0035101	DATA SHEET	LAPP
valid from: 20.01.2025	UNITRONIC® LiYY (TP)	

Application

UNITRONIC® LiYY (TP) is a twisted pair data cable for low frequency applications. The cable is designed for fixed installation and for conditional flexible use. It is used in dry and damp interiors but not appropriate for outside usage.
The twisted pairs with short lay lengths provides good decoupling of the conductor circuits.
The cable is used for example in computer systems, instrumentation technology, office equipment and balances.

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	fine wire strands of bare copper acc. to IEC 60228 resp. EN IEC 60228, class 5
Insulation	PVC compound TI52 acc. to EN 50290-2-21
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
Outer sheath	PVC compound TM52 acc. to EN 50290-2-22 colour: grey (similar RAL 7032)

Electrical properties at 20 °C

Conductor resistance	0.14 mm²: max. 138.0 Ω/km 0.25 mm²: max. 79.0 Ω/km 0.34 mm²: max. 57.0 Ω/km 0.5 mm²: class 5 0.75 mm²: class 5 1 mm²: class 5 1.5 mm²: class 5
Specific volume resistivity	> 20 G Ω x cm
Mutual capacitance	C/C: approx. 120 nF/km (at 800 Hz)
Inductance	approx. 0.65 mH/km
Maximum operating voltage	0.14 mm²: 350 V ≥ 0.25 mm²: 500 V (not intended to be used in conjunction with low impedance sources, such as power grids)
Test voltage	0.14 mm²: 1200 V ≥ 0.25 mm²: 1500 V

Mechanical and thermal properties

Minimum bending radius	occasional flexing: 10 x outer diameter fixed installation: 4 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).