

# IndustrialNet™ TX6A™ Connectors

## specifications

8-position, industrial connector shall be applicable for use in manufacturing environments and shall meet/exceed the ANSI/TIA-568-C.2 standard for Category 6A performance requirements. Bulkhead RJ45 jack shall incorporate an IP65/IP67 rated seal and shall be designed to provide protection from dust and temporary immersion in water typically found in harsh industrial environments. Tethered cap shall ensure IP65/IP67 protection of the connector and plug in the unmated condition. Secondary seals on both the connector and plug shall provide an additional environmental barrier. Termination to a 4-pair 24 AWG 100 ohm twisted pair cable shall not require the use of a punchdown tool. An IP65/IP67 rating shall be achieved when mated with an IP65/IP67 and NEMA UL Type 12 industrial grade, bayonet style patch cord.



## technical information

<b>Category 6A/Class E<sub>A</sub> channel and component performance:</b>	Exceeds channel and component requirements of ANSI/TIA-568-C.2 Category 6A and ISO11801 Class E <sub>A</sub> standards at swept frequencies 1 to 500 MHz
<b>IEC compliance:</b>	Plug meets IEC 60603-7 specifications
<b>Environmental protection:</b>	Industrial bulkhead connection protects and seals connections against dust and water immersion to ANSI/IEC 60529-2004; vibration, temperature and chemical resistant; shielded version further enhances electromagnetic performance
<b>FCC and ANSI/TIA compliance:</b>	Meets ANSI/TIA-1096-A; contacts plated with 50 microinches of gold for superior performance
<b>IP compliance:</b>	Bulkhead connection rated IP65/ P67 for dust protection and temporary liquid immersion
<b>NEMA/UL compliance:</b>	Bulkhead connection rated UL Type 12 to provide protection against circulating dust, falling dirt, and dripping noncorrosive liquids
<b>RoHS compliancy status:</b>	Compliant
<b>PoE compliance:</b>	Meets IEEE 802.3af and IEEE 802.3at for PoE applications
<b>Material:</b>	Bulkhead connector is constructed of black PBT plastic
<b>Temperature rating:</b>	-4°F to 158°F (-20°C to 70°C) during operation
<b>Electrical/mechanical performance:</b>	Mechanical interface meets all ODVA Ethernet/IP* mechanical performance requirements
<b>Packaging:</b>	Connector and plug include protective cap
<b>Conductor termination range:</b>	Wire cap compatible with 22 – 26 AWG solid or stranded cable with conductor insulation diameters of 0.060 in. (1.5mm) max. and overall cable O.D. 0.200 in. (5.1mm) to 0.330 in. (8.4mm)

## key features and benefits

<b>IP/NEMA/UL rated connection</b>	Withstands light wash down and temporary submerged conditions in harsh factory environments without loss of performance when mated to IP65/IP67 IndustrialNet™ Patch Cords
<b>Bulkhead anti-rotation washer</b>	Eliminates the potential for module rotation to ensure a secure installation
<b>Connector mounting nut</b>	Holds bulkhead safely and securely from inside of enclosure
<b>Robust construction</b>	Includes plug contact plated with 50 microinches of gold to support reliable, error-free data transmission
<b>Bayonet style interface</b>	Provides quick installation for lowest installed cost
<b>Protective cap</b>	Maintains IP65/IP67 seal during unmated connection
<b>Patented Giga-TX™ Technology</b>	Optimizes performance by reducing conductor untwist to less than 1/8"
<b>Forward motion termination</b>	Speeds installation and places no impact on critical components for maximum reliability
<b>RJ45 interface</b>	Offers industry standard solution familiar to end users which speeds deployment
<b>No punchdown tool required</b>	Terminates with standard adjustable slipjaw pliers or optional termination tool (EGJT); saves money on purchase of new tools
<b>Universal wiring scheme</b>	Provides color coded termination cap for T568A and T568B wiring schemes
<b>Standard mounting</b>	Bulkhead connector fits into optional faceplate as well as standard IEC 1-13/64" (30.5mm) diameter mounting hole

## applications

IndustrialNet™ TX6A™ Connectors 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 even under harsh industrial conditions. Innovative design features provide a secure, reliable connection for superior data transmission in work cells where moisture and dust/particles are encountered, in temperature extremes and in applications with vibration. Industrial bulkhead connection protects and seals

against dust and water immersion common in the food and beverage industry where bacterial contamination is present and light wash down is required. High temperature resilience of up to 85°C storage and 70°C operating offers reliable connection in manufacturing facilities such as metal processing, welding, and chemical batch processing where high temperatures are normal. In automotive panel stamping plants and work cells where vibration is a concern, the IndustrialNet™ TX6A™ Connectors protect the RJ45 mating.

### IndustrialNet™ TX6A™ Connectors

<b>UTP:</b>	IAEBH6X
<b>STP:</b>	IAEBH6XS

### IndustrialNet™ TX6A™ Patch Cords

**UTP with bulkhead connector on both ends:** IUTP6X1MBL\*

**UTP with bulkhead connector on one end:** IUTP6X1MBLR\*

**STP with bulkhead connector on both ends:** ISTEP6X1MBL\*

**STP with bulkhead connector on one end:** ISTEP6X1MBLR\*

### IndustrialNet™ Stainless Steel Faceplates

<b>Single gang:</b>	IAEFP1
<b>Double gang:</b>	IAEFP2-2G

### Tools and Accessories

**Termination:**  
**tool (optional):** EGJT or TGJT

**Wire snipping tool:** CWST

**Wire stripping tool:** CCAST

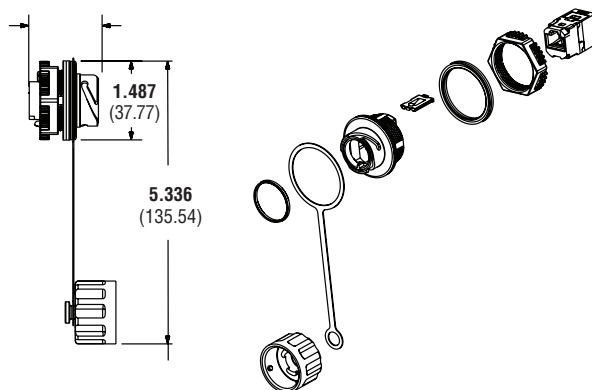
\*For lengths 2, 3, 5, and 10 meters, change the length designation in the part number to the desired length. For example, the part number for an STP patch cord with industrial bulkhead connectors on both ends in 5 meter length is ISTEP6X5MBL.

## Test Results

Mechanical Test	Test Method	Measurement	Required Performance
<b>Normal Force</b>	—	Load (grams)	> 100
<b>Vibration</b>	IEC 512-6d	Circuit Resistance Change (mOhms)	< 40
<b>Shock</b>	IEC 512-6c	Contact Disturbance (microsecond)	< 5
<b>Durability</b>	IEC 512-9a	Circuit Resistance Change (mOhms)	< 40
<b>Mating/Unmating</b>	IEC 512-13b	Mating Force (N)	< 20
		Unmating Force (N)	< 20

Mechanical Test	Test Method	Measurement	Required Performance
<b>Low Level Circuit Resistance</b>	IEC 512-2a	Resistance (mOhms)	< 20
<b>Dielectric Withstand Voltage</b>	IEC 512-4a	1000VAC, 1 minute	Passed
<b>Insulation Resistance</b>	IEC 512-3a	Resistance (MOhms)	> 500

Mechanical Test	Test Method	Measurement	Required Performance
<b>Temperature Life</b>	IEC 512-9b	Circuit Resistance Change (mOhms)	< 40
<b>Humidity</b>	IEC 512-11c	Circuit Resistance Change (mOhms)	< 40
<b>Thermal Shock</b>	IEC 512-11d	Circuit Resistance Change (mOhms)	< 40
<b>Climactic Sequence</b>	IEC 512-11a	Circuit Resistance Change (mOhms)	< 40
<b>Flowing Mixed Gas Corrosion</b>	IEC 512-11g	Circuit Resistance Change (mOhms)	< 40



**IAEBH6X (Unshielded)**

**IAEBH6XS (Shielded)**

Dimensions are in inches (Dimensions in parentheses are metric)

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