# IndustrialNet™ Category 6A SF/UTP Copper Cable

## specifications

Category 6A 4-pair SF/UTP copper cable shall meet or exceed the IEC 61156-6, ANSI/TIA-568-C.2 Category 6A and ODVA Ethernet/IP standards up to 80 meters. The stranded copper conductors shall be 24/7 and 26/7 AWG with high density polyethylene (HDPE) insulation. The copper conductors shall be twisted in pairs and wrapped with a foam polypropylene tape to form a core. All pairs shall then be surrounded by an overall braided shield and metallic foil and covered with a thermoplastic elastomer (TPE) jacket. The jacket shall be oil, UV, weld splatter, and abrasion resistant for enhanced chemical resistance and mechanical performance. The jacket shall be flame retardant (CMX/CM) for Industrial Ethernet applications. This cable shall support high-flex applications and be rated for panel or on-machine applications where space is shared with 600V high voltage cables.



### technical information

Electrical performance:	Certified component performance up to 80 meters and exceeds the requirements IEC 61156-6 Category 6A, ANSI/TIA-568-C.2 Category 6A
Standard compliances:	UL AWM Style 2463 (80°C 600V) Flex Life Test: 1 million cycles at 10 x cable diameter; 10 million cycles at 20x cable diameter Torsion Life Test: 3 million cycles, 270° Oil resistance 6 months @ 20°C
Conductors/insulators:	Four pairs of 24/7 AWG and 26/7 stranded copper insulated with high density polyethylene (HDPE) insulation
Insulation diameter:	24 AWG = 1.1mm (0.045 in.) nominal 26 AWG = 0.86mm (0.034 in.) nominal
PoE+ compliant	Meets IEEE 802.3af and IEEE 802.3at for PoE applications
Flame rating:	CMX/CM (UL1685) IEC 60332-1, IEC 60754-1 and -2, IEC 61034-2, EN50575: Eurcolass Fca
Installation tension:	110 N (25 lbf) maximum
Temperature rating:	-40°C to 80°C (-40°F to 176°F) during transport, installation, and operation
Cable jacket:	Thermoplastic elastomer (TPE), oil, sunlight, weld splatter, and abrasion resistant
Cable diameter:	24 AWG = 8.1mm (0.322 in.) nominal 26 AWG = 7.3mm (0.290 in.) nominal
Cable weight:	18 kg/305m (40 lbs./1000 ft.)
Packaging:	Packaged 305 meters (1000 feet) on a reel Package tested to ISTA Procedure 1A

# key features and benefits

Cable has been tested by an independent laboratory and complies with the electrical standard requirements of IEC 61156-6 Category 6A and ANSI/TIA-568-C.2 Category 6A standards
Shielded SF/UTP cable construction protects against environmental elements that can cause electrical performance failures; stranded conductors for high flex applications and ease of installation; cable jacket is oil, sunlight, weld splatter, and abrasion resistant for enhanced chemical resistance and mechanical performance
Life cycle tested for robotic and c-track use
Rated for panel or on-machine applications when the space is shared with 600V high voltage power cables

# applications

IndustrialNet™ Category 6A SF/UTP Copper Cable provides reliability and high performance as an integral component of the end-to-end solution for industrial Ethernet based communications networks. The 4-pair high performance cable ensures highest availability in conditions seen in industrial environments. The cable incorporates a durable oil and UV resistant TPE jacket meeting Appliance Wiring Material requirements and rated for panel or on-machine applications when the space is shared with 600V high voltage power cables.

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Key applications include:

- 10BASE-T (Ethernet)
- 100BASE-T (Fast Ethernet)
- 1000BASE-T (Gigabit Ethernet)
- 10GBASE-T (Gigabit Ethernet)
- Control panel deployments featuring power source voltages
- Downlinks from control panel to the machine area
   Uplinks featuring gigabit data transmission from the control panel to the consolidation point
- · High flex applications Robotic, C-Track



IndustrialNet ™ Category 6A SF/UTP Copper Cable

24/7 AWG CMX/CM

**4-pair:** ISFCH6X04A\*\*-UG

26/7 AWG CMX/CM

**4-pair:** ISFCH6X04B\*\*-UG

IndustrialNet ™ Category 6A RJ45 Field Terminable Plug

Field

terminable plug: ISPS688FAS

IndustrialNet ™ M12 X-Code to RJ45 Panel Mount Adapter

Straight: ICAM12XRJS

90 degree angle: ICAM12X90RJS

Mini-Com® Modular Patch Panel

8-port: CDPP8RG

DIN Rail Adapter

**1-port:** CADIN1IW\*\*\*

\*\*To designate color, add suffix TL (Teal), BL (Black).

\*\*\*For standard colors other than Off White, replace IW in part number with BL (Black), EI (Electric Ivory), IG (International Gray), or WH (White).

# **IndustrialNet™ Category 6A SF/UTP Copper Cable**

## additional specifications

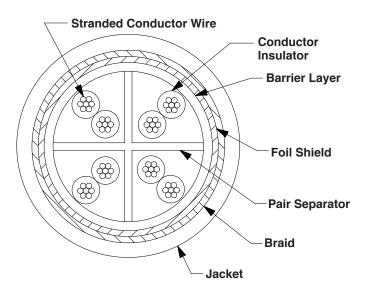
Mechanical Test			
Ultimate Breaking Strength	>400 N (90 lbf.)		
Minimum Bend Radius	2x cable diameter		
Electrical Test			
Nominal Velocity of Propagation (NVP)	68%		
Operating Voltage, Maximum	80V		

#### cable construction

#### ISFCH6X04A

# Stranded Conductor Wire Conductor Insulator **Barrier Layer Braid** ~~~ Foil Shield **Pair Separator** Jacket

#### ISFCH6X04B



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