Data network cables for low-frequency analogue/digital signal transmission

Usage criteria	UNITRONIC® 100, 100 CY	UNITRONIC® LiYY, LiYCY	UNITRONIC® LiYY (TP)	UNITRONIC® LiYCY (TP)	UNITRONIC® 300, 300 S	UNITRONIC® 300 STP	UNITRONIC® LiYCY-CY	UNITRONIC® LiFYCY (TP)	UNITRONIC® CY PiDY (TP)	UNITRONIC® ST	UNITRONIC® LiYD11Y	UNITRONIC® PUR CP	UNITRONIC® PUR CP (TP)	UNITRONIC® Li2YCY(TP)-Li2YCYv (TP)	UNITRONIC® Li2YCY PiMF	UNITRONIC® ROBUST, ROBUST C	UNITRONIC® ROBUST C (TP)	UNITRONIC® LiHH, LiHCH	UNITRONIC® LiHCH (TP)	UNITRONIC® FD, FD CY	UNITRONIC® FD P plus	UNITRONIC® FD CP plus*	UNITRONIC® FD CP (TP) plus*	JE-Y(ST)Y...BD	JE-LiYCY...BD	Indoor telephone cable J-Y(ST)Y	Fire alarm cable J-Y(ST)Y red	J-2Y(ST)Y...ST III BD	Outdoor telephone cable
Use																													
Food and beverage industry**																✔	✔												
Access control/time recording system				✓		✓				✔	✔		✓				✓		✓					✔	✔	✔		✔	✓
Medical technology, laundries, car washing equipment, chemical industry, composting plants, sewage works																✔	✔												
Production data acquisition systems		✔		✓		✓				✔			✓				✓		✓					✔	✔	✔		✔	✓
Clock systems		✔										✓	✓											✔	✔	✔		✔	✓
Versions with UL and <16AWG/<1.5 mm² ***		✔		✔	✔	✔															✔	✔	✔						
Intrusion detection systems		✓		✓	✓	✓	✓				✔			✓	✓	✓	✓	✓	✓					✓	✓	✓		✔	✓
Fire alarm systems														✓	✓											✓	✔		
Class I, Div. 2 (PLTC, 18&16 AWG)					✔	✔																							
Telephone private branch exchanges											✓			✓	✓									✔	✔	✔		✔	✔
Intercom systems		✓		✓	✓	✓	✓	✓			✓	✓	✓	✔	✔	✔	✔	✓	✓					✓	✓	✔		✔	✔
Electro-acoustic systems											✓			✔	✔		✔		✓					✓		✔		✔	✔
Recording studio cables/microphone cables	✓	✓		✓	✓	✓	✓	✓	✓		✓	✓	✓	✔	✔	✔	✔	✓	✓										
Printers/plotters				✓		✓		✔			✓		✓	✔	✔		✔		✓	✓	✔	✓	✓						
DC stepper motors				✔		✔							✔	✔	✔		✔		✔				✔		✓				
Encoders (position or angle)				✔		✔			✓				✔	✔	✔		✔		✔				✔		✓				
Industrial sensors, U < 50 V_{eff}	✔	✔	✔	✔	✔	✔	✔	✓	✔		✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✓	✓				
Industrial actuators, U < 50 V_{eff}	✔	✔	✔	✔	✔	✔	✔		✔		✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔		✓				
Measurement and control purposes, analogue	✔	✔	✔	✔	✔	✔	✔	✔	✔		✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✓	✓			✓	✓
MSR, digital	✓	✓	✓	✓	✓	✓			✓		✓	✓	✓	✔	✔	✔	✔	✓	✓	✔	✔	✔	✔		✓			✓	✓
In electronic devices	✔	✔	✔	✔	✔	✔	✔	✔	✔		✓	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔						
For cutting/clamping technology (0.34 mm²/AWG 22)	✔	✔										✔		✔	✓	✔	✔	✔							✔				
Temperature range																													
+105 °C					□	□																							
+90 °C																□	□												
+80 °C (UL) for UL AWM versions		□	□																		□	□	□						
+80 °C	▲	▲	▲	▲			▲	▲	▲	▲	▲	▲	▲	▲	▲			▲	▲	▲	□	□	□						
+75 °C (UL/CSA CMX – stationary)																						▲	▲						
+70 °C	●	●	●	●			●	●	●		●	●	●	●	●			●	●	●				▲	▲	▲	▲	▲	▲
+50 °C																								●	●				
-5 °C	●	●	●	●			●	●	●		●	●	●	●	●			●	●	●				●	●				
-25 °C					●	●																							
-30 °C	▲						▲	▲	▲	▲	▲	▲	▲	▲	▲			▲	▲					▲	▲	▲	▲	▲	
-40 °C		▲	▲	▲	▲	▲										●	●			▲	□	□	□						
-50 °C																▲	▲												
Installation																													
Fixed installation indoors	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✓	✔	✔	✔	✔	✔	✔	✔	✔	✓	✓	✓	✓	✔	✔	✔	✔	✔	
Flexing applications (indoors), occasional	✔	✔	✓	✓	✔	✔	✓	✔	✓		✔	✔	✓	✔	✔	✔	✔	✔	✓	✔	✔	✔	✔		✓				
Outdoors					✔	✔					✔	✔	✔			✔	✔				✔	✔	✔						✔
Permanent flexing (indoors/outdoors)																					✔	✔	✔						
As tray cable in North-America					✔	✔																							
Design																													
Halogen-free																✔	✔	✔	✔		✔	✔	✔						✔
Flame-retardant, self-extinguishing	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔		✔	✔	✔	✔			✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✓	✓
Symmetrical transmission, twisted pair (TP)			✔	✔		✔		✔	✔			✔	✔	✔			✔						✔	✔	✔	✔		✔	✔
High pair decoupling, pair screening									✔						✔														
El. screening effect, overall screening	✓	✓		✔	✓	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✓	✔	✓	✔	✓		✔	✔	✔	✔	✔	✔	✔	✔
Low-attenuation transmission, low-capacitance														✔	✔	✔	✔				✔	✔	✔					✔	
Individually screened cores							✔																						
Colour code DIN 47100		✔	✔	✔			✔	✔	✔		✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔						
UNITRONIC® colour code	✔																												
Industrial electronics colour code per VDE 0815																								✔	✔				
Star quad colour code "BD" per VDE 0815/0816																									✓			✔	✔
Pair colour code "LG" per VDE 0815																										✔	✔		
Special colour code					✓	✓				✔																			
PVC/special PVC outer sheath	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔				✔	✔					✔				✔	✔	✔	✔	✔	
PUR sheath, abrasion-resistant, cut-resistant											✔	✔	✔								✔	✔	✔						
PE outer sheath (not flame-retardant)																													✔
Special TPE sheath, chem. resistant																✔	✔												

	Cable protection hoses		Cable entries	Marking	Accessories
Halogen-free accessories	SILVYN® RILL PA6	SILVYN® EMC AS-CU	SKINTOP® ST-HF-M	FLEXIMARK® single core marking	Embossed metal plates, insulated conductor end sleeves
	SILVYN® RILL PA12	SILVYN® SSUE	SKINTOP® GMP-HF-M	Flexipart, marking sleeves, Flexiprint	Insulated cable lugs, TBTA insulating tape
	SILVYN® FPAS	SILVYN® UI 511	SKINTOP® BLK-GL-M	FLEXIMARK® cable labelling	Shrink hoses CMP/PKG/HSB/PLG
	SILVYN® HCC	SILVYN® HFX	SKINTOP® GMP-GL-M	MINI system, shrink tube labelling	TEC end caps
	SILVYN® LCCH-2	SILVYN® CHAIN	SKINDICHT® KW-M	FLEXIMARK® component labelling	TEB branch joints
	SILVYN® AS	SILVYN® CHAIN STEEL	SKINDICHT® KU-M	LB LA labels	KW plastic coil
	SILVYN® EDU-AS	SILVYN® HIPROJACKET	SKINDICHT® EKU-M	DYMO® label strips	Cable ties Basic Tie/TY-RAP®/TY-FAST®
	SILVYN® TC				

✔ Main application/design
✓ Possible application

● Flexible use
□ Fixed and flexible use
▲ Fixed installation

*NFPA 79, 2015 Edition, 12.9.2, Exemption 3 not applicable before May 2016
**especially for production and processing equipment of milk and meat products
***for internal wiring in industrial machinery in the USA