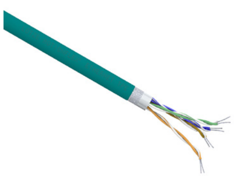
Cat5e Industrial Ethernet Cable Continuous Flexing

LUTZE SYSTEMATIC TECHNOLOGY

A1040020-1 Cable Specifications

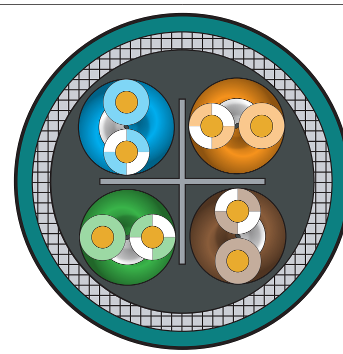


Part Number	Wire/Cable Type	Flexibility	Minimum Cut Length (ft)*	Approximate Weight (lb/ft)	Price per foot
A1040020-1	Cat5e industrial Ethernet	Continuous Flexing	20	0.05	$;5,xs:

Physical Properties

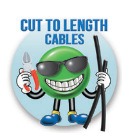
Conductor Gauge	24 AWG	**Conductor Stranding**	7-stranded tinned copper
Conductor Material	Tinned Copper	**Conductor Insulation Wall Thickness**	0.011 in; nominal
Conductor Assembly	4 twisted pairs	**Bare Conductor Diameter**	0.024 in; nominal
Color Code – Pair 1	Blue, White/Blue	**Insulated Conductor Diameter**	0.046 in; nominal
Color Code – Pair 2	Orange, White/Orange	**Twisted Conductor Diameter**	0.092 in; nominal
Color Code – Pair 3	Green, White/Green	**Overall Cable Diameter**	0.299 in; nominal
Color Code – Pair 4	Brown, White/Brown	**Jacket Color**	Teal
Voltage Rating	600V	**Jacket Thickness**	0.033 in; nominal
Temperature Rating	-40 to 80 °C (-40 to 176 °F)	**Jacket Material**	TPE
Plenum	No	**Sunlight Resistant**	Yes
Shield	Shielded	**Oil Resistance**	Yes
Drain	No	**Flame Retardant**	Yes
Conductor Insulation Material	High-density Polyethylene (HDPE)	**Sample Print Legend**	www.lutze.com Part# A1040020 LUTZE MOTIONFLEX ETHERNET CAT5e SF/UTP TPE (4-PAIR AWG24) E319350 c(UL) CMX OUTDOOR CMR 75C SUN RES OR AWM STYLE 2463 80C 600 V OIL RES II RoHS <Date Code YYWW> CE-59 <SEQ. FT MARK>
Minimum Bend Radius	Moving: 2.99in Fixed: 2.24in		
Cabled Core Diameter	0.234 in		

Electrical Characteristics (for 100 meters of cable)

Impedance (1-100 MHz)	100 Ω 1 – 100 MHz	**UL Classification**	(cULus) TYPE CMR/CMX Outdoor or AWM Style 2463; (cURus) TYPE CMG
Capacitance	15.2 pF/ft @ 1MHz; Nominal	**Approvals****	cULus, cURus,CE, RoHs
Resistance, Max.	24.5 Ω DC per 1000ft	**Attenuation Crosstalk Ratio, Far End (ACRF)**	1 ≤ ƒ ≤ 100 MHz: 23.8 - 20 LOG(ƒ/100) dB MIN
Dielectric Withstanding, Min.	2000V RMS	**Insertion Loss**	1 ≤ ƒ ≤ 100 MHz: 1.967 √ƒ + 0.023(ƒ) + 0.050/√ƒ dB MAX
Return Loss	1 ≤ ƒ < 10 MHz: 20 + 5 LOG(ƒ) dB MIN 10 ≤ ƒ < 20 MHz: 25 dB MIN 20 ≤ ƒ ≤ 100 MHz: 25 - 7.0 LOG(ƒ/20) dB MIN	**Power Sum Attenuation to Crosstalk Ratio, Far End (PSACRF)**	1 ≤ ƒ ≤ 100 MHz: 20.8 - 20 LOG(ƒ/100) dB MIN
Near End Crosstalk (NEXT)	1 ≤ ƒ ≤ 100 MHz: 35.3 - 15 LOG(ƒ/100) dB MIN	**Cross Section**	
Power Sum Near End Crosstalk (PSNEXT)	1 ≤ ƒ ≤ 100 MHz: 32.3 - 15 LOG(ƒ/100) dB MIN		
TCL	1 ≤ ƒ ≤ 100 MHz: 30 - 10 LOG(ƒ/100) dB MIN		
ELTCTL	1 ≤ ƒ ≤ 30 MHz: 35 - 20 LOG(ƒ) dB MIN		
Velocity Of Propagation	0.66		
Delay	4 ≤ ƒ ≤ 100 MHz: 534 + 36/√(ƒ ns MAX		
Delay Skew	1 ≤ ƒ ≤ 100 MHz: <45ns/100m		

* See web store www.AutomationDirect.com for maximum cut lengths

** To obtain the most current agency approval information, see the Agency Approval Checklist section on the part number's web page at www.AutomationDirect.com



Please Note: Our prices on Continuous Flexing IE Cable are closely tied to the market price for copper. This allows us to offer the best savings possible if conditions are favorable; however, it also means that our prices may increase if market conditions warrant.

SYSTEMATIC TECHNOLOGY

LUTZE Industrial Ethernet Cables

LUTZE Industrial Ethernet Cables

Many industrial applications expose cables to hazards that are not present in commercial data cabling installations. Although a cable suited for commercial applications may initially work in a harsh industrial environment, it could quickly fail when used in an industrial application. While commercial grade cables may have a low initial product cost, downtime due to premature failure can be avoided by using a cable that has been designed and tested for the industrial environment. LUTZE's Industrial Ethernet cables were developed to survive the many industrial hazards that commercial cables will not, such as oils, harsh chemicals and cleaning agents often associated with the factory floor.

There are more than just physical hazards to overcome in an industrial application; electrical threats pose an issue for Ethernet cables as well. The presence of EMF/EMI can create a real issue for communication networks and where you can use a shielded commercial product. In most cases, the shielding provided is a single layer of foil which is adequate for installation away from the factory floor. However, when dealing with electrical noise generated by motors and switching equipment, commercial cables struggle to meet the demands of a typical industrial environment. The Industrial Ethernet cables from LUTZE are made with both a foil layer and a tinned copper braid to provide superior noise rejection compared to the commercial counterparts.

Furthermore, commercial Ethernet cables have a tube jacket surrounding the conductor pairs with room within for the pairs to move around and even untwist in applications requiring constant motion. This results in early mechanical or electrical failure of the cable. LUTZE continuous flexing Industrial Ethernet cable have a jacket that is pressure extruded over the cable core, effectively "locking" the conductor pairs in place. This type of jacket construction provides very stable electrical performance, even when the cable is impacted, bent, or repeatedly flexed. Pressure extrusion also provides a very smooth, round, and firm jacket profile that is crush resistant and ideal for obtaining a reliable termination and seal when installing connectors.

Features

- Available in Category 5e, 6 and 6a
- In compliance with TIA 568-C.2 and TIA 1005
- Designed for use in EtherNet/IP systems *
- 26-22 AWG stranded or 22 AWG solid
- 2 or 4 twisted pairs
- Shielded constructions
- Rugged TPE and PVC jacket options
- UL Type CMX OUTDOOR – CM and UL AWM Style 2463 (80°C, 600V)
- Cut to length in 1-foot increments
- Low 20-foot minimum length

*** EtherNet/IP is a trademark of ODVA, Inc.**

Description

AutomationDirect offers Lutze Industrial Ethernet cable in 2 and 4 pair, unshielded and shielded constructions. Conductors are color coded high density polyethylene insulation. Shielded constructions include both a tinned copper braid shield and aluminized polyester foil overall shield. All constructions feature a rugged jacket with excellent moisture, chemical, UV and weathering resistance, exceptional low-temperature flexibility, and good flame and fire resistance. Some are specifically designed and constructed for continuous flexing applications. Agency approvals include UL Type CMX OUTDOOR, UL Type CMG/PLTC, UL AWM Style 2570, and UL AWM Style 20201.

Click on the thumbnail to the right or go to https://www.automationdirect.com/VID-WD-0016 for a short introduction on our cut to length cable