APTER■POWER

PRODUCT TECHNICAL REFERENCE

INDUSTRIAL AUTOMATION PRODUCT

PR6424-003-030

PR6424 16 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 PR6424 16 mm eddy-current measurement system
Part number	PR6424-003-030
Country	USA
HS code	8537101190

APTER POWER SALES TEAM

WHATSAPP / PHONE +86 180 3023 5313

EMAIL sales13@apterpower.com

WEBSITE www.apterpower.com

2 Technical Specifications

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

PARAMETER	TECHNICAL VALUE
Sensor family	PR6424
Sleeve thread	M18 x 1.5
Armor	No
Probe length Cx	70 mm
Overall sensor length C	82.5 mm
Adapter plug	Included
Total cable length	8 m
Cable end	LEMO
Static nominal range	+/-2.0 mm
Recommended dynamic range	100 to 1000 um p-p
Sensitivity	4 V/mm
Nominal distance center	Approximately 2.7 mm
Basic air gap	0.55 to 0.95 mm
Operating temperature	-35 to +120 degC
Pressure at sensor head	10,000 hPa
Vibration endurance	5 g at 60 Hz

3 System Role and Architecture

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

FUNCTION 1

Uses the larger M18 x 1.5 sensing body

FUNCTION 2

Provides a four-millimetre nominal static span

FUNCTION 3

Carries the probe signal over eight metres

FUNCTION 4

Matches a PR6424-capable converter channel

Matched system components

- CON021 or CON041 converter configured for PR6424
- Conductive target surface
- M18 mounting hardware
- Compatible monitor input

SYSTEM INTEGRATION RECORD

INTEGRATION ITEM	DOCUMENTED ROLE
Installed host / carrier	CON021 or CON041 converter configured for PR6424
Companion hardware	Conductive target surface
Field connection	M18 mounting hardware
Primary system function	Uses the larger M18 x 1.5 sensing body
Controlled acceptance duty	Large-shaft radial vibration

4 Applications and Engineering Context

Large-shaft radial vibration

Uses the larger M18 x 1.5 sensing body

Axial displacement monitoring

Provides a four-millimetre nominal static span

Differential expansion measurement

Carries the probe signal over eight metres

Machine-position trending

Matches a PR6424-capable converter channel

TECHNICAL NOTE

Match the M18 x 1.5 installation and PR6424 converter range, protect the 70 mm probe body, support the eight-metre cable and verify the full linear response.

MODEL-SPECIFIC ACCEPTANCE EVIDENCE

CHECK	ACCEPTANCE CONDITION
Identity	PR6424-003-030 / PR6424-003-030 recorded
Physical interface	CON021 or CON041 converter configured for PR6424
Companion check	Conductive target surface
Functional proof	Uses the larger M18 x 1.5 sensing body
Application test	Large-shaft radial vibration

5 Engineering Precautions

1. Verify the complete PR6424-003-030 order code, M18 x 1.5 mounting interface and assigned PR6424 16 mm eddy-current system measuring point before work.
2. Place the monitored machine and its protection channel in the approved maintenance state before disturbing PR6424-003-030.
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
1X00781H01L	Related Emerson product	View 1X00781H01L page
38B6041X152	Related Emerson product	View 38B6041X152 page
38B5786X092	Related Emerson product	View 38B5786X092 page
PR6423-003-130-CON021	Related Emerson product	View PR6423-003-130-CON021 page
5X00226G04	Related Emerson product	View 5X00226G04 page
5X00481G04	Related Emerson product	View 5X00481G04 page
KJ2005X1-BK11-2P4688X052...	Related Emerson product	View KJ2005X1-BK11-2P4688X052... page
PR9268-601-000-025531	Related Emerson product	View PR9268-601-000-025531 page

MANUFACTURER SOURCE RECORD

Emerson PR642x Eddy Current Sensor Installation Guide

MHM-97857 Rev. 1.11, January 2026

APTER POWER SALES TEAM

WHATSAPP / PHONE +86 180 3023 5313

EMAIL sales13@apterpower.com

WEBSITE www.apterpower.com