

Emerson - PR6424**PR6424-010-140**

16 mm Armored Eddy Current Sensor

Verified model data

Manufacturer	Emerson
Part number	PR6424-010-140
Official designation	PR6424/010-140
Product family	PR6424
Product type	16 mm armored eddy current sensor
Case thread	M18×1.5
Cable armor	Yes
Sleeve length	40 mm
Total sensor length	52.5 mm
Adapter plug	Not included; continuous lead
Total cable length	10 m

Selection summary

Emerson PR6424-010-140 is a 16 mm armored eddy current sensor for larger non-contact shaft displacement and vibration measurements.

The official PR6424/010-140 code specifies M18×1.5 mounting, a 40 mm sleeve, 52.5 mm total sensor length, no intermediate adapter, a continuous 10 m lead and LEMO end.

Before installation or replacement, verify shaft diameter, target alloy and surface, probe reach and angle, working gap, 10 m cable route, converter pairing and monitor range.

APTER POWER

Emerson - PR6424**PR6424-010-140****Additional verified data**

Cable end	LEMO
Linear measuring range	4 mm
Initial air gap	Approximately 2.7 mm at the center position
Sensitivity	4 V/mm
Reference target	42CrMo4 / AISI 4140 steel
Minimum shaft diameter	80 mm
Operating temperature	-35 to +150°C in the exact-family specifications sheet
Protection class	IP66
Armored cable bend radius	35 mm

Range Selection

- Choose PR6424 when the required movement exceeds the practical PR6423 range
- Confirm the target remains inside the linear region over all machine states
- Reserve gap margin for thermal growth and axial movement

Mechanical Fit

- Use the M18×1.5 thread and documented 40 mm sleeve reach
- Keep the probe square to the target and the holder rigid
- Verify shaft diameter, target surface and surrounding metal clearance

Cable Integrity

- Treat the 10 m lead as a continuous calibrated part of the sensor
- Observe the 35 mm bend radius and provide strain relief
- Keep the LEMO connector dry, clean and fully latched

Application checkpoints

- Large-shaft radial vibration monitoring
- Axial position or differential movement measurement within the verified range
- Eccentricity and shaft-position monitoring on turbines, compressors, pumps and fans

Evidence boundary: The official sheet publishes approximately 200 g for a sensor with 1 m unarmored cable, not the complete 10 m armored PR6424/010-140. Exact product weight therefore remains blank; only the official sensor drawing dimensions are listed.

Source basis: Emerson PR6424 16 mm Sensor Specifications, December 2024, and exact PR6424/010-140 ordering matrix.