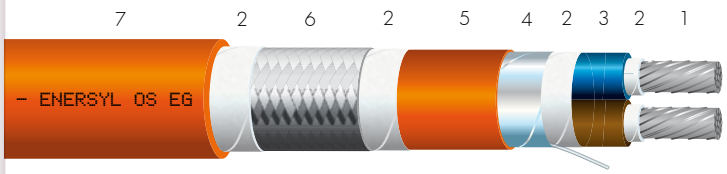
ENERSYL® OS 331 SHF1 POWER

Multicore power cables



1 • Tin-plated copper core, class 2 or 5 as per IEC 60228.
2 • Optional separating tape.
3 • Insulation: silicone rubber, type S 95 + optional filler(s).
4 • (optional) electrical screen: aluminium/PET tape + continuity wire (EG) / tin-plated copper braid (BE) / bare copper braid (BR).
5 • (optional) Internal sheath: HFFR, type SHF1.
6 • (optional) Armour: galvanized steel braid (BG) / double steel tape (FA).
7 • Outer sheath: HFFR, type SHF1.

Reference

• (example) ENERSYL® OS EG BG 331 SHF1 POWER 2x4 mm²
OS: for offshore applications
EG, BE, BR: type of electrical screen
BG, FA: type of armour
331 : fire resistant cable
SHF1: nature of sheath material
POWER: power cable
2: number of conductors
X, G: type of assembly without (X) or with (G) an earth wire
4 mm²: cross-section in mm²

Approvals - standards

• IEC 60228 / IEC 60092-353.
• IEC 60092-360.
• IEC 60332-1 / IEC 60332-3.
• IEC 61034-2 / IEC 60754-1 / IEC 60754-2.

Markings

• OMERIN – ENERSYL < OS xx xx 331 SHF1 POWER >< cross-section > – 600/1000V – < batch > – < year >

Standard products

• **Sheath**: orange.
• **Colour identification of conductors:**
< up to 5 conductors: as per HD 308 S2.
> more than 5 conductors: black numbered.

Technical characteristics

Thermal

• Continuous operating temperature: -30 °C to +80 °C.
• Maximum core temperature: +95 °C.

Electrical

• Rated voltage: 600/1000 V.
• Test voltage: 3500 V.

Smoke - fire

• Flame retardant – cable alone: IEC 60332-1-2 / NF C 32-070 test C2.
• Flame retardant – bunched cable: IEC 60332-3-22 cat. A.
• Fire retardant: NF C 32-070 test C1.
• Low smoke density: IEC 61034-2.
• Halogen-free: IEC 60754-1.
• Low corrosivity of gas emissions: IEC 60754-2.

Resistance of outer sheath to chemical attacks as per OMERIN test report NT140220-01:

• Good resistance to acid.
• Good resistance to base.
• Fairly good resistance to aliphatic hydrocarbons.
• Resistance to water: type AD7 as per IEC 60529 without immersion of ends.
• Resistance to UV ≥ 2000 hours as per EN 16472.

Options

• **SHF2**: cross-linked HFFR outer sheath, type SHF2.
• **Other colours**: contact us.
• **Electrical screen using copper/PET tape**: contact us.
• **ATEX** as per NF C 15-100 part 4-42 / EN 60079-14.
Particularly suited for static facilities in potentially explosive environments, excluding the "i" intrinsic safety protection mode.
> **ENERSYL® OS BG 331 EX SHF1 POWER:** with a HFFR sheath under the armour and without hygroscopic separating tape.

For this product, please contact:

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LES CABLES DE L'EXTREME

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For an optimum use of the cables produced by our company, we recommend testing in real conditions. Our sales department is available for a possible provision of samples, and/or for the conditions of a complete study in our laboratories.
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				NON-SHIELDED CABLES			ARMOURED CABLES			
Nominal cross-section (mm²)	Nominal stranding	Nominal thickness of insulation (mm)	Nominal diameter of conductors (mm)	Nominal thickness of the sheath (mm)	Nominal outside diameter* (mm)	Approximate linear weight (kg/km)	Nominal thickness of the sheath (mm)	Nominal outside diameter* (mm)	Approximate linear weight (kg/km)	Max. linear resistance at 20 °C (Ω/km)
2 x 1.5	7 / 0.52	1.0	3.6	1.1	9.9	108	0.9	13.0	233	12.2
3 x 1.5	7 / 0.52	1.0	3.6	1.1	10.5	136	0.9	13.6	268	12.2
4 x 1.5	7 / 0.52	1.0	3.6	1.2	11.6	172	0.9	14.7	317	12.2
5 x 1.5	7 / 0.52	1.0	3.6	1.2	12.6	203	0.9	15.8	364	12.2
7 x 1.5	7 / 0.52	1.0	3.6	1.2	13.7	260	1.0	17.0	438	12.2
12 x 1.5	7 / 0.52	1.0	3.6	1.4	18.4	433	1.1	22.0	701	12.2
19 x 1.5	7 / 0.52	1.0	3.6	1.5	21.6	640	1.2	25.5	965	12.2
24 x 1.5	7 / 0.52	1.0	3.6	1.6	25.4	806	1.2	29.4	1192	12.2
27 x 1.5	7 / 0.52	1.0	3.6	1.7	26.1	898	1.3	30.2	1301	12.2
37 x 1.5	7 / 0.52	1.0	3.6	1.8	29.4	1188	1.3	33.6	1648	12.2
2 x 2.5	19 / 0.41	1.0	4.1	1.1	10.9	139	0.9	14.0	276	7.56
3 x 2.5	19 / 0.41	1.0	4.1	1.2	11.8	185	0.9	15.0	336	7.56
4 x 2.5	19 / 0.41	1.0	4.1	1.2	12.8	229	0.9	16.0	392	7.56
5 x 2.5	19 / 0.41	1.0	4.1	1.2	14.0	273	1.0	17.4	458	7.56
7 x 2.5	19 / 0.41	1.0	4.1	1.3	15.5	365	1.0	19.1	589	7.56
12 x 2.5	19 / 0.41	1.0	4.1	1.5	20.7	601	1.1	24.4	906	7.56
19 x 2.5	19 / 0.41	1.0	4.1	1.6	24.3	896	1.2	28.2	1260	7.56
24 x 2.5	19 / 0.41	1.0	4.1	1.7	28.6	1128	1.3	32.7	1568	7.56
27 x 2.5	19 / 0.41	1.0	4.1	1.8	29.4	1257	1.3	33.6	1717	7.56
37 x 2.5	19 / 0.41	1.0	4.1	1.9	33.1	1672	1.4	37.4	2196	7.56
2 x 4	56 / 0.30	1.0	4.7	1.2	12.3	184	0.9	15.5	341	5.09
3 x 4	56 / 0.30	1.0	4.7	1.2	13.1	241	0.9	16.3	407	5.09
4 x 4	56 / 0.30	1.0	4.7	1.2	14.3	301	1.0	17.7	490	5.09
5 x 4	56 / 0.30	1.0	4.7	1.3	15.9	373	1.0	19.5	603	5.09
7 x 4	56 / 0.30	1.0	4.7	1.3	17.3	488	1.0	20.9	737	5.09
12 x 4	56 / 0.30	1.0	4.7	1.5	23.2	811	1.2	27.0	1158	5.09
2 x 6	84 / 0.30	1.0	5.2	1.2	13.3	230	1.0	16.7	406	3.39
3 x 6	84 / 0.30	1.0	5.2	1.2	14.1	307	1.0	17.5	494	3.39
4 x 6	84 / 0.30	1.0	5.2	1.3	15.8	399	1.0	19.3	627	3.39
5 x 6	84 / 0.30	1.0	5.2	1.4	17.4	490	1.1	21.1	745	3.39
7 x 6	84 / 0.30	1.0	5.2	1.4	19.0	646	1.1	22.8	928	3.39
2 x 10	77 / 0.40	1.0	6.4	1.3	16.0	339	1.0	19.6	570	1.95
3 x 10	77 / 0.40	1.0	6.4	1.3	17.0	460	1.0	20.6	705	1.95
4 x 10	77 / 0.40	1.0	6.4	1.4	18.9	594	1.1	22.6	875	1.95
5 x 10	77 / 0.40	1.0	6.4	1.4	20.7	721	1.1	24.4	1027	1.95
2 x 16	119 / 0.40	1.0	7.8	1.4	19.0	479	1.1	22.8	761	1.24
3 x 16	119 / 0.40	1.0	7.8	1.4	20.2	658	1.1	24.0	958	1.24
4 x 16	119 / 0.40	1.0	7.8	1.5	22.5	853	1.1	26.2	1184	1.24
5 x 16	119 / 0.40	1.0	7.8	1.5	24.7	1040	1.2	28.6	1415	1.24
2 x 25	192 / 0.40	1.2	9.6	1.5	22.8	707	1.1	26.8	1055	0.795
3 x 25	192 / 0.40	1.2	9.6	1.5	24.3	984	1.2	28.3	1355	0.795
4 x 25	192 / 0.40	1.2	9.6	1.6	27.0	1282	1.2	31.2	1705	0.795
5 x 25	192 / 0.40	1.2	9.6	1.7	29.9	1583	1.3	34.1	2050	0.795
2 x 35	259 / 0.40	1.2	11.0	1.6	25.8	924	1.2	29.8	1315	0.565
3 x 35	259 / 0.40	1.2	11.0	1.6	27.6	1294	1.2	31.7	1726	0.565
4 x 35	259 / 0.40	1.2	11.0	1.7	30.6	1689	1.3	34.8	2166	0.565
5 x 35	259 / 0.40	1.2	11.0	1.8	33.9	2088	1.4	38.3	2632	0.565
2 x 50	370 / 0.40	1.4	13.2	1.7	30.4	1277	1.3	34.6	1752	0.393
3 x 50	370 / 0.40	1.4	13.2	1.8	32.7	1818	1.3	37.1	2345	0.393
4 x 50	370 / 0.40	1.4	13.2	1.9	36.3	2374	1.4	40.7	2957	0.393
5 x 50	370 / 0.40	1.4	13.2	2.0	40.2	2936	1.5	44.8	3600	0.393
2 x 70	333 / 0.50	1.4	14.8	1.8	33.8	1661	1.4	38.2	2204	0.277
3 x 70	333 / 0.50	1.4	14.8	1.9	36.4	2377	1.4	40.7	2959	0.277
4 x 70	333 / 0.50	1.4	14.8	2.0	40.4	3110	1.5	45.0	3776	0.277
2 x 95	444 / 0.50	1.6	17.4	2.0	39.4	2229	1.5	44.0	2879	0.210
3 x 95	444 / 0.50	1.6	17.4	2.1	42.4	3194	1.5	46.9	3892	0.210

* The rated outer diameter of cables may vary by +/- 15% depending on the options selected.