APTER POWER

PRODUCT TECHNICAL REFERENCE

INDUSTRIAL AUTOMATION PRODUCT

PR6424-010-140

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	PR6424-010-140
Country	USA
HS code	8537101190

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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	Yes
Probe length Cx	40 mm
Overall sensor length C	52.5 mm
Adapter plug	Not included
Total cable length	10 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

Combines a short 40 mm probe with armored protection

FUNCTION 2

Provides a ten-metre overall cable

FUNCTION 3

Uses the PR6424 four-millimetre static span

FUNCTION 4

Requires the documented connection arrangement without an included adapter

Matched system components

- PR6424-configured converter
- M18 x 1.5 bracket
- Ten-metre cable route
- Compatible LEMO connection hardware

SYSTEM INTEGRATION RECORD

INTEGRATION ITEM	DOCUMENTED ROLE
Installed host / carrier	PR6424-configured converter
Companion hardware	M18 x 1.5 bracket
Field connection	Ten-metre cable route
Primary system function	Combines a short 40 mm probe with armored protection
Controlled acceptance duty	Large-shaft radial monitoring

4 Applications and Engineering Context

Large-shaft radial monitoring

Combines a short 40 mm probe with armored protection

Remote thrust-position points

Provides a ten-metre overall cable

Differential expansion loops

Uses the PR6424 four-millimetre static span

Armored long-run probe replacement

Requires the documented connection arrangement without an included adapter

TECHNICAL NOTE

Verify that the required adapter hardware is available, match the M18 thread and ten-metre system length, then prove the PR6424 linear span after installation.

MODEL-SPECIFIC ACCEPTANCE EVIDENCE

CHECK	ACCEPTANCE CONDITION
Identity	PR6424-010-140 / PR6424-010-140 recorded
Physical interface	PR6424-configured converter
Companion check	M18 x 1.5 bracket
Functional proof	Combines a short 40 mm probe with armored protection
Application test	Large-shaft radial monitoring

5 Engineering Precautions

1. Verify the complete PR6424-010-140 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 PR6424-010-140.
3. Protect the probe tip from impact and keep the mounting thread and bracket free from burrs or contamination.
4. Route the 10 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
KC4011X1-BZ1	Related Emerson product	**View KC4011X1-BZ1 page**
KC4011X1-BW1	Related Emerson product	**View KC4011X1-BW1 page**
KJ2201X1-BA1	Related Emerson product	**View KJ2201X1-BA1 page**
3900-02-10	Related Emerson product	**View 3900-02-10 page**
396P-02-12-55	Related Emerson product	**View 396P-02-12-55 page**
396P-08-10-55	Related Emerson product	**View 396P-08-10-55 page**
KJ3002X1-BG2-12P1731X062	Related Emerson product	**View KJ3002X1-BG2-12P1731X062 page**
KJ3002X1-BB1-12P0683X082	Related Emerson product	**View KJ3002X1-BB1-12P0683X082 page**

MANUFACTURER SOURCE RECORD

Emerson PR642x Eddy Current Sensor Installation Guide

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