

IndustrialNet™ TX6A™ Connectors

PANDUIT®

SPECIFICATION SHEET

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

Category 6A/Class E_A channel and component performance:	Exceeds channel and component requirements of ANSI/TIA-568-C.2 Category 6A and ISO11801 Class E _A standards at swept frequencies 1 to 500 MHz
IEC compliance:	Plug meets IEC 60603-7 specifications
Environmental protection:	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
FCC and ANSI/TIA compliance:	Meets ANSI/TIA-1096-A; contacts plated with 50 microinches of gold for superior performance
IP compliance:	Bulkhead connection rated IP65/ P67 for dust protection and temporary liquid immersion
NEMA/UL compliance:	Bulkhead connection rated UL Type 12 to provide protection against circulating dust, falling dirt, and dripping noncorrosive liquids
RoHS compliancy status:	Compliant
PoE compliance:	Meets IEEE 802.3af and IEEE 802.3at for PoE applications
Material:	Bulkhead connector is constructed of black PBT plastic
Temperature rating:	-4°F to 158°F (-20°C to 70°C) during operation
Electrical/mechanical performance:	Mechanical interface meets all ODVA Ethernet/IP* mechanical performance requirements
Packaging:	Connector and plug include protective cap
Conductor termination range:	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

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

UTP:	IAEBH6X
STP:	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: ISTP6X1MBL*

STP with bulkhead connector on one end: ISTP6X1MBLR*

IndustrialNet™ Stainless Steel Faceplates

Single gang:	IAEFP1
Double gang:	IAEFP2-2G

Tools and Accessories

Termination tool (optional): EGJT or TGJT

Wire snipping tool: CWST

Wire stripping tool: CCAST

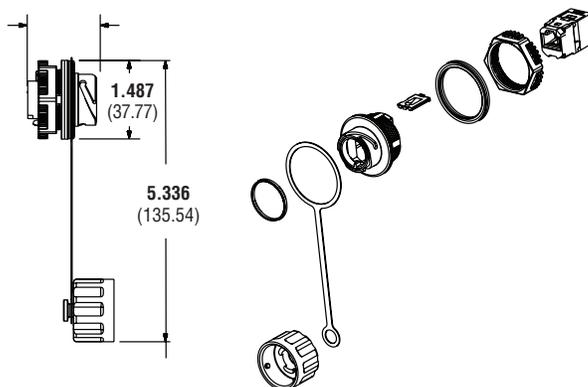
*For lengths 2, 3, 5, and 10 meters, change the length designation in the part number to the desired length. For example, the part number for an STP patch cord with industrial bulkhead connectors on both ends in 5 meter length is ISTP6X5MBL.

Test Results

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

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

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