Pall Corporation

New: RCA222 Series Differential Pressure Transducers

The RCA222 Differential Pressure (ΔP) Transducers are the latest monitoring devices for use with Pall filter assemblies. They provide continuous, reliable, real time data of filter service condition to give users increased control of their fluid system maintenance procedures.

The RCA222 ΔP transducers sense the temperature and differential pressure across an in-service filter element and transmit the reading as either a digital Modbus RTU signal, or alternatively a 4-20 mA signal which can then be interpreted as a value of remaining filter life.

The RCA222 device is also available with visual LED outputs with colour statuses for various warning levels.

The 'plug and play' transducers are designed to fit all standard Pall threaded indicator ports, for applications rated up to 450 bar.

LED option top view

RCA 222 Differential Pressure Transducer

Features

- Provides a more automated, continuous method for monitoring filter service life. Also, detection of sudden changes in filter condition can help identify potentially damaging operating conditions, enablingthe operator to take corrective action before failure occurs
- No manual on-site checking of filter status required
- Transducer thermal lockout (< 20 ºC) ignores signals received before normal operating temperature is reached, ensuring readings are relevant
- Available in a range of standard differential pressures to suit the Pall filter housing bypass settings
- Modbus output gives temperature and differential pressure as two outputs
- Modbus units can be daisy chained together back wto a single PC / PLC

Technical Information

Maximum operating pressure:	450 bar
Pressure fatigue rating:	0-400-0 bar > 1 x 10^6
Proof pressure:	675 bar
Burst pressure (typical):	1100 bar
Number of cycles (Mechanical):	1 x10^5
Operating temperature:	-25 °C (-13 °F) to 85 °C (185 °F)
Minimum ambient temperature:	-40 °C (-40 °F)
IP rating:	IP65 with mating connector to M12-5 to IEC 61076-2-101 socket plug assembly
Connector 4-20 mA & Modbus: LED Option:	 PA6, 6-M12 5 Pin 6-M12 4 Pin, both to IEC 61076-2-101

Materials of Construction

Body, piston, spring retainer:	Brass
Spring:	Stainless Steel
Seals:	Fluorocarbon
Tightening torque setting:	50-60 Nm

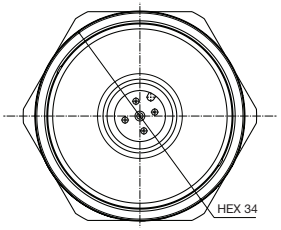
Electrical switch ratings

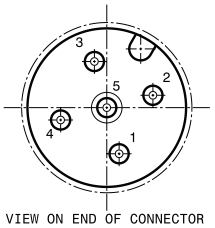
24 VDC PNP Maximum load 0.4 A normally open, analogue output 4-20 mA.

Automatic switch reset when differential pressure is reduced.

Thermal lockout T° = 20 °C (68 °F) Note: if T < T° Digital output 1 remains normally open, digital output 2 remains normally open and analogue output remains at 4 mA.

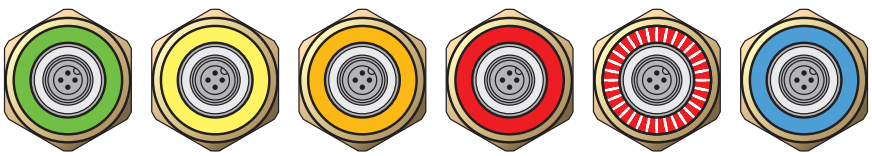
Analogue output remains at 4 mA until a minimum of 25 % of differential pressure range has been exceeded (dead band).



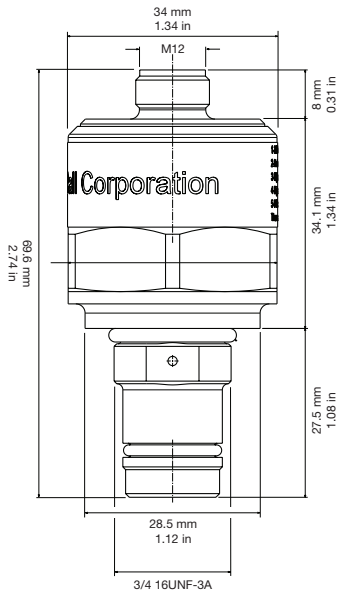


VIEW ON END OF CONNECTOR

Transducer Connection	Connection Modbus	Connection LED's
Pin 1: 24 VCC ± 10 %	**Pin 1:** 24 VCC ± 10 %	**Pin 1:** 24 VCC ± 10 %
Pin 2: Analogue Output 4-20 mA	**Pin 2:** N/A	**Pin 2:** Output 2 (100 %)
Pin 3: Digital Output 1 75 % (PNP)	**Pin 3:** Modbus RTU B	**Pin 3:** 0 VDC, Ground
Pin 4: Digital Output 2 100 % (PNP)	**Pin 4:** Modbus RTU A	**Pin 4:** Output 1 (75 %)
Pin 5: 0 VDC, Ground	**Pin 5:** 0 VDC, Ground	**Note:** 4 Pin connector only



Filter Normal T > 20 ˚C | DP Increase Warning 1 T > 20 ˚C | DP Increase Warning 2 T > 20 ˚C | Change Filter T > 20 ˚C | Filter On Bypass T > 20 ˚C | Cold Start T < 20 ˚C



Indicator Part Numbers:

4-20 mA Output	Modbus Output	LED Output
RCA222ZK2011	RCA222ZK20M	RCA222ZK20LED11
RCA222ZK4024	RCA222ZK40M	RCA222ZK40LED24
RCA222ZK4034	RCA222ZK80M	RCA222ZK40LED34
RCA222ZK8069		RCA222ZK80LED69

Code	Differential Pressure Range
K20	0.3 - 2.0 bard (5-29 psid)
K40	0.5 - 4.0 bard (8-58 psid)
K80	1.0 - 8.0 bard (15-116 psid)

Code	Switch Output Setting
11	1.1 bar (16 psid), with K20 only
24	2.4 bar (35 psid), with K40 only
34	3.4 bar (50 psid), with K40 only
69	6.9 bar (100 psid), with K80 only

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Because of technological developments related to the products, systems, and/or services described herein, the data and procedures are subject to change without notice. Please consult your Pall representative or visit www.pall.com to verify that this information remains valid.

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