

Silicone-insulated single-core high-voltage automotive cables, unscreened – copper and aluminium

Application: HV aggregates, charging devices and internal battery cabling

Cable construction in accordance with LV 216-1 and ISO 6722

Construction of HV wiring systems for hybrid and electric vehicles

Operating temperature range in accordance with ISO 6722

–40 °C to +200 °C/3,000 h
–40 °C to +225 °C/240 h

The unscreened high-voltage cables complement the Coroplast high-voltage cables product family. Wherever high-voltage cables are housed in metallically enclosed spaces, such as in the internal high-voltage batteries, the high-voltage cables do not need to be screened, subject to proof of EMC suitability.

As in the case of the screened Coroplast high-voltage cables, the electric conductor materials of copper and aluminium can be chosen between, in accordance with our modular system. The cable geometries remain cross-section-dependent. The tried-and-tested, electrically safe, mechanically highly stable and flexibility-promoting silicone insulation material continues to be a guarantee of the functionality of the Coroplast high-voltage cables across the entire vehicle lifespan.



You can find detailed information on the design of these cables on the following pages of this brochure. A first impression of the current load ratings of the unscreened high-voltage cables can be gained from the threshold value curves in the technical section.

High-voltage automotive cables 600 V AC / 1,000 V DC – single-core, unscreened

Conductor material: Copper

Layout tables in accordance with LV 216-1

**Silicone – high-voltage cables FHL2G 0.35 mm² to 120 mm²
(Standard cross-sections)**

cross-section [mm ²]	Conductor		diameter (max.) [mm]	resistance at 20 °C (max.) [mΩ/m]	Core diameter [mm]
	finely stranded (nom.) (max.) [mm]	extra finely stranded (nom.) (max.) [mm]			
0.35*	12 x 0.21	45 x 0.11	0.9	52.0	2.1 (– 0.3)
0.5*	16 x 0.21	64 x 0.11	1.1	37.1	2.3 (– 0.3)
0.75*	24 x 0.21	96 x 0.11	1.3	24.7	2.5 (– 0.3)
1.0*	32 x 0.21	126 x 0.11	1.5	18.5	2.7 (– 0.3)
1.5*	30 x 0.26	192 x 0.11	1.8	12.7	3.0 (– 0.3)
2.5*	50 x 0.26	320 x 0.11	2.2	7.6	3.6 (– 0.3)
4.0*	56 x 0.31	120 x 0.21	2.8	4.7	4.4 (– 0.4)
6.0*	84 x 0.31	183 x 0.21	3.4	3.1	5.0 (– 0.4)
10	80 x 0.41	320 x 0.21	4.5	1.82	6.5 (– 0.6)
16	126 x 0.41	512 x 0.21	5.8	1.16	8.3 (– 0.6)
25	196 x 0.41	790 x 0.21	7.2	0.743	10.0 (– 0.6)
35	276 x 0.41	1,070 x 0.21	8.5	0.527	11.0 (– 0.7)
50	396 x 0.41	1,600 x 0.21	10.5	0.368	13.2 (– 0.8)
70	360 x 0.51	2,175 x 0.21	12.5	0.259	15.1 (– 0.8)
95	475 x 0.51	3,000 x 0.21	14.8	0.196	17.4 (– 1.0)
120*	608 x 0.51	3,700 x 0.21	16.5	0.153	19.5 (– 1.0)

* These cable cross-sections can be ordered on request.