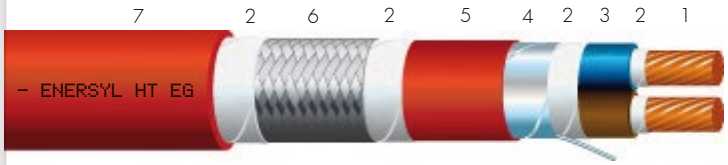
# ENERSYL® HT POWER

## *Multicore power cables*




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 + 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: silicone rubber.
6 • (optional) Armour: galvanized steel braid (BG).
7 • Outer sheath: silicone rubber.

### Reference

• (example) ENERSYL® HT EG BG POWER 2x4 mm²
**HT**: high temperature
**EG, BE, BR**: type of electrical screen
**BG**: 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.
• NF EN 50200.
• IEC 61034-2 / IEC 60754-1 / IEC 60754-2.

### Markings

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

### Standard products

• **Sheath**: brick red.
• **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: -60°C to +200°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: 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 NT140102-01:

• Good resistance to acid.
• Fairly good resistance to base.
• Good resistance to IRM 902 mineral oil.
• 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.
• **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® HT BG EX POWER:** with a silicone sheath under the armour and without hygroscopic separating tape.

For this product, please contact:

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LES CABLES DE L'EXTREME

**www.omerin.com**

The information provided in this technical data sheet is indicative and may be modified without prior notice, laying, wiring and electrical conditions and the environment of the cable can not be fully considered in our studies. In no way the company OMERIN shall be held responsible for any incidents in the case of inappropriate uses, particularly in the case of wiring conditions that do not respect the good practice and the standards in force.
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 | 0.8 | 3.1 | 1.0 | 8.4 | 100 | 1.4 | 12.4 | 229 | 12.1 |
| 3 x 1.5 | 7 / 0.52 | 0.8 | 3.1 | 1.0 | 8.9 | 120 | 1.4 | 12.9 | 256 | 12.1 |
| 4 x 1.5 | 7 / 0.52 | 0.8 | 3.1 | 1.2 | 10.1 | 156 | 1.5 | 14.3 | 314 | 12.1 |
| 5 x 1.5 | 7 / 0.52 | 0.8 | 3.1 | 1.4 | 11.4 | 173 | 1.5 | 15.6 | 348 | 12.1 |
| 7 x 1.5 | 7 / 0.52 | 0.8 | 3.1 | 1.4 | 12.3 | 222 | 1.5 | 16.5 | 410 | 12.1 |
| 12 x 1.5 | 7 / 0.52 | 0.8 | 3.1 | 1.5 | 16.1 | 360 | 1.6 | 20.8 | 635 | 12.1 |
| 19 x 1.5 | 7 / 0.52 | 0.8 | 3.1 | 1.6 | 19.0 | 541 | 1.8 | 24.1 | 883 | 12.1 |
| 24 x 1.5 | 7 / 0.52 | 0.8 | 3.1 | 1.8 | 22.5 | 692 | 2.2 | 28.4 | 1141 | 12.1 |
| 27 x 1.5 | 7 / 0.52 | 0.8 | 3.1 | 1.8 | 23.0 | 760 | 2.2 | 28.8 | 1218 | 12.1 |
| 37 x 1.5 | 7 / 0.52 | 0.8 | 3.1 | 2.0 | 26.0 | 1020 | 2.4 | 32.3 | 1562 | 12.1 |
| 2 x 2.5 | 7 / 0.67 | 0.8 | 3.6 | 1.2 | 9.8 | 142 | 1.4 | 13.8 | 290 | 7.41 |
| 3 x 2.5 | 7 / 0.67 | 0.8 | 3.6 | 1.4 | 10.8 | 182 | 1.5 | 15.0 | 350 | 7.41 |
| 4 x 2.5 | 7 / 0.67 | 0.8 | 3.6 | 1.4 | 11.7 | 224 | 1.5 | 15.9 | 404 | 7.41 |
| 5 x 2.5 | 7 / 0.67 | 0.8 | 3.6 | 1.4 | 12.7 | 236 | 1.5 | 16.9 | 430 | 7.41 |
| 7 x 2.5 | 7 / 0.67 | 0.8 | 3.6 | 1.5 | 14.0 | 314 | 1.6 | 18.5 | 538 | 7.41 |
| 12 x 2.5 | 7 / 0.67 | 0.8 | 3.6 | 1.6 | 18.5 | 517 | 1.8 | 23.5 | 850 | 7.41 |
| 19 x 2.5 | 7 / 0.67 | 0.8 | 3.6 | 1.8 | 21.9 | 785 | 2.0 | 27.4 | 1200 | 7.41 |
| 24 x 2.5 | 7 / 0.67 | 0.8 | 3.6 | 2.0 | 25.9 | 1001 | 2.4 | 32.2 | 1541 | 7.41 |
| 27 x 2.5 | 7 / 0.67 | 0.8 | 3.6 | 2.0 | 26.4 | 1103 | 2.4 | 32.7 | 1653 | 7.41 |
| 37 x 2.5 | 7 / 0.67 | 0.8 | 3.6 | 2.2 | 29.9 | 1481 | 2.6 | 36.6 | 2130 | 7.41 |
| 2 x 4 | 7 / 0.85 | 0.8 | 4.2 | 1.4 | 11.4 | 199 | 1.5 | 15.6 | 375 | 4.61 |
| 3 x 4 | 7 / 0.85 | 0.8 | 4.2 | 1.4 | 12.1 | 244 | 1.5 | 16.3 | 429 | 4.61 |
| 4 x 4 | 7 / 0.85 | 0.8 | 4.2 | 1.4 | 13.2 | 303 | 1.5 | 17.4 | 503 | 4.61 |
| 5 x 4 | 7 / 0.85 | 0.8 | 4.2 | 1.5 | 14.5 | 328 | 1.6 | 19.0 | 559 | 4.61 |
| 7 x 4 | 7 / 0.85 | 0.8 | 4.2 | 1.5 | 15.8 | 431 | 1.6 | 20.5 | 702 | 4.61 |
| 12 x 4 | 7 / 0.85 | 0.8 | 4.2 | 1.6 | 21.0 | 716 | 2.0 | 26.4 | 1114 | 4.61 |
| 2 x 6 | 7 / 1.04 | 1.0 | 5.2 | 1.4 | 13.4 | 285 | 1.5 | 17.6 | 488 | 3.08 |
| 3 x 6 | 7 / 1.04 | 1.0 | 5.2 | 1.5 | 14.4 | 359 | 1.6 | 18.9 | 589 | 3.08 |
| 4 x 6 | 7 / 1.04 | 1.0 | 5.2 | 1.5 | 15.8 | 447 | 1.6 | 20.4 | 718 | 3.08 |
| 5 x 6 | 7 / 1.04 | 1.0 | 5.2 | 1.5 | 17.2 | 475 | 1.8 | 22.3 | 788 | 3.08 |
| 7 x 6 | 7 / 1.04 | 1.0 | 5.2 | 1.6 | 19.1 | 644 | 1.8 | 24.2 | 988 | 3.08 |
| 2 x 10 | 7 / 1.33 | 1.1 | 6.4 | 1.5 | 16.0 | 421 | 1.6 | 20.7 | 695 | 1.83 |
| 3 x 10 | 7 / 1.33 | 1.1 | 6.4 | 1.5 | 17.0 | 528 | 1.8 | 22.1 | 837 | 1.83 |
| 4 x 10 | 7 / 1.33 | 1.1 | 6.4 | 1.6 | 19.0 | 675 | 1.8 | 24.0 | 1017 | 1.83 |
| 5 x 10 | 7 / 1.33 | 1.1 | 6.4 | 1.6 | 20.8 | 719 | 2.0 | 26.2 | 1114 | 1.83 |
| 2 x 16 | 7 / 1.68 | 1.1 | 7.4 | 1.6 | 18.3 | 590 | 1.8 | 23.4 | 921 | 1.15 |
| 3 x 16 | 7 / 1.68 | 1.1 | 7.4 | 1.6 | 19.5 | 750 | 1.8 | 24.5 | 1100 | 1.15 |
| 4 x 16 | 7 / 1.68 | 1.1 | 7.4 | 1.8 | 21.8 | 966 | 2.0 | 27.3 | 1378 | 1.15 |
| 5 x 16 | 7 / 1.68 | 1.1 | 7.4 | 1.8 | 23.9 | 1041 | 2.4 | 30.1 | 1543 | 1.15 |
| 2 x 25 | 7 strands | 1.2 | 8.6 | 1.6 | 20.7 | 821 | 2.0 | 26.2 | 1215 | 0.727 |
| 3 x 25 | 7 strands | 1.2 | 8.6 | 1.8 | 22.5 | 1080 | 2.2 | 28.3 | 1529 | 0.727 |
| 4 x 25 | 7 strands | 1.2 | 8.6 | 2.0 | 25.1 | 1392 | 2.4 | 31.4 | 1917 | 0.727 |
| 5 x 25 | 7 strands | 1.2 | 8.6 | 2.0 | 27.5 | 1518 | 2.4 | 33.8 | 2090 | 0.727 |
| 2 x 35 | 7 strands | 1.3 | 9.7 | 1.8 | 23.3 | 1099 | 2.2 | 29.2 | 1563 | 0.524 |
| 3 x 35 | 7 strands | 1.3 | 9.7 | 2.0 | 25.3 | 1452 | 2.4 | 31.5 | 1980 | 0.524 |
| 4 x 35 | 7 strands | 1.3 | 9.7 | 2.2 | 28.2 | 1874 | 2.4 | 34.4 | 2458 | 0.524 |
| 5 x 35 | 7 strands | 1.3 | 9.7 | 2.4 | 31.3 | 2089 | 2.6 | 38.0 | 2767 | 0.524 |
| 2 x 50 | 19 strands | 1.4 | 11.5 | 2.0 | 27.3 | 1520 | 2.4 | 33.6 | 2087 | 0.387 |
| 3 x 50 | 19 strands | 1.4 | 11.5 | 2.4 | 29.9 | 2035 | 2.6 | 36.6 | 2685 | 0.387 |
| 4 x 50 | 19 strands | 1.4 | 11.5 | 2.4 | 32.9 | 2590 | 2.6 | 39.6 | 3301 | 0.387 |
| 5 x 50 | 19 strands | 1.4 | 11.5 | 2.6 | 36.6 | 2881 | 2.8 | 43.6 | 3702 | 0.387 |
| 2 x 70 | 19 strands | 1.4 | 12.7 | 2.4 | 30.5 | 1987 | 2.6 | 37.2 | 2649 | 0.268 |
| 3 x 70 | 19 strands | 1.4 | 12.7 | 2.4 | 32.5 | 2608 | 2.6 | 39.2 | 3310 | 0.268 |
| 4 x 70 | 19 strands | 1.4 | 12.7 | 2.6 | 36.2 | 3369 | 2.8 | 43.3 | 4183 | 0.268 |

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