IndustrialNet™ Category 6A SF/UTP Copper Cable

PANDUIT®

specifications

Category 6A 4-pair SF/UTP copper cable shall meet or exceed the channel requirements of ANSI/TIA-568.2-D and ISO 11801 as noted below. 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:	24 AWG: Certified point-to-point and 2-connector channel performance up to 80 meters and meets or exceeds the requirements of ANSI/TIA-568.2-D and ISO 11801.
	26 AWG: Certified point-to-point and 2-connector channel performance up to 66 meters and meets or exceeds the requirements of ANSI/TIA-568.2-D and ISO 11801.
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 for six months at 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") nominal
	26 AWG = 0.86mm (0.034") nominal
PoE+ compliant	Meets IEEE 802.3af and IEEE 802.3at for PoE applications
Flame rating:	CMX/CM (UL1685)
	EN50575: Euroclass 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") nominal
	26 AWG = 7.3mm (0.290") nominal
Cable weight:	18 kg/305m (40 lbs./1000')
Packaging:	Packaged 305m (1000') on a reel
	Package tested to ISTA Procedure 1A

key features and benefits

Third party tested:	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
Reliability:	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
High flex applications:	Life cycle tested for robotic and c-track use
600V on-machine applications:	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.

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
Category 6A RJ45 Field Terminable Plug	
Field terminable plug:	FPS6X88MTG
IndustrialNet M12 X-Code to RJ45 Panel Mount Adapter	
Straight:	ICAM12XRJS
90° angle:	ICAM12X90RJS
Mini-Com® Modular Patch Panel	
8-port, unshielded:	CDPP8RG
8-port, shielded:	CDPP8RG-S
DIN Rail Adapter	
1-port, unshielded:	CADIN1IG***
1-port, shielded:	CADIN1IG-S***

**To designate color, add suffix TL (Teal), BL (Black).
***For standard colors other than International Gray, replace IG in part number with BL (Black).

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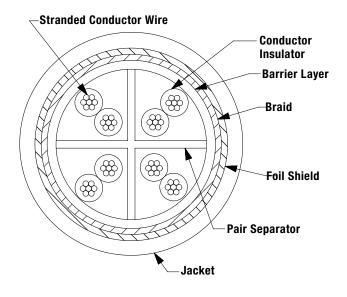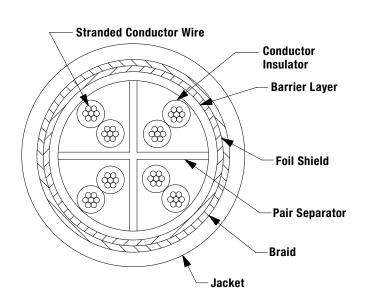
Mechanical Test	
Ultimate Breaking Strength	>400 N (90 lbf.)
Minimum Bend Radius	2x cable diameter
Electrical Test	
Nominal Velocity of Propagation (NVP)	68%
Operating Voltage, Maximum	80V

cable construction

ISFCH6X04A

- Stranded Conductor Wire
- Conductor Insulator
- Barrier Layer
- Braid
- Foil Shield
- Pair Separator
- Jacket

ISFCH6X04B

- Stranded Conductor Wire
- Conductor Insulator
- Barrier Layer
- Foil Shield
- Pair Separator
- Braid
- Jacket

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