

CON021

PR642x eddy-current sensor signal converter

CONTROLLED ENGINEERING COPY

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.

INSTALLATION IDENTITY	REQUIRED VALUE
Complete model	CON021
Manufacturer part	CON021
Hardware type	CON021
System family	PR642x eddy-current transducer system



APTER POWER SALES TEAM

WHATSAPP / PHONE +86 180 3023 5313
EMAIL sales13@apterpower.com
WEBSITE www.apterpower.com



01 PRE-INSTALLATION PLAN

- 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.

MATCHED HARDWARE

- Matched PR642x or PR6453 probe
- Compatible extension cable where specified
- Negative DC instrument supply
- Voltage-input machinery monitor

INSTALLATION CONTROL RECORD

CONTROL ITEM	REQUIRED RECORD
Identity	CON021 / CON021 recorded
Physical interface	Matched PR642x or PR6453 probe
Companion check	Compatible extension cable where specified
Functional proof	Interfaces six documented PR642x/PR6453 sensor families
Application test	Radial shaft-vibration loops

02 WIRING & INTERFACE CHECKS

CHECK ITEM	REQUIRED 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
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

FIELD 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.

03 COMMISSIONING WORKFLOW



COMMISSIONING ACCEPTANCE EVIDENCE

EVIDENCE ITEM	ACCEPTANCE CONDITION
Identity	CON021 / CON021 recorded
Physical interface	Matched PR642x or PR6453 probe
Companion check	Compatible extension cable where specified
Functional proof	Interfaces six documented PR642x/PR6453 sensor families
Application test	Radial shaft-vibration loops

04 RETURN-TO-SERVICE RECORD

- ☐
- Verify the selected -4 to -20 V or -2 to -18 V output arrangement against the monitor input.
- ☐
- Set the probe gap in the approved linear region and check the quiescent output.
- ☐
- Prove dynamic response, polarity and alarm action before returning the channel to service.
- ☐
- Confirm the intended process response before normal operation.

VERIFICATION RECORD

PRODUCT IDENTITY	CON021
INSTALLED POSITION	Documented PR642x eddy-current transducer system position
VERIFICATION METHOD	Controlled inspection and functional test
RELEASE RECORD	Final diagnostic state retained before service

RELATED PRODUCTS ON APTER POWER

MODEL	SYSTEM ROLE	APTER POWER PAGE
ES0350-M1A05L-27N0	Related Emerson product	View ES0350-M1A05L-27N0 page
960177-02	Related Emerson product	View 960177-02 page
KJ2003X1-BB1	Related Emerson product	View KJ2003X1-BB1 page
EC3-X33	Related Emerson product	View EC3-X33 page
FX-340	Related Emerson product	View FX-340 page
7379A31G04	Related Emerson product	View 7379A31G04 page
KJ3224X1-EA1-12P4367X022	Related Emerson product	View KJ3224X1-EA1-12P4367X022 page
FSROC-EXP-EXP	Related Emerson product	View FSROC-EXP-EXP page

SOURCE IDENTIFIERS

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

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