PRESS RELEASE

Rosenberger Hochfrequenztechnik presents new Expanded Beam Multifiber (EBM®) connectors for harsh environments

Future-proof connections for demanding applications

Fridolfing, 7. Mai 2025 - Rosenberger Hochfrequenztechnik, one of the world's leading manufacturers of connectivity solutions in high-frequency, fiber optic and high-voltage technology, presents its new Expanded Beam Multifiber (EBM®) connectors. These cutting-edge connectors set new industry standards for reliability, durability and ease of use - meeting the ever-growing demand for high-speed, low-maintenance data transmission in harsh environments.

High fiber density in the smallest space: 2 to 12 fibers per ferrule

EBM® connectors are equipped with a ferrule that can accommodate up to 12 singlemode or multimode fibers. This allows space-saving and weight-optimised multi-fiber connections to be implemented - ideal for modern applications with high bandwidth requirements and limited installation space.

Robust, low-maintenance and designed for extreme conditions

The EBM® connectors were engineered to withstand extreme temperatures, vibrations, contamination and repeated mating cycles - offering a robust solution for industries where high-speed, high-reliability communication is mission-critical. Unlike conventional fiber optic connectors, EBM® technology uses a collimation light beam to ensure a permanently reliable connection with minimal maintenance. Contactless transmission protects the sensitive fiber end faces from damage and significantly reduces the risk of signal loss due to contamination.

"In harsh environments, a reliable connection is not just important - it's essential," says Marc Käumle, Executive Vice President at Rosenberger. "Our EBM® connectors were specifically designed for such conditions. With minimal maintenance and stable, high-performance connections, we help customers in industries such as defence, energy, transportation and industrial automation to keep their operations running."

The most important advantages at a glance

- **Stable connection:** reliable, low-loss connectivity
- **Plug-and-play:** quick, intuitive installation with no training required
- **Low maintenance:** simple cleaning, no special tools required
- **Lightweight and compact:** space-saving high-density design
- Rugged durability: Withstands harsh conditions and 5,000+ mating cycles

Innovative technology for the toughest challenges

EBM® technology is based on advanced optics that avoid physical contact between the fiber ends, minimising wear and the risk of contamination. A collimation lens expands and focuses the light beam to ensure high signal integrity for single-mode and multimode applications - ideal for applications in harsh environments.

EBM® product portfolio at a glance:

S-RMC Connector

- Integrated Expanded Beam technology into industrial connectors

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- Based on the proven Rosenberger RMC housing screw mechanism for harsh environments
- Protection class at least IP68
- 5,000 mating cycles
- Vibration, shock and corrosion resistance in accordance with IEC 61300
- Temperature proof: -40 °C to +85 °C

MIL 13 Connector

- Integration Expanded Beam technology into 38999 size #13 housing
- Standard screw mechanism for harsh environments
- Protection class at least IP68
- 5,000 mating cycles
- Vibration, shock and corrosion resistance in accordance with IEC 61300
- Temperature proof: -40 °C to +85 °C

Future-proof high-speed connections

With the ongoing transition from copper to fiber optic solutions, the need for robust high-speed connections is increasing. Rosenberger's EBM® connectors provide future-proof connectivity for secure, high-performance networks - for example in radar systems, offshore energy systems, defence communications, industrial automation and transportation.

"As the industry is increasingly moving towards fully connected, data-driven operating processes, the need for robust fiber optic solutions is also increasing," adds Marc Käumle. "With our EBM® connectors, we are providing a long-term connectivity solution that ensures reliability in the world´s toughest environments."

Further information:
https://www.rosenberger.com/ebm/

About Rosenberger
Rosenberger, a world-renowned manufacturer of electronic components and systems, stands for cutting-edge technologies, development expertise and uncompromising quality. Headquartered in Germany, the Rosenberger Group is represented worldwide with sales and production sites and offers a wide range of standardised and customised connection solutions in high-frequency, high-voltage and fiber optic technologies.

Rosenberger guarantees the reliable transmission of signals, data and energy in the most demanding fields of application. Leading high-tech companies in the fields of mobile communications and telecommunications, industrial measurement technology, automotive electronics, medical and industrial electronics, data centres and aerospace rely on Rosenberger's products, which are characterised by precision and maximum reliability. The CNC machining division manufactures precision parts for various industries, including the automotive and commercial vehicle industry, shipbuilding and traditional mechanical and plant engineering.

Rosenberger has been family-owned since the company was founded in 1958 and employs around 15,000 people (m/f/d) worldwide who stand for commitment, innovative strength and quality awareness in the tradition of a family-owned company.

Further information can be found at www.rosenberger.com

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