# IndustrialNet™ Category 5e SF/UTP Copper Cable

## specifications

Category 5e 2-pair SF/UTP copper cable shall meet or exceed the IEC 61156-6, ANSI/TIA-568-C.2 Category 5e and ODVA EtherNet/IP standards up to 80 meters. The stranded copper conductors shall be 24/7 AWG with foamed polyethylene (PE) insulation. The copper conductors shall be twisted in pairs. Both pairs shall then be surrounded by an overall metallic foil and braided shield and covered with a polyurethane (PUR) jacket. The jacket shall be oil, ozone, and abrasion resistant for enhanced chemical resistance and mechanical performance. The jacket shall be flame retardant and halogen-free for industrial Ethernet applications. The cable shall support high flex and torsion applications.

**EtherNet/IP™**

## technical information

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|---|---|
| **Electrical performance:** | Certified component performance up to 80 meters and exceeds the requirements IEC 61156-6 and ANSI/TIA-568-C.2 Category 5e and ODVA EtherNet/IP standards at swept frequencies up to 100 MHz |
| **Standard compliances:** | Flexure IEC 61935-2<br>Flex Life Test: 1 million cycles at 10x cable diameter; 10 million cycles at 20x cable diameter<br>Torsion Life Test: 3 million cycles, 360°<br>Ozone resistance VDE 0472-805<br>Oil resistance EN 60811-2-1 (7 days x 24hrs/90°C) |
| **Conductors/insulators:** | Two pairs of 24/7 AWG stranded copper insulated with foamed polyethylene |
| **Insulation diameter:** | 1.15 – 1.25mm (0.045 – 0.049 in.) |
| **Flame rating:** | Flame retardant, halogen-free – IEC 60332-1-2, IEC 60754-1 |
| **Installation tension:** | 80 N (18 lbf) maximum |
| **Temperature rating:** | -40°C to 80°C (-40°F to 167°F) during transport, installation, and operation |
| **Cable jacket:** | Polyurethane (PUR), oil, ozone, and abrasion resistant |
| **Cable diameter:** | 6.4mm (0.252 in.) nominal |
| **Cable weight:** | 22.5 kg/500m (50 lbs./1640 ft.) |
| **Packaging:** | Packaged 500 meters (1640 feet) on a reel<br>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 standard flex applications and ease of installation; cable jacket shall be oil, ozone, and abrasion resistant for enhanced chemical resistance and mechanical performance |
| **Ethernet/IP Compliant** | Enhanced design to provide performance levels required to support industrial network applications; meets ODVA Ethernet/IP performance requirements |
| **Descending length cable markings** | Easy identification of remaining cable reduces installation time and cable scrap |
| **Packaged on a reel** | Ensures proper performance and provides quick installation |

## 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 and Ethernet/IP based communications networks. The 2-pair high performance cable ensures highest availability in conditions seen in industrial environments. The cable incorporates a durable PUR jacket for use in installations requiring cable with a halogen-free rating.

Key applications include:

• 10BASE-T (Ethernet)
• 100BASE-T (Fast Ethernet)
• Industrial Ethernet
• Ethernet/IP
• Downlinks from control panel to the machine area
• Industrial deployments requiring protection against moisture ingress

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**IndustrialNet™ Category 5e SF/UTP Copper Cable**

**Flame retardant, halogen-free 2-pair:** ISFX5502A*-LED

**IndustrialNet™ Category 6/5e RJ45 Field Terminable Plug**

**Field terminable plug:** ISPS688FA

**IndustrialNet™ M12 D-Code Field Terminable Plug**

**Field terminable plug:** ISPS5E44MFA

**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
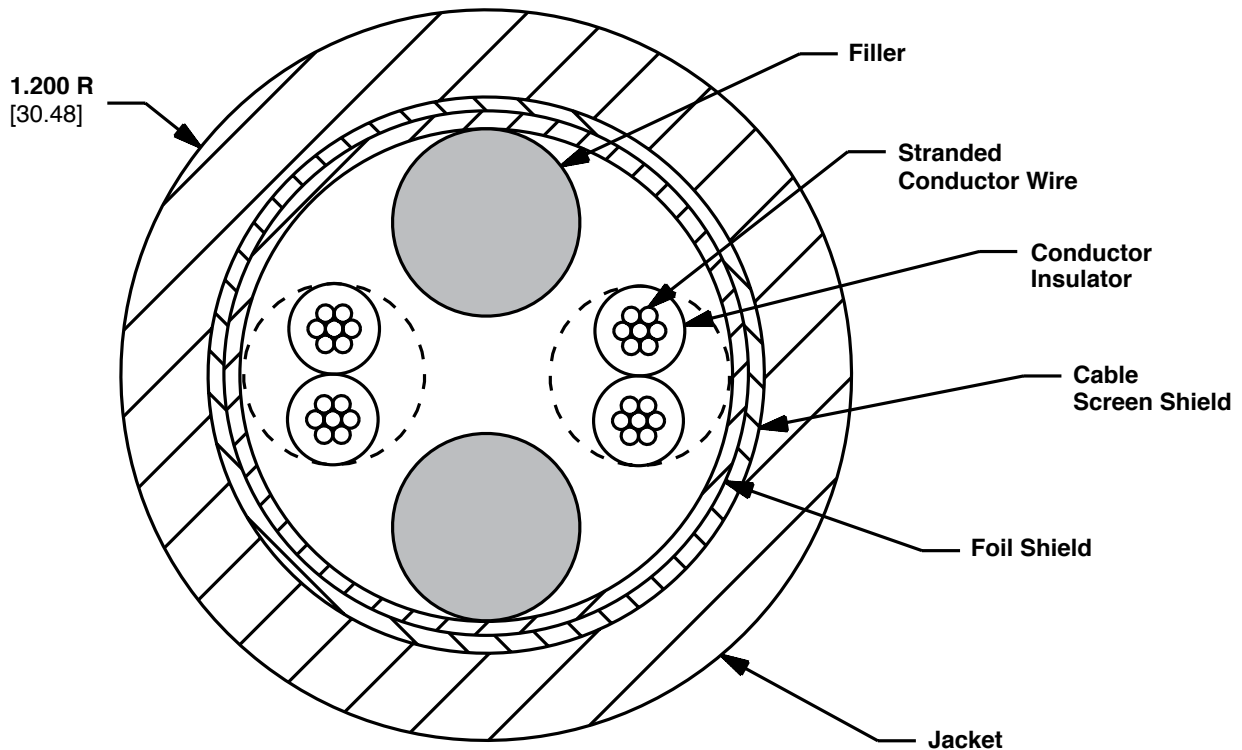
**DIN Rail Adapter**

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

*To designate color, add suffix TL (Teal) or RD (Red).

**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).

# IndustrialNet™ Category 5e SF/UTP Copper Cable

## additional specifications

| Mechanical Test | |
|---|---|
| Ultimate Breaking Strength | >400 N (90 lbf.) |
| Minimum Bend Radius | 8x cable diameter |
| **Electrical Test** | |
| Nominal Velocity of Propagation (NVP) | 72% |
| Operating Voltage, Maximum | 80V |

## cable construction

**1.200 R**
[30.48]

Filler

Stranded
Conductor Wire

Conductor
Insulator

Cable
Screen Shield

Foil Shield

Jacket

Dimensions are in inches. [Dimensions in brackets are metric].

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