



ISO 19642 / LV 216 High-Voltage EV Powertrain Cables

FHLR2GCB2G

Shielded Automotive HV Cable

ISO 19642-9 / LV 216-2 EMC-shielded (foil + braid) double-silicone (2G) orange high-voltage



ISO 19642-9

600 V AC / 900 V DC & 1000 V

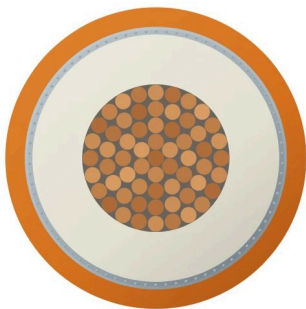
-40 to +180 °C

Application

FHLR2GCB2G is a screened high-voltage automotive traction cable engineered to ISO 19642-9 and German OEM standard LV 216-2 for 600 V AC / 900 V DC and 1000 V AC / 1500 V DC electric vehicle (BEV/HEV) underbody and powertrain harnesses. It combines an extra-fle

Typical uses: 800 V Inverter-to-Traction-Motor Phases, Battery-to-Inverter Underbody HV Bus, Onboard Charger (OBC) & CCS Fast-Charge Inlet Leads

Construction



Cross-section, not to scale

1	Conductor	ISO 19642-9
2	Insulation	ISO 19642-9
3	Tape	ISO 19642-9
4	Screen	ISO 19642-9
5	Sheath	ISO 19642-9

Technical data

Typical values

Rated voltage (U0/U)	600 V AC / 900 V DC & 1000 V AC / 1500 V DC	Max. operating voltage	1000 V AC / 1500 V DC
Dielectric test voltage	5000 V AC (core-to-screen dielectric withstand per ISO 19642-9)	Insulation resistance	≥ 1000 MΩ·km at +20 °C
Operating temperature range	-40 °C to +180 °C	Dynamic / flexing temperature	-40 °C to +180 °C
Max. short-circuit temperature	+250 °C	Min. bend radius (fixed)	4 × D
Min. bend radius (flexing)	6 × D	Max. tensile pulling load	15 N/mm ²
Vibration & mechanical duty	E-axis & chassis dynamic movement	Flame retardancy	ISO 19642-9 flame propagation self-extinguishing (< 70 s)
Oil & fluid resistance	ISO 19642-9 automotive fluid resistance (ATF, gear oil, brake fluid, coolant, diesel, road salt)	UV, weather & ozone	Ozone, UV, stone-chip abrasion & 3000 h +180 °C thermal aging resistant
Chemical & environmental	Halogen-free silicone elastomer inner and outer layers resistant to hydrolysis and underbody chemicals	Standards	ISO 19642-9 (2019) — Road vehicles — Automotive cables — Part 9: Dimensions and requirements for 600 V a.c. or 900 V d.c. and 1000 V a.c. or 1500 V d.c. round, sheathed, screened or unscreened multicore and single-core copper conductor cables

Sizes

8 standard constructions

Tick the sizes you need and send this page to info@tebaoflex.com or WhatsApp +86 185 9591 3361.

Designation	Size / Configuration	Stranding · Wall	Nom. OD mm	Copper kg/km	Total mass ≈ kg/km	Min. bend R mm
FHLR2GCB2G size schedule 8 sizes						
☐ FHLR2GCB2G 1×6	1×6	0.15 · 0.9 mm	7.40	60.9	105.0	44.4
☐ FHLR2GCB2G 1×10	1×10	0.20 · 1.0 mm	8.90	94.0	162.0	53.4
☐ FHLR2GCB2G 1×16	1×16	0.20 · 1.0 mm	10.30	136.3	235.0	61.8
☐ FHLR2GCB2G 1×25	1×25	0.20 · 1.1 mm	12.10	200.1	345.0	72.6
☐ FHLR2GCB2G 1×35	1×35	0.20 · 1.2 mm	13.60	266.8	460.0	81.6
☐ FHLR2GCB2G 1×50	1×50	0.20 · 1.3 mm	15.80	368.3	635.0	94.8
☐ FHLR2GCB2G 1×70	1×70	0.20 · 1.4 mm	17.90	495.9	855.0	107.4
☐ FHLR2GCB2G 1×95	1×95	0.20 · 1.6 mm	20.40	661.2	1,140.0	122.4

– Dimensions and tolerances conform to ISO 19642-9.

Electrical data

8 sizes

Size / Configuration	Max. DC R @ 20 °C Ω/km	Current in air A	Installed / duty A
1×6	3.110	78	62
1×10	1.820	108	86
1×16	1.160	145	116
1×25	0.743	195	156
1×35	0.527	245	196
1×50	0.368	305	244
1×70	0.259	380	304
1×95	0.196	460	368

– Reference ampacities at +30 °C ambient; apply duty-cycle or grouping correction factors per standard.

Standards and approvals

✓ ISO 19642-9 Class E (+180 °C); LV 216-2

✓ LV 216-2 (2014)

✓ RoHS 3 & REACH Compliant

Certifications



Management systems: ISO 9001, ISO 14001, ISO 45001

Request a quotation

Send the size, length and destination. An application engineer replies within 2 business hours.

WhatsApp / phone

+86 185 9591 3361

Email

info@tebaoflex.com

Web

tebaoflex.com/cables/fh1r2gcb2g-shielded-automotive-hv-cable



Typical values for this cable type, based on ISO 19642-9. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.