



SAE J1127 Automotive & Heavy-Duty Starter / Ground Battery Cables

STX

Thin-Wall Battery Cable

SAE J1127 Type STX 60 V DC starter thin-wall cross-linked polyethylene (XLPE)
+125 °C batt



SAE J1127

60 V DC (25 V AC)

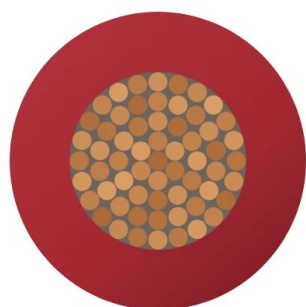
-40 to +125 °C

Application

STX is an SAE J1127 Type STX thin-wall cross-linked battery cable engineered for 60 V DC automotive and commercial vehicle starting and power distribution systems where routing space and harness weight are constrained. Combining rope-lay annealed bare copper c

Typical uses: Tight Engine-Bay Starter & Alternator Harnesses, Automated OEM Battery Harness Assembly, 48 V Mild-Hybrid & Auxiliary Power Distribution

Construction



Cross-section, not to scale

1 Conductor

SAE J1127

2 Tape

SAE J1127

3 Sheath

SAE J1127

Technical data

Typical values

Rated voltage (U0/U)	60 V DC (25 V AC)	Max. operating voltage	60 V DC
Dielectric test voltage	1000 V AC (spark/dielectric test per SAE J1127)	Insulation resistance	SAE J1127 thin-wall pinch, abrasion & dielectric compliance
Operating temperature range	-40 °C to +125 °C	Dynamic / flexing temperature	-40 °C to +125 °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	Engine vibration & compact harness routing	Flame retardancy	SAE J1127 45° flame test (self-extinguishing)
Oil & fluid resistance	SAE J1127 hot oil, diesel fuel, power steering fluid & battery acid resistant	UV, weather & ozone	UV, weather, ozone & +125 °C under-hood thermal aging resistant
Chemical & environmental	Resistant to sulfuric battery acid, engine oil, gasoline, diesel, glycol coolant and brake fluid	Standards	SAE J1127 (2020) — Surface Vehicle Standard — Low Voltage Battery Cable (Type STX Thin-Wall)

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
STX size schedule 8 sizes						
☐ STX 6 AWG (13.3 mm ²)	6 AWG (13.3 mm ²)	133/27 · 1.4 mm	7.30	84.1	145.0	43.8
☐ STX 4 AWG (21.2 mm ²)	4 AWG (21.2 mm ²)	133/25 · 1.65 mm	9.10	123.0	212.0	54.6
☐ STX 2 AWG (33.6 mm ²)	2 AWG (33.6 mm ²)	259/26 · 1.65 mm	10.80	182.7	315.0	64.8
☐ STX 1 AWG (42.4 mm ²)	1 AWG (42.4 mm ²)	259/25 · 1.65 mm	11.90	226.2	390.0	71.4
☐ STX 1/0 AWG (53.5 mm ²)	1/0 AWG (53.5 mm ²)	259/24 · 1.65 mm	13.20	279.6	482.0	79.2
☐ STX 2/0 AWG (67.4 mm ²)	2/0 AWG (67.4 mm ²)	259/23 · 1.65 mm	14.60	345.1	595.0	87.6
☐ STX 3/0 AWG (85.0 mm ²)	3/0 AWG (85.0 mm ²)	259/22 · 1.9 mm	16.80	435.0	750.0	100.8
☐ STX 4/0 AWG (107.2 mm ²)	4/0 AWG (107.2 mm ²)	413/23 · 1.9 mm	18.60	544.0	938.0	111.6

– Dimensions and tolerances conform to SAE J1127.

Electrical data

8 sizes

Size / Configuration	Max. DC R @ 20 °C Ω/km	Current in air A	Installed / duty A
6 AWG (13.3 mm ²)	1.320	125	100
4 AWG (21.2 mm ²)	0.840	185	148
2 AWG (33.6 mm ²)	0.530	245	196
1 AWG (42.4 mm ²)	0.420	285	228
1/0 AWG (53.5 mm ²)	0.330	330	264
2/0 AWG (67.4 mm ²)	0.260	385	308
3/0 AWG (85.0 mm ²)	0.210	450	360
4/0 AWG (107.2 mm ²)	0.170	520	416

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

Standards and approvals

- ✓ SAE J1127 Type STX; ISO 6722-1 Class C
- ✓ ISO 6722-1 (2011)
- ✓ 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/stx-thin-wall-battery-cable



Typical values for this cable type, based on SAE J1127. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.