0031320	DATA SHEET	LAPP
valid from: 20.01.2025	UNITRONIC® Li2YCY (TP)	

Application

UNITRONIC® Li2YCY (TP) are data cables with low capacitance for wiring of data systems at transmission rates up to 10 Mbit/s and is qualified for the serial interfaces RS422 und RS485. They can be used as a signal-, control- and measuring cable as well as for transmission of low, sensitive signals and high bit rates.
Decoupling by means of twisted pair cable design and the screen protects against electromagnetic interferences.
These cables are designed for fixed installation in dry and damp interiors and for occasional flexible use. They can be used for solderless connections, e.g. connections with insulation displacement technology and MAXI-TERMI-Point wiring.

Design

Design	Design based on standard VDE 0812 and EN 50288-7
Certification	EN 13501-6 and EN 50575 Classification of fire behaviour (article/dimension range see www.lappkabel.com/cpr)
Conductor	7-wire strands of bare copper wires
Insulation	special Polyolefin-based compound
Core identification code	acc. to DIN 47100
Cable assembly	cores twisted to pairs, pairs are stranded in layers, optionally with fillers wrapping with foil on the outer layer
Screen	braid of tinned copper, coverage 85 % (nominal value)
Outer sheath	PVC compound TM52 acc. to EN 50290-2-22 colour: grey (similar RAL 7032)

Electrical properties at 20 °C

Loop resistance	max. 186.0 Ω/km (0.22 mm²) max. 115.0 Ω/km (0.34 mm²) max. 78.4 Ω/km (0.5 mm²)
Specific volume resistivity	> 5 G Ω x km
Mutual capacitance	C/C approx. 60 nF/km C/S approx. 160 nF/km (at 800 Hz)
Inductance	approx. 0.65 mH/km
Characteristic impedance	100 ± 15 Ω (> 1 MHz)
Attenuation	at 100 kHz approx. 0.9 dB/100 m (0.22 mm²) approx. 0.75 dB/100 m (0.34 mm²) approx. 0.6 dB/100 m (0.5 mm²) at 1 MHz approx. 2.7 dB/100 m (0.22 mm²) approx. 2.2 dB/100 m (0.34 mm²) approx. 1.8 dB/100 m (0.5 mm²)
Near-end cross-talk	min. 50 dB (up to 1 MHz) min. 40 dB (up to 10 MHz)
Velocity of propagation	nom. 0.66 c
Maximum operating voltage	250 V (not intended to be used in conjunction with low impedance sources, such as power grids)
Test voltage	C/C: 2000 V C/S: 1000 V

Mechanical and thermal properties

Minimum bending radius	occasional flexing: 15 x outer diameter fixed installation: 6 x outer diameter
Temperature range	occasional flexing: -5 °C up to +70 °C fixed installation: -40 °C up to +80 °C
Flammability	flame retardant acc. to IEC 60332-1-2 resp. EN 60332-1-2

General requirements	These cables are conform to EU-Directive 2014/35/EU (Low Voltage Directive) and to EU-Directive 2011/65/EU (RoHS, Restriction of the use of certain hazardous substances). A part of these cables (see www.lappkabel.com/cpr) are classified acc. to the EU-Regulation no. 305/2011 (CPR).
Environmental information	These cables meet the substance-specific requirements of the EU Directive 2011/65/EU (RoHS).