

PR6423/002-001 CON041

Eddy Current Measurement System

EPRO PR6423/002-001 CON041 combines an 8 mm PR6423 eddy-current sensor with a CON041 signal converter for non-contact shaft-displacement and position measurements. The documented PR6423 measuring range is 2 mm and the CON041 bandwidth extends to 20 kHz.

BRAND	EPRO	MODEL	PR6423/002-001 CON041
PRODUCT	Eddy Current Measurement System	FAMILY	Industrial automation
OFFICIAL SOURCE	Emerson PR6423 8 mm Eddy Current Sensor Specification Sheet	RECORD	PR6423 specification sheet, December 2024

DOCUMENT SCOPE

Official technical evidence, controlled engineering checks, model-specific FAQ and related product navigation.

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PR6423/002-001 CON041

Product Overview and Applications

SYSTEM FUNCTION

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FUNCTION 1

Measures shaft displacement without contact

FUNCTION 2

Uses a 2 mm linear measuring range with an 8 mm sensor

FUNCTION 3

Provides high-frequency response through the CON041 converter

FUNCTION 4

Supports radial, axial, position, eccentricity and speed/key measurements

APPLICATION	ENGINEERING CONTEXT
Radial shaft vibration	Measures dynamic shaft displacement on critical rotating machinery.
Axial position	Monitors thrust position with a matched target and calibrated gap.
Eccentricity monitoring	Tracks low-speed shaft orbit and eccentricity through the eddy-current loop.
Speed and key reference	Provides a non-contact pulse signal from a suitable shaft target.

Technical Data and Acceptance

PARAMETER	VERIFIED VALUE
Sensor	PR6423/002-001, 8 mm eddy-current sensor
Converter	CON041 DIN-rail signal converter
Linear measuring range	2 mm (80 mil)
Initial air gap	0.5 mm (20 mil)
Scale factor	8 V/mm (203.2 mV/mil) ±5% at 0 to 45 °C
Target material	42CrMo4 / AISI 4140 ferromagnetic steel
Converter frequency range	0 to 20,000 Hz (-3 dB)
Converter output range	-2 to -18 V or -4 to -20 V, configuration dependent
Converter supply range	-21 to -32 V or -23 to -32 V, output-range dependent
Converter mounting	DIN rail with screw terminals

Acceptance Path

1 IDENTITY

The complete PR6423/002-001 CON041 marking and revision agree with the engineering record.

2 COMPATIBILITY

System position, companion hardware and interfaces match the manufacturer documentation.

3 CONFIGURATION

Saved values, channel mappings and protection limits are restored without unexplained change.

4 FUNCTIONAL PROOF

Diagnostics and the model-specific controlled test pass without unexplained fault.

Precautions and Model-Specific FAQ

NO.	PRECAUTION	QUESTION	ANSWER
1	Verify the complete PR6423/002-001 and CON041 markings as a matched measurement loop.	What is EPRO PR6423/002-001 CON041?	It is an 8 mm PR6423 eddy-current sensor matched with a CON041 signal converter.
2	Confirm the target material and minimum shaft requirements from the PR6423 data sheet.	What measuring range applies to EPRO PR6423/002-001 CON041?	The PR6423 specification lists a 2 mm linear measuring range with a 0.5 mm initial air gap.
3	Set the documented initial air gap before operation.		
4	Use the correct CON041 supply and output-range configuration.	What scale factor is documented for EPRO PR6423/002-001 CON041?	The sensor specification gives 8 V/mm, or 203.2 mV/mil, within the stated tolerance and temperature range.
5	Route sensor and converter wiring away from high-energy interference sources		
6	Protect the sensor cable, connector and DIN-rail terminals from damage and contamination.	What bandwidth does the CON041 in EPRO PR6423/002-001 CON041 provide?	The converter frequency range is 0 to 20,000 Hz at the -3 dB point.
7	Do not interchange sensor or converter without recalibrating the complete loop.		
8	Verify gap voltage, scale factor, frequency response and monitor indication before release.		

Related Products on Apter Power

MODEL	APTER POWER PAGE
WOODWARD DYN2-94025-004	View WOODWARD DYN2-94025-004
WOODWARD 9907-186	View WOODWARD 9907-186
WOODWARD 8237-1246	View WOODWARD 8237-1246
Allen Bradley 1203-GD1	View Allen Bradley 1203-GD1
Allen Bradley 1203-GU6	View Allen Bradley 1203-GU6
Allen Bradley 1305-BA01A-HA2	View Allen Bradley 1305-BA01A-HA2

FAQ, Related Products and Sources

QUESTION	ANSWER
Which output ranges are available for EPRO PR6423/002-001 CON041?	The CON041 supports -2 to -18 V or -4 to -20 V depending on the selected supply/output configuration.
Why must EPRO PR6423/002-001 CON041 be calibrated as a complete loop?	Sensor, cable, converter, target material and gap together determine the measurement scale and linearity.
What confirms successful commissioning of EPRO PR6423/002-001 CON041?	Correct gap voltage, scale factor, dynamic response and monitor indication under a controlled test confirm release.

MANUFACTURER SOURCE RECORDS

Emerson PR6423 8 mm Eddy Current Sensor Specification Sheet - PR6423 specification sheet, December 2024
Emerson CON041 Eddy Current Signal Converter Specification Sheet - CON041 specification sheet, June 2017

Related Products on Apter Power

MODEL	APTER POWER PAGE
Allen Bradley 1305-BA03A	View Allen Bradley 1305-BA03A
Allen Bradley 1336-L4-42336-200-51	View Allen Bradley 1336-L4-42336-200-51
Allen Bradley 1336-PB-SP23C	View Allen Bradley 1336-PB-SP23C
Allen Bradley 1336-PB-SP5A	View Allen Bradley 1336-PB-SP5A
Allen Bradley 1336-QOUT-SP19A	View Allen Bradley 1336-QOUT-SP19A
Allen Bradley 1336T-LM1EN	View Allen Bradley 1336T-LM1EN
Allen Bradley 1336T-LM1EN-74103-015-52A-297346	View Allen Bradley 1336T-LM1EN-74103-015-52A-297346
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