VFD & motor drive cables

# 29528 Series 600/1000V TC-ER WTTC

## Dual Copper-Tape VFD Cable

UL 1277 TC-ER / UL 2277 WTTC · 600/1,000 V · −40...+90 °C · Min. bend 12 × OD

UL 1277 TC-ER / UL 2277 WTTC | 600 V TC-ER / 1,000 V WTTC



## Application

UL 1277 TC-ER 600 V / UL 2277 WTTC 1,000 V (-40 to +90 °C) 3-phase + 3 symmetrical split grounds XLPE insulated and dual helical copper-tape shielded high-power VFD feeder.

**Typical uses:** Industrial automation & control cabinets, Inverter-fed motor drive systems, Process instrumentation & oil/gas skids, Machine tools & robotic cells, Data centers, stadiums & broadcast facilities

## Construction






Cross-section, not to scale

| | | |
|---|---|---|
| 1 | 3×1 AWG (7×19×22) Tinned Copper Phases | 3×1 AWG (42.4 mm²) Class D Stranded Tinned Copper Phases |
| 2 | 1.45mm XLPE + 3×6 AWG Symmetrical Grounds | XLPE Phase Insulation + 3×6 AWG (7×19×27) Bare Cu Grounds |
| 3 | Two Overlapping Helical Bare Copper Tape Shields | 100% Coverage Dual Helical Bare Copper Tape Screen |
| 4 | Sunlight & Oil Resistant Black PVC Jacket | UL 1277 TC-ER / 1000V WTTC Heavy-Duty Outer Sheath (30.48 mm OD) |

## Technical data

Typical values

| | | | |
|---|---|---|---|
| **Nominal / reference voltage** | 600 V TC-ER / 1,000 V WTTC | **Conductor & core insulation** | 3×1 AWG (42.4 mm²) Class D Stranded Tinned Copper Phases · XLPE Phase Insulation + 3×6 AWG (7×19×27) Bare Cu Grounds |
| **Routine dielectric / continuity test** | 100% factory drum spark & continuity verified | **Operating temperature range** | −40…+90 °C |
| **Short-circuit / peak thermal limit** | +160 °C to +250 °C (5 s conductor thermal limit) | **Flame & fire performance** | UL 1277 TC-ER / UL 2277 WTTC |
| **Minimum bending radius** | 12 × OD | **Screening / armour architecture** | 100% Coverage Dual Helical Bare Copper Tape Screen |
| **Outer sheath material & colour** | UL 1277 TC-ER / 1000V WTTC Heavy-Duty Outer Sheath (30.48 mm OD) | **Standards** | UL 1277 TC-ER / UL 2277 WTTC / CSA C22.2 No. 230 CIC-TC / NFPA 79 / IEEE 1202 |

## Sizes

3 standard constructions

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

| Part designation | Configuration | Conductor & shield | Insulation / wall | Outer sheath | Outer diameter mm | Min. bend radius mm | Max. conductor resistance @ 20 °C Ω/km | Copper weight kg/km | Cable weight kg/km | Key elect |
|---|---|---|---|---|---|---|---|---|---|---|
| **29528 Series 600/1000V TC-ER WTTC** 3 sizes | | | | | | | | | | |
| ☐ 29528 3×1 AWG + 3×6 AWG Sym. GND | 3 × 42.4 mm² (7×19×22) + 3 × 13.3 mm² GND | 7×19×22 Tinned Cu + 1.45mm XLPE + Dual Helical Cu Tape | XLPE Phase Insulation + 3×6 AWG (7×19×27) Bare Cu Grounds | Industrial PVC | 30.5 | 366 | 0.41 | 1,685.0 | 2,120 | 600 V TC-I |
| ☐ 29527 3×2 AWG + 3×8 AWG Sym. GND | 3 × 33.6 mm² + 3 × 8.37 mm² GND | Stranded Tinned Cu + 1.45mm XLPE + Dual Helical Cu Tape | XLPE Phase Insulation + 3×6 AWG (7×19×27) Bare Cu Grounds | Industrial PVC | 28.4 | 341 | 0.52 | 1,340.0 | 1,785 | 600 V TC-I |
| ☐ 29532 3×4/0 AWG + 3×4 AWG Sym. GND | 3 × 107.2 mm² + 3 × 21.2 mm² GND | Stranded Tinned Cu + XLPE + Dual Helical Cu Tape | XLPE Phase Insulation + 3×6 AWG (7×19×27) Bare Cu Grounds | Industrial PVC | 46.7 | 561 | 0.16 | 3,860.0 | 4,890 | 600 V TC-I |

– Dimensions and weights are nominal manufacturing targets subject to standard production tolerances.

## Standards and approvals

- ✓ UL 1277 TC-ER / UL 2277 WTTC Compliant
- ✓ EN 10204 3.1 Factory Test Certificate
- ✓ CE, RoHS 2 (2011/65/EU) & REACH

## 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/29528-series-600-1000v-tc-er-wttc-symmetrical-ground-copper-tape-vfd-cable**

Typical values for this cable type, based on Reference specification per UL 1277 TC-ER / UL 2277 WTTC (29528 Series 600/1000V TC-ER WTTC). Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.