Screened power & VFD / motor supply cables

# 29521 / 29522 600/1000V VFD

## 29521 / 29522 600/1000 V TC-ER WTTC VFD Cable

Dual-listed 600 V TC-ER / 1000 V WTTC flexible VFD motor cable

UL 1277 Type TC-ER | U0/U 600/1000 V · 4 kV AC | EMC Screened




## Application

29521 / 29522 600/1000 V VFD delivers flexible tinned copper conductors, low-capacitance XLPE insulation, and 100% foil plus 85% braid EMC shielding for industrial and wind-turbine VFD circuits.

**Typical uses:** Variable frequency drive (VFD) motor bays, Industrial pumps, fans & compressor skids, Process plants, oil & gas & HVAC systems, Heavy manufacturing & plant MCC feeders

## Construction






Cross-section, not to scale

| | | |
|---|---|---|
| 1 | Conductor | ASTM B172 Class K flexible tinned annealed copper · ASTM B172 Class K / UL 1277 |
| 2 | Core insulation | Low-capacitance cross-linked polyethylene (XLPE) · UL 1277 Type TC-ER |
| 3 | Core assembly & separator | Concentric cabled assembly with low-friction fleece or polyester binder tape · UL 1277 Type TC-ER |
| 4 | EMC metallic screen | 100% foil + ≥ 85% tinned copper braid + 3 symmetrical grounds · EMC ≥ 85% / 100% foil |
| 5 | Outer sheath | Black UV- & oil-resistant TPE/PVC outer jacket · UL 1685 Vertical Tray |

## Technical data

Typical values

| | | | |
|---|---|---|---|
| Rated voltage U0/U | 600/1000 V | AC test voltage | 4 kV AC / 5 min |
| Conductor class | ASTM B172 Class K tinned Cu | EMC screen | 100% foil + ≥ 85% tinned copper braid + 3 |
| Insulation resistance | ≥ 1,000 MΩ·km at 20 °C | Temp. range (fixed) | -40 °C to +90 °C |
| Temp. range (flexing) | -25 °C to +90 °C | Short-circuit temp. | +250 °C (5 s) |
| Min. bending radius | 10 × OD (fixed) | Flame retardance | UL 1685 Vertical Tray |
| Oil & chemical perf. | UL Oil Res I/II | Environmental / EMC | Direct Burial & Sun Res |
| Outer sheath | Black UV- & oil-resistant TPE/PVC outer | | |

## Sizes

12 standard constructions

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

| | Cores × AWG/kcmil | Outer Ø ≈ mm | Max. R20 Ω/km | Copper index kg/km | Weight ≈ kg/km | Min. bend R 10×D mm |
|---|---|---|---|---|---|---|
| ☐ | 3×14 AWG + 3×18 AWG | 12.3 | 9.070 | 114 | 244 | 123 |
| ☐ | 3×12 AWG + 3×16 AWG | 13.3 | 5.710 | 164 | 325 | 133 |
| ☐ | 3×10 AWG + 3×14 AWG | 14.7 | 3.590 | 243 | 451 | 147 |
| ☐ | 3×8 AWG + 3×14 AWG | 18.1 | 2.260 | 338 | 646 | 181 |
| ☐ | 3×6 AWG + 3×12 AWG | 20.2 | 1.420 | 513 | 922 | 202 |
| ☐ | 3×4 AWG + 3×12 AWG | 24.0 | 0.892 | 740 | 1,322 | 240 |
| ☐ | 3×2 AWG + 3×10 AWG | 28.5 | 0.561 | 1,147 | 1,996 | 285 |
| ☐ | 3×1/0 AWG + 3×6 AWG | 32.9 | 0.353 | 1,926 | 3,169 | 329 |
| ☐ | 3×2/0 AWG + 3×6 AWG | 35.5 | 0.280 | 2,315 | 3,782 | 355 |
| ☐ | 3×4/0 AWG + 3×4 AWG | 42.4 | 0.176 | 3,643 | 5,832 | 424 |
| ☐ | 3×350 kcmil + 3×2 AWG | 51.9 | 0.107 | 5,935 | 9,348 | 519 |
| ☐ | 3×500 kcmil + 3×2 AWG | 59.4 | 0.075 | 8,044 | 12,590 | 594 |

- Max. conductor DC resistance R20 at 20 °C per ASTM B172 / B8 (tinned copper).
- Minimum bending radius calculated at 10 × nominal outer diameter (OD). Custom core counts and lengths available on request.

## Standards and approvals

- UL 1277 Type TC-ER
- UL 2277 Type WTTC
- CSA AWM I/II A/B FT4
- 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/29521-29522-600-1000v-tc-er-wttc-vfd-cable**

Typical values for this cable type, based on UL 1277 Type TC-ER · UL 2277 Type WTTC · CSA AWM I/II A/B FT4. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.