

PR6423-002-030

PR6423 8 mm eddy-current displacement sensor

Non-contact eddy-current displacement measurement of a conductive shaft or target

PRODUCT SNAPSHOT

BRAND

Emerson

FAMILY

Emerson PR6423 8 mm eddy-current measureme

PART

PR6423-002-030

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PRODUCT OVERVIEW

Non-contact eddy-current displacement measurement of a conductive shaft or target

1

Uses an M10 x 1 metric sleeve

2

Provides an eight-metre unarmored lead

3

Measures over a two-millimetre nominal static span

4

Terminates in the documented LEMO connection

SYSTEM COMPONENTS

CON021 or CON041 signal converter

Conductive steel target

Probe mounting bracket

Compatible machinery-monitoring input

TECHNICAL NOTE

Confirm the M10 x 1 mounting, 45 mm probe length, eight-metre loop and paired converter calibration; set gap only after the bracket is mechanically secure.

TECHNICAL DATA

PARAMETER	VALUE
Sensor family	PR6423
Sleeve thread	M10 x 1
Armor	No
Probe length Cx	45 mm
Overall sensor length C	54 mm
Adapter plug	Included
Total cable length	8 m
Cable end	LEMO

PARAMETER	VALUE
Static nominal range	+/-1.0 mm
Recommended dynamic range	50 to 500 um p-p
Sensitivity	8 V/mm
Nominal distance center	Approximately 1.5 mm
Basic air gap	0.4 to 0.7 mm
Operating temperature	-35 to +180 degC; +200 degC short term
Pressure at sensor head	10,000 hPa
Vibration endurance	5 g at 60 Hz

RELATED PRODUCTS ON APTER POWER

MODEL	SYSTEM ROLE	APTER POWER PAGE
38B6041X082	Related Emerson product	View 38B6041X082 page
KJ3222X1-BA1-12P2532X092...	Related Emerson product	View KJ3222X1-BA1-12P2532X092... page
PR6424-013-140-CON021-91...	Related Emerson product	View PR6424-013-140-CON021-91... page
PR6424-000-041-CON041	Related Emerson product	View PR6424-000-041-CON041 page
KJ4001X1-BE1-12P0818X072...	Related Emerson product	View KJ4001X1-BE1-12P0818X072... page
SP4401	Related Emerson product	View SP4401 page
SP3401	Related Emerson product	View SP3401 page
12P4705X062	Related Emerson product	View 12P4705X062 page

APPLICATIONS & PRECAUTIONS

COMMON APPLICATIONS

Radial shaft vibration

Uses an M10 x 1 metric sleeve

Axial thrust position

Provides an eight-metre unarmored lead

Shaft centerline trending

Measures over a two-millimetre nominal static span

Eccentricity measurement

Terminates in the documented LEMO connection

PRODUCT PRECAUTIONS

- 1 Verify the complete PR6423-002-030 order code, M10 x 1 mounting interface and assigned PR6423 8 mm eddy-current system measuring point before work.
- 2 Place the monitored machine and its protection channel in the approved maintenance state before disturbing PR6423-002-030.
- 3 Protect the probe tip from impact and keep the mounting thread and bracket free from burrs or contamination.
- 4 Route the 8 m sensor lead without sharp bends, crushing, tensile load or contact with hot and moving surfaces.
- 5 Keep the LEMO or open-end connection clean, dry and fully identified before reconnecting the measurement loop.
- 6 Confirm the paired signal converter or monitor input, cable length and target material match the documented measuring chain.
- 7 Set the static gap within the documented linear region while preserving shaft and probe mechanical clearance.
- 8 Prove polarity, static gap, dynamic response and alarm action before returning the protection channel to service.

ENGINEER FAQ

Q1 Does PR6423-002-030 match CON021 or CON041 signal converter in a Radial shaft vibration installation?

Verify the complete PR6423-002-030 marking, the documented Emerson PR6423 8 mm eddy-current measurement system position and the installed CON021 or CON041 signal converter before fitting the assembly.

Q2 How should PR6423-002-030 be wired when it must uses an m10 x 1 metric sleeve?

Isolate the circuit, identify every terminal and reproduce the approved polarity, shield and channel assignment for PR6423-002-030; then continuity-test the affected path.

Q3 Which Emerson PR6423 8 mm eddy-current measurement system records should be captured before removing PR6423-002-030?

Record the as-found wiring, installed position, active configuration and diagnostic state associated with PR6423-002-030 before disconnection.

Q4 What controlled test confirms that PR6423-002-030 can provides an eight-metre unarmored lead?

Apply the approved field or simulated stimulus, observe the Emerson PR6423 8 mm eddy-current measurement system indication and confirm the intended response without bypassing the normal interlocks.

Q5 Which Conductive steel target condition should be checked when PR6423-002-030 reports an abnormal state?

Check the Conductive steel target supply, seating and connection first, then compare channel diagnostics with the recorded PR6423-002-030 baseline.

Q6 Can PR6423-002-030 be moved directly into Axial thrust position without validating Compatible machinery-monitoring input?

No. Confirm the Compatible machinery-monitoring input, revision, connection scheme and Emerson PR6423 8 mm eddy-current measurement system configuration before transferring PR6423-002-030 to that duty.

Q7 What maintenance evidence is required after PR6423-002-030 is used for Shaft centerline trending?

Retain the nameplate record, corrective action, final diagnostics and a controlled shaft centerline trending functional-test result for PR6423-002-030.

Q8 How should PR6423-002-030 be returned to service in Eccentricity measurement?

Restore power under control, verify measures over a two-millimetre nominal static span, exercise the intended signal path and release PR6423-002-030 only after the Emerson PR6423 8 mm eddy-current measurement system remains in its approved operating state.

SOURCE Emerson PR642x Eddy Current Sensor Installation Guide | MHM-97857 Rev. 1.11, January 2026

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