



UL 13 / UL 2250 300 V tray cable

PLTC / PLTC-ER / ITC / ITC-ER

PLTC/ITC Instrumentation Tray Cable

Dual-listed UL 13 PLTC-ER & UL 2250 ITC-ER 300 V Exposed Run tray cable



UL 13 PLTC-ER & UL 2250 ITC-ER

300 V · 105 °C · Exposed Run

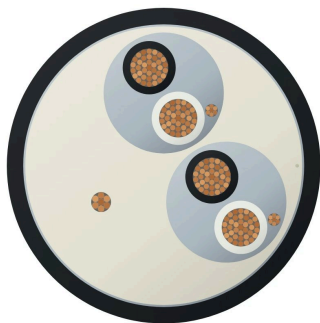
Class I Div 2 (NEC 501/725/727)

Application

North American 300 V dual-rated Type PLTC-ER and Type ITC-ER instrumentation tray cable certified to UL 13 and UL 2250 with 105 °C PVC or XLPE insulation, 100 % Al/PET individual/overall shielding, tinned drain wires and Exposed Run (-ER) jacket.

Typical uses: North American Oil, Gas & LNG Plants, NEC Class I Division 2 Process Units, DCS, PLC & 4–20 mA / HART Field Loops, Power Generation & Petrochemical Complexes, Pulp, Paper & Chemical Manufacturing

Construction



Cross-section, not to scale

- | | | |
|---|---|---|
| 1 | 7-strand bare or tinned copper conductors | |
| 2 | 105 °C FR-PVC or 90 °C XLPE core insulation | Rated 300 V at +105 °C dry
/ +75 °C wet |
| 3 | Individual pair shield (IS+OS multi-pair) | |
| 4 | Overall collective shield (OS) | 100 % electrostatic
interference rejection |
| 5 | Exposed Run (-ER) Sunlight & Oil Resistant jacket | |

Technical data

Typical values

Rated voltage	300 V rms	ITC circuit rating (NEC Art. 727)	≤ 150 V and ≤ 5 A (non-power-limited instrumentation)
PLTC circuit rating (NEC Art. 725)	Class 2 & Class 3 power-limited control & signal circuits	Dielectric test voltage	1500 V AC rms for 1 min (core-to-core & core-to-shield)
Nominal mutual capacitance	≈ 115–155 pF/m (PVC) · ≈ 80–105 pF/m (XLPE option)	Operating temperature	–30 °C to +105 °C dry (+75 °C wet)
Cold bend & cold impact	–30 °C (–40 °C Arctic grade optional)	Exposed Run (-ER) qualification	Passes UL 1277 / UL 13 metallic-conduit-equivalent crush & impact
Min. bending radius	6 × OD (OS) · 8 × OD (IS+OS)	Flame test ratings	UL 1685 Vertical Tray · IEEE 1202 (70,000 BTU/hr) · CSA FT4
Oil & sunlight resistance	UL Oil Res I (60 °C) / Oil Res II (75 °C) & 720-hr Sunlight Resistant	Standards	UL 13 (Type PLTC / PLTC-ER) & UL 2250 (Type ITC / ITC-ER)

Sizes

17 standard constructions

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

Order designation	Configuration	Shielding	Outer Ø ≈ mm	Copper kg/km	Weight ≈ kg/km	Min. bend R fixed mm
20 AWG (0.52 mm² · 7×28 AWG) — 300 V PLTC-ER / ITC-ER 5 sizes						
☐ PLTC/ITC-ER 1P×20AWG OS	1 Pair × 20 AWG (7×28)	OS	5.7	13	44	46
☐ PLTC/ITC-ER 2P×20AWG IS/OS	2 Pairs × 20 AWG (7×28)	IS+OS	8.4	28	82	67
☐ PLTC/ITC-ER 4P×20AWG IS/OS	4 Pairs × 20 AWG (7×28)	IS+OS	10.2	54	132	82
☐ PLTC/ITC-ER 8P×20AWG IS/OS	8 Pairs × 20 AWG (7×28)	IS+OS	13.5	104	226	108
☐ PLTC/ITC-ER 12P×20AWG IS/OS	12 Pairs × 20 AWG (7×28)	IS+OS	16.4	154	322	131
18 AWG (0.82 mm² · 7×26 AWG) — 300 V PLTC-ER / ITC-ER 7 sizes						
☐ PLTC/ITC-ER 1P×18AWG OS	1 Pair × 18 AWG (7×26)	OS	6.2	20	56	50
☐ PLTC/ITC-ER 1T×18AWG OS	1 Triad × 18 AWG (7×26)	OS	6.6	28	68	53
☐ PLTC/ITC-ER 2P×18AWG IS/OS	2 Pairs × 18 AWG (7×26)	IS+OS	9.4	42	104	75
☐ PLTC/ITC-ER 4P×18AWG IS/OS	4 Pairs × 18 AWG (7×26)	IS+OS	11.4	82	168	91
☐ PLTC/ITC-ER 8P×18AWG IS/OS	8 Pairs × 18 AWG (7×26)	IS+OS	15.2	160	294	122
☐ PLTC/ITC-ER 12P×18AWG IS/OS	12 Pairs × 18 AWG (7×26)	IS+OS	18.5	238	418	148
☐ PLTC/ITC-ER 24P×18AWG IS/OS	24 Pairs × 18 AWG (7×26)	IS+OS	25.4	472	795	203
16 AWG (1.31 mm² · 7×24 AWG) — 300 V PLTC-ER / ITC-ER 5 sizes						
☐ PLTC/ITC-ER 1P×16AWG OS	1 Pair × 16 AWG (7×24)	OS	7.0	31	74	56
☐ PLTC/ITC-ER 1T×16AWG OS	1 Triad × 16 AWG (7×24)	OS	7.5	44	92	60
☐ PLTC/ITC-ER 4P×16AWG IS/OS	4 Pairs × 16 AWG (7×24)	IS+OS	13.0	126	228	104
☐ PLTC/ITC-ER 8P×16AWG IS/OS	8 Pairs × 16 AWG (7×24)	IS+OS	17.4	248	405	139
☐ PLTC/ITC-ER 12P×16AWG IS/OS	12 Pairs × 16 AWG (7×24)	IS+OS	21.2	368	582	170

– 14 AWG (2.08 mm²) and 12 AWG (3.31 mm²) PLTC-ER / ITC-ER cables as well as multi-triad (2T–12T) cables are also available.

Electrical parameters by AWG gauge

5 sizes

AWG size metric	Drain wire tinned Cu	Max. DCR @ 20 °C Ω/km	Nom. L mH/km	Nom. C (core/core) pF/m
22 AWG (0.33 mm ² · 7×30)	22 AWG	54.5	0.65	115
20 AWG (0.52 mm ² · 7×28)	22 AWG	34.4	0.62	125
18 AWG (0.82 mm ² · 7×26)	20 AWG	21.4	0.59	135
16 AWG (1.31 mm ² · 7×24)	18 AWG	13.7	0.56	148

AWG size metric	Drain wire tinned Cu	Max. DC R @ 20 °C Ω/km	Nom. L mH/km	Nom. C (core/core) pF/m
14 AWG (2.08 mm ² · 7×22)	16 AWG	8.6	0.53	155

– For 600 V tray circuits or Class I Division 1 hazardous locations, select TC-ER-HL or MC-HL Instrumentation.

Standards and approvals

- ✓ UL 13 Listed Type PLTC / PLTC-ER (300 V 105 °C)
- ✓ UL 2250 Listed Type ITC / ITC-ER (300 V 105 °C)
- ✓ NEC Art. 725, 727 & 501.10(B) Class I Div 2

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

info@tebaoflex.com

Web

tebaoflex.com/cables/pltc-itc-instrumentation-tray-cable



Typical values for this cable type, based on UL 13 / UL 2250 / NEC Articles 725, 727 & 501. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.