

CON021

PR642x eddy-current sensor signal converter

Conditioned proportional voltage derived from an Emerson PR642x eddy-current probe

PRODUCT SNAPSHOT

BRAND

Emerson

FAMILY

PR642x eddy-current transducer system

PART

CON021

ORIGIN / HS

USA / 8537101190

APTER POWER SALES TEAM

WHATSAPP / PHONE

+86 180 3023 5313

EMAIL

sales13@apterpower.com

WEBSITE

www.apterpower.com



PRODUCT OVERVIEW

Conditioned proportional voltage derived from an Emerson PR642x eddy-current probe

1

Interfaces six documented PR642x/PR6453 sensor families

2

Passes dynamic shaft motion through a 20 kHz bandwidth

3

Uses a self-locking LEMO probe connection

4

Provides a voltage output for the connected monitor channel

SYSTEM COMPONENTS

Matched PR642x or PR6453 probe

Compatible extension cable where specified

Negative DC instrument supply

Voltage-input machinery monitor

TECHNICAL NOTE

Mount the converter with four M5 fasteners, verify the PR642x family and output range, isolate the negative DC supply, and prove gap voltage plus dynamic response before enabling alarms.

TECHNICAL DATA

PARAMETER	VALUE
Converter model	CON021
Alternative model	SNG-CON021
Compatible sensors	PR6422; PR6423; PR6424; PR6425; PR6426; PR6453
Frequency response	0 to 20 kHz (-3 dB)
Rise time	<15 us
Supply for -4 to -20 V output	-23 to -32 V DC
Supply for -2 to -18 V output	-21 to -32 V DC

PARAMETER	VALUE
Operating temperature	-30 to +100 degC
Shock and vibration	5 g at 60 Hz at 25 degC
Ingress protection	IP20
Sensor connector	Self-locking LEMO
Supply/output terminal capacity	1.5 mm2 maximum
Housing material	LMgSi0.5F22

RELATED PRODUCTS ON APTER POWER

MODEL	SYSTEM ROLE	APTER POWER PAGE
A6560	Related Emerson product	View A6560 page
A6120	Related Emerson product	View A6120 page
A6312-06	Related Emerson product	View A6312-06 page
IC695CPE330	Related Emerson product	View IC695CPE330 page
A6210	Related Emerson product	View A6210 page
A6110	Related Emerson product	View A6110 page
5X00121G01	Related Emerson product	View 5X00121G01 page
5X00119G01	Related Emerson product	View 5X00119G01 page

APPLICATIONS & PRECAUTIONS

COMMON APPLICATIONS

Radial shaft-vibration loops

Interfaces six documented PR642x/PR6453 sensor families

Axial position measurement

Passes dynamic shaft motion through a 20 kHz bandwidth

Machine centerline observation

Uses a self-locking LEMO probe connection

Eccentricity and expansion monitoring

Provides a voltage output for the connected monitor channel

PRODUCT PRECAUTIONS

- 1 Confirm the complete CON021/SNG-CON021 identification and the paired PR642x probe type before removal.
- 2 Place the monitored machine and protection channel in the approved maintenance state.
- 3 Isolate the negative DC supply and record supply polarity plus output conductors.
- 4 Protect the self-locking LEMO interface from dirt, moisture and bent contacts.
- 5 Mount the replacement with four M5 fasteners on a stable grounded panel.
- 6 Verify the selected -4 to -20 V or -2 to -18 V output arrangement against the monitor input.
- 7 Set the probe gap in the approved linear region and check the quiescent output.
- 8 Prove dynamic response, polarity and alarm action before returning the channel to service.

ENGINEER FAQ

Q1 Does CON021 match Matched PR642x or PR6453 probe in a Radial shaft-vibration loops installation?

Verify the complete CON021 marking, the documented PR642x eddy-current transducer system position and the installed Matched PR642x or PR6453 probe before fitting the assembly.

Q3 Which PR642x eddy-current transducer system records should be captured before removing CON021?

Record the as-found wiring, installed position, active configuration and diagnostic state associated with CON021 before disconnection.

Q5 Which Compatible extension cable where specified condition should be checked when CON021 reports an abnormal state?

Check the Compatible extension cable where specified supply, seating and connection first, then compare channel diagnostics with the recorded CON021 baseline.

Q7 What maintenance evidence is required after CON021 is used for Machine centerline observation?

Retain the nameplate record, corrective action, final diagnostics and a controlled machine centerline observation functional-test result for CON021.

Q2 How should CON021 be wired when it must interfaces six documented pr642x/pr6453 sensor families?

Isolate the circuit, identify every terminal and reproduce the approved polarity, shield and channel assignment for CON021; then continuity-test the affected path.

Q4 What controlled test confirms that CON021 can passes dynamic shaft motion through a 20 khz bandwidth?

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

Q6 Can CON021 be moved directly into Axial position measurement without validating Voltage-input machinery monitor?

No. Confirm the Voltage-input machinery monitor, revision, connection scheme and PR642x eddy-current transducer system configuration before transferring CON021 to that duty.

Q8 How should CON021 be returned to service in Eccentricity and expansion monitoring?

Restore power under control, verify uses a self-locking lemo probe connection, exercise the intended signal path and release CON021 only after the PR642x eddy-current transducer system remains in its approved operating state.

SOURCE Emerson CON021 Eddy Current Signal Converter Product Data Sheet | CON021 product data sheet

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