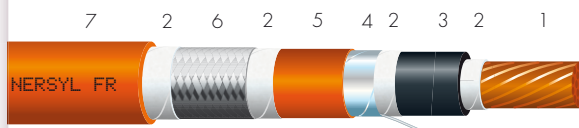


ENERSYL® FR POWER

Single core power cables



Reference

- (example) **ENERSYL® FR EG BG POWER 150 mm²**
FR : fire resistant
EG, BE, BR: type of electrical screen
BG, FA: type of armour
POWER: power cable
150 mm²: cross-section in mm²

Approvals - standards

- IEC 60228 / NF C 32-090.
- IEC 60332-1 / IEC 60332-3 / NF C 32-070 test C1.
- IEC 60331-21 / NF EN 50200.
- IEC 61034-2 / IEC 60754-1 / IEC 60754-2.

Markings

- OMERIN – ENERSYL < FR xx xx POWER >
< cross-section > – 600/1000V – < batch > – < year >

Standard products

- **Sheath:** orange.
- **Insulation:** black.

- 1 • Stranded bare copper core, class 2 as per IEC 60228.
- 2 • Optional separating tape.
- 3 • Insulation: silicone rubber as per NF C 32-090.
- 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 ST8 as per IEC 60502-1.
- 6 • (optional) Armour: galvanized steel braid (BG) / double steel tape (FA).
- 7 • Outer sheath: HFFR, type ST8 as per IEC 60502-1.

Technical characteristics Thermal

- Continuous operating temperature: -30 °C to +80 °C.
- Maximum core temperature: +90 °C.

Electrical

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

Smoke - fire

- Flame retardant – cable alone:
IEC 60332-1-2 / NF EN 60332-1-2 / NF C 32-070 test C2.
- Flame retardant – bunched cable:
IEC 60332-3-22 cat. A / NF EN 60332-3-22 cat. A.
- Fire retardant: NF C 32-070 test C1.
- Fire resistant: IEC 60331-21 / NF EN 50200.
- Low smoke density: IEC 61034-2 / NF EN 61034-2.
- Halogen-free: IEC 60754-1 / NF EN 60754-1.
- Low corrosivity of gas emissions: IEC 60754-2 / NF EN 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

- **FLEX:** flexible tin-plated copper core, class 5 as per IEC 60228.
- **Other colours:** contact us.
- **105 °C cable:** 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® FR BG EX POWER** : with a HFFR sheath under the armour and without hygroscopic separating tape.

For this product, please contact:



SEVI KABEL

VIA DEI MARINAI D'ITALIA, 1 - 10034 CHIVASSO (TO) - Tel. 011.910.11.12 / 011.910.67.78 - Fax 011.913.13.13 - info@sevikabel.it

Nominal cross-section (mm ²)	Nominal stranding	Nominal thickness of insulation (mm)	Nominal diameter of conductors (mm)	NON-SHIELDED CABLES			ARMoured CABLES			Max. linear resistance at 20 °C (Ω/km)
				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)	
1.5	7 / 0.52	0.8	3.1	0.6	4.7	36	1.0	7.8	101	12.1
2.5	7 / 0.67	0.8	3.6	0.6	5.2	49	1.0	8.3	120	7.41
4	7 / 0.85	0.8	4.2	0.6	5.8	66	1.0	8.9	144	4.61
6	7 / 1.04	1.0	5.2	0.6	6.8	95	1.0	9.9	185	3.08
10	7 / 1.33	1.1	6.4	0.7	8.2	145	1.0	11.4	253	1.83
16	7 / 1.68	1.1	7.4	0.7	9.2	205	1.0	12.4	325	1.15
25	7 strands	1.2	8.6	0.8	10.7	302	1.1	14.1	447	0.727
35	7 strands	1.3	9.7	1.0	12.2	417	1.2	15.8	587	0.524
50	19 strands	1.4	11.5	1.1	14.2	574	1.2	17.9	775	0.387
70	19 strands	1.4	12.7	1.2	15.6	753	1.2	19.5	992	0.268
95	19 strands	1.6	14.8	1.2	17.8	1032	1.3	21.9	1313	0.193
120	19 strands	1.5	16.4	1.2	19.4	1271	1.3	23.5	1575	0.153
150	19 strands	1.5	18.3	1.3	21.5	1566	1.4	25.8	1913	0.124
185	37 strands	1.6	20.7	1.3	23.9	1936	1.4	28.2	2320	0.0991
240	37 strands	1.8	23.4	1.4	26.8	2495	1.5	31.3	2938	0.0754
300	61 strands	2.0	27.0	1.5	30.6	3123	1.6	35.3	3641	0.0601
400	61 strands	2.4	30.4	1.5	34.0	3952	1.6	38.7	4526	0.0470

* The rated outer diameter of cables may vary by +/- 15% depending on the options selected (excluding FLEX option +/- 25%).

For this product, please contact:

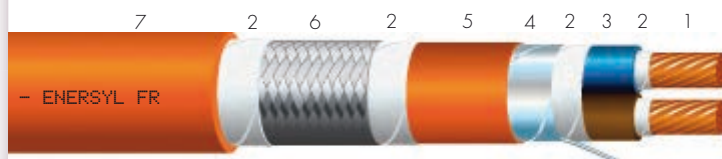


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ENERSYL® FR POWER

Multicore power cables



Reference

- (example) **ENERSYL® FR EG BG POWER 2x4 mm²**
FR : fire resistant
EG, BE, BR: type of electrical screen
BG, FA: type of armour
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 / NF C 32-090.
- IEC 60332-1 / IEC 60332-3 / NF C 32-070
test C1.
- IEC 60331-21 / NF EN 50200.
- IEC 61034-2 / IEC 60754-1 / IEC 60754-2.

Markings

- OMERIN – ENERSYL < FR xx xx 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: white numbered.

Technical characteristics

Thermal

- Continuous operating temperature: -30 °C to +80 °C.
- Maximum core temperature: +90 °C.

Electrical

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

Smoke - fire

- Flame retardant – cable alone:
IEC 60332-1-2 / NF EN 60332-1-2 / NF C 32-070 test C2.
- Flame retardant – bunched cable:
IEC 60332-3-22 cat. A / NF EN 60332-3-22 cat. A.
- Fire retardant: NF C 32-070 test C1.
- Fire resistant: IEC 60331-21 / NF EN 50200.
- Low smoke density: IEC 61034-2 / NF EN 61034-2.
- Halogen-free: IEC 60754-1 / NF EN 60754-1.
- Low corrosivity of gas emissions: IEC 60754-2 / NF EN 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

- FLEX: flexible tin-plated copper core, class 5 as per IEC 60228.
- Other colours: contact us.
- 105 °C cable: 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® FR BG EX POWER** : with a HFFR sheath under the armour and without hygroscopic separating tape.

For this product, please contact:



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				NON-SHIELDED CABLES			ARMoured CABLES			Max. linear resistance at 20 °C (Ω/km)
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)	
2 x 1.5	7 / 0.52	0.8	3.1	0.7	8.0	95	1.0	11.2	201	12.1
3 x 1.5	7 / 0.52	0.8	3.1	0.7	8.5	115	1.0	11.7	227	12.1
4 x 1.5	7 / 0.52	0.8	3.1	0.7	9.3	142	1.0	12.5	263	12.1
5 x 1.5	7 / 0.52	0.8	3.1	0.8	10.5	151	1.1	13.9	293	12.1
7 x 1.5	7 / 0.52	0.8	3.1	0.9	11.6	204	1.1	15.0	359	12.1
12 x 1.5	7 / 0.52	0.8	3.1	1.2	15.8	351	1.3	19.9	602	12.1
19 x 1.5	7 / 0.52	0.8	3.1	1.2	18.5	522	1.3	22.6	813	12.1
24 x 1.5	7 / 0.52	0.8	3.1	1.3	21.8	660	1.4	26.1	1012	12.1
27 x 1.5	7 / 0.52	0.8	3.1	1.3	22.3	727	1.4	26.5	1086	12.1
37 x 1.5	7 / 0.52	0.8	3.1	1.3	24.9	960	1.5	29.4	1373	12.1
2 x 2.5	7 / 0.67	0.8	3.6	0.7	9.0	129	1.0	12.2	247	7.41
3 x 2.5	7 / 0.67	0.8	3.6	0.8	9.9	165	1.0	13.1	294	7.41
4 x 2.5	7 / 0.67	0.8	3.6	0.9	11.0	210	1.1	14.4	358	7.41
5 x 2.5	7 / 0.67	0.8	3.6	1.0	12.2	223	1.2	15.8	394	7.41
7 x 2.5	7 / 0.67	0.8	3.6	1.1	13.5	300	1.2	17.1	487	7.41
12 x 2.5	7 / 0.67	0.8	3.6	1.2	18.0	499	1.3	22.0	782	7.41
19 x 2.5	7 / 0.67	0.8	3.6	1.3	21.2	754	1.4	25.5	1097	7.41
24 x 2.5	7 / 0.67	0.8	3.6	1.3	24.8	941	1.5	29.3	1352	7.41
27 x 2.5	7 / 0.67	0.8	3.6	1.4	25.5	1054	1.5	30.0	1476	7.41
37 x 2.5	7 / 0.67	0.8	3.6	1.4	28.6	1399	1.5	33.1	1870	7.41
2 x 4	7 / 0.85	0.8	4.2	0.8	10.5	182	1.1	13.9	324	4.61
3 x 4	7 / 0.85	0.8	4.2	0.9	11.4	231	1.1	14.8	384	4.61
4 x 4	7 / 0.85	0.8	4.2	1.0	12.7	294	1.2	16.3	470	4.61
5 x 4	7 / 0.85	0.8	4.2	1.1	14.0	313	1.2	17.7	511	4.61
7 x 4	7 / 0.85	0.8	4.2	1.1	15.3	415	1.2	19.2	650	4.61
12 x 4	7 / 0.85	0.8	4.2	1.3	20.7	704	1.3	24.7	1027	4.61
2 x 6	7 / 1.04	1.0	5.2	1.0	12.9	277	1.2	16.5	456	3.08
3 x 6	7 / 1.04	1.0	5.2	1.1	13.9	350	1.2	17.5	543	3.08
4 x 6	7 / 1.04	1.0	5.2	1.1	15.3	438	1.2	19.1	672	3.08
5 x 6	7 / 1.04	1.0	5.2	1.2	16.9	465	1.3	21.0	733	3.08
7 x 6	7 / 1.04	1.0	5.2	1.2	18.6	625	1.3	22.7	918	3.08
2 x 10	7 / 1.33	1.1	6.4	1.2	15.7	421	1.2	19.6	661	1.83
3 x 10	7 / 1.33	1.1	6.4	1.2	16.7	526	1.3	20.8	790	1.83
4 x 10	7 / 1.33	1.1	6.4	1.2	18.5	665	1.3	22.5	955	1.83
5 x 10	7 / 1.33	1.1	6.4	1.3	20.5	708	1.3	24.5	1028	1.83
2 x 16	7 / 1.68	1.1	7.4	1.2	17.8	583	1.3	21.9	863	1.15
3 x 16	7 / 1.68	1.1	7.4	1.2	19.0	740	1.3	23.0	1038	1.15
4 x 16	7 / 1.68	1.1	7.4	1.3	21.1	946	1.4	25.4	1287	1.15
5 x 16	7 / 1.68	1.1	7.4	1.3	23.2	1008	1.4	27.4	1380	1.15
2 x 25	7 strands	1.2	8.6	1.3	20.4	824	1.3	24.5	1143	0.727
3 x 25	7 strands	1.2	8.6	1.3	21.8	1060	1.4	26.0	1412	0.727
4 x 25	7 strands	1.2	8.6	1.3	24.0	1349	1.4	28.3	1734	0.727
5 x 25	7 strands	1.2	8.6	1.4	26.6	1468	1.5	31.1	1908	0.727
2 x 35	7 strands	1.2	9.7	1.3	22.6	1083	1.4	26.9	1447	0.524
3 x 35	7 strands	1.2	9.7	1.3	24.2	1410	1.4	28.4	1798	0.524
4 x 35	7 strands	1.2	9.7	1.4	26.9	1815	1.5	31.3	2259	0.524
5 x 35	7 strands	1.2	9.7	1.5	29.8	1993	1.6	34.5	2498	0.524
2 x 50	19 strands	1.4	11.5	1.4	26.4	1493	1.5	30.9	1929	0.387
3 x 50	19 strands	1.4	11.5	1.4	28.2	1949	1.5	32.7	2414	0.387
4 x 50	19 strands	1.4	11.5	1.5	31.4	2510	1.6	36.1	3042	0.387
5 x 50	19 strands	1.4	11.5	1.6	34.9	2752	1.7	39.7	3358	0.387
2 x 70	19 strands	1.4	12.7	1.4	28.8	1907	1.5	33.3	2380	0.268
3 x 70	19 strands	1.4	12.7	1.5	31.0	2531	1.6	35.7	3056	0.268
4 x 70	19 strands	1.4	12.7	1.6	34.5	3268	1.6	39.2	3850	0.268
2 x 95	19 strands	1.5	14.8	1.5	33.2	2613	1.6	37.9	3173	0.193
3 x 95	19 strands	1.5	14.8	1.6	35.8	3482	1.7	40.6	4103	0.193

* The rated outer diameter of cables may vary by +/- 15% depending on the options selected (excluding FLEX option +/- 25%).