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International Designation: TCX® (C) 331 150/250V 7T0.75

INSTRUMENTATION CABLES

STANDARDS

Product IEC 60228

Installation IEC 60092-350; IEC 60092-360; IEC 60092-376

Test a; IEC 60331-1 or 2; IEC 60332-1; IEC 60332-3-22; IEC 60754-1; IEC 61034

APPLICATION

TCX® (C) 331 150/250 V fire resistant armoured twisted pair cables maintain circuit integrity in case of fire by meeting performances requirements from the IEC 60331 series for 180 minutes. These telecommunication and instrumentation cables show a low transfer impedance in low frequency and an effective screening in high frequency, making them very suitable for polluted electromagnetic surroundings. TCX(C) 331 cables are used for detection and warning systems where enhanced mechanical protection is required. Designed with halogen-free fire retardant materials, they provide optimum safety for people and maximal asset protection against all risks of fire.

Design

- 1. Conductor**
Stranded bare copper class 2
- 2. Insulation**
Mica tape + XLPE (cross-linked polyethylene)
- 3. Inner covering**
Lapped polyester tape
- 4. Armouring**
Bare copper braid
- 5. Outer sheath**
Polyolefin SHF1
Colour: orange

Example of marking:

LYNXEO 279 TCX (C) 331 150/250 V "n" 2 or 3 "s" mm² 90°C IEC 60092-376 IEC 60332-3-22 Cat. A IEC 60331-1/2 "ww/yy" * CE * TCF + metric marking

Core Identification

Pair: white / blue with printed with pair number

Triad: white / blue / red with printed with triad number



Halogen free
IEC 60754-1



Conductor flexibility
Stranded class 2



Rated Voltage Uo/U
(Um)
150 / 250 (300) V



Fire resistant
IEC 60331-1 or -2



Fire retardant
EN IEC 60332-3-22
(cat A)



Smoke density
IEC 61034



Gases corrosivity
IEC 60754-2



Electro magnetic
interference
resistance
Yes

CHARACTERISTICS

Construction characteristics

Halogen free	IEC 60754-1
Conductor flexibility	Stranded class 2
Insulation	XLPE + Mica tape
Outer sheath	Polyolefin
Conductor material	Bare copper
Sheath colour	Orange
Armour type	Bare copper braid
Drain wire	Tinned copper
Protection	Polyester tape(s)

Dimensional characteristics

Number of pairs	-
Number of triples	7
Conductor cross-section	0.75 mm ²
Nominal outer diameter	19.3 mm
Minimum outer diameter	18.5 mm
Maximum outer diameter	21.0 mm
Approximate weight	480 kg/km

Electrical characteristics

Rated Voltage U ₀ /U (U _m)	150 / 250 (300) V
Max. DC resistance of the conductor at 20°C	52 Ohm/km

Usage characteristics

Fire resistant	IEC 60331-1 or -2
Fire retardant	EN IEC 60332-3-22 (cat A)
Smoke density	IEC 61034
Gases corrosivity	IEC 60754-2
Electro magnetic interference resistance	Yes
Operating temperature, range	-30 ... 80 °C
Max. conductor temperature in service	90 °C

OTHER CHARACTERISTICS

Test Voltage

AC between cores of the same unit..... 1.5 kV AC

Minimum bending radius for fixed installations

• TCX® 331..... 6 x outer diameter