IndustrialNet™ Category 5e SF/UTP Copper Cable

PANDUIT®

SPECIFICATION SHEET

specifications

CC-Link

Category 5e 4-pair SF/UTP copper cable shall meet or exceed the IEC 61156-6, ANSI/TIA-568-C.2 Category 5e and ODVA Ethernet/IP^ and CC-Link standards up to 80 meters. The stranded copper conductors shall be 24/7 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 600 V panel or on-machine applications where space is shared with high voltage cables.



technical information

Electrical performance:	Certified component performance up to 80 meters and meets or exceeds the requirements IEC 61156-6 Category 5e, ANSI/TIA-568-C.2 Category 5e and ODVA Ethernet/IP^ and CC-Link standards at swept frequencies up to 100 MHz
Standard compliances:	UL AWM Style 2463 (80°C 600 V) Flex Life Test: 1 million cycles at 10 x cable diameter; 10 million cycles at 20x cable diameter Torsion Life Test: 3 million cycles, 360° Oil resistance 6 months @ 20°C
Conductors/insulators:	Four pairs of 24/7 AWG stranded copper insulated with high density polyethylene (HDPE) insulation
Insulation diameter:	1.12 – 1.22mm (0.044 – 0.048 in.)
Flame rating:	CMX/CM (UL1685)
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:	7.2mm (0.285 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

Third party tested	Cable has been tested by an independent laboratory and complies with the electrical standard requirements of IEC 61156-6 Category 5e and ANSI/TIA-568-C.2 Category 5e 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
600 V on-machine applications	Rated for panel or on-machine applications when the space is shared with 600V high voltage power cables

applications

IndustrialNet™ Category 5e 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)
- Industrial Ethernet/IP^
- 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

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IndustrialNet™ Category 5e SF/UTP Copper Cable

CMX/CM 4-pair: ISFCH5C04A*-XG

IndustrialNet™ Category 6/5e RJ45 Field Terminable Plug

Field terminable plug: ISPS688FA

IndustrialNet™ Category 5e Shielded 600 V-Rated Patch Cords

CM/CMX: **ISTPHCH1MTL

IndustrialNet™ M12 D-Code to RJ45 Panel Mount Adapter

Panel mount adapter: ICAM12DRJS

Mini-Com® Modular Patch Panel

8-port: CDPP8RG

DIN Rail Adapter

1-port: CADIN1IW***

*To designate color, add suffix TL (Teal), BL (Black), RD (Red), BU (Blue), GY (Gray), or YL (Yellow).

**For other lengths, change the length designation (1M) of the part number to the desired length (0.3M, 0.6M, 2M, 3M, 5M, or 10M); to designate color, replace TL (Teal) suffix with BL (Black), RD (Red), or YL (Yellow). For example, the part number for a 2-meter teal patch cord is ISTPHCH2MTL.

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

^EtherNet/IP is a trademark of ODVA.

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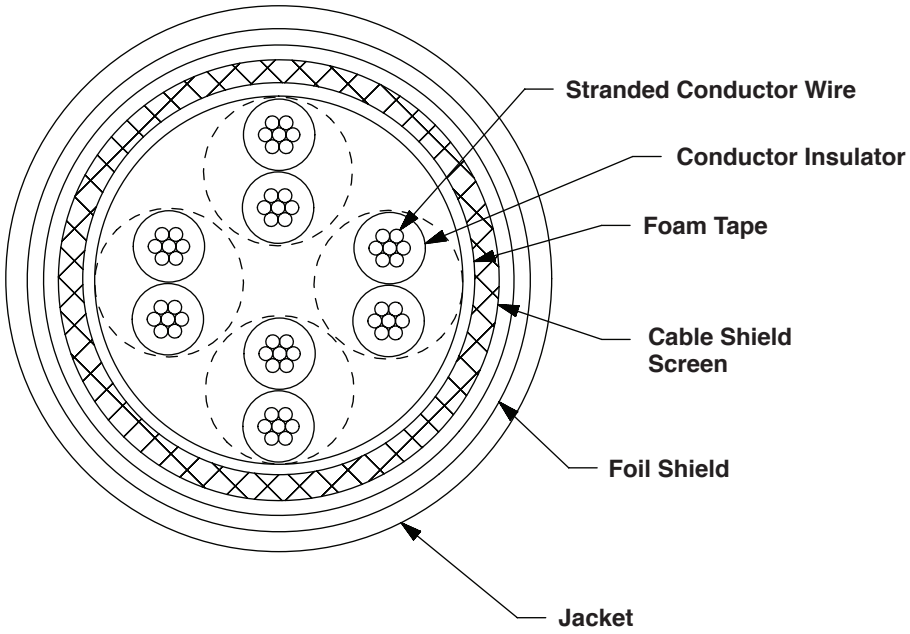
additional specifications

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



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