

HF-CXOSA 0.6/1kV

Halogen free low smoke power cables,
with copper wire braiding



Type Approval Certificates

- American Bureau of Shipping
- Bureau Veritas
- China Classification Society
- Det Norske Veritas-Germanischer Lloyd
- Korean Register
- Lloyd's Register
- Nippon Kaiji Kyokai

Application

For fixed installations in all areas and open deck



Conductors

acc. to IEC 60228 - Class 2 circular stranded copper for size 10mm² and below
- Class 5 flexible conductor for size 16mm² and above

Insulation

cross-linked polyethylene HF XLPE-90°C acc. to IEC 60092-351

Filler

polypropylene yarn

Inner Covering

polyester tape

Screen/Armour

copper wire braiding more than 90% coverage as armour and shielding to achieve better EMI (Electro Magnetic Interference) performance

Outer Sheath

thermoplastic polyolefine halogen-free compound type SHF1 acc. to IEC 60092-359

Color of Outer Sheath

black

Core Identification

- 1-core : not specified
- 2-core : brown, blue
- 3-core : black, brown, grey
- 4-core : black, blue, brown, grey
- 5-core : grey, black₁, blue, brown, black₂
- 6-core : white with black numbering
- and more

Cable Marking

e.g. : S.E.C. HF-CXOSA 0.6/1kV 19X1.5 SQMM IEC 60092-353
& IEC 60332-3-22 LSOH YYYY (WW)

Maximum conductor operating temperature	: +90°C
Lowest ambient temperature for fixed installation	: -40°C
Lowest installation temperature	: -15°C
Maximum short-circuit conductor temperature	: +250°C
Minimum bending radius	: 6D (D is the overall diameter of the cable)

Test Performances

Flame retardant	: IEC 60332-3-22 Category A
Smoke emission	: IEC 61034-2
Gases evolved during combustion	: IEC 60754-1: <0,5% acid gas IEC 60754-2: pH ≥4,3; conductivity ≤10 μSmm ⁻¹

Standards

Construction and Design	: IEC 60228, IEC 60092-350, IEC 60092-353
Materials	: IEC 60092-351, IEC 60092-359

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No. of Cores	Conductor Size	Nominal Outer Diameter	Maximum Conductor Resistance	Voltage Test (A.C)	Minimum Insulation Resistance	Approx. Cable Weight
No.s	mm ²	mm	Ω/km-20°C	kV/5min	MΩkm-20°C	kg/km
1	1	6.7	18.1	3.5	1380	55
1	1.5	6.9	12.1	3.5	850	85
1	2.5	7.4	7.41	3.5	700	100
1	4	7.9	4.61	3.5	600	120
1	6	8.5	3.08	3.5	500	130
1	10	9.6	1.83	3.5	400	175
1	16	10.7	1.21	3.5	340	270
1	25	12.5	0.780	3.5	290	380
1	35	13.7	0.554	3.5	270	510
1	50	15.8	0.386	3.5	250	680
1	70	18.0	0.272	3.5	220	930
1	95	20.1	0.206	3.5	210	1190
1	120	22.0	0.161	3.5	210	1475
1	150	24.1	0.129	3.5	210	1790
1	185	26.8	0.1060	3.5	210	2210
1	240	29.9	0.0801	3.5	210	2865
1	300	32.8	0.0641	3.5	200	3515
1	400	36.6	0.0486	3.5	200	4460
2	1	9.8	18.1	3.5	1380	100
2	1.5	10.4	12.1	3.5	850	135
2	2.5	11.3	7.41	3.5	700	170
2	4	12.6	4.61	3.5	600	200
2	6	14.3	3.08	3.5	500	260
2	10	16.2	1.83	3.5	400	400
2	16	18.5	1.21	3.5	340	620
2	25	22.0	0.780	3.5	290	880
2	35	24.5	0.554	3.5	270	1130
2	50	28.2	0.386	3.5	250	1500
2	70	32.5	0.272	3.5	220	2060
2	95	37.1	0.206	3.5	210	2720
2	120	40.9	0.161	3.5	210	3270
2	150	45.5	0.129	3.5	210	3990
2	185	50.5	0.1060	3.5	210	4980
2	240	56.5	0.0801	3.5	210	6290
2	300	62.4	0.0641	3.5	200	7730
3	1	10.3	18.1	3.5	1380	115
3	1.5	10.9	12.1	3.5	850	160
3	2.5	12.1	7.41	3.5	700	200
3	4	13.2	4.61	3.5	600	260
3	6	15.0	3.08	3.5	500	335
3	10	17.2	1.83	3.5	400	510
3	16	19.7	1.21	3.5	340	800
3	25	23.5	0.780	3.5	290	1150
3	35	26.4	0.554	3.5	270	1490
3	50	29.9	0.386	3.5	250	1990
3	70	34.7	0.272	3.5	220	2860
3	95	39.6	0.206	3.5	210	3650
3	120	43.8	0.161	3.5	210	4550

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No.s	mm ²	mm	Ω/km-20°C	kV/5min	MΩkm-20°C	kg/km
3	150	48.6	0.129	3.5	210	5450
3	185	54.0	0.106	3.5	210	6700
3	240	60.8	0.0801	3.5	210	8510
4	1	11.1	18.1	3.5	1380	140
4	1.5	11.9	12.1	3.5	850	185
4	2.5	13.0	7.41	3.5	700	245
4	4	14.9	4.61	3.5	600	315
4	6	16.3	3.08	3.5	500	435
4	10	18.7	1.83	3.5	400	635
4	16	21.5	1.21	3.5	340	1000
4	25	26.1	0.780	3.5	290	1460
4	35	29.1	0.554	3.5	270	1880
4	50	33.1	0.386	3.5	250	2530
4	70	38.9	0.272	3.5	220	3660
4	95	43.7	0.206	3.5	210	4895
4	120	48.7	0.161	3.5	210	5660
4	150	53.9	0.129	3.5	210	6920
4	185	59.8	0.106	3.5	210	8645
5	1	12.1	18.1	3.5	1380	165
5	1.5	12.9	12.1	3.5	850	220
5	2.5	14.9	7.41	3.5	700	285
5	4	16.1	4.61	3.5	600	270
5	6	17.9	3.08	3.5	500	380
5	10	20.6	1.83	3.5	400	795
5	16	23.6	1.21	3.5	340	1210
5	25	28.7	0.780	3.5	290	1820
5	35	32.1	0.554	3.5	270	2390
5	50	37.1	0.386	3.5	250	3230
5	70	42.9	0.272	3.5	220	4480
6	1	13.0	18.1	3.5	1380	200
6	1.5	14.6	12.1	3.5	850	245
6	2.5	16.0	7.41	3.5	700	350
7	1	13.0	19.20	3.5	1380	215
7	1.5	14.6	12.1	3.5	850	270
7	2.5	16.0	7.41	3.5	700	355
8	1	14.7	19.2	3.5	1380	235
8	1.5	15.6	12.1	3.5	850	340
8	2.5	17.3	7.41	3.5	700	440
9	1	15.6	18.1	3.5	1380	300
9	1.5	16.6	12.1	3.5	850	370
9	2.5	18.4	7.41	3.5	700	490
10	1	16.8	18.1	3.5	1380	310
10	1.5	18.1	12.1	3.5	850	395
10	2.5	20.1	7.41	3.5	700	540
12	1	17.5	18.1	3.5	1380	350
12	1.5	18.6	12.1	3.5	850	440
12	2.5	20.7	7.41	3.5	700	580

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No.s	mm ²	mm	Ω/km-20°C	kV/5min	MΩkm-20°C	kg/km
14	1	18.2	18.1	3.5	1380	390
14	1.5	19.4	12.1	3.5	850	495
14	2.5	21.6	7.41	3.5	700	670
16	1	19.1	18.1	3.5	1380	430
16	1.5	20.6	12.1	3.5	850	560
16	2.5	22.9	7.41	3.5	700	765
18	1	20.2	18.1	3.5	1380	470
18	1.5	21.5	12.1	3.5	850	590
18	2.5	24.0	7.41	3.5	700	810
19	1	20.2	18.1	3.5	1380	490
19	1.5	21.5	12.1	3.5	850	600
19	2.5	24.0	7.41	3.5	700	835
20	1	20.7	18.1	3.5	1380	510
20	1.5	22.1	12.10	3.5	850	660
20	2.5	24.6	7.41	3.5	700	910
23	1	22.0	18.1	3.5	1380	580
23	1.5	23.7	12.1	3.5	850	750
23	2.5	26.4	7.41	3.5	700	1060
24	1	23.4	18.1	3.5	1380	600
24	1.5	25.0	12.1	3.5	850	785
24	2.5	28.3	7.41	3.5	700	1095
27	1	23.8	18.1	3.5	1380	650
27	1.5	25.7	12.1	3.5	850	830
27	2.5	28.9	7.4	3.5	700	1180
28	1	23.8	18.1	3.5	1380	680
28	1.5	25.7	12.1	3.5	850	870
28	2.5	28.9	7.41	3.5	700	1210
30	1	24.6	18.1	3.5	1380	730
30	1.5	26.5	12.1	3.5	850	940
30	2.5	29.8	7.4	3.5	700	1290
32	1	25.0	18.1	3.5	1380	770
32	1.5	27.0	12.1	3.5	850	980
32	2.5	30.3	7.4	3.5	700	1340
33	1	25.6	18.1	3.5	1380	800
33	1.5	27.5	12.1	3.5	850	995
33	2.5	31.1	7.41	3.5	700	1380
34	1	25.8	18.1	3.5	1380	810
34	1.5	27.6	12.1	3.5	850	1010
34	2.5	31.4	7.41	3.5	700	1420
37	1	26.5	18.1	3.5	1380	850
37	1.5	28.8	12.1	3.5	850	1060
37	2.5	32.3	7.4	3.5	700	1530
44	1	29.9	18.1	3.5	1380	940
44	1.5	32.4	12.1	3.5	850	1290
44	2.5	36.8	7.41	3.5	700	1780