

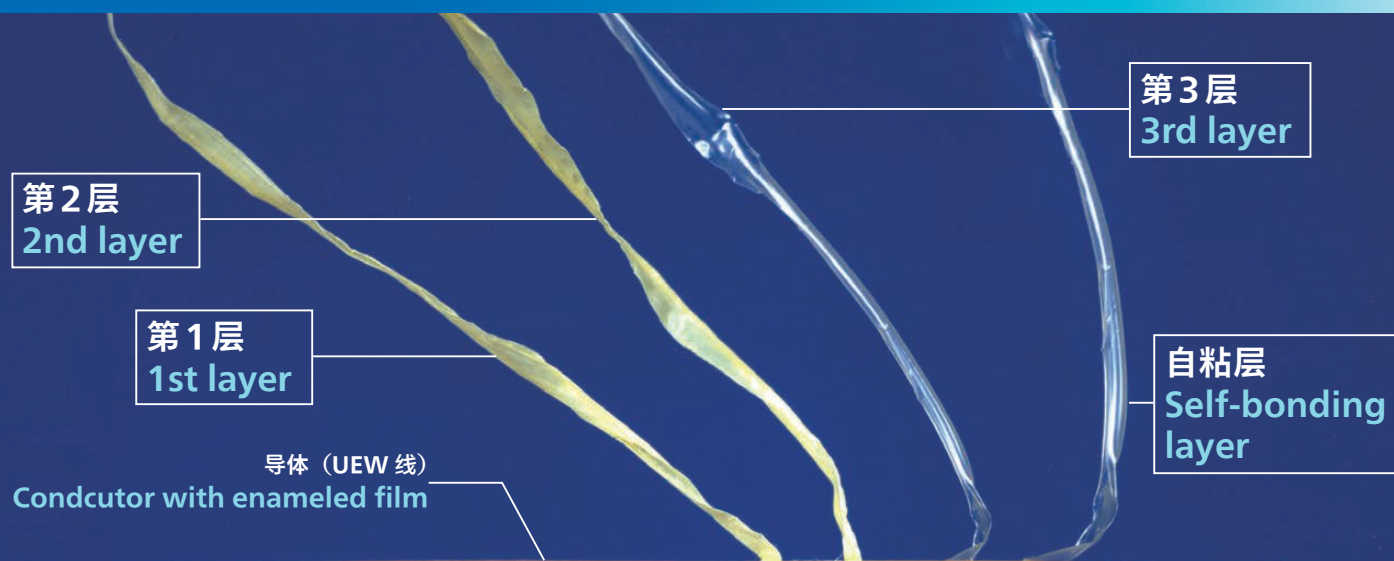
All to brighten the world

FURUKAWA
ELECTRIC

古河电工 TEX 系列 B 种 3 层绝缘电线

FURUKAWA TEX Series Class B Triple Insulated Winding Wire

TEX-ELZC3/TEX-ELZSC3



特长 FEATURES

- 具有 IEC, UL 规定的强化绝缘机能。
- 电线单体的耐热等级为 B 种 (130°C)*¹。
- 最大动作电压为 1000Vrms*²。
- 可以直接进行软铅焊。
- 附加有自粘性的类型。
- 适用于高频应用场景, TEX-ELZSC3 可适用更高频率需求。

- Conforming to reinforced insulation according to IEC and UL
- Thermal index Class B (130°C)*¹
- Rated at 1000 Vrms*² for maximum working voltage
- Solderable
- Equipped with a self-bonding layer on the surface of standard type TEX-E wire
- Available for high-frequency applications, TEX-ELZSC3 is suitable for even higher frequency.

*1 在 UL 情况下, 超越 A 种的设计, 需要具有 UL1446 规定的绝缘系统。

*2 在 IEC 62368-1 安规条件下, 以每分钟 3000Vrms 的耐压试验所定义的数值。

*1 UL requires an insulation system specified by UL 1446, for a design of operation exceeding the temperature in class A.

*2 This value is defined by a withstand voltage test at 3000 Vrms for 1 minute in IEC 62368-1.

安全规格 SAFETY APPROVALS

认证机关 Certification Bodies	TEX-ELZC3	TEX-ELZSC3
UL		UL 60950-1 UL 60601-1 UL 61800-5-1
VDE		IEC/EN 62368-1 IEC/EN 61558-1 IEC/EN 60601-1

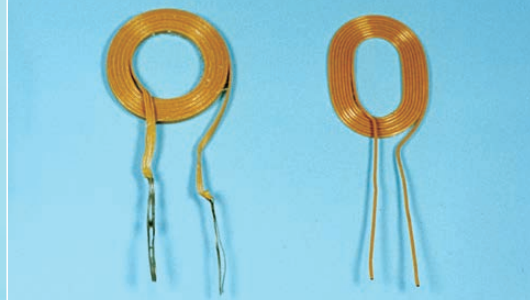
关于各个认证机关的认定条件, 请咨询我们。

Contact us regarding the certification conditions for each authorities.

TEX-ELZ(S)C3 与已申请 UL1446 绝缘系统认证的 TEX-ELZ(S) 可以同等使用。

For UL1446, TEX-ELZ(S)C3 can be used with the same registration as TEX-ELZ(S).

应用例子 Applications



追加取得 IEC 61558-1 的安规认证, 意味着产品适用于 IEC 61335-1 (家电)、IEC 61347-2-13 (LED 照明用电源) 变得更容易了。

By acquisition of IEC 61558-1, application to IEC 60335-1 (Household), IEC 61347-2-13 (LED light) becomes easier.

TEX-ELZC3/TEX-ELZSC3

构造 CONSTRUCTION

自粘层

Self-bonding layer

第3层：聚酰胺类树脂皮膜
3rd layer: Polyamide

第2层：改性聚酯类耐热树脂皮膜
2nd layer: Modified Polyester

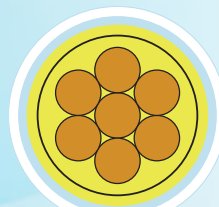
第1层：改性聚酯类耐热树脂皮膜
1st layer: Modified Polyester

TEX-ELZC3

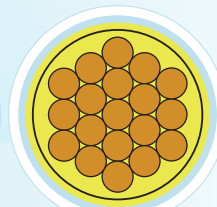
TEX-ELZSC3

导体（UEW线）
Conductor with
enameled film

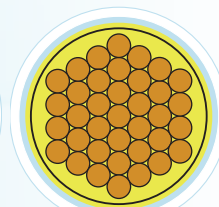
● TEX-ELZC3



7 股绞合导体
7strands
twisted

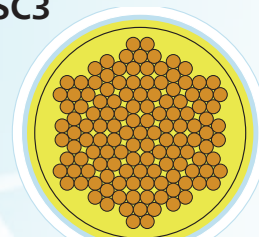


19 股绞合导体
19strands
twisted



37 股绞合导体
37strands
twisted

● TEX-ELZSC3



133 股绞合导体
133strands
twisted

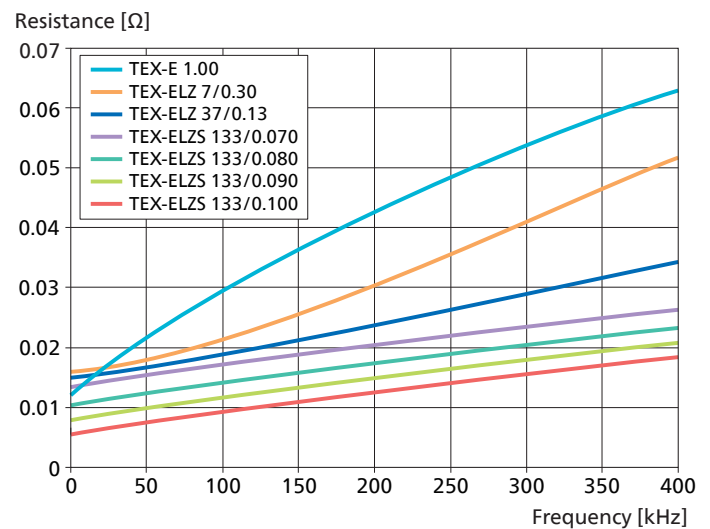
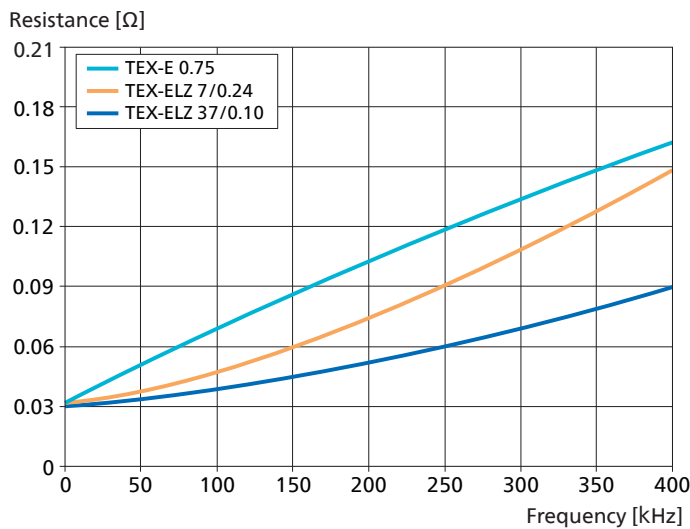
特长 FEATURES

- TEX-ELZC3/TEX-ELZSC3是古河电工以自有技术独自开发的可以直焊的B种类满足耐热要求的强化绝缘电线。
TEX-ELZC3/TEX-ELZSC3: Reinforced Insulation Litz Wire, is unique Furukawa Electric, and designed to fulfil the requirement of Class B.
- TEX-ELZC3/TEX-ELZSC3线材外径为圆形结构不易变形，能够维持形状的稳定。
The round shape of TEX-ELZC3/TEX-ELZSC3 wire has resistant to crushing and can maintain shape stability.
- 可选择导体绞线股数为7股、19股、37股、133股。
The number of twisted conductors can be selected from 7, 19, 37, 133.
- TEX-ELZSC3 有透明與黑色可供選擇。
TEX-ELZSC3 is available in transparent and black.
- TEX-ELZSC3相比TEX-ELZC3可以应用于更高频率的需求。
TEX-ELZSC3 can be used in a higher frequency range compared to TEX-ELZC3.



周波数特性 FREQUENCY CHARACTERISTICS

- 经验证，TEX-ELZC3导体的电阻会随着股数增加而减小，这一特性在频率达到400kHz时仍成立。
TEX-ELZC3 has confirmed that conductor resistance reduces so as to have a greater number of strands up to 400kHz.
- 经验证，增加TEX-ELZC3单股导体的线径，可抑制因频率上升导致的导体电阻增加。
The larger the strand diameter of TEX-ELZC3, the more conductor resistance can be suppressed in the high-frequency.



* 频率特性和TEX-ELZ/TEX-ELZS相同。

* The frequency characteristics are the same as those of TEX-ELZ/TEX-ELZS.

● 相关特性参考下表 Table of Characteristics

项目 Items	試験条件 Test Conditions	特性值 Spec
绝缘击穿电压 (kVrms) Breakdown voltage (kVrms)	双股绞合 Twisted pair	20<*1
耐电压 Withstand voltage	1分钟4200Vrms 4200 Vrms for 1 min	合格 Pass
焊锡温度420°C (秒)*2 Solderability at 420°C (sec)*2	<7/0.20, 19/0.12	8
	≥7/0.20, 19/0.13, 37/0.10, 133/0.070	10

*1 为界限数值，并非使用上限数值。

*2 焊锡加工时请使空气充分流通。

*1 Limit value, not specification.

*2 Note that your solder shop would preferably be ventilated.

● 符合IEC 61558-1, Annex K (K.2.2 ~ K.2.5)测试要求 IEC 61558-1, Annex K (K.2.2~K.2.5) Passed.

项目 Items	試験条件 Test Conditions
K.2.2 绝缘耐压 Electric Strength	1分钟8400Vrms双股绞合 8400 Vrms for 1 min Twisted pair
K.2.3 粘性、可挠性 Adherence and Flexibility	1分钟4200Vrms芯棒单股绕线 4200 Vrms for 1 min Mandrel
K.2.4 高温击穿 Heat Shock	225°C × 30分 1分钟4200Vrms芯棒单股绕线 225°C for 30 min 4200 Vrms for 1 min Mandrel
K.2.5 弯曲后绝缘强度 Retention of Electric Strength after Bending	1分钟4200Vrms芯棒单股绕线 4200 Vrms for 1 min Mandrel

尺寸 DIMENSIONS

● TEX-ELZC3

导体称呼直径 (mm) Nominal Conductor Diameter	标称成品外径 (mm) Standard Overall Diameter	标称最大外径 (mm) Max. Overall Diameter	最大导体阻抗 (Ω/km at 20°C) Max. Conductor Resistance	产品重量 (kg/km) Weight
7/0.10	0.552	0.592	346.9	0.722
7/0.11	0.582	0.622	285.1	0.845
7/0.12	0.618	0.658	238.4	0.985
7/0.13	0.648	0.688	202.4	1.129
7/0.14	0.678	0.718	173.9	1.283
7/0.15	0.708	0.748	151.1	1.448
7/0.16	0.744	0.784	132.4	1.631
7/0.17	0.774	0.814	117.0	1.816
7/0.18	0.804	0.844	104.2	2.012
7/0.19	0.834	0.874	93.34	2.218
7/0.20	0.864	0.904	84.11	2.435
7/0.21	0.894	0.934	76.18	2.661
7/0.22	0.924	0.964	69.96	2.898
7/0.23	0.960	1.000	63.91	3.157
7/0.24	0.990	1.030	58.60	3.415
7/0.25	1.020	1.060	53.94	3.683
7/0.26	1.050	1.090	49.81	3.962
7/0.27	1.080	1.120	46.13	4.251
7/0.28	1.110	1.150	42.85	4.550
7/0.29	1.140	1.180	39.90	4.859
7/0.30	1.176	1.216	37.02	5.193
19/0.10	0.770	0.810	127.8	1.727
19/0.11	0.820	0.860	105.0	2.047
19/0.12	0.880	0.920	87.85	2.412
19/0.13	0.930	0.970	74.56	2.789
37/0.10	0.986	1.026	65.63	3.188
37/0.11	1.056	1.096	53.94	3.799
37/0.12	1.140	1.180	45.11	4.495
37/0.13	1.210	1.250	38.29	5.217

参考值 Reference value

● TEX-ELZSC3

导体称呼直径 (mm) Nominal Conductor Diameter	标称成品外径 (mm) Standard Overall Diameter	标称最大外径 (mm) Max. Overall Diameter	最大导体阻抗 (Ω/km at 20°C) Max. Conductor Resistance	产品重量 (kg/km) Weight
133/0.070	1.470	1.498	39.04	6.010
133/0.075	1.545	1.573	33.80	6.808
133/0.080	1.620	1.648	29.55	7.657
133/0.085	1.695	1.723	26.06	8.557
133/0.090	1.770	1.798	23.15	9.508
133/0.095	1.845	1.873	20.70	10.51
133/0.100	1.920	1.948	18.62	11.56

参考值 Reference value

▶▶ 商品详情请参阅以下网站

About Products

<https://www.furukawaelectric.com/tex-e/cn/>



<https://www.furukawaelectric.com/tex-e/en/>



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