

IndustrialNet™ Category 5e SF/UTP Copper Cable

specifications

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

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).

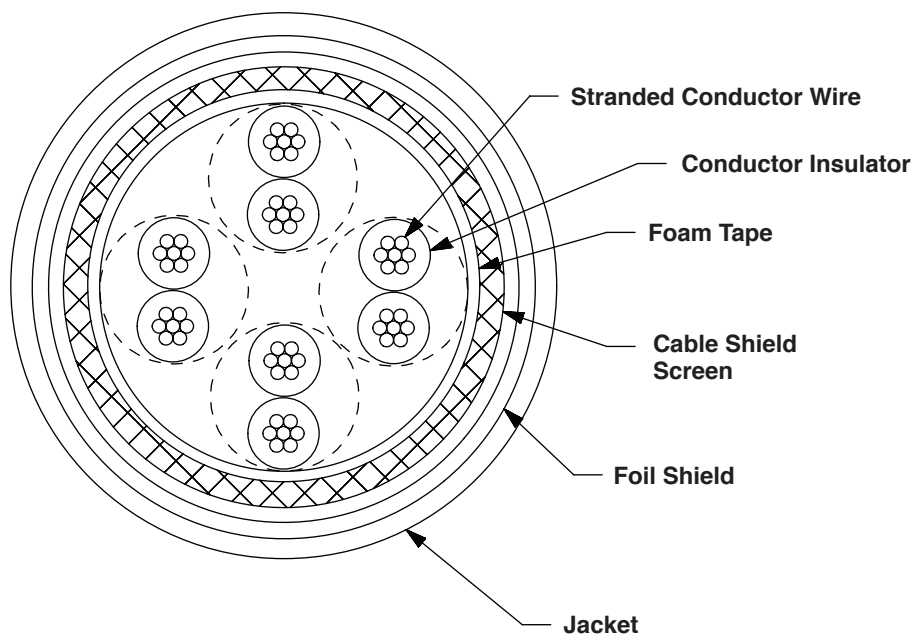
[^]EtherNet/IP is a trademark of ODVA.

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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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