

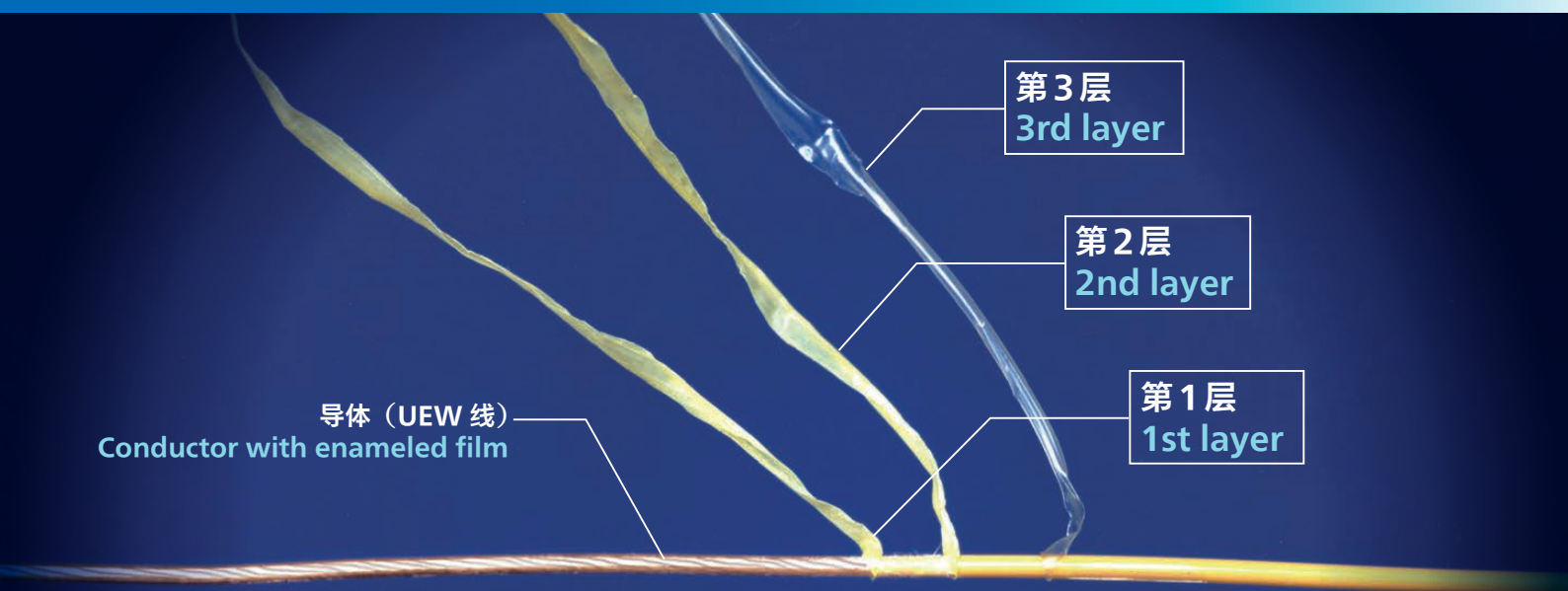
All to brighten the world

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-ELZ/TEX-ELZS



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。
- 适用于高频应用场景, TEX-ELZS可适用更高频率需求。

*1 在UL情况下, 超越A种的设计, 需要具有UL 1446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。

- 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
- Available for high-frequency applications. TEX-ELZS is suitable for even higher frequency.

*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 3000Vrms for 1 minute in IEC 62368-1.

安全规格 SAFETY APPROVALS

认证机关 Certification Bodies	TEX-ELZ	TEX-ELZS
UL	UL 60950-1 UL 60601-1 UL 61800-5-1	
CSA	ANCI/UL62368-1, CSA C22.2 No. 62368-1	—
NEMKO	IEC/EN 62368-1	—
TÜV	EN 62368-1	—
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-ELZS与已申请UL1446绝缘系统认证的TEX-ELZ可以同等使用。

For UL1446, TEX-ELZS can be used with the same registration as TEX-ELZ.

▶ 变压器尺寸规格比较 (容量相同)

Size comparison (transformer of capacity equivalent)



使用UEW漆包线的变压器
Conventional Type with "UEW"

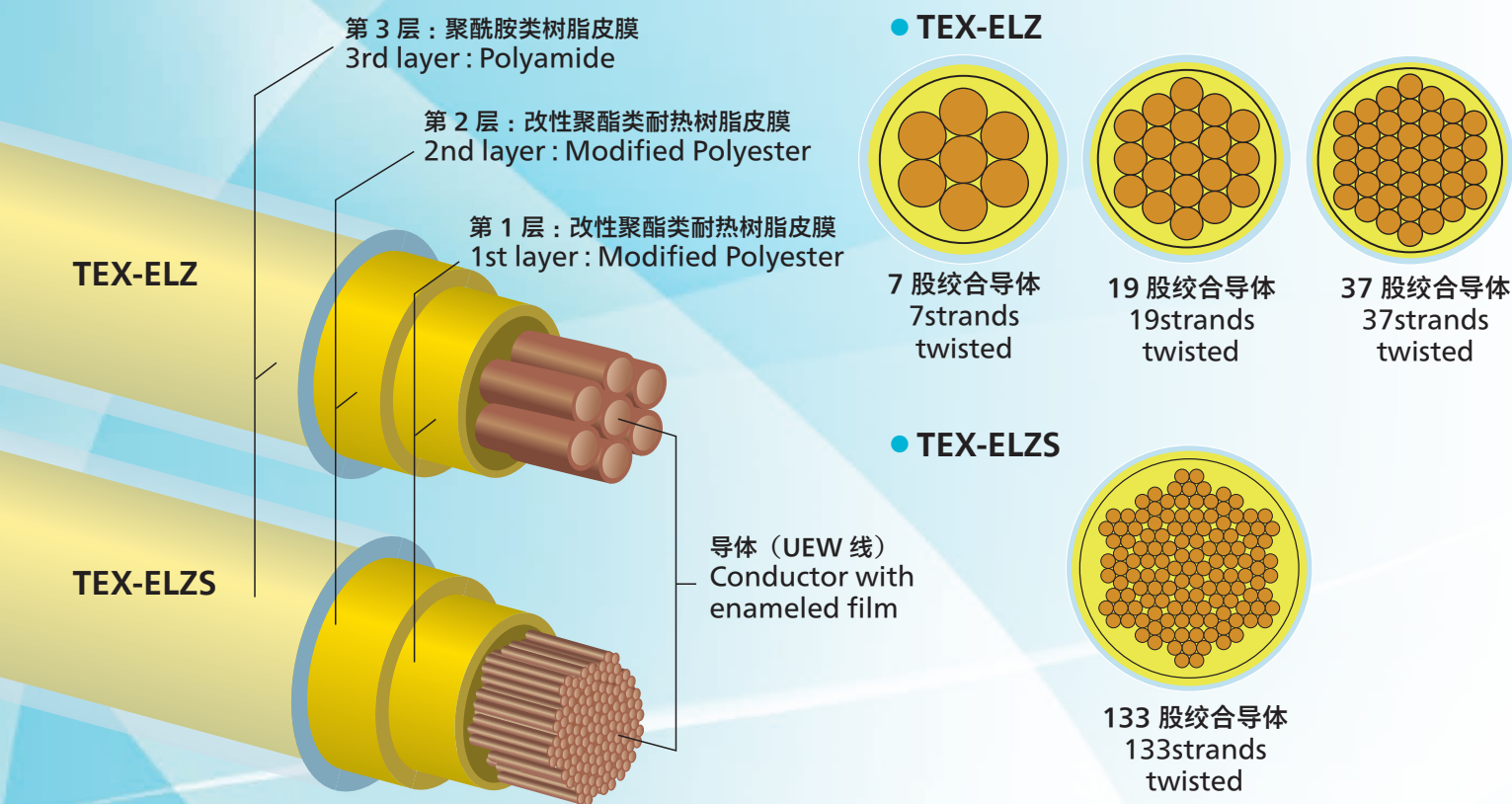
使用TEX-ELZ/TEX-ELZS线的变压器
New Type with "TEX-ELZ/TEX-ELZS"

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-ELZ/TEX-ELZS

构造 CONSTRUCTION



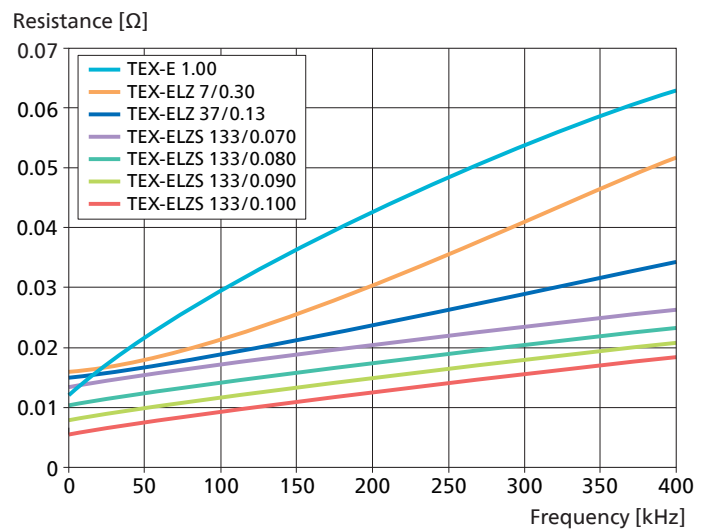
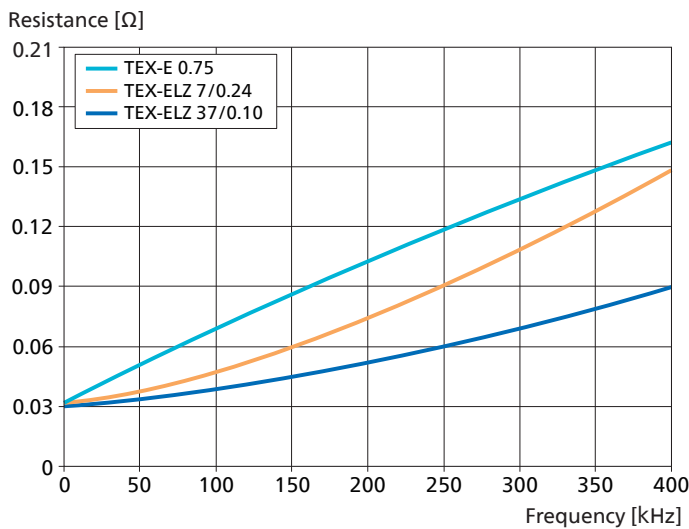
特性 FEATURES

- TEX-ELZ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-ELZ/TEX-ELZS : Reinforced Insulation Litz Wire, is unique Furukawa Electric, and designed to fulfil the requirement of Class B.
- TEX-ELZ/TEX-ELZS线材外径为圆形结构不易变形，能够维持形状的稳定性的。
The round shape of TEX-ELZ/TEX-ELZS 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-ELZ标准外径尺寸范围0.524 ~ 1.180mm、
TEX-ELZS标准外径尺寸范围1.430 ~ 1.880mm。
Standard Size Range(OD) : 0.524~1.180mm (TEX-ELZ)
Standard Size Range(OD) : 1.430~1.880mm (TEX-ELZS)
- TEX-ELZS 有透明與黑色可供選擇。
TEX-ELZS is available in transparent and black.
- TEX-ELZS相比TEX-ELZ可以应用于更高频率的需求。
TEX-ELZS can be used in a higher frequency range compared to TEX-ELZ.



周波数特性 FREQUENCY CHARACTERISTICS

- 经验证，TEX-ELZ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-ELZ has confirmed that conductor resistance reduces so as to have a greater number of strands up to 400kHz.
- 经验证，增加TEX-ELZS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-ELZS, the more conductor resistance can be suppressed in the high-frequency.



● 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，并非是使用上限数值。

*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-ELZ

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	0.524	0.580	346.9	0.679
7/0.11	0.554	0.610	285.2	0.797
7/0.12	0.590	0.650	238.4	0.931
7/0.13	0.620	0.680	202.4	1.069
7/0.14	0.650	0.710	173.8	1.217
7/0.15	0.680	0.740	151.1	1.375
7/0.16	0.716	0.770	132.4	1.550
7/0.17	0.746	0.800	117.0	1.728
7/0.18	0.776	0.830	104.2	1.917
7/0.19	0.806	0.860	93.34	2.115
7/0.20	0.836	0.890	84.10	2.323
7/0.21	0.866	0.920	76.18	2.541
7/0.22	0.896	0.950	69.96	2.769
7/0.23	0.932	0.990	63.91	3.017
7/0.24	0.962	1.020	58.61	3.265
7/0.25	0.992	1.050	53.94	3.523
7/0.26	1.022	1.080	49.81	3.792
7/0.27	1.052	1.110	46.13	4.070
7/0.28	1.082	1.140	42.85	4.358
7/0.29	1.112	1.170	39.91	4.656
7/0.30	1.148	1.180	37.01	4.976

19/0.10	0.740	0.800	127.8	1.678
19/0.11	0.790	0.850	105.0	1.991
19/0.12	0.850	0.910	87.85	2.348
19/0.13	0.900	0.960	74.56	2.718

37/0.10	0.956	1.016	65.63	3.096
37/0.11	1.026	1.086	53.94	3.693
37/0.12	1.110	1.170	45.11	4.370
37/0.13	1.180	1.240	38.29	5.075

参考值 Reference value

● TEX-ELZS

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	1.430	1.458	39.04	5.833
133/0.075	1.505	1.533	33.80	6.622
133/0.080	1.580	1.608	29.55	7.462
133/0.085	1.655	1.683	26.06	8.352
133/0.090	1.730	1.758	23.15	9.294
133/0.095	1.805	1.833	20.70	10.29
133/0.100	1.880	1.908	18.62	11.33

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/>



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