



ITT

Interconnect Solutions  
Cannon, VEAM, BIW

Industry's first 150°C (302°F), IP69k sealed,  
RoHS compliant Signal Connectors

# Metr1x Series



*Engineered for life*

## Industry's first 150°C (302°F), IP69k sealed, RoHS compliant Signal Connectors

Drawing from a rich portfolio of signal integrity execution, ITT Interconnect Solutions' customers identified the need to drive increased signal functionality in smaller packaging for vehicular applications. Customers requested the capability to ensure signal integrity and vibration resistance using a

quadrax type arrangement, in a robust IP69k sealed package. Meeting this market need, ICS pulled from its rich signal execution history, including the deployment of quadrax {Mil / Aero} and QXM12 {Mass Transit} contacts, to define the exciting new Metr1x product line.



Unibody stainless steel construction ensures robust resistance to engine oil, diesel fuel, cooling liquid, and kerosene.



Multiple receptacle variations including robust stainless steel housings ensure a variety of customer configurations may be realized with the singular Metr1x product line.



Utilization of a crimped housing achieves water ingress protection of at least 2 hours when immersed up to 4 meters while withstanding steam and high-pressure cleaning.

## Metr1x Connectors Fully Dry Fully Functional All the Time

The Metr1x represents an innovative new interconnect addressing the needs of signal and sensor integrity {100V / 4A} in harsh, vehicular, and power generation environments. This new product excels in engine compartments for both heavy diesel and gas applications. The Metr1x's stainless steel design ensures fully dry and functional

operation in challenging environments including engine oils, soot, and aggressive salt spray. The connector provides EMI shielding as well as resistance against vibration up to 20g and shock up to 50g. The product is sealed to IP69k, operates up to 150°C (302°F), conforms to UL94-V0, and is RoHS compliant.

### WHY INNOVATIVE CUSTOMERS CHOOSE ITT?

- **Incorporation of industry proven CGK contacts and concomitant shielding** *avoiding down time associated with superfluous troubleshooting and maintenance.*
- **Strategically deployed crimped housing** *eliminating cable overstressing and providing sealing up to IP69k.*
- **Multiple interconnect configurations and housings available for specific customer applications** *ensuring customer flexibility in replacing traditional cable gland usage.*
- **Unique industry combination of high vibration resistance, high operating temperature, and IP69k sealing** *providing the industry's leading combination of harsh environment capability in the industrial M12 standard.*



The Metr1x features our CGK size 20 contacts, approved to German Defense VG Specifications and capable of withstanding up to 20g's.



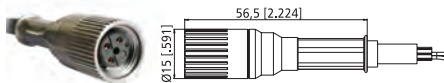
The mating face addresses adherence to stringent M12 industry standards while allowing 2, 3, or 4 way versions and accommodating standard cable configurations.

## Optimal Mix of Sealing, Vibration Resiliency & Temperature Resistance

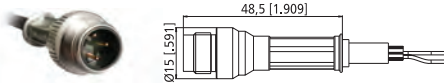
Providing an assortment of housing variations, the Metr1x excels in harsh environments. Special screw in variants allow for the direct replacement of cable gland configurations. Further, the Metr1x series benefits from a unique and robust crimped housing design providing the capability for optional end bells.

The series operates at 100 V DC with a current rating of 4A and provides the unique capability of both IP68 (4 meters/2 hours) and IP69k in high temperature environments up to 150°C / 302°F. Additionally, the ICS coupling nut design allows for 100% reliable signal integrity up to 20 g's. The unparalleled mix of sealing, vibration, and temperature performance identifies the Metr1x series as the premier solution for all shielded signal applications.

2-, 3-, 4-way Socket / Plug



2-, 3-, 4-way Pin / Inline Receptacle



All measurements are in mm [inch]

## Controlling Efficient Power Utilization Begins with Metr1x

Noting the customer articulated need to ensure signal integrity in engine compartment conditions, ITT ICS introduced the industry leading Metr1x connector offering. Recognizing the need for 100% reliability in complex thermodynamic systems such as heavy diesel engines, the Metr1x excels by ensuring the integrity of signal processing during critical combustion control and regulation functions, conditions typically associated with high temperature, high vibration, and the presence of noxious fluids. Noting this

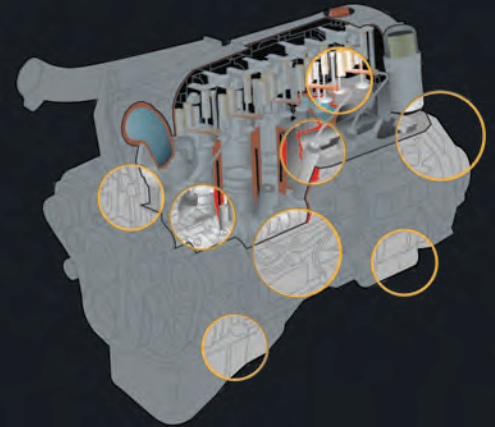
correlation to control and operational efficiency, the Metr1x represents the preeminent solution for ensuring uninterrupted signal transmission in the harshest environments. Partnered with ITT ICS's pioneering engineering capability and globally deployed manufacturing excellence, we welcome the opportunity to support you in realizing innovative and differentiated products.



► For more specifications please see [www.ittcannon.com](http://www.ittcannon.com)

## APPLICATIONS

- Heavy Diesel Engines
- Heavy Gas Engines
- Diesel Injection Systems
- Defence Systems
- Agricultural Machinery
- Agricultural Equipment
- Construction Machinery
- Power Generating Units
- Industrial Automation
- Robotics



## ENGINE SENSORS MEASURING

- Engine, oil, coolant and manifold temperature
- Oil, coolant and manifold pressure



## THINK ABOUT ITT

Reliability, Innovation, and Engineered Solutions, these terms collectively describe ITT Interconnect Solutions and define a legacy of Interconnect Science spanning nearly a century, reflecting billions of quality products sold, and incorporating the three industry leading brands of Cannon,

VEAM, and BIW. Our Innovation Timeline uniquely defines a historical compendium of interconnect leadership spanning over 90 years and including many industry firsts; Audio Connectors, Aviation Circulars, D-Sub's, Micro's, fiber optic assemblies, Zero Insertion Force Technologies, and other advanced applications of Interconnect Science. When collaborating with a technology leader, choose a participant with documented trust, established through

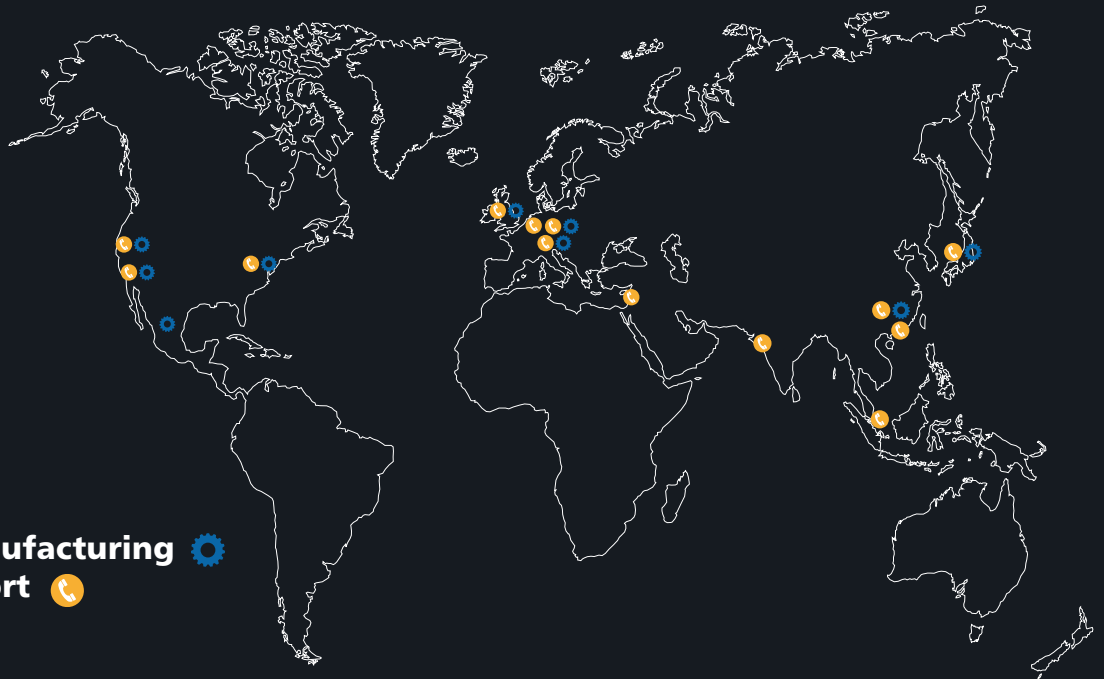
multi-industry achievements as substantiated through the participation on every free world space mission, the creation of the first Mil / Spec interconnects, participation on the first talking movie, 100% reliability for over 45 years in Rail applications, and numerous additional achievements in major Military, Aerospace, Industrial, Medical, and Power markets. At ITT ICS, we truly are "Engineered for Life™."

Think about ITT.





# ITT



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