CON041

PR642x eddy-current sensor signal converter

Conditioned -4 to -20 V DC output proportional to PR642x probe displacement

PRODUCT SNAPSHOT

BRAND	FAMILY
Emerson	PR642x DIN-rail eddy-current transducer sy
PART	ORIGIN / HS
CON041	USA / 8537101190

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PRODUCT OVERVIEW

Conditioned -4 to -20 V DC output proportional to PR642x probe displacement

1. Mounts on a control-cabinet DIN rail
2. Supports four documented PR642x probe families
3. Provides family-specific standard measuring spans
4. Outputs a proportional negative DC voltage

SYSTEM COMPONENTS

- PR6422, PR6423, PR6424 or PR6426 probe
- DIN-rail cabinet position
- Negative DC supply and signal wiring
- Compatible Emerson or third-party voltage input

TECHNICAL NOTE

Match the converter setup to the exact PR6422/3/4/6 probe, isolate cabinet power, preserve terminal identity and confirm gap voltage plus full-range response after DIN-rail installation.

TECHNICAL DATA

PARAMETER	VALUE
Converter model	CON041
Alternative models	SNG-CON041; SNG-CON041-SF
Mounting	DIN rail
Compatible sensors	PR6422; PR6423; PR6424; PR6426
Standard PR6422 range	1 mm; linearity <=1.5%

PARAMETER	VALUE
Standard PR6423 range	2 mm; linearity <=1.0%
Standard PR6424 range	4 mm; linearity <=1.5%
Standard PR6426 range	8 mm; linearity <=1.5%
Voltage output	-4 to -20 V DC
Installation environment	Control cabinet

RELATED PRODUCTS ON APTER POWER

MODEL	SYSTEM ROLE	APTER POWER PAGE
CL6821X1-A5-41B5222X422-65	Related Emerson product	**View CL6821X1-A5-41B5222X422-65 page**
KJ4001X1-BA3-12P3378X012...	Related Emerson product	**View KJ4001X1-BA3-12P3378X012... page**
1C31166G02	Related Emerson product	**View 1C31166G02 page**
EN-204-EN-204-00-000	Related Emerson product	**View EN-204-EN-204-00-000 page**
1C31169G02	Related Emerson product	**View 1C31169G02 page**
FX-490	Related Emerson product	**View FX-490 page**
ES0350-M1A05L-27N0	Related Emerson product	**View ES0350-M1A05L-27N0 page**
960177-02	Related Emerson product	**View 960177-02 page**

APPLICATIONS & PRECAUTIONS

COMMON APPLICATIONS

Compact radial-vibration channels

Mounts on a control-cabinet DIN rail

Axial displacement loops

Supports four documented PR642x probe families

Differential expansion monitoring

Provides family-specific standard measuring spans

Large-gap shaft-position measurement

Outputs a proportional negative DC voltage

PRODUCT PRECAUTIONS

1. Confirm the complete CON041/SNG-CON041/SNG-CON041-SF identity and paired probe family before replacement.
2. Place the monitored machine and protection channel in the approved maintenance state.
3. Isolate cabinet power and record every supply, signal and shield terminal.
4. Release the DIN-rail latch without bending terminals or stressing adjacent converters.
5. Use ESD controls and keep the sensor connector plus terminal area clean and dry.
6. Restore the probe-family range and verify it matches PR6422, PR6423, PR6424 or PR6426.
7. Set the probe static gap within the correct family linear region and record the quiescent output.
8. Prove polarity, full-range response and alarm action before returning the channel to service.

ENGINEER FAQ

Q1 Does CON041 match PR6422, PR6423, PR6424 or PR6426 probe in a Compact radial-vibration channels installation?

Verify the complete CON041 marking, the documented PR642x DIN-rail eddy-current transducer system position and the installed PR6422, PR6423, PR6424 or PR6426 probe before fitting the assembly.

Q2 How should CON041 be wired when it must mounts on a control-cabinet din rail?

Isolate the circuit, identify every terminal and reproduce the approved polarity, shield and channel assignment for CON041; then continuity-test the affected path.

Q3 Which PR642x DIN-rail eddy-current transducer system records should be captured before removing CON041?

Record the as-found wiring, installed position, active configuration and diagnostic state associated with CON041 before disconnection.

Q4 What controlled test confirms that CON041 can supports four documented pr642x probe families?

Apply the approved field or simulated stimulus, observe the PR642x DIN-rail eddy-current transducer system indication and confirm the intended response without bypassing the normal interlocks.

Q5 Which DIN-rail cabinet position condition should be checked when CON041 reports an abnormal state?

Check the DIN-rail cabinet position supply, seating and connection first, then compare channel diagnostics with the recorded CON041 baseline.

Q6 Can CON041 be moved directly into Axial displacement loops without validating Compatible Emerson or third-party voltage input?

No. Confirm the Compatible Emerson or third-party voltage input, revision, connection scheme and PR642x DIN-rail eddy-current transducer system configuration before transferring CON041 to that duty.

Q7 What maintenance evidence is required after CON041 is used for Differential expansion monitoring?

Retain the nameplate record, corrective action, final diagnostics and a controlled differential expansion monitoring functional-test result for CON041.

Q8 How should CON041 be returned to service in Large-gap shaft-position measurement?

Restore power under control, verify provides family-specific standard measuring spans, exercise the intended signal path and release CON041 only after the PR642x DIN-rail eddy-current transducer system remains in its approved operating state.

SOURCE Emerson CON041 Converter for PR642x Eddy Current Sensors Installation Guide | MHM-97860 Rev. 10.1, January 2025

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