

**28.5 V DC & 270 V DC Aircraft Ground Power (GPU) Cables**

GP 270 V DC

270 V DC Aircraft Ground-Power Cable

MIL-STD-704F / SAE AS5756 270 V DC (± 135 V DC) $2 \times 35-2 \times 95$ mm² + ground + screened pilots



MIL-STD-704F · 270 V DC (± 135 V)

F-35 / F-22 Fighter GPU Cable

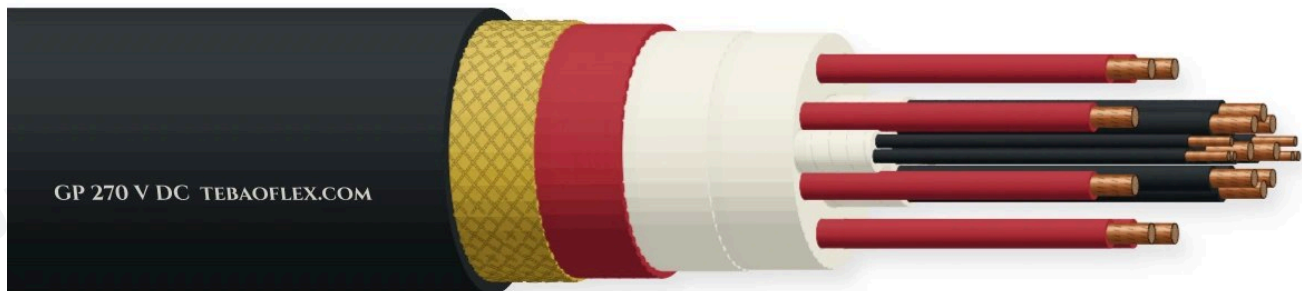
$2 \times 35-95$ mm² + PE + Screened Control

Application

GP 270 V DC Aircraft Ground-Power Cable is engineered to MIL-STD-704F and SAE AS5756 for 5th-generation tactical fighter aircraft (F-35 Lightning II, F-22 Raptor) and advanced military UAV/avionics converters operating on 270 V DC (± 135 V DC), combining

Typical uses: F-35A/B/C & F-22 fighter ground power, Naval aircraft carrier flight-deck pits, 270 V DC solid-state GPU converters, Aerospace HVDC power lab test stands

Construction



Cross-section, not to scale

1	Class 6 extra-flexible tinned copper	MIL-STD-704F / SAE AS5756
2	90 °C HVDC-grade EPR / XLPO insulation	SAE AS5756
3	Tinned copper screen over control/sense	MIL-STD-704F EMC
4	Inner elastomeric bedding +	ISO 6858
5	Flight-line outer sheath (PUR / CPE)	SAE AS5756 / MIL-DTL-3432

Technical data

Typical values

Nominal system voltage	270 V DC (± 135 V DC wrt chassis ground per	Cable insulation voltage rating	0.6/1 kV AC / 1.5 kV DC
Routine dielectric test voltage	3,500 V AC (power) · 1,500 V AC (control	Control screen coverage	≥ 85 % tinned copper braid over
Max. conductor operating temp.	+90 °C continuous · +250 °C short-circuit	Operating temperature range	-40 °C to +90 °C (-55 °C arctic cold option)
Dynamic reeling temperature	-35 °C to +80 °C	Min. bending radius	5 × D static · 6 × D dynamic reeling
Crush & deck drag resistance	Reinforced double-sheath withstands fighter	Military fluid resistance	JP-5, JP-8, Jet-A1, PAO dielectric coolant
Flame & halogen-free options	IEC 60332-1-2 · MIL-DTL-3432 · LSZH	Standards	MIL-STD-704F (270 V DC) · SAE AS5756 · ISO

Sizes

5 standard constructions

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

Order designation	Cores × Size	Main cross-section	Outer Ø ≈ mm	Copper kg/km	Weight ≈ kg/km	Min. bend R fixed mm
Standard GP 270 V DC configurations 5 sizes						
☐ GP 270 V DC 2×35 + 1G25 + (6×1.5)C mm ²	2×35 + 1G25 + (6×1.5)C	35.0 mm ²	31.5	1,020	1,680	189
☐ GP 270 V DC 2×50 + 1G25 + (6×1.5)C mm ²	2×50 + 1G25 + (6×1.5)C	50.0 mm ²	35.2	1,320	2,120	211
☐ GP 270 V DC 2×70 + 1G35 + (6×1.5)C mm ²	2×70 + 1G35 + (6×1.5)C	70.0 mm ²	39.4	1,810	2,790	236
☐ GP 270 V DC 2×70 + 1G35 + (8×2.5)C mm ²	2×70 + 1G35 + (8×2.5)C	70.0 mm ²	40.8	1,920	2,950	245
☐ GP 270 V DC 2×95 + 1G50 + (8×2.5)C mm ²	2×95 + 1G50 + (8×2.5)C	95.0 mm ²	45.2	2,580	3,840	271

– Outer diameters and weights are nominal factory values subject to ± 5 % manufacturing tolerance per MIL-STD-704F / SAE AS5756 / ISO 6858 (270 V DC / ± 135 V DC GPU).

Electrical & ampacity

5 sizes

Configuration	Max. DC R @ 20 °C Ω/km	I _z free air A	I _z tray / duct A	I _{sc} (1 s) kA	Voltage drop mV/A/m	Dielectric test V
2×35 + 1G25 + (6×1.5)C	0.56	195	175	5.01	1.13	3,500
2×50 + 1G25 + (6×1.5)C	0.39	245	220	7.15	0.79	3,500
2×70 + 1G35 + (6×1.5)C	0.28	310	280	10.01	0.55	3,500
2×70 + 1G35 + (8×2.5)C	0.28	310	280	10.01	0.55	3,500
2×95 + 1G50 + (8×2.5)C	0.21	380	340	13.59	0.42	3,500

– Conductor DC resistance at +20 °C per IEC 60228 and reference current ratings at 30 °C ambient per MIL-STD-704F / SAE AS5756 / ISO 6858 (270 V DC / ± 135 V DC GPU).

Standards and approvals

- ✓ MIL-STD-704F (270 V DC)
- ✓ SAE AS5756 / ISO 6858
- ✓ IEC 60228 Class 6

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/270-v-dc-aircraft-ground-power-cable



Typical values for this cable type, based on MIL-STD-704F / SAE AS5756 / ISO 6858 (270 V DC / ± 135 V DC GPU). Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.