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IndustrialNet™ TX5e™ Connectors

PANDUIT®
SPECIFICATION SHEET

SPECIFICATIONS

8-position, industrial connectors shall be applicable for use in manufacturing environments and shall meet/exceed the ANSI/TIA-568-C.2 standard for Category 5e performance requirements. Bulkhead RJ45 jack and plug shall incorporate an IP67 rated seal and shall be designed to provide protection from dust and temporary immersion in water typically found in harsh industrial environments. Tethered protective cap shall ensure 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 IP67 rating shall be achieved when mated with an IP67 and NEMA UL Type 12 industrial grade, bayonet style patch cord.



IndustrialNet™ TX5e™ Connectors	
UTP:	IAEBH5E
Shielded:	IAEBH5ES
Coupler module:	IAEBHC5E
IndustrialNet™ TX5e™ Modular Plugs	
UTP:	MPI588T
Shielded:	MPSI588T
IndustrialNet™ TX5e™ Patch Cords	
UTP with caps:	IUTP6X*MBL
IndustrialNet™ Stainless Steel Faceplates	
Single gang:	IAEFP1
Double gang:	IAEFP2-2G
Tools and Accessories	
Empty bulkhead:	IAEBH
Termination tool (optional):	EGJT-1
Wire snipping tool:	CWST
Wire stripping tool:	CJAST

*Meter lengths: 1, 2, 3, 5, or 10 meters

TECHNICAL INFORMATION

Category 5e/Class D channel and component performance:	Exceeds channel and component requirements of ANSI/TIA-568-C.2 Category 5e and ISO11801 Class D standards at swept frequencies 1 to 100 MHz
Electrical/mechanical performance:	Meets all ODVA Ethernet/IP electrical and mechanical performance requirements
Environmental protection:	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
IEC compliance:	Plug meets IEC 60603-7 specifications
IP compliance:	Rated IP67 for dust protection and temporary liquid immersion
NEMA/UL compliance:	Rated UL Type 12 to provide protection against circulating dust, falling dirt, and dripping noncorrosive liquids
Packaging:	Connector and plug include protective cap
RoHS compliancy status:	Compliant
PoE compliance:	Meets IEEE 802.3af and IEEE 802.3at for PoE applications
Conductor termination range:	Wire cap compatible with 24 – 26 AWG solid or stranded cable with conductor insulation diameters of 0.035 in. to 0.040 in. and overall cable O.D. 0.205 in. to 0.250 in.

KEY FEATURES AND BENEFITS

Bayonet style interface:	Provides positive reinforcement during mated condition; rated to 100 mating cycles
Protective cap:	Maintains IP67 seal during unmated connection
Utilizes patented Giga-TX™ Technology:	Optimizes performance by reducing conductor untwist to less than 1/8"
No punchdown tool required:	Can terminate with standard adjustable slipjaw pliers or optional termination tool (EGJT)
Universal wiring scheme:	Termination cap is color coded 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

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APPLICATIONS

IndustrialNet™ TX5e™ 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. The Bulkhead RJ45 Industrial Ethernet Connector is a key component to an overall Industrial Ethernet application. In most designs, the bulkhead connector will be the interface that protects the integrity of the Ethernet data transfer from the switch, and PLC out to the devices or up to the horizontal plant backbone. Typical work cells requiring the IP67 protection, where wash down is needed. This is common in the food and beverage industry where bacterial contamination is present. The bulkhead connector also offers high temperature resilience, namely 85°C storage and 70°C operating. In manufacturing facilities such as metal processing, welding, and chemical batch processing, high temperatures are normal. Vibration is also a concern, as in automotive panel stamping plants and work cells. The IndustrialNet™ TX5e™ Connectors protect the RJ45 mating even in the most severe vibration applications.

TEST RESULTS

Performance Test	Test Method	100 MHz Required Performance (dB)	100 MHz Typical Test Results (dB)
NEXT	Additional Transmission Performance Specifications for 4-pair Ohm Category 5e Cabling, ANSI/TIA-568-C.2	>43	>45
FEXT		>35	>37
Attenuation		<0.40	<0.10
Return Loss		>20	>30

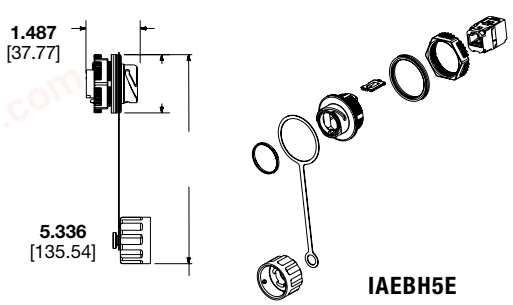
Consult technical support for cable brand specific channel test results.

Mechanical Test	Test Method	Measurement	Required Performance
Normal Force	—	Load (grams)	>150
Vibration	IEC 512-6d	Circuit Resistance Change (mOhms)	<1
Shock	IEC 512-6c	Contact Disturbance (microsecond)	<1
Durability	IEC 512-9a	Circuit Resistance Change (mOhms)	<5
Mating/Unmating	IEC 512-13b	Mating Force (N)	<15
		Unmating Force (N)	

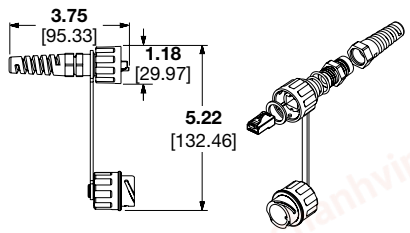
Mechanical Test	Test Method	Measurement	Required Performance
Low Level Circuit Resistance	IEC 512-2a	Resistance (mOhms)	<5
Dielectric withstand Voltage	IEC 512-4a	1000VAC, 1 minute	Passed
Insulation Resistance	IEC 512-3a	Resistance (mOhms)	>1000

Mechanical Test	Test Method	Measurement	Required Performance
Temperature Life	IEC 512-9b	Circuit Resistance Change (mOhms)	<1
Humidity	IEC 512-11c		<2
Thermal Shock	IEC 512-11d		<5
Climactic Sequence	IEC 512-11a		<5
Flowing Mixed Gas Corrosion	IEC 512-11g	Circuit Resistance Change (mOhms)	**<5**

ENGINEERING DRAWINGS



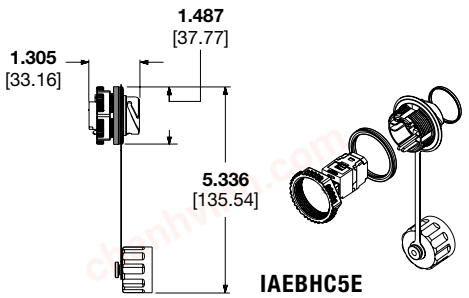
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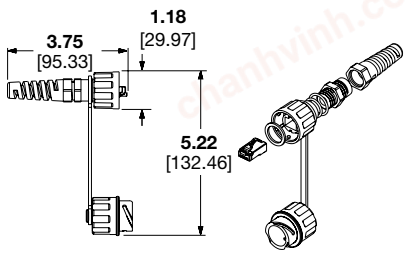
MPI588T

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IAEBHC5E



MPSI588T

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

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7/2024