

INDUSTRIAL AUTOMATION PRODUCT

CON021

PR642x eddy-current sensor signal converter

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

IDENTITY	VERIFIED VALUE
Manufacturer	Emerson
System family	PR642x eddy-current transducer system
Part number	CON021
Country	USA
HS code	8537101190

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Technical Specifications

Technical values below are limited to the named Emerson product record.

PARAMETER	TECHNICAL 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 mm ² maximum
Housing material	LMgSi0.5F22

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System Role and Architecture

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

FUNCTION 1

Interfaces six documented PR642x/PR6453 sensor families

FUNCTION 2

Passes dynamic shaft motion through a 20 kHz bandwidth

FUNCTION 3

Uses a self-locking LEMO probe connection

FUNCTION 4

Provides a voltage output for the connected monitor channel

Matched system components

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

SYSTEM INTEGRATION RECORD

INTEGRATION ITEM	DOCUMENTED ROLE
Installed host / carrier	Matched PR642x or PR6453 probe
Companion hardware	Compatible extension cable where specified
Field connection	Negative DC instrument supply
Primary system function	Interfaces six documented PR642x/PR6453 sensor families
Controlled acceptance duty	Radial shaft-vibration loops

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Applications and Engineering Context

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

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.

MODEL-SPECIFIC ACCEPTANCE EVIDENCE

CHECK	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

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Engineering 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.

RELATED PRODUCTS ON APTER POWER

MODEL	SYSTEM ROLE	APTER POWER PAGE
098-01257-01	Related Emerson product	View 098-01257-01 page
5X00167G01	Related Emerson product	View 5X00167G01 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

MANUFACTURER SOURCE RECORD

Emerson CON021 Eddy Current Signal Converter Product Data Sheet

CON021 product data sheet

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