Screened power & VFD / motor supply cables

SPEC 45451 2000V TC-ER

SPEC 45451 2000 V TC-ER Copper Tape VFD Cable

ICEA Method 3 coloured 2 kV RHH/RHW-2 copper tape VFD cable



UL 1277 TC-ER · ICEA S-138-738 | **ICEA Method 3 (Blk/Red/Blu)** | **5-mil Cu Tape · Silicone-Free PVC**

Application

2,000 V UL 1277 TC-ER / ICEA S-138-738 VFD tray cable featuring Class B compressed bare copper, ICEA Method 3 colour-coded RHH/RHW-2 XLPE phases (Black/Red/Blue), three bare grounds, 5-mil copper tape (≥ 50% lap), and silicone-free PVC jacket.

Typical uses: Automotive & silicone-free paint plants, Industrial process & factory trays, Oil, gas & chemical motor feeders, Water treatment & HVAC plants, NEC Class I Div 2 hazardous locations

Construction





Cross-section, not to scale

1	**Conductor**	Class B compressed stranded bare annealed copper · ASTM B3 / B8 Class B compressed
2	**Phase insulation**	2 kV RHH/RHW-2 XLPE (ICEA Method 3: 1-Black, 2-Red, 3-Blue) · UL 44 RHH/RHW-2 + 3 × bare Cu grounds
3	**Fillers & binder tape**	Non-hygroscopic polypropylene fillers & binder tape · Symmetrical 3+3 round core assembly
4	**5-mil copper tape shield**	5-mil (0.127 mm) helical annealed bare copper tape (≥ 50% lap) · ICEA S-138-738 double-thickness overlap
5	**Outer jacket**	Black PWIS-free sunlight- & oil-resistant PVC · UL 1277 Type TC-ER · Oil Res I/II

Technical data

Typical values

Rated voltage	2,000 V (2 kV) AC	**Conductor class**	ASTM B8 Class B compressed bare Cu
Phase identification	ICEA Method 3 (1-Black, 2-Red, 3-Blue)	**EMC shield**	5-mil bare Cu tape (≥ 50% overlap)
Max. conductor temp.	+90 °C wet or dry (RHH/RHW-2)	**Ambient temp. (fixed)**	−40 °C to +90 °C
Min. bending radius	12 × OD (Cu-tape shielded)	**Flame test**	IEEE 1202 / UL 1685 / CSA FT4
Jacket formulation	PWIS-free sunlight & oil-resistant PVC	**Installation ratings**	TC-ER · Direct Burial · Class I Div 2

Sizes

15 standard constructions

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

	Phase + 3× Ground (AWG)	Outer Ø ≈ mm	Max. R20 Ω/km	Copper index kg/km	Weight ≈ kg/km	Min. bend R 12×D mm
☐	3×14 AWG + 3×18 AWG	15.5	8.450	128	330	186
☐	3×12 AWG + 3×16 AWG	16.5	5.310	179	416	198
☐	3×10 AWG + 3×14 AWG	17.8	3.340	257	544	214
☐	3×8 AWG + 3×14 AWG	20.6	2.100	351	737	247
☐	3×6 AWG + 3×12 AWG	22.7	1.320	527	1,019	272
☐	3×4 AWG + 3×12 AWG	26.4	0.832	756	1,432	317
☐	3×2 AWG + 3×8 AWG	30.8	0.523	1,249	2,222	370
☐	3×1 AWG + 3×8 AWG	32.8	0.415	1,496	2,618	394
☐	3×1/0 AWG + 3×6 AWG	35.0	0.329	1,943	3,278	420
☐	3×2/0 AWG + 3×6 AWG	37.5	0.261	2,333	3,889	450
☐	3×3/0 AWG + 3×4 AWG	41.0	0.207	3,044	4,965	492
☐	3×4/0 AWG + 3×4 AWG	44.2	0.164	3,663	5,926	530
☐	3×250 kcmil + 3×4 AWG	48.3	0.139	4,211	6,874	580
☐	3×350 kcmil + 3×2 AWG	54.0	0.099	5,959	9,453	648
☐	3×500 kcmil + 3×2 AWG	61.2	0.070	8,070	12,656	734

- Conductor max. DC resistance R20 follows ASTM B8 Class B compressed bare annealed copper at 20 °C.
- Silicone-free outer PVC jacket is compatible with automotive paint shops and surface-finishing facilities.

Standards and approvals

- ✓ UL 1277 Type TC-ER (2,000 V) · UL 44 RHH/RHW-2
- ✓ ICEA S-138-738 Symmetrical VFD Specification
- ✓ IEEE 1202 / FT4 · Sunlight & Oil Resistant · Direct Burial

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-45451-2000v-tc-er-copper-tape-vfd-cable

Typical values for this cable type, based on UL 1277 Type TC-ER · UL 44 RHH/RHW-2 · ICEA S-138-738. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.