



Miniature high-speed data connectivity: Fischer MiniMax™ Series now available with AWG24 Ethernet and IP68 sealing down to 20m/24h

Saint-Prex, 10 April 2018 – Fischer Connectors, the global connectivity solution provider of high-performance circular connector and cable assemblies, continues to push the boundaries of technological innovation in **rugged miniaturization, high-speed data transmission, and sealing**.

Several new extensions to the ultra-dense Fischer MiniMax™ Series, increasing its usability in many applications, are available as of April 2018:

- High-speed AWG24 Ethernet data transfer
- Enhanced IP68 sealing down to 20m/24h
- Hexagonal body style
- Anthracite coating with <math><5\text{m}\Omega</math> panel grounding

The result of these innovations is exceptional performance in a very small connector, addressing the growing need for higher data transmission in such markets as **medical, unmanned vehicles, industrial, instrumentation, and defense** – to name only a few.

Providing rugged full-speed AWG24 Ethernet

Building on the success of the USB 3.0 contact block introduced last year, Fischer Connectors has released another data-speed focused extension to the company's high-density miniature Fischer MiniMax™ Series. The new MiniMax connector in 08 size now gives design engineers the option of integrating rugged connectivity solutions with full-speed Ethernet into their latest creations. This new contact block configuration of eight AWG24 pins in a receptacle of only 12 mm diameter enables fast Ethernet data transmission over longer distances. The new configuration can help move Ethernet connectivity into more rugged environments, protected from the elements with enhanced IP68 ratings.

Taking devices deeper

Advances in design and production processes have also enabled Fischer Connectors to increase the depth that all Fischer MiniMax™ Series connectors can safely achieve, providing enhanced reliability for extreme environments. The more stringent IP68 sealing level ensures all MiniMax connectors and cable assembly solutions now go even deeper than ever before – achieving a new standard of 20 meters for 24 hours. This is an exceptional IP rating test for such a small connector, opening new opportunities for the miniaturization of underwater devices.

Fischer MiniMax™ Series – key features

High-density miniaturization

- 4 to 24 signal & power contacts
- Size 06 in 10 mm diameter, size 08 in 12 mm
- Up to 45% smaller and 75% lighter
- Can replace multiple large connectors



High-speed data transfer

- Tested for high-speed protocols USB 3.0, HDMI – **new Ethernet with 8 AWG24 contacts**
- Data transfer of up to 10 GB/s



Reliability

- IP68 sealing – **new standard down to 20m/24h**
- 5,000 mating cycles
- 1,000 hours salt mist spray



Choice of **three locking systems**: push-pull, quick-release and screw.

New shape of body style: **hexagonal**
New standard color: **anthracite**

Available as a pre-cabled solution.



Additional body style and color options

The Fischer MiniMax™ Series receptacles now also come in a hexagonal body style, making integration into small housings easier and more robust. As customers do not need to rely on the flat of the panel cut, they can instead include a hexagonal recess on the backside of the panel in which the receptacle will fit.

As for coating, the new standard for the Fischer MiniMax™ Series now includes an anthracite surface treatment. This coating is similar to the one used on the Fischer UltiMate™ Series, reaching <math><5\text{ m}\Omega</math> panel grounding as required in MIL standards while still being non-reflective and stealthy.

Focus on size, weight, and functionality

Wim Vanheertum, Director of Product Management at Fischer Connectors, explains: *“The MiniMax connector aims to increase the performance of miniature rugged devices, handling more mixed signal and power connections in a unique combination. Our highly-engineered miniature signal & power connectivity solution is ideally suited for applications where **Space, Weight and Power (SWaP)** is critical, increasing portability and resisting water, corrosion, vibration, shock and extreme temperatures – for device manufacturers looking for ruggedized, sealed and shielded connectors, with reduced weight and size combined with optimal usability and performance. MiniMax is also a solution to wearable (handheld, body-worn) and mobile equipment challenges, and it provides more functionality in smaller devices, lowering the total cost of ownership.”*

Enhanced storage and transportation of data

The popular Fischer Rugged Flash Drive – an extremely tough memory stick specially designed for storage and transportation of sensitive data in harsh environments – also offers improved performance with the new MiniMax USB 3.0 connector interface as standard. With nine contacts in optimized positions, it delivers high-speed data transmission and better mobile data storage in a virtually indestructible housing.



The Fischer Rugged Flash Drive has been adapted to the MiniMax USB 3.0 connector (size 08 – left on the photo) with nine poles.

More photos, more information:



3D cross-sectional view of the MiniMax Ethernet 8-pin connector.



The standard IP68 sealing level of the Fischer MiniMax™ Series is -20 meters for 24 hours.

• White papers:

- *High-Speed Communication Protocols for Ethernet, USB & HDMI:*
www.fischerconnectors.com/global/en/white-paper-high-speed-communication-protocols-ethernet-usb-hdmi
- *The Increasing Impact of Data Speed and Miniaturization on Rugged Connector Selection:*
www.fischerconnectors.com/global/en/white-paper-increasing-impact-data-speed-and-miniaturization-rugged-connector-selection
- **Fischer MiniMax™ Series – NEW** rugged Ethernet & IP68 sealing level:
<https://www.fischerconnectors.com/global/en/high-speed-data-power-high-density-miniature-connector>
- **Fischer MiniMax™ Series** – product page: www.fischerconnectors.com/global/en/fischer-minimaxtm-series
- **Fischer Rugged Flash Drive** – product page: www.fischerconnectors.com/global/en/products/rugged-flash-drive-0
- **Applications:** www.fischerconnectors.com/global/en/applications
- Fischer Connectors' website: www.fischerconnectors.com
- How to contact us: www.fischerconnectors.com/global/en/contact-us

Fischer Connectors' **press release with HD pictures and related documents** can be found [here](#) (dropbox).

About Fischer Connectors:

Fischer Connectors has been designing, manufacturing and distributing high performance connectors and cable assembly solutions for more than 60 years. **Recognized for their reliability, quality and resistance to extreme environments,** Fischer Connectors' solutions are used in fields requiring faultless quality, such as medical, industrial, instrumentation, audiovisual, transportation, energy and defense & security.

The Fischer Connectors Group's head office is in Saint-Prex, Switzerland (Canton of Vaud), where the Research & Development Center and its manufacturing facilities are located. The Group has an international presence with its subsidiaries and a wide network of distributors and agents, as well as its cable assembly sites in Europe, the United States and Asia.



www.fischerconnectors.com