



SAE J1128 North American Automotive Primary Wires

GPT

Automotive Primary Wire

60 V DC / 25 V AC SAE J1128 regular-wall thermoplastic PVC automotive primary wire (20–8 A)



60 V DC / 25 V AC

SAE J1128 Type GPT

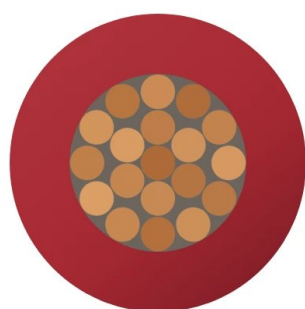
-40 to +85 °C (Class A)

Application

Type GPT (General Purpose Thermoplastic) is a standard-wall 60 V DC (25 V AC) low-voltage primary wire manufactured to SAE J1128 for North American automotive, agricultural, marine-cabin and trailer harnesses. Built with concentric stranded ASTM B3 bare copper

Typical uses: Passenger car & truck cabins, Agricultural & off-highway machinery, RV, caravan & boat interiors, Aftermarket lighting & accessories, Utility trailer wiring looms

Construction



Cross-section, not to scale

1 Stranded bare copper conductor

ASTM B3

2 Regular-wall thermoplastic PVC

SAE J1128

3 Integral colour-coded outer skin

SAE J1128

Technical data

Typical values

Nominal operating voltage	≤60 V DC / ≤25 V AC	Dielectric withstand test	1.0 kV AC rms for 1 minute (wet dielectric test)
Spark test voltage (in-line)	1.5 kV to 3.0 kV AC rms	Continuous operating temperature	-40 °C to +85 °C (3000 h thermal class)
Cold bend test temperature	-40 °C for 4 hours on mandrel without cracking	Nom. wall thickness (20-14 AWG)	0.58 mm (0.023 in)
Nom. wall thickness (12-10 / 8 AWG)	0.66 mm (12 AWG) · 0.79 mm (10 AWG) · 0.94 mm (8 AWG)	Min. installation bend radius	5 × overall wire diameter
Flame propagation	45° inclined burn test: self-extinguishes within 70 s	Fluid immersion resistance	Engine oil, gasoline, diesel, ethanol, antifreeze & battery acid per SAE J1128
Standards	SAE J1128 Type GPT		

Sizes

12 standard constructions

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

Designation	AWG Metric mm ²	Strands / Wall mm	Max. OD mm	Copper kg/km	Total mass ≈ kg/km	Min. bend R mm
GPT size range 12 sizes						
☐ GPT 20 AWG (0.5 mm ²)	20 AWG (0.5 mm ²)	7/28 · 0.58 mm	2.50	4.9	9.2	12.5
☐ GPT 18 AWG (0.8 mm ²)	18 AWG (0.8 mm ²)	16/30 · 0.58 mm	2.75	7.6	12.5	13.8
☐ GPT 16 AWG (1.0 mm ²)	16 AWG (1.0 mm ²)	19/29 · 0.58 mm	3.05	11.2	16.8	15.2
☐ GPT 14 AWG (2.0 mm ²)	14 AWG (2.0 mm ²)	19/27 · 0.58 mm	3.45	17.8	24.5	17.2
☐ GPT 12 AWG (3.0 mm ²)	12 AWG (3.0 mm ²)	19/25 · 0.66 mm	4.20	28.2	37.5	21.0
☐ GPT 10 AWG (5.0 mm ²)	10 AWG (5.0 mm ²)	19/23 · 0.79 mm	5.10	45.0	58.5	25.5
☐ GPT 8 AWG (8.0 mm ²)	8 AWG (8.0 mm ²)	19/21 · 0.94 mm	6.20	71.5	91.0	31.0
☐ GPT 18 AWG 19-Strand	18 AWG (19/30)	19/30 · 0.58 mm	2.80	8.9	13.8	14.0
☐ GPT 16 AWG 26-Strand	16 AWG (26/30)	26/30 · 0.58 mm	3.10	12.1	17.8	15.5
☐ GPT 14 AWG 41-Strand	14 AWG (41/30)	41/30 · 0.58 mm	3.50	19.1	26.0	17.5
☐ GPT 12 AWG 65-Strand	12 AWG (65/30)	65/30 · 0.66 mm	4.25	30.2	39.8	21.2
☐ GPT 10 AWG 105-Strand	10 AWG (105/30)	105/30 · 0.79 mm	5.15	48.5	62.0	25.8

– Dimensions and maximum overall diameters conform to SAE J1128 / ISO 6722-1 Class A.

Electrical data

12 sizes

AWG Metric mm ²	Max. DCR @ 20 °C mΩ/m	Single wire in air A	In harness bundle A
20 AWG (0.5 mm ²)	34.60	11	9
18 AWG (0.8 mm ²)	21.40	15	12
16 AWG (1.0 mm ²)	14.60	19	15
14 AWG (2.0 mm ²)	9.18	26	20
12 AWG (3.0 mm ²)	5.77	35	27
10 AWG (5.0 mm ²)	3.63	48	37
8 AWG (8.0 mm ²)	2.28	65	51
18 AWG (19/30)	19.20	16	12
16 AWG (26/30)	13.80	20	16
14 AWG (41/30)	8.90	27	21
12 AWG (65/30)	5.58	36	28
10 AWG (105/30)	3.52	50	39

– Current ratings are reference values at +25 °C ambient; derate for multi-wire harness bundles and elevated engine-bay temperatures.

Standards and approvals

- ✓ SAE J1128 Type GPT
- ✓ ISO 6722-1 Class A (85 °C)
- ✓ Ford ESB-M1L56-A
- ✓ Chrysler MS-3450
- ✓ RoHS 3 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

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Email

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tebaoflex.com/cables/gpt-automotive-primary-wire



Typical values for this cable type, based on SAE J1128 / ISO 6722-1 Class A. Values for your order are confirmed in the quotation. Subject to change without notice.
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