

INDUSTRIAL AUTOMATION PRODUCT

# PR6423-002-030

PR6423 8 mm eddy-current displacement sensor

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

| IDENTITY      | VERIFIED VALUE                                      |
|---------------|-----------------------------------------------------|
| Manufacturer  | Emerson                                             |
| System family | Emerson PR6423 8 mm eddy-current measurement system |
| Part number   | PR6423-002-030                                      |
| Country       | USA                                                 |
| HS code       | 8537101190                                          |

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## Technical Specifications

Technical values below are limited to the named Emerson product record.

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

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System Role and Architecture

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

FUNCTION 1

Uses an M10 x 1 metric sleeve

FUNCTION 2

Provides an eight-metre unarmored lead

FUNCTION 3

Measures over a two-millimetre nominal static span

FUNCTION 4

Terminates in the documented LEMO connection

Matched system components

- CON021 or CON041 signal converter
- Conductive steel target
- Probe mounting bracket
- Compatible machinery-monitoring input

SYSTEM INTEGRATION RECORD

| INTEGRATION ITEM           | DOCUMENTED ROLE                   |
|----------------------------|-----------------------------------|
| Installed host / carrier   | CON021 or CON041 signal converter |
| Companion hardware         | Conductive steel target           |
| Field connection           | Probe mounting bracket            |
| Primary system function    | Uses an M10 x 1 metric sleeve     |
| Controlled acceptance duty | Radial shaft vibration            |

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Applications and Engineering Context

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

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.

MODEL-SPECIFIC ACCEPTANCE EVIDENCE

| CHECK              | ACCEPTANCE CONDITION                     |
|--------------------|------------------------------------------|
| Identity           | PR6423-002-030 / PR6423-002-030 recorded |
| Physical interface | CON021 or CON041 signal converter        |
| Companion check    | Conductive steel target                  |
| Functional proof   | Uses an M10 x 1 metric sleeve            |
| Application test   | Radial shaft vibration                   |

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## Engineering 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.

### RELATED PRODUCTS ON APTER POWER

| MODEL                       | SYSTEM ROLE             | APTER POWER PAGE                                      |
|-----------------------------|-------------------------|-------------------------------------------------------|
| 38B6041X152                 | Related Emerson product | <a href="#">View 38B6041X152 page</a>                 |
| 38B5786X092                 | Related Emerson product | <a href="#">View 38B5786X092 page</a>                 |
| PR6423-003-130-CON021       | Related Emerson product | <a href="#">View PR6423-003-130-CON021 page</a>       |
| 5X00226G04                  | Related Emerson product | <a href="#">View 5X00226G04 page</a>                  |
| 5X00481G04                  | Related Emerson product | <a href="#">View 5X00481G04 page</a>                  |
| KJ2005X1-BK11-2P4688X052... | Related Emerson product | <a href="#">View KJ2005X1-BK11-2P4688X052... page</a> |
| PR9268-601-000-025531       | Related Emerson product | <a href="#">View PR9268-601-000-025531 page</a>       |
| KJ1501X1-BC4-C2-A013P006... | Related Emerson product | <a href="#">View KJ1501X1-BC4-C2-A013P006... page</a> |

### MANUFACTURER SOURCE RECORD

Emerson PR642x Eddy Current Sensor Installation Guide

MHM-97857 Rev. 1.11, January 2026

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