method.

Precautions to be taken while installing aluminium conductor lines.

The use of aluminium for overhead lines has been standardised by many countries. However, stretching and jointing procedures for aluminium conductors are not as simple as those for copper conductors. There are many precautions which need to be taken while erecting aluminium conductors for overhead lines. These are:

- (i) Always use proper equipment for handling the conductor.
- (ii) The conductor reels should be unloaded from the transport to the ground carefully with the help of a crane.
- (iii) Rotate the reel while unwinding the conductor. Unreeling should not be done at an unmanageable speed.
- (iv) To avoid nicking or kinking the conductor, parallel jaw grips with suitable lines should be used while pulling the conductor.
- (v) When jointing and pulling the conductor around the angle points, always use free running shaves or blocks with adequate grooves.
- (vi) The conductor should be spliced carefully using the proper technique.
- (vii) All the strands of the conductor should be properly gripped before pulling.
- (viii) Avoid excessive pulling on the conductor and also check for excessive conductor slack.
- (ix) Tap off connections from aluminium lines should not be taken by copper binding wire. For this purpose, either aluminium weather-proof clamps or bimetallic clamps of proper alloys should be used. This is essential to eliminate electrolytic corrosion.
- (x) With copper conductors the jointing is done by twisting the strands, but with aluminium, this will lead to the development of high resistance joints. For aluminium twisting joints, a uni-joint or compression joint should be used.
- (xi) In order to increase the life of aluminium distribution and transmission lines, the conductor at the supports should be carefully bound to the shackles or insulators, with flat aluminium tape for distribution lines and tapered armour rods for transmission lines.
- (xii) To avoid damage to the strands, mark the conductor with crayons or friction tape.

Thorough installation procedures, in accordance with the above and using the correct type of fittings and attachments will ensure aluminium conductors offer a permanent and trouble-free power transmission solution.

Sag and tension data from SCC:

Our Technical Department can provide chart/stringing sag tables on request for different types of overhead conductors. For this purpose, please supply the following information needed to prepare the relevant data.

1. Temperature range.
2. Wind temperature.
3. Wind pressure temp.
4. Ruling span.
5. Minimum and maximum span.
6. Span increment.
7. Maximum tension and at what temperature.
8. Initial tension and at what temperature.

MODULUS OF ELASTICITY AND CO-EFFICIENT OF LINEAR EXPANSION FOR WIRES AND CONDUCTORS

DIMENSIONS AND WEIGHTS

Serial No.	Conductor type	Stranding	Modulus of elasticity kg/mm ²		Coefficient of linear expansion Per °C x 10 ⁻⁶	
1	BHD Copper	7	11500		17	
		19	10700		17	
		37	10700		17	
		61	10200		17	
2	AAC & AAAC	7	6000		23	
		19	5700		23	
		37	5700		23	
		61	5500		23	
		91	5500		83	
3	ACSR & ACSR/AW		ACSR	ACSR/AW	ACSR	ACSR/AW
		6/1	8100	7760	19.1	20.0
		7/1	9200	8400	17.1	19.0
		18/1	7700	10100	19.8	20.5
		12/7	10700	10100	15.3	17.0
		24/7	7400	7500	19.6	20.5
		26/7	7700	7750	18.9	20.0
		28/7	7900	8280	18.4	19.2
		30/7	8200	8200	17.8	19.2
		45/7	7200	6950	20.7	21.5
		54/7	7000	7470	19.3	20.5
		30/19	8000	8200	18.0	19.3
		32/19	8200	8300	17.5	19.1
		54/19	6800	7400	19.4	20.5
		84/19	7400	7060	20.6	20.4

OVERHEAD CONDUCTORS

ELECTRICAL CHARACTERISTICS

- All Aluminium Conductors (AAC)
- All Aluminium Alloy Conductors (AAAC)
- ACSR Conductors (ASTM Specifications)
- ACSR/AW Conductors

ELECTRICAL CHARACTERISTICS

Catalogue number	Conductor		Ampacities				Resistance		Reactance at 300mm Spacing 60HZ	
	Cross sectional area mm ²	No. and nominal dia. of wires no.xmm	Sun No wind amp	No wind No Sun amp	Sun Wind amp	Wind No Sun amp	DC at 20°C ohm/km	AC at 75°C ohm/km	Inductive	Capacitive M-ohm/km
QXX1-09X	16	7x1.70	69	75	115	119	1.8020	2.2015	0.3849	2.4573
QXX1-10X	25	7x2.10	92	101	149	155	1.1810	1.4429	0.3689	2.3488
QXX1-11X	35	7x2.50	117	130	186	194	0.8317	1.0161	0.3558	2.2592
QXX1-13X	50	7x3.00	151	168	234	245	0.5787	0.7072	0.3420	2.1656
QXX1-14X	50	19x1.80	149	165	231	242	0.5950	0.7272	0.3388	2.1656
QXX1-16X	70	19x2.10	184	205	280	295	0.4371	0.5343	0.3271	2.0864
QXX1-17X	95	19x2.50	235	262	349	369	0.3085	0.3775	0.3140	1.9968
QXX1-18X	120	19x2.80	275	308	403	426	0.2459	0.3011	0.3055	1.9386
QXX1-21X	150	37x2.25	321	361	465	493	0.1960	0.2404	0.2956	1.8781
QXX1-22X	185	37x2.50	372	419	531	566	0.1587	0.1952	0.2876	1.8240
QXX1-24X	240	61x2.25	453	513	636	680	0.1191	0.1473	0.2762	1.7490
QXX1-26X	300	61x2.50	524	594	725	777	0.0965	0.1197	0.2683	1.6949
QXX1-27X	400	61x2.89	637	724	867	933	0.0722	0.0909	0.2573	1.6204
QXX1-28X	500	61x3.23	738	842	991	1070	0.0578	0.0738	0.2489	1.5632
QXX1-29X	625	91x2.96	853	975	1104	1202	0.0462	0.0604	0.2402	1.5050
QXX1-31X	800	91x3.35	991	1138	1272	1389	0.0361	0.0492	0.2308	1.4414
QXX1-32X	1000	91x3.74	1126	1296	1433	1570	0.02900	0.0417	0.2225	1.3849

Ambient air temperature 25°C

Conductor operating temperature 75°C

ELECTRICAL CHARACTERISTICS

Code word	Conductor		Ampacity				Resistance		
	Size	Number of wires	Sun No wind	No wind No sun	Sun Wind	Wind No sun	DC 20°C	AC 25°C	AC 75°C
	AWG	A1/Steel	amp	amp	amp	amp	ohm/km	ohm/km	ohm/km
Turkey	6	6/1	60	70	105	110	0.64420	2.1490	2.6837
Swan	4	6/1	85	95	140	145	0.40470	1.3550	1.7159
Swanate	4	7/1	85	95	140	145	0.40040	1.3386	1.7388
Sparrow	2	6/1	115	130	185	195	0.25430	0.8530	1.1089
Sparate	2	7/1	115	130	185	195	0.25150	0.8432	1.1188
Robin	1	6/1	130	150	210	220	0.20180	0.6759	0.8891
Roven	1/0	6/1	150	175	240	255	0.15980	0.5381	0.7152
Quail	2/0	6/1	175	205	275	295	0.12680	0.4265	0.5807
Pigeon	3/0	6/1	205	240	315	340	0.10070	0.3379	0.4692
Penguin	4/0	6/1	240	275	365	390	0.07981	0.2697	0.3839
Waxwing	266800	18/1	300	345	455	480	0.06458	0.2169	0.2595
Partidge	266800	26/7	305	355	455	490	0.06396	0.2146	0.2569
Ostrich	300000	26/7	330	390	495	530	0.05690	0.1906	0.2283
Merlin	336400	18/1	350	405	515	560	0.05119	0.1719	0.2057
Linnel	336400	26/7	360	420	530	570	0.05077	0.1699	0.2034
Oriole	336400	30/7	365	425	530	575	0.05038	0.1690	0.2041
Chickadee	397500	18/1	390	460	575	620	0.04332	0.1457	0.1742
Ibis	397500	26/7	405	470	590	640	0.04296	0.1444	0.1726
Lark	397500	30/7	410	475	590	640	0.04265	0.1434	0.1716
Pelican	477000	18/1	440	520	640	700	0.03609	0.1217	0.1453
Flicker	477000	24/7	450	530	670	710	0.03591	0.1207	0.1444
Hawk	477000	26/7	460	540	660	720	0.03579	0.1201	0.1437
Hen	477000	30/7	460	540	666	720	0.03553	0.1191	0.1427
Osprey	556500	18/1	490	580	710	770	0.03095	0.1043	0.1247
Parakeet	556500	24/7	500	590	720	790	0.03078	0.1037	0.1240
Dove	556500	26/7	510	600	730	790	0.03066	0.1033	0.1237
Eagle	556500	30/7	510	600	730	800	0.03046	0.1027	0.1227
Peacock	605000	24/7	530	630	760	830	0.02831	0.0955	0.1142
Squab	605000	26/7	540	630	760	830	0.02822	0.0951	0.1135
Teal	605000	30/19	540	640	770	840	0.02804	0.0942	0.1125
Rook	636000	24/7	550	650	780	860	0.02694	0.0906	0.1083
Grosbeak	636000	26/7	560	660	790	860	0.02683	0.0902	0.1079
Egret	636000	30/19	560	660	790	870	0.02667	0.0899	0.1076
Flamingo	666600	24/7	570	670	810	880	0.02569	0.0869	0.1037
Crow	715500	54/7	600	700	840	920	0.02395	0.0810	0.0968
Starling	715500	26/7	610	710	850	930	0.02384	0.0804	0.0961
Redwing	715500	30/19	610	720	860	940	0.02372	0.0801	0.0955
Tern	795000	45/7	630	750	890	970	0.02173	0.0738	0.0879
Condor	795000	54/7	640	760	900	990	0.02157	0.0728	0.0869
Drake	795000	26/7	650	770	910	990	0.02145	0.0727	0.0868
Mallard	795000	30/19	660	780	910	1000	0.02133	0.0722	0.0860
Crane	874500	54/7	690	810	960	1050	0.01958	0.0666	0.0794
Canary	900000	54/7	700	830	950	1050	0.01904	0.0646	0.0771
Rail	954000	45/7	720	850	970	1070	0.01810	0.0620	0.0738
Cardinal	954000	54/7	730	870	990	1090	0.01797	0.0614	0.0732
Ortolon	1033500	45/7	760	900	1020	1130	0.01672	0.0574	0.0682
Curlew	1033500	54/7	770	910	1040	1150	0.01659	0.0568	0.0676
Blueicy	1113000	45/7	790	940	1070	1190	0.01551	0.0535	0.0636
Finch	1113000	54/19	810	960	1090	1210	0.01545	0.0531	0.0633
Bunting	1192500	45/7	830	990	1120	1240	0.01448	0.0502	0.0594
Grackls	1192500	54/19	850	1010	1130	1260	0.01445	0.0495	0.0591
Bittarn	1272000	45/7	870	1030	1160	1290	0.01358	0.0472	0.0561
Pheasant	1272000	54/19	890	1050	1180	1320	0.01354	0.0466	0.0554
Dipper	1351500	45/7	900	1080	1210	1340	0.01278	0.0449	0.0528
Martin	1351500	54/19	920	1100	1230	1370	0.01275	0.0440	0.0522
Bobolink	1431000	45/7	940	1120	1250	1390	0.01207	0.0427	0.0502
Plover	1431000	54/19	950	1140	1270	1420	0.01203	0.0417	0.0495
Nuthatch	1510500	45/7	970	1160	1300	1440	0.01144	0.0404	0.0476
Parrot	1510500	54/19	990	1180	1320	1470	0.01141	0.0400	0.0472
Lapwing	1590000	45/7	1010	1200	1340	1490	0.01086	0.0387	0.0456
Falcon	1590000	54/19	1030	1230	1360	1520	0.01083	0.0381	0.0449
Chukar	1780000	84/19	1090	1300	1440	1600	0.00973	0.0348	0.0410
Bluebird	2156000	84/19	1230	1480	1610	1810	0.008037	0.0295	0.0344
Kiwi	2167000	72/7	1220	1400	1600	1790	0.008034	0.0299	0.0348

ALUMINIUM CONDUCTORS STEEL REINFORCED (ACSR)
TO ASTM B:232 - 86 SPECIFICATION

Reactance at 300mm spacing, 60Hz	
Inductive ohms/km	Capacitive M-ohms/km
0.3936	2.4633
0.3739	2.3452
0.3772	2.3321
0.3575	2.2238
0.3600	2.2107
0.3510	2.1648
0.3411	2.1058
0.3346	2.0467
0.3298	1.9877
0.3155	1.9286
0.2959	1.8898
0.2890	1.8602
0.2844	1.8307
0.2871	1.8274
0.2802	1.8012
0.2766	1.7881
0.2806	1.7848
0.2740	1.7585
0.2700	1.7454
0.2740	1.7388
0.2684	1.7192
0.2671	1.7126
0.2635	1.6962
0.2684	1.6929
0.2628	1.6798
0.2608	1.6732
0.2579	1.6568
0.2598	1.6568
0.2579	1.6503
0.2549	1.6339
0.2579	1.6470
0.2559	1.6371
0.2523	1.6240
0.2559	1.6339
0.2530	1.6142
0.2516	1.6437
0.2480	1.5945
0.2523	1.6010
0.2487	1.5879
0.2480	1.5814
0.2441	1.5650
0.2454	1.5617
0.2441	1.5551
0.2454	1.5551
0.2425	1.5420
0.2425	1.5322
0.2339	1.5190
0.2398	1.5125
0.2362	1.4993
0.2372	1.4961
0.2336	1.4829
0.2349	1.4797
0.2316	1.4665
0.2323	1.4665
0.2287	1.4561
0.2306	1.4501
0.2267	1.4337
0.2280	1.4370
0.2251	1.4206
0.2260	1.4239
0.2224	1.4108
0.2205	1.3911
0.2139	1.3451
0.2162	1.3558

ALUMINIUM CONDUCTOR ALUMINIUM CLAD STEEL REINFORCED (ACSR/AW)

ELECTRICAL CHARACTERISTICS

Catalogue number	Conductors			Ampacities				Resistance		Reactance at 300mm spacing, 60HZ	
	Size	No. and nominal dia. of aluminium	No. and nominal dia. of steel	Sun No wind	No wind No Sun	Sun Wind	Wind No Sun	DC at 25°C	AC at 75°C	Inductive	Capacitive
	AWG	no.xmm	no.xmm	amp	amp	amp	amp	ohm/km	ohm/km	ohm/km	M-ohm/km
VXX1-M4X	4	6X2.12	1X2.12	89	98	144	150	1.3110	1.5650	0.3739	2.3452
VXX1-M5X	4	7X1.96	1X2.61	90	100	146	152	1.2760	1.5230	0.3772	2.3321
VXX1-M2X	2	6X2.67	1X2.67	122	135	192	201	0.8240	0.9830	0.3575	2.2238
VXX1-M3X	2	7X2.47	1X3.30	125	139	197	206	0.8016	0.9570	0.3600	2.2107
VXX1-M1X	1	6X3.00	1X3.00	144	159	223	233	0.6525	0.7786	0.3510	2.1648
VXX1-P1X	1/0	6X3.37	1X3.37	169	188	258	270	0.5177	0.6181	0.3411	2.1058
VXX1-P2X	2/0	6X3.78	1X3.78	198	221	299	314	0.4106	0.4902	0.3346	2.0467
VXX1-P3X	3/0	6X4.25	1X4.25	232	259	345	364	0.3264	0.3897	0.3288	1.9817
VXX1-P4X	4/0	6X4.77	1X4.77	273	306	399	423	0.2590	0.3091	0.3155	1.9286
VXX1-B1X	266800	18X3.09	1X3.09	309	348	448	475	0.2140	0.2558	0.2959	1.8898
VXX1-B2X	266800	26X2.57	1X2.00	320	360	461	490	0.2077	0.2479	0.2890	1.8602
VXX1-B3X	300000	26X2.73	7X2.12	347	391	497	528	0.1850	0.2208	0.2844	1.8303
VXX1-B4X	336400	18X3.47	1X3.47	363	409	519	552	0.1700	0.2029	0.2871	1.8274
VXX1-B5X	336400	26X2.89	7X2.25	376	424	534	569	0.1647	0.1967	0.2802	1.8012
VXX1-B6X	336400	30X2.69	7X2.69	383	433	543	579	0.1615	0.1928	0.2766	1.7881
VXX1-B7X	397500	18X3.77	1X3.77	407	460	576	614	0.1440	0.1719	0.2806	1.7848
VXX1-B8X	397500	24X3.27	7X2.18	417	471	587	627	0.1380	0.1653	0.2788	1.7760
VXX1-B9X	397500	26X3.14	7X2.44	421	476	592	633	0.1398	0.1668	0.2740	1.7585
VXX1-C1X	397500	30X2.92	7X2.92	431	487	603	645	0.1368	0.1634	0.2700	1.7454
VXX1-C2X	477000	18X4.14	1X4.14	461	522	646	690	0.1204	0.1437	0.2740	1.7388
VXX1-C3X	477700	24X3.58	7X2.39	473	535	658	705	0.1178	0.1407	0.2684	1.7192
VXX1-C4X	477000	26X3.44	7X2.67	478	541	664	711	0.1165	0.1390	0.2671	1.7126
VXX1-C5X	477000	30X3.2	7X3.20	487	553	675	724	0.1140	0.1363	0.2635	1.6962
VXX1-C6X	556500	18X4.47	1X4.47	512	580	710	761	0.1034	0.1235	0.2600	1.6950
VXX1-C7X	556500	24X3.87	7X2.58	525	596	724	777	0.1012	0.1208	0.2684	1.6929
VXX1-C8X	556500	26X3.72	7X2.89	530	602	730	784	0.1000	0.1194	0.2628	1.6798
VXX1-C9X	556500	30X3.46	7X3.46	541	615	743	798	0.0980	0.1170	0.2608	1.6732
VXX1-D1X	605000	24X4.03	7X2.69	556	631	763	819	0.0930	0.1111	0.2579	1.6568
VXX1-D2X	605000	26X3.87	7X3.01	561	637	769	926	0.0920	0.1112	0.2588	1.6568
VXX1-D4X	605000	30X3.61	19X2.16	573	652	783	642	0.0900	0.1078	0.2580	1.6503
VXX1-D6X	636000	18X4.78	1X4.78	566	643	778	835	0.0870	0.1041	0.2549	1.6339
VXX1-D7X	636000	24X4.14	7X2.76	575	653	787	845	0.0887	0.1058	0.2579	1.6470
VXX1-D8X	636000	26X3.97	7X3.09	581	661	794	854	0.0877	0.1046	0.2559	1.6371
VXX1-E1X	636000	30X3.70	19X2.22	592	674	807	868	0.0860	0.1028	0.2523	1.6240

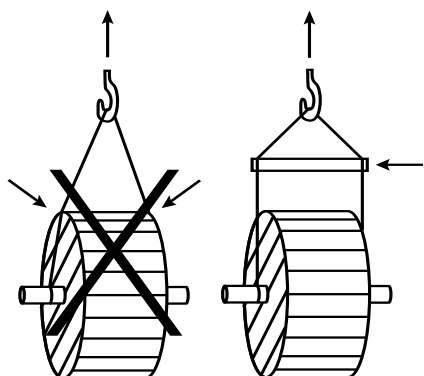
ALUMINIUM CONDUCTOR ALUMINIUM CLAD STEEL REINFORCED (ACSR/AW)

ELECTRICAL CHARACTERISTICS

Catalogue number	Conductors			Ampacities				Resistance		Reactance at 300mm spacing, 60HZ	
	Size	No. and nominal dia. of aluminium	No. and nominal dia. of steel	Sun No wind	No wind No Sun	Sun Wind	Wind No Sun	DC at 25°C	AC at 75°C	Inductive	Capacitive
	AWG	no.xmm	no.xmm	amp	amp	amp	amp	ohm/km	ohm/km	ohm/km	M-ohm/km
VXX1-E2X	666600	24X4.23	7X2.82	582	661	798	857	0.0846	0.1011	0.2559	1.6339
VXX1-E3X	666600	26X4.07	7X3.16	600	682	817	880	0.0816	0.0977	0.2550	1.6460
VXX1-E5X	715500	26X4.21	7X3.28	629	716	853	919	0.0780	0.0930	0.2516	1.6437
VXX1-E6X	715500	30X3.92	19X2.35	641	731	867	935	0.0766	0.0915	0.2480	1.5945
VXX1-E7X	795000	24X4X62	7X3.08	667	760	901	972	0.0729	0.0869	0.2470	1.6400
VXX1-E9X	795000	45X3.38	7X2.25	654	745	886	955	0.0696	0.0830	0.2523	1.6010
VXX1-F2X	795000	54X3.08	7X3.08	667	760	901	972	0.0712	0.0849	0.2487	1.5879
VXX1-E8X	795000	26X4.44	7X3.45	674	769	909	981	0.0704	0.0840	0.2480	1.5814
VXX1-F3X	795000	30X4.14	19X2.48	688	785	925	999	0.0690	0.0825	0.2441	1.5650
VXX1-F4X	900000	45X3.59	7X2.40	710	810	955	1031	0.0632	0.0750	0.2450	1.5570
VXX1-F5X	900000	54X3.28	7X3.28	724	826	971	1049	0.0632	0.0750	0.2440	1.5510
VXX1-F6X	954000	45X3.7	7X2.47	738	842	989	1069	0.0611	0.0728	0.2454	1.5510
VXX1-F8X	954000	54x3.38	7x3.38	753	859	1005	1087	0.0598	0.07130	0.2425	1.5420
VXX1-F9X	1033500	45x3.85	7x2.57	778	889	1037	1123	0.0566	0.06700	0.2425	1.5322
VXX1-G2X	1033500	54x3.52	7x3.52	793	906	1029	1119	0.0552	0.06570	0.2392	1.5190
VXX1-G3X	1113500	45x4.00	7x2.66	816	933	1058	1151	0.0528	0.06270	0.2398	1.5125
VXX1-G4X	1113500	54x3.65	19x2.19	829	949	1073	1168	0.0518	0.06160	0.2362	1.4993
VXX1-G5X	1192500	45x4.14	7x2.76	782	895	1011	1101	0.0495	0.05860	0.2372	1.4961
VXX1-G6X	1192500	54x3.77	19x2.27	867	992	1119	1219	0.0485	0.05760	0.2336	1.4829
VXX1-G7X	1272000	45x4.27	7x2.85	888	1017	1145	1248	0.0467	0.05520	0.2349	1.4797
VXX1-G8X	1272000	54x3.90	19x2.34	902	1034	1162	1267	0.0457	0.05420	0.2316	1.4665
VXX1-H1X	1351500	45x4.40	7x2.93	921	1056	1186	1293	0.0441	0.05200	0.2323	1.4660
VXX1-H2X	1351500	54x4.02	19x2.14	937	1075	1204	1314	0.0432	0.05110	0.2287	1.4561
VXX1-H3X	1431000	45x4.53	7x3.02	955	1095	1227	1339	0.0418	0.04940	0.2306	1.4500
VXX1-H4X	1431000	54x4.14	19x2.48	970	1113	1243	1358	0.0409	0.04850	0.2267	1.4337
VXX1-H5X	1510500	45x4.65	7x3.10	986	1132	1264	1381	0.0399	0.04700	0.2280	1.4370
VXX1-H6X	1510500	54x4.26	19x2.55	1003	1152	1283	1403	0.0389	0.04588	0.2251	1.4206
VXX1-H7X	1590000	45x4.77	7x3.18	1016	1167	1300	1422	0.0381	0.04490	0.2260	1.4239
VXX1-H8X	1590000	54x4.36	19x2.62	1033	1187	1319	1443	0.0372	0.04380	0.2224	1.4108
VXX1-M8X	1780000	84x3.70	19x2.22	1088	1252	1386	1518	0.0344	0.04000	0.2205	1.3911
VXX1-M9X	2156000	84x4.07	19x2.44	1211	1397	1532	1683	0.0284	0.03300	0.2139	1.3451
VXX1-P5X	2167000	72x4.41	7x2.94	1201	1384	1520	1669	0.0292	0.03390	0.2162	1.3558
VXX1-P6X	2515000	76x4.43	19x2.07	1243	1435	1570	1725	0.0252	0.02930	0.2070	1.3000
VXX1-P7X	2515000	76x4.62	19x2.16	1303	1505	1639	1804	0.0257	0.02960	0.2000	1.2900

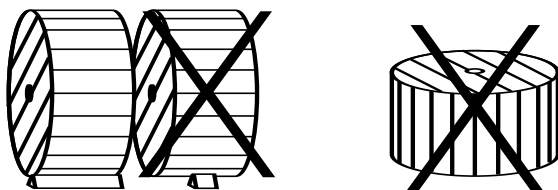
OVERHEAD LINES

CABLE HANDLING AND LAYING PARAMETERS

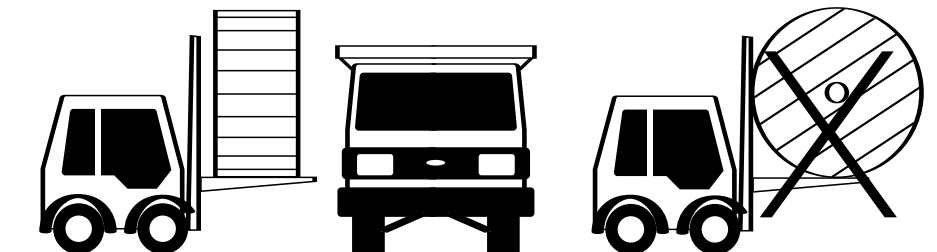


Lifting cable drums using crane.

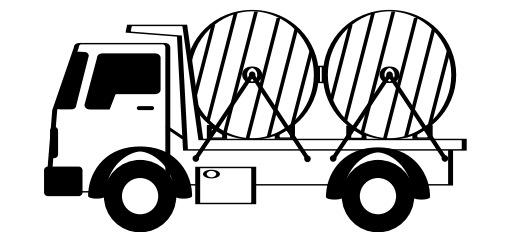
Overhead conductors should be installed by trained personnel in accordance with good engineering practices, recognised codes of practice, statutory local requirements, IEEE wiring regulations and where relevant, in accordance with any specific instructions issued by the company. Cables are often supplied in heavy cable reels and handling these reels can constitute a safety hazard. In particular, dangers may arise during the removal of steel binding straps and during the removal of retaining battens and timbers which may expose projecting nails.



Do not lay drums flat on their sides, use proper stops to prevent drums rolling.



Lift drums on fork trucks correctly.



Secure drums adequately before transportation.



Roll in the direction shown by the arrow.