

Emerson - PR6422**PR6422-013-041**

5 mm Armored Eddy Current Sensor

Verified model data

Manufacturer	Emerson
Part number	PR6422-013-041
Official designation	PR6422/013-041
Product family	PR6422
Product type	5 mm armored eddy current sensor
Case thread	M6×0.5
Cable armor	Yes
Sleeve length	50 mm
Total sensor length	55.3 mm
Adapter plug	Included
Total cable length	10 m

Selection summary

Emerson PR6422-013-041 is a compact 5 mm eddy current probe for non-contact shaft displacement, position and vibration measurement.

The official PR6422/013-041 order code defines M6×0.5 mounting, cable armor, a 50 mm sleeve, adapter plug, 10 m total cable and an open cable end.

Before installation or replacement, verify the matching converter and serial-number pairing, target material, shaft diameter, initial gap, cable armor route, bend radius, terminal wiring and hazardous-area documentation.

APTER POWER

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Additional verified data

Cable end	Open
Nominal static range	±0.5 mm
Recommended dynamic range	25 to 250 µm
Sensitivity	16 V/mm
Nominal center gap	Approximately 0.8 mm
Reference target	42CrMo4 / SAE 4140 steel
Minimum shaft diameter	At least 20 mm
Operating temperature	-35 to +180°C; up to +200°C short-term
Protection class	IP66
Cable minimum bend radius	35 mm with metal protection

Mechanical Fit

- Use the M6×0.5 mounting thread and documented 50 mm sleeve reach
- Provide a stiff holder and keep the probe axis within the published angular tolerance
- Confirm shaft diameter and free metal clearance around the 5 mm head

Measuring Chain

- Match the sensor type and serial number to the selected converter
- Use the documented target material or a verified material-specific calibration
- Keep the measurement inside the selected static or dynamic range

Cable Practice

- Respect the 35 mm minimum bend radius for the armored lead
- Protect the adapter plug and open cable end from moisture and tensile load
- Route the signal cable away from switching conductors and bond the shield as documented

Application checkpoints

- Radial shaft vibration measurement on compact turbomachinery locations
- Axial displacement, position or eccentricity monitoring with the matched converter
- Speed or key-related measurement where the verified target and electronics support the application

Evidence boundary: The official documents publish sensor-family weight for a 1 m unarmored lead, not the complete 10 m armored PR6422/013-041 assembly. Exact product net weight and complete L×W×H therefore remain blank.

Source basis: Emerson PR6422 5 mm Sensor Specifications, December 2023, and exact PR6422/013-041 ordering matrix.