Screened power & VFD / motor supply cables

SPEC 45442 600/1000V TPE VFD

SPEC 45442 600/1000 V TPE Flexible VFD Cable

Oil-resistant TPE-jacketed 600/1000 V TC-ER flexible VFD cable

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

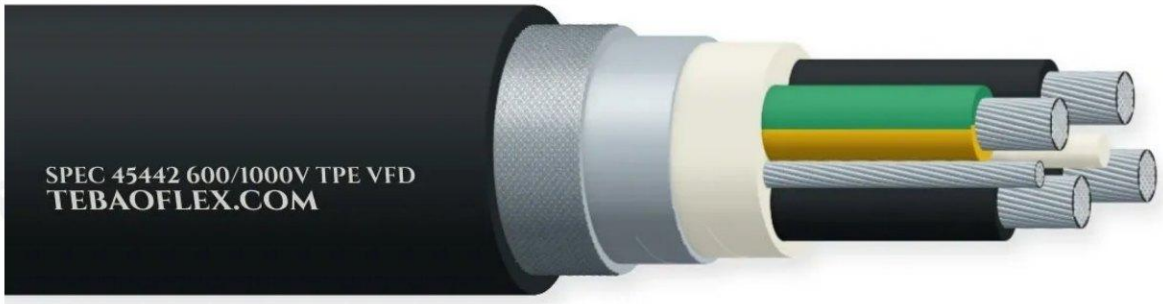


Application

SPEC 45442 600/1000 V TPE VFD pairs flexible tinned copper conductors and thermoset XLPE insulation with an abrasion- and oil-resistant black TPE jacket for cold-weather and flexing industrial VFD drives.

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 thermoset XLPE (90 °C wet/dry) · 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 shield · EMC ≥ 85% / 100% foil
5	Outer sheath	Black abrasion-, oil- & UV-resistant TPE jacket · UL Oil Res I/II

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 shield
Insulation resistance	≥ 1,000 MΩ·km at 20 °C	Temp. range (fixed)	-40 °C to +90 °C
Temp. range (flexing)	-30 °C to +90 °C	Short-circuit temp.	+250 °C (5 s)
Min. bending radius	8 × OD (flexing)	Flame retardance	UL Oil Res I/II
Oil & chemical perf.	Cold Bend -40 °C	Environmental / EMC	Sunlight & Direct Burial
Outer sheath	Black abrasion-, oil- & UV-resistant TPE		

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 8×D mm
☐	3×14 AWG + 3×18 AWG	12.3	9.070	114	244	98
☐	3×12 AWG + 3×16 AWG	13.3	5.710	164	325	106
☐	3×10 AWG + 3×14 AWG	14.7	3.590	243	451	118
☐	3×8 AWG + 3×14 AWG	18.1	2.260	338	646	145
☐	3×6 AWG + 3×12 AWG	20.2	1.420	513	922	162
☐	3×4 AWG + 3×12 AWG	24.0	0.892	740	1,322	192
☐	3×2 AWG + 3×10 AWG	28.5	0.561	1,147	1,996	228
☐	3×1/0 AWG + 3×6 AWG	32.9	0.353	1,926	3,169	263
☐	3×2/0 AWG + 3×6 AWG	35.5	0.280	2,315	3,782	284
☐	3×4/0 AWG + 3×4 AWG	42.4	0.176	3,643	5,832	339
☐	3×350 kcmil + 3×2 AWG	51.9	0.107	5,935	9,348	415
☐	3×500 kcmil + 3×2 AWG	59.4	0.075	8,044	12,590	475

- Max. conductor DC resistance R20 at 20 °C per ASTM B172 / B8 (tinned copper).
- Minimum bending radius calculated at 8 × 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/spec-45442-600-1000v-tpe-flex-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.