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

specifications

Industrial patch cords shall be constructed of Category 5e, industrial grade, 24 AWG stranded, twisted 4-pair shielded SF/UTP cable with a flame retardant (CM) thermoplastic elastomer (TPE) jacket. Patch cord cable shall be offered in multiple colors and lengths for design flexibility. Each patch cord shall be pre-terminated to include Category 5e RJ45 shielded modular plugs on each end, with a black strain relief boot, and wired according to the T568A standard. Each patch cord is designed to support high-flex applications and is rated for 600 V panel or on-machine applications when the space is shared with high voltage power cables.



technical information

Electrical/ mechanical performance:	Exceeds channel and component requirements of ANSI/TIA-568-C.2 Category 5e and ISO 11801 Class D standards at swept frequencies up to 100MHz; meets ODVA Ethernet/IP electrical and mechanical performance requirements
FCC and ANSI compliance:	Meets all applicable ANSI/TIA-968-A requirements; contacts plated with 50 microinches of gold for superior performance
IEC compliance:	Meets IEC 60603-7
UL-rated:	UL 1863 approved
IP compliance:	Rated IP20
RoHS compliancy status:	Compliant
PoE compliance:	Meets IEEE 802.3af and IEEE 802.3at for PoE applications
Other standard compliances:	UL AWM Style 2463 (80°C 600 V) Flex Life Test: 1 million cycles at 10x cable diameter; 10 million cycles at 20x cable diameter Torsion Life Test: 3 million cycles, 360°
Temperature rating:	-20°C to 70°C (-4°F to 158°F) operating -40°C to 70°C (-40°F to 158°F) storage
Wiring scheme:	T568A
Cable jacket diameter:	7.2mm (0.285 in.) nominal
Flame rating:	CM (UL1685)
Packaging:	1 unit per polyethylene bag, 10 units per carton

key features and benefits

Robust 600V-rated construction	Allows for patch runs between automation devices in industrial environments; rated for 600 V panel or on-machine applications when the space is shared with high voltage power cables; plug contact plated with 50 microinches of gold
100% performance tested for wire map, NEXT, and return loss	Confidence that each patch cord delivers specified performance
Centered de-embedded plug	Performs in center of ANSI/TIA-568-C.2 component range, ensuring interoperability and optimum performance
Integral pair manager	Optimizes performance and consistency by reducing untwist at the plug
Flexible stranded cable	24 AWG stranded copper cable with a nominal diameter of 7.2mm (0.285 in.) allows for high density applications and superior panel cable management
Identification provides	Identification of performance level, length, and quality control number for future traceability

applications

IndustrialNet™ Patch Cords provide an ideal solution to support Industrial Ethernet from the Local Area Network (LAN) based support offices to the processing devices on the plant floor. The industrial Ethernet patch cord is a key component to an overall industrial Ethernet application. The patch cord will be the interface that protects the integrity of the Ethernet data transfer from the switch or PLC out to the devices or up to the horizontal plant backbone. The patch cord incorporates a durable oil and UV resistant TPE jacketed cable with modular plugs and is fully shielded for use in high noise (EMI/RFI) environments.

Key applications include:

- 10BASE-T (Ethernet)
- 100BASE-T (Fast Ethernet) 1000BASE-T (Gigabit Ethernet)
- Industrial Ethernet
- Ethernet/IP
- Control Panel deployments featuring power source voltages
- Uplinks featuring gigabit data transmission from the control panel to the consolidation point
- High flex applications Robotic, C-Track



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

CM/CMX: *ISTPHCH1MTL

IndustrialNet™ Category 5e SF/UTP Copper Cable

CM/CMX

ISFCH5C02A**-XG 2-pair: 4-pair: ISFCH5C04A**-XG

IndustrialNet ™ Category 6/5e RJ45 Field Terminable Plug

Field

terminable plug: ISPS688FA

IndustrialNet™ M12 D-Code Field Terminable Plug

Field

terminable plug: ISPS5E44MFA

IndustrialNet™ M12 D-Code to RJ45 Panel Mount Adapter

Panel

mount adapter: ICAM12DRJS

Mini-Com® Modular Patch Panel

8-port: CDPP8RG

DIN Rail Adapter

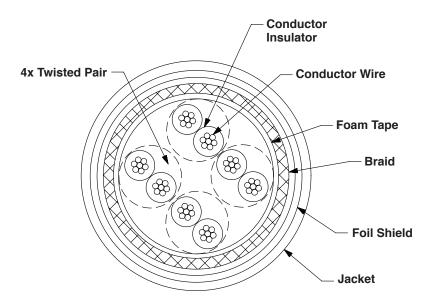
CADIN1IW*** 1-port:

*For other lengths, change the length designation (1M) of the part number to the desired length (0.3M, 0.6M, 1.5M, 2M, 2.5M 3M, 3.5M, 4M, 4.5M, 5M, 10M, 15M, or 20M); to designate color, replace TL (Teal) suffix with BL (Black), RD (Red), BU (Blue), GY (Gray), or YL (Yellow). For example, the part number for a 2-meter teal patch cord is ISTPHCH2MTL.

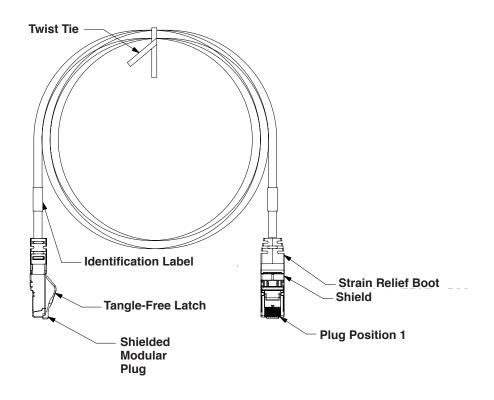
**To designate color, add suffix TL (Teal). BL (Black), RD (Red), BU (Blue), GY (Gray), or YL (Yellow).

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

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



Cross Section View of Cable



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IndustrialNet™ Category 6A 600V Patch Cords

specifications

Industrial patch cords shall be constructed of Category 6A, industrial grade, 26 AWG stranded, twisted 4-pair shielded SF/UTP cable with a flame retardant (CMR) thermoplastic elastomer (TPE) jacket. Patch cord cable shall be offered in teal and black colors and lengths for design flexibility. Each patch cord shall be pre-terminated to include Category 6A RJ45 shielded modular plugs on each end, with a black strain relief boot, and wired according to the T568B standard. Each patch cord is designed to support high-flex applications and is rated for 600V panel or on-machine applications when the space is shared with high voltage power cables.



technical information

Electrical/ mechanical performance:	Exceeds channel and component requirements of ANSI/TIA-568-C.2 Category 6A and ISO 11801 Class Ea standards at swept frequencies up to 500MHz; meets ODVA Ethernet/IP electrical and mechanical performance requirements
FCC and ANSI compliance:	Meets all applicable ANSI/TIA-968-A requirements; contacts plated with 50 micro-inches of gold for superior performance
IEC compliance:	Meets IEC 60603-7 UL-rated: UL 1863 approved
IP compliance:	Rated IP20
RoHS compliancy status:	Compliant
PoE compliance:	Meets IEEE 802.3af and IEEE 802.3at for PoE+ applications
Other standard compliances:	UL AWM Style 2463 (80°C 600V) Flex Life Test: 1 million cycles at 10x cable diameter; 10 million cycles at 20x cable diameter Torsion Life Test: 3 million cycles, 360°
Temperature rating:	-10°C to 60°C (14°F to 140°F) operating; -40°C to 70°C (-40°F to 158°F) storage
Wiring scheme:	T568B
Cable jacket diameter:	7.4 mm (0.29 in.) nominal
Flame rating:	CMR (UL1685)
Packaging:	1 unit per polyethylene bag, 10 units per carton

key features and benefits

Robust 600V-rated construction:	Allows for patch runs between automation devices in industrial environments; rated for 600V panel or on-machine applications when the space is shared with high voltage power cables; plug contact plated with 50 micro-inches of gold
100% performance tested for wire map, NEXT, and return loss:	Factory testing provides confidence that each patch cord delivers specified performance
Centered de-embedded plug:	Performs in center of ANSI/TIA-568-C.2 component range, ensuring interoperability and optimum performance
Integral pair manager:	Optimizes performance and consistency by reducing untwist at the plug
Flexible stranded cable:	26 AWG stranded copper cable with a nominal diameter of 7.4mm (0.29 in.) allows for high density applications and superior panel cable management
Identification provides for future traceability:	Identification of performance level, length, and quality control number is provided on each cord

applications

IndustrialNet™ Patch Cords provide an ideal solution to support Industrial Ethernet from the Local Area Network (LAN) based support offices to the processing devices on the plant floor. The industrial Ethernet patch cord is a key component to an overall industrial Ethernet application. The patch cord will be the interface that protects the integrity of the Ethernet data transfer from the switch or PLC out to the devices or up to the horizontal plant backbone. The patch cord incorporates a durable oil and UV resistant TPE jacketed cable with modular plugs and is fully shielded for use in high noise (EMI/RFI) environments.

Key applications include:

- 10BASE-T (Ethernet)
- 100BASE-T (Fast Ethernet) 100BASE-T (Gigabit Ethernet)
- Industrial Ethernet
- Ethernet/IP
- Control Panel deployments featuring power source voltages
- Uplinks featuring gigabit data transmission from the control panel to the consolidation point · High flex applications - Robotic, C-Track



IndustrialNet ™ Category 6A Shielded 600 V-Rated Patch Cords

^ISTPH6X1M** CM/CMX:

IndustrialNet ™ Category 6A SF/UTP Copper Cable

CMR/CMX 4-pair: ISFCH6X04B**-UG

IndustrialNet ™ Category 6/5e RJ45 Field Terminable Plug

terminable plug: ISPS688MFA

IndustrialNet™ M12 X-Code Field Terminable Plug

Field

terminable Plug: ISPS6A88MFA

IndustrialNet™ M12 X-Code to RJ45 Panel Mount Adapter

Panel

mount adapter: ICAM12DRJS

Mini-Com® Modular Patch Panel

8-port: CDPP8RG

DIN Rail Adapter

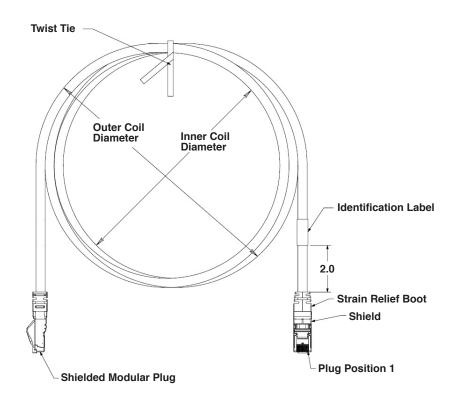
CADIN1IW*** 1-port:

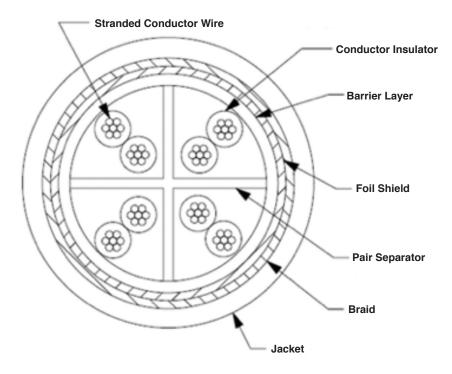
^For other lengths, change the length in the part number, to the desired length (0.3M, 0.6M, 1M, 1.5M, 2M, 2.5M, 3M, 3.5M, 4M, 4.5M, 5M, 7M, 10M, 15M, or 20M)

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

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

IndustrialNet™ Category 6A 600V Patch Cords





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IndustrialNet™ M12 D-Code **Category 5e Overmolded Cordsets**



specifications

Industrial Ethernet cordsets shall be constructed of Category 5e, industrial grade, stranded, twisted pair cable for UTP and STP installations. Each cordset shall be 600V AWM rated for UL508A control cabinets, and on-machine use. The jacket shall be flame retardant (CMX/CM) for industrial Ethernet applications. Each cordset shall be pre-terminated and overmolded to include Category 5e M12 or RJ45 industrial plugs on each end which are wired according to the T568B and IEC 60603-7-41 standards.



technical information

Category 5e/ Class D channel and component performance:	Exceeds channel and component requirements of ANSI/TIA-568.2-D Category 5e and ISO11801 Class D standards at swept frequencies of 1 to 100 MHz
FCC and ANSI compliance:	Meets ANSI/TIA-1096-A; contacts plated with 50 micro-inches of gold for superior performance
IEC compliance:	 ANSI/TIA 568.2-D: Category 5e ISO 11801 Class D standards at swept frequencies up to 100 MHz ANSI/TIA-1005-A: Telecommunications Infrastructure Standard for Industrial Premises IEC 61076-2-101 Connectors for Electronic Equipment: Circular connectors Detail specification for connectors with M 12 x 1 screw-locking, for data transmission frequencies up to 100 MHz
IP compliance:	Rated IP67 for dust protection and temporary liquid immersion. 10 million plus flex cycles
NEMA/UL compliance:	NEMA, 1, 3, 4, 6, 6P and IEC IP67, UL Type 12
PoE compliance:	Meets IEEE 802.3af and IEEE 802.3at for PoE applications
RoHS compliance:	Compliant
Temperature rating:	-40° to +75°C (-40° to +167°F)
Materials:	Constructed of 24 AWG UTP or STP stranded industrial grade TPE cable and IP67 overmolded connectors; Coupling nut: nickel plated over copper-zinc alloy; Contact pins: gold plated over copper-zinc alloy

key features and benefits

IP/NEMA/UL/CE rated	Withstands light wash down and temporary submerged conditions without loss of performance to ensure reliability in harsh factory environments
Robust 600V-rated construction	Allows for patch runs between automation devices in industrial environments; rated for 600 V panel or on-machine applications when the space is shared with high voltage power cables; plug contact plated with 50 micro-inches of gold
Ergonomic design	Offers ease of handling while installing and in close proximity to other connectors
100% Performance tested	Factory testing provides confidence that each patch cord delivers specified performance
TPE jacket	Protects cable against weld splatter, chemicals and abrasions; suitable for high-flex applications for increased reliability
Factory terminated	Helps reduce termination errors in the field; assures reliability and saves time
Extended temperature range	Provides durable connection in extreme conditions to increase system reliability
Robust construction	Rated to 10 million flex cycles, providing durability and reliability
Optional RJ45 connector	Offers industry standard solution familiar to end users to speed deployment

applications

IndustrialNet™ M12 D-Code Category 5e Overmolded Cordsets provide fast, reliable connections from machines and devices to switches and enclosures on the plant floor for Ethernet, PROFINET, Modbus and EtherCAT. The cordsets are rated to IP67, NEMA 1, 3, 4, 6, 6P, UL and M.I.C.E., ensuring high performance

and longevity under harsh environmental conditions. In mated conditions, these cordsets can withstand high temperature and high vibration commonly found in harsh industrial applications such as automotive, food and beverage, oil and gas, transportation and mining.

IndustrialNet™ M12 D-Code Category 5e Overmolded Cordsets

M12 male to male D-Code, straight connector,

*ICD11T2NTL1M UTP, teal:

M12 male to male D-Code, straight connector,

STP, teal: *ICD11T1NTL1M

M12 Male D-Code, straight connector,

angled connector,

STP. teal: *ICD12T1NTL1M

M12 male D-Code, female D-Code, straight connectors,

STP, teal: *ICD13T1NTL1M

M12 male D-Code.

straight connector, RJ45 plug,

STP, teal: *ICD14T1NTL1M

M12 male D-Code, straight connector, STP, teal: *ICD15T1NTL1M

M12 male to male D-Code,

angled connector,

*ICD22T1NTL1M STP, teal:

M12 male D-Code, angled connector, STP, teal: *ICD25T1NTL1M

M12 male D-Code, female D-Code, angled connectors,

STP, teal: *ICD26T1NTL1M

M12 female D-Code. straight connector,

*ICD35T1NTL1M STP, teal:

M12 bulkhead female D-Code,

RJ45 plug,

STP, teal: *ICD44T1NTL1M

M12 bulkhead female D-Code, STP, teal: ICD45T1NTL0.5M

Accessories

IndustrialNet™ M12 D-Code female to RJ45 jack panel mount adapter: **ICAM12DRJS**

IndustrialNet™ Category 5e

M12 D-Code field

terminable plug: ISPS5E44MFA

IndustrialNet™ Category 6A/6/5e shielded RJ45 field

terminable plug: FPS6X88MTG

IndustrialNet™ Copper Cable

Category 5e, SF/UTP, 24/7 AWG stranded,

CM 2-pair: ISFCH5C02A**-XG

IndustrialNet™ 600V Copper Patch Cords

Category 5e, SF/UTP, 600V Patch Cords: ISTPHCH*M**

*For other lengths, change the length designation (1M) of the part number to the desired standard length (.5M, 2M, 3M, 5M, 10M, 15M or 20M)

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

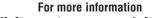
IndustrialNet™ M12 D-Code Category 5e Overmolded Cordsets



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IndustrialNet™ M12 X-Code Category 6A Overmolded Cordsets



specifications

Industrial Ethernet cordsets shall be constructed of Category 6A, industrial grade, stranded, twisted pair cable for UTP and STP installations. Each cordset shall be pre-terminated and overmolded to include Category 6A M12 or RJ45 industrial plugs on each end which are wired according to the T568B and IEC 60603-7-41 standards.



technical information

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Category 6A/ Class E _A channel and component performance:	Exceeds channel and component requirements of ANSI/TIA-556-C.2 Category 6A and ISO11801 Class $\rm E_{\rm A}$ standards at swept frequencies of 1 to 500 MHz
FCC and ANSI compliance:	Meets ANSI/TIA-1096-A; contacts plated with 50 micro-inches of gold for superior performance
IEC compliance:	 Interface conforms to IEC-61076-2-101 ANSI/TIA 568-C.2: Category 6A ISO 11801 Class E_A standards at swept frequencies up to 500 MHz ANSI/TIA-1005-A: Telecommunications Infrastructure Standard for Industrial Premises IEC 61076-2-109 Connectors for Electronic Equipment: Circular connectors – Detail specification for connectors with M 12 x 1 screwlocking, for data transmission frequencies up to 500 MHz
IP compliance:	Rated IP67/68 for dust protection and temporary liquid immersion. 10 million plus flex cycles
NEMA/UL compliance:	NEMA, 1, 3, 4, 6, 6P and IEC IP67/68, UL Type 12
PoE compliance:	Meets IEEE 802.3af and IEEE 802.3at for PoE applications
RoHS compliance:	Compliant
Temperature rating:	-40° to +75°C (32° to +167°F)
Materials:	Constructed of 24 AWG UTP or STP stranded industrial grade and TPU and TPO cable and IP67/68 overmolded connectors; Coupling nut: nickel plated over copper-zinc alloy; Contact pins: gold plated over copper-zinc alloy

key features and benefits

IP/NEMA/UL/CE rated	Withstands light wash down and temporary submerged conditions without loss of performance to ensure reliability in harsh factory environments
TPU and TPO jackets	Protect cable against weld splatter, chemicals and abrasions; suitable for high-flex applications for increased reliability
Factory terminated	Helps reduce termination errors in the field; assures reliability and saves time
Extended temperature range	Provides durable connection in extreme conditions to increase system reliability
Robust construction	Rated to 10 million flex cycles, providing durability and reliability
Optional RJ45 connector	Offers industry standard solution familiar to end users to speed deployment

applications

IndustrialNet™ M12 X-Code Category 6A Overmolded Cordsets provide fast, reliable connections from machines and devices to switches and enclosures on the plant floor for Ethernet, PROFINET, Modbus and EtherCAT. The cordsets are rated to IP67/68, NEMA 1,3,4,6,6P, UL and M.I.C.E., ensuring high

performance and longevity under harsh environmental conditions. In mated conditions, these cordsets can withstand high temperature and high vibration commonly found in harsh industrial applications such as automotive, food and beverage, oil and gas, transportation and mining.

IndustrialNet™ M12 X-Code Category 6A Overmolded Cordsets

M12 bulkhead female X-code, STP. black: ICX45T1NBL0.5M

M12 bulkhead female X-code, RJ45 plug, STP, black: *ICX44T1NBL1M

M12 male X-code, straight connector, STP, teal: *ICX15T1NTL1M

M12 male to male X-Code, straight connector,

STP, teal: *ICX11T1NTL1M

Accessories

IndustrialNet[™] Category 6A M12 X-Code field

terminable plug: ISPS6A88MFA

IndustrialNet[™] M12 X-Code female to 90° RJ45 jack panel mount adapter: ICAM12X90DRJS

IndustrialNet[™] M12 X-Code female to RJ45 jack panel mount adapter: ICAM12XRJS

IndustrialNet™ Copper Cable

Category 6A S/FTP, 24/7 AWG stranded, PUR 4-pair: ISX6X04**-LED

Category 6 S/FTP, 22/1 AWG stranded, LSZH 4-pair: PSM6004**-LED

Category 7 S/FTP, 22/1 AWG stranded, LSZH 4-pair: PSMD7004BL-LED

Category 6A SF/UTP, 24/7 AWG stranded, CM 4-pair: ISFCH6X04A**-UG

Category 6A SF/UTP, 26/7 AWG stranded, CM 4-pair: ISFCH6X04B**-UG

Category 6 U/UTP, 24/7 AWG stranded, CM 4-pair, black: IUC6C04ABL-CEG

Category 6 F/UTP, 26/7 AWG stranded, CM 4-pair. black: IFC6C04BBL-CEG

Category 6 S/FTP, 24/7 AWG stranded, PUR 4-pair: ISX6004A**-LED

Category 6 U/UTP, 23/1 AWG stranded, CMR 4-pair: IURH6004**-UG

CMR 4-pair: IURH6004**-UG
Category 6 F/UTP, 23/1 AWG stranded,

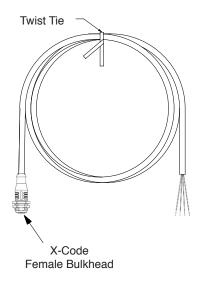
CMR 4-pair: IFRH6C04**-UG

*For other lengths, change the length designation (1M) of the part number to the desired standard length (2M, 3M, 5M, 10M, 15M or 20M).

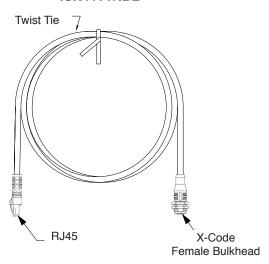
** To designate color, add suffix TL (Teal), BL (Black), RD (Red), BU (Blue), GY (Gray), YL (Yellow), OR (Orange), or IG (International Gray). Contact Customer Service for complete list of colors.

IndustrialNet™ M12 X-Code Category 6A Overmolded Cordsets

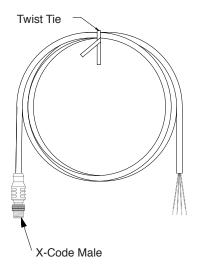
ICX45T1NBL0.5M



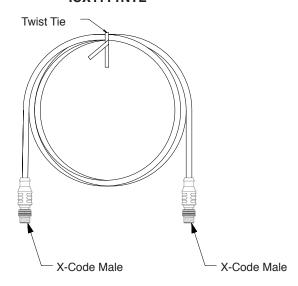
ICX44T1NBL



ICX15T1NTL



ICX11T1NTL



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