



D Series

Compact and miniature connector for extreme conditions

- IP68 (20m/2h) unmated
- Robust 5-way keying
- Easy integration push-pull & break-away
- Tested according to MIL-STD-810H

OPTIMA D Series has been designed to meet the demands of **modern miniature systems** operating in harsh environments where **failure is not an option**. Engineered with a new patented latching ring, this push-pull connector is optimised for high vibration resistance and **unparalleled reliability**.

Its lightweight, low-profile structure is combined with a **stealth, non-reflective, conductive surface treatment**, making it ideal for military and aerospace applications. Built to withstand most demanding requirements, OPTIMA's D Series has been tested according to military standard such as **MIL-STD-810H**.

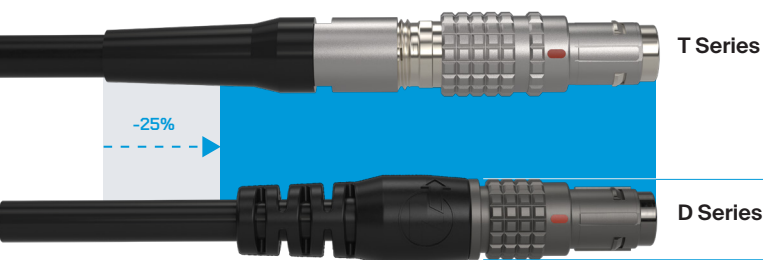
Thanks to LEMO's **modular connector design**, the OPTIMA D Series integrates configurations from other series, offering a variety of multipole combinations, **high-speed data transfer** options via USB and Ethernet protocols, and **high-frequency coaxial solutions**.

Rugged push-pull connectors

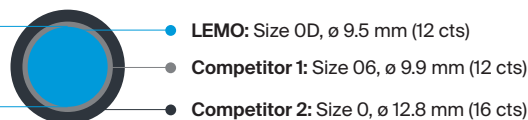
The OPTIMA D Series combines modular versatility with a lightweight, low-profile design, supporting multipole, high-speed USB/Ethernet, and high-frequency coaxial configurations. Rugged and easy to integrate, it's built for demanding military and aerospace environments. LEMO also offers pre-assembled connectors compatible with NATO STANAG 4695 and 4851, ensuring fast deployment and seamless interoperability.



Compact design for miniature systems



The D series is 25% shorter than the LEMO's ORIGINAL Series. It offers a high contact density up to 32 contacts and a very small plug diameter for space saving application.



Modular design

Five sizes with various configuration

Size DD

- Up to 6 contacts

Size OD

- Coax 50 Ω up to 15 GHz
- 10G Base T1 SPE
- 7 contacts (USB 2.0 + power)
- Up to 12 contacts

Size 1D

- 4 contacts (USB 2.0)
- 1000 base T1 2x SPE
- 1000 base T4 (1 Gb/s)
- 7 contacts (2x SPE + power)
- 10 contacts USB 3.2 (10 Gb/s)
- Up to 16 contacts

Size 2D

- 10G Base T4 (10 Gb/s)
- Coax 50 Ohm & 75 Ohm + 10 contacts
- Up to 32 contacts

Size 3D

- 3x coax 50 Ω
- 2x coax 50 Ω + 10 contacts
- Up to 32 contacts

Panel cut-out \varnothing

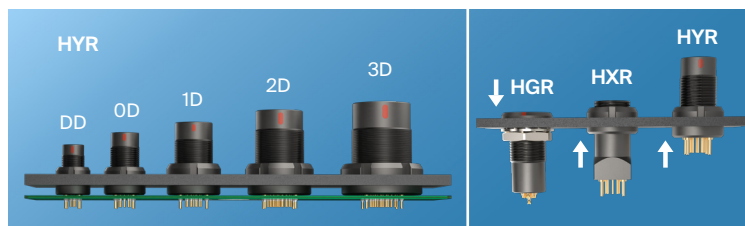


Robust and quick mating-unmating



- 5-way keying for robust blind mating
- Break-away option for emergency disconnection

Easy integration



- HYR socket model enables different sizes to be mounted on the same pcb
- Other front and back mounting sockets available to optimise integration and miniaturisation

Key features

- Compact size and miniature design
- Rugged design withstanding harsh conditions
- High pin density with a broad variety of combination
- Sealing performance ensuring reliability in wet, dusty or submersible environments
- Dark and non reflecting surface treatment with high corrosion resistance
- Secure locking mechanism even in high vibration environment
- Compliant with MIL-STD-810H, ensuring performance in the toughest military applications

Technical characteristics

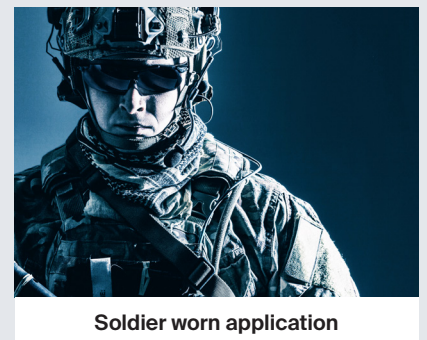
Endurance	> 5000 matings
Ingress Protection Index (mated & unmated)	IP68 (20m/2h)
Housing material	Nickel plated brass
Min. & Max. operating temperature	-55°C/+150°C (socket) -40°C/+90°C (plug & free socket)
Salt fog	1000 hours
Vibration	37.8g max, 8 hours
Shielding effectiveness	> 75 dB up to 10 MHz > 40 dB up to 1 GHz

User's benefits



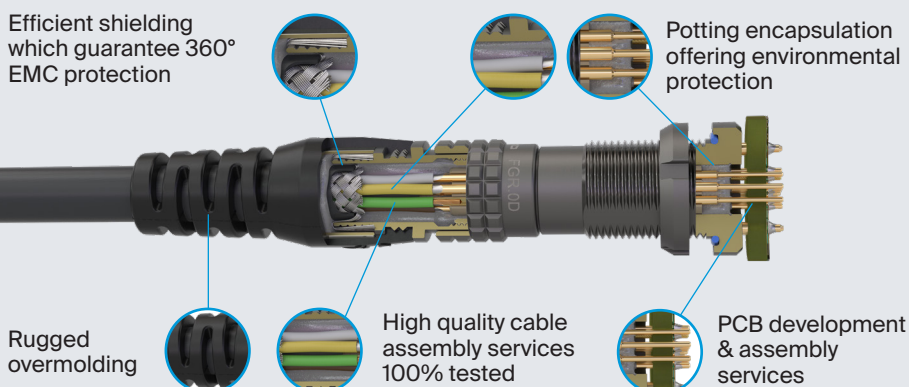
Main applications

The D Series offers the optimal miniature connectivity solution for soldier worn application like radios, headsets, cameras and visual enhancement devices. Engineered with exceptional vibration resistance, it's also the perfect choice for UAV or aerospace applications.



Cable assembly services

LEMO offers complete solutions including cable selection, meticulous cable assembly, and proficient overmolding services.



- **Custom Solutions:** Expert in complex cable harnesses and assemblies overmolding.
- **Private Labeling:** Tailored branding for sensitive projects.
- **Certifications:** IPC-620, ISO 9001, AS9100, MIL-STD-810, and more.
- **End-to-End Support:** From design to delivery, with timely and reliable service.

Empowering connectivity

About LEMO

With a strong legacy of excellence and innovation, the LEMO Group is a global leader in providing high performance custom interconnect solutions. From the depth of the oceans to the far reaches of outer space, no matter how harsh the environment may be, our connectors and cable solutions are chosen, wherever connections are too critical, precious, or vital to fail. Offering over 90,000 product combinations that continue to grow through custom specific designs, our

subsidiaries and 20 distributors have built a global network of strong, dedicated local resources with unmatched technical expertise and understanding of customer requirements. Thanks to our global network, we serve more than 150,000 customers in over 80 countries worldwide. All our staff of 2,000 people are united to accomplish the same mission: to guarantee to our customers interconnect solutions that exceed their current requirements and anticipate their future expectations.

Years of experience	+75
Employees	+2000
Custom solutions	+90000
Subsidiaries	20
Distributors	+20
Customers worldwide	+150000
Countries	+80

LEMO, your ideal partner

One-on-One local engineering expertise and technical support for system integration

Strong supply chain and global distribution network

Custom interconnect solutions for specific project requirements including rapid prototyping

Certified interconnect solutions in compliance with industry standards

Vertical integration ensuring reliable, high-quality interconnect solutions and sustained availability



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