

Ruggedness Redefined:

Precision Put to the Test

Improved LMR48 product family—double vibration protection for extreme conditions.

When it comes to precise position determination under the most demanding conditions, the structurally improved LMR48 product family from TR Electronic sets new standards. The non-contact and completely wear-free measurement method guarantees maximum reliability and a long service life, even in highly dynamic machine environments and challenging assembly situations. Thanks to its flexible design in a robust tubular housing, the system is ideally suited for both direct cylinder mounting and machine mounting.

Compact, precise, and with extensive interface options

Despite its tremendous durability, the system makes no compromises in performance: With a resolution of up to 0.1 mm, the linear encoder delivers precise measurements for demanding motion sequences. To ensure seamless integration into existing control architectures, the LMR48 offers analog transmission as well as the digital standards SSI and CANopen.

For machines that withstand extreme loads

Hydraulic cylinders in stationary and mobile applications, in particular, are subjected to extreme, demanding conditions on a daily basis. Whether it's vibrations in heavy-duty applications or fast cycles in industrial settings—the LMR48 demonstrates its strengths wherever mechanical stresses push conventional sensors to their limits. It is the reliable partner for harsh environmental conditions.

Technological Advancement Through Optimized Design

The developers achieved a decisive breakthrough through continuous improvement of the internal design, based on many years of experience and the specific requirements of real-world customer applications. As a result, the permissible vibration levels for the entire, fully installed system were doubled from 10 g to an impressive 20 g (according to DIN EN 6068-2-6 for sinusoidal vibrations from 50 to 2000 Hz).

This increased resilience is not merely a theoretical value: The measurement system underwent extensive, rigorous vibration testing in the group's own environmental laboratory and has already proven itself successfully in practice with selected pilot customers.

In summary:

- Non-contact system for absolutely wear-free continuous operation.
- Interface options include analog, SSI, or CANopen.
- Precise performance with 0.1 mm resolution for reliable processes.
- Vibration-resistant up to 20 g (according to DIN EN 6068-2-6 at sinusoidal frequencies of 50–2000 Hz)

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Robust LMR48 Linear Absolute Position Sensor from TR Electronic

LMR48 Series Products on the TR Website:
<https://www.tr-electronic.com/s/S027128>