



CGAU 1.8/3 kV rail & traction single-core

CGAU

Rubber Single-Core Cable for Rail Vehicles and Equipment

1.8/3 (3.6) kV EPR/PCP short-circuit-proof rubber single-core cable for rail vehicles



1.8/3 (3.6) kV

Short-Circuit-Proof

1.5 – 300 mm² Class 5

Application

Heavy-duty dual-layer elastomer single-core power and equipment cable (CGAU) rated U₀/U = 1.8/3 (3.6) kV AC (3.6/5.4 kV DC) with Class 5 tinned copper conductor, EPR/HEPR dielectric (3GI3), and oil/flame-resistant polychloroprene outer sheath (5GM2).

Typical uses: Diesel-Electric & Electric Locomotives, Metro, Tram & EMU Traction Converter Cabinets, 750 V / 1,500 V / 3,000 V DC Busbar & Battery Wiring, Industrial Switchgear Short-Circuit-Proof Jumpers, Auxiliary Generator & Resistor Bank Leads

Construction



Cross-section, not to scale

- 1 Fine-stranded Class 5 tinned copper conductor
- 2 Polyester separating tape ($\geq 16 \text{ mm}^2$)
- 3 1.8/3 kV EPR (3GI3) primary dielectric
- 4 Oil- & flame-retardant PCP / elastomer outer sheath (5GM2)

Technical data

Typical values

Nominal AC voltage (U0/U)	1.8/3 kV · Max operating Um = 3.6 kV AC	Max. operating DC voltage	2.7/5.4 kV DC
Routine AC test voltage	6.0 kV AC rms for 5 min	Max. conductor temperature	+90 °C continuous · +250 °C short-circuit (5 s)
Operating temperature (fixed)	−40 °C to +80 °C (ambient)	Operating temperature (flexing)	−25 °C to +80 °C
Cross-section range	1.5 mm ² to 300 mm ² (Class 5 tinned copper)	Min. bend radius	4 × OD (fixed ≤ 12 mm) · 5 × OD (fixed > 12 mm) · 10 × OD (flexing)
Max. tensile load	15 N/mm ² of copper cross-section	Oil & fuel resistance	EN 60811-404 mineral oil & diesel fuel resistant
Flame retardancy	IEC 60332-1-2 / NF C 32-070 C2	Ozone & weather resistance	EN 60811-403 ozone resistant for outdoor bogie cleating
Standards	NF F 63-305 · DIN VDE 0250-602 · IEC 60245		

Sizes

14 standard constructions

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

Order designation	Cross-Section mm ²	Max Wire Ø mm	Max R @20°C Ω/km	Nominal OD mm	Weight kg/km	Ampacity A (30°C)	Fixed R mm
Control, Battery & Auxiliary Sizes — 1.5 mm ² to 25 mm ² 7 sizes							
☐ CGAU-18/30-1X1.5	1 × 1.5	0.26	13.700	7.0	64	30	35
☐ CGAU-18/30-1X2.5	1 × 2.5	0.26	8.210	7.5	78	41	38
☐ CGAU-18/30-1X4	1 × 4.0	0.31	5.090	8.0	96	55	40
☐ CGAU-18/30-1X6	1 × 6.0	0.31	3.390	8.5	118	70	43
☐ CGAU-18/30-1X10	1 × 10	0.41	1.950	9.5	165	98	48
☐ CGAU-18/30-1X16	1 × 16	0.41	1.240	10.8	230	132	54
☐ CGAU-18/30-1X25	1 × 25	0.41	0.795	12.5	330	176	63
Traction Motor, Inverter & Main Busbar Sizes — 35 mm ² to 300 mm ² 7 sizes							
☐ CGAU-18/30-1X35	1 × 35	0.41	0.565	13.8	435	218	69
☐ CGAU-18/30-1X50	1 × 50	0.41	0.393	15.6	595	276	78
☐ CGAU-18/30-1X70	1 × 70	0.51	0.277	17.5	795	347	88
☐ CGAU-18/30-1X95	1 × 95	0.51	0.210	19.8	1,030	416	99
☐ CGAU-18/30-1X120	1 × 120	0.51	0.164	21.6	1,275	488	108
☐ CGAU-18/30-1X185	1 × 185	0.51	0.108	26.0	1,910	644	130
☐ CGAU-18/30-1X300	1 × 300	0.51	0.066	31.8	3,020	898	159

– For ambient temperatures above 30 °C, apply standard VDE 0298-4 derating factors (e.g. 0.82 at 50 °C, 0.71 at 60 °C for +90 °C EPR).

Standards and approvals

- ✓ NF F 63-305 & DIN VDE 0250-602 1.8/3 kV Compliant
- ✓ VDE 0100-520 Inherently Short-Circuit & Earth-Fault Proof

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/cgau-rubber-single-core-cable-for-rail-vehicles-and-equipment



Typical values for this cable type, based on NF F 63-305 / DIN VDE 0250-602 / IEC 60092-353. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.