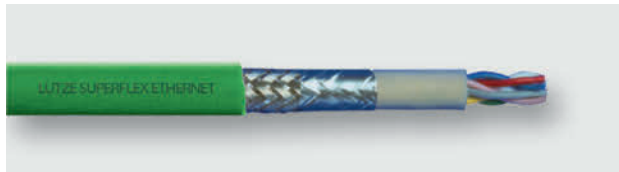


LUTZE SUPERFLEX® ETHERNET BUS (C) PUR, Shielded

High Flexing ETHERNET Cable with UL Approval



Application

- For the cabling of industrial field bus systems with the globally accepted TCP/IP protocol
- Applicable in automation technology, transport and conveyor technology, machine tool manufacturing
- For continuous flexible applications in C-tracks or free movement

Characteristics

- High active and passive interference resistance (EMC)
- Talc and Silicone free

Technical data

Impedance	100Ω ± 10Ω
Loop resistance	Braid AWG 22/7= 0.34 ² <110Ω/km Braid AWG 24/19= 0.24 ² <155Ω/km Braid AWG 26/19=0.14 ² <280Ω/km
Operating capacitance	50pF/m
Nominal voltage	300V
Test voltage	1500V
Temperature range	Moving -30°C - +70°C Fixed -40°C - +80°C
Minimum bending radius	Moving 12 x cable OD Fixed 6 x cable OD
Burning behavior	Flame retardant per DIN EN 60332-1-2 IEC 60332-1 UL 1581 section VW-1 Flame test FT 1
Halogen free	According to DIN EN 60754-1
Approvals	cULus CMX cURus AWM RoHS REACH
Item specific certifications	104337: CC-Link IE Field

Construction

- AWG conductor
- Bare copper wire
- Conductor insulation special polyolefin
- ST static foil shield
- Tinned copper braid, optical coverage ≥ 85 %
- Jacket special-PUR, matte, adhesion-free surface
- Green jacket RAL 6018

For further information, see ETHERNET pages in the Technical Overview

Specifications are subject to change without prior notice

Part No.	Description No. of conductors	OD / Ø ca. mm	OD / Ø inches	Weight Lbs/Mft	Copper Lbs/Mft
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SUPERFLEX Industrial Ethernet/ProfiNet/EtherCat

104302	(2x2xAWG22/19) CMX Cat5 100 MHz, SF/UTQ Star-Quad, FC WH/BU; YE/OG	6.6	0.260	50	25
104303	(2x2xAWG22/7) CMX Cat5 100 MHz, SF/UTQ Star-Quad, FC, ProfiNet Type C WH/BU; YE/OG	6.5	0.256	41	21

SUPERFLEX Industrial Ethernet/Ethernet IP

104379	(2x2xAWG26/19) AWM 21198 Cat5e 100 MHz, SF/UTQ WH/BU; YE/OG	5.3	0.209	24	12
104337	(4x2xAWG24/19) AWM 21198 Cat5e 100 MHz, S/UTP WHBU/BU, WHOG/OG, WHGN/GN, WHBN/BN	7.8	0.307	46	37
104396	(4x2xAWG26/19) AWM 21198 Cat5e 100 MHz, SF/UTP WHBU/BU, WHOG/OG, WHGN/GN, WHBN/BN	6.7	0.264	36	19
104347	(4x2xAWG26/19) CMX Cat6 350 MHz, SF/UTP WHBU/BU, WHOG/OG, WHGN/GN, WHBN/BN	7.9	0.311	42	28

ETHERNET – Overview

1) Correct Handling and Installation of Network Copper Cable

- Do not subject cable to tension
- Do not kink the cable
- Do not bend the cable more than 90° (See individual specifications for bending radius)
- Strip the cable as short as possible
- Do not crush cable when fastening
- Do not untwist the conductor pairs by more than 0.5 inch
- Terminate the shielding on both ends

2) LUTZE ETHERNET Cables

We recommend shielded industrial ETHERNET cable, such as LUTZE ETHERNET cable, for use in industrial environment to ensure secure connectivity. Motors and other electrical noise producing devices are often located in close proximity to network cabling. EMI (Electro Magnetic Interference) and RFI (Radio Frequency Interference) can distort data transmission on copper-based network cable. To lessen or eliminate interference, called alien-crosstalk, the use of shielded industrial cable and connectors is recommended.

Available LUTZE ETHERNET Cables:

Available LUTZE ETHERNET Cables:			
S/UTP	SF/UTP	SF/UTQ	S/FTP
Susceptibility for Interference			
some	low	low	low
104337 CAT 5e	104335 CAT 5e	104301 CAT 5e	104338 CAT 6 _A
	104336 CAT 5e	104307 CAT 5e	104397 CAT 6 _A
	104396 CAT 5e	104302 CAT 5e	104331 CAT 7
	104349 CAT 5e	104303 CAT 5e	
	104347 CAT 6	104379 CAT 5e	

3) Key for Twisted Pair Cables according to ISO/IEC-11801 (2002)E

XX/YYZ

XX for the outer shielding / Y for the pair shielding ZZ for the pair arrangement

U = unshielded / U = unshielded TP = twisted pair (regular)

F = foiled shield / F = foiled shield TQ = quad pair (star quad)

S = braided shield / S = braided shield

SF = braided and foiled shield

In order to utilize EMI/RFI shielding, the shield must be properly terminated at both ends!

4) ProfiNet Star Quad Design and Termination

The star quad is a specific low-impedance cable configuration. Four conductors are twisted on a common axis. The conductors across from each other make a pair.

In **Figure 1** the pairs are as follows:

Pair 1:

Conductor A ↔ Conductor D

Pair 2:

Conductor B ↔ Conductor C

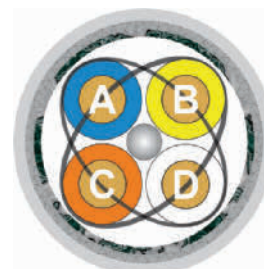


Figure 1

Other terminations than in **Figure 1** lead to interferences, decreased connectivity or no connectivity at all.