

## RCA222ZK Series Differential Pressure Transducer Remaining Filter Service Life Indicator

The RCA222 Differential Pressure ( $\Delta P$ ) Transducer is the latest monitoring device for use with Pall filter assemblies. It provides continuous, reliable, real time data of filter service condition to give users increased control of their fluid system maintenance procedures.

The RCA222K\*\*\*\*  $\Delta P$  transducer senses the temperature and differential pressure across an in-service filter element and transmits the reading as either a digital MODBUS RTU signal, or alternatively a 4-20mA signal this can then be interpreted as a value of remaining filter life. There is also a visual option with five colour changes to give multiple warning levels including cold start.

The 'plug and play' transducer is designed to fit all standard Pall threaded indicator ports, regardless of filter age, for applications rated up to 450 bar.

- Provides a more automated, continuous method for monitoring filter service life
- Sudden changes in filter condition can help detect potentially damaging operating conditions, enabling the operator to take corrective action before failure occurs
- No manual on-site checking of filter status required
- Transducer thermal lockout (<20 °C) 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 setting the transducer is intended to be used with (0.3-1.0 bar (4.3-14.5 psi), 0.5-4.0 bar (7.3-58.0 psi) and 1.0-8.0 bar (14.5-116 psi).
- MODBus output gives temperature and differential pressure as two outputs. Units can be daisy chained together back to a single PC / PLC.
- 4-20mA and LED units have the benefit of two additional switched outputs set at 75% and 100% filter life (see table 3 below).

### Materials of construction:

Body, piston, spring retainer:	Brass
Spring:	Stainless steel
Seals:	Fluorocarbon
Indicator tightening torque:	50-60Nm.



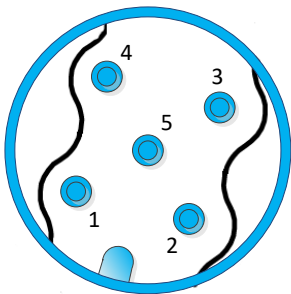
View On Top LED Version.



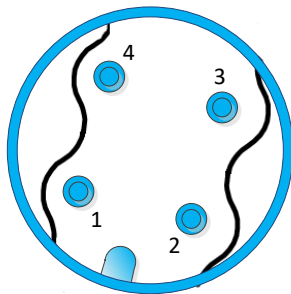
RCA 222 Differential Pressure Transducer

### Technical Information:

Maximum operating pressure:	450 bar
Pressure fatigue rating:	0-400-0 bar >1 x 10 <sup>6</sup>
Proof pressure:	675 bar
Burst pressure (typical):	1100 bar
Number of cycles (Mechanical):	1 x10 <sup>5</sup>
Temperature at which actuation / reset remains in set range: $\pm 15\%$	-25°C(-13°F) to 85°C(185°F)
IP rating:	IP65 with mating connector to M12-5 to IEC 61076-2-1001 socket plug assembly.
Connector:	PA6, 6-M12-5 PIN to IEC 61076-2-101.

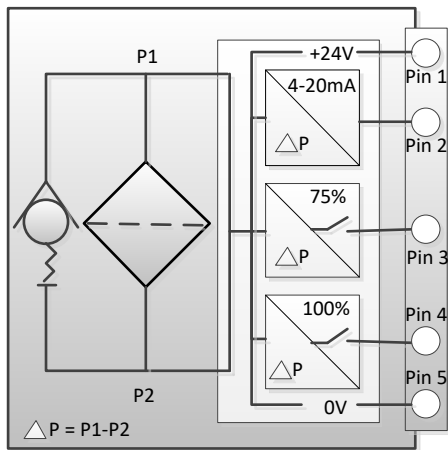


View on Connector Pins 4-20ma and Modbus Version.

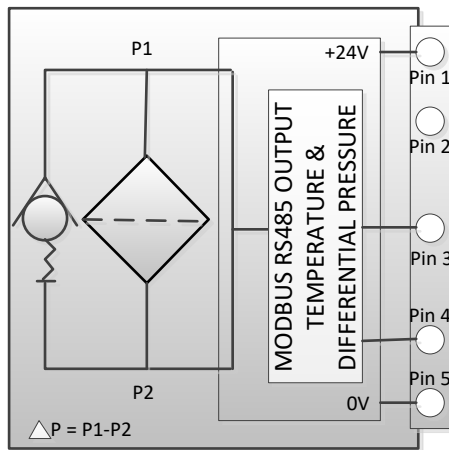


View on Connector Pins LED Version.

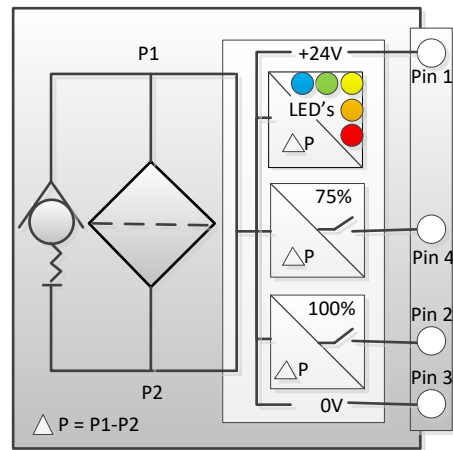
Typical Part Numbers		
4-20mA Output	ModBus output	LED Output
RCA222ZK2011	RCA222ZK20M	RCA222ZK20LED11
RCA222ZK4024	RCA222ZK40M	RCA222ZK40LED24
RCA222ZK4034	RCA222ZK80M	RCA222ZK40LED34
RCA222ZK8069		RCA222ZK80LED69



**4-20mA Output**



**ModBus Output**



**LED Output**

**Connection 4-20mA:**

- Pin 1:** 24 VDC ± 10%
- Pin 2:** Analogue out 4-20mA
- Pin 3:** Output 1 (75%)
- Pin 4:** Output 2 (100%)
- Pin 5:** 0 VDC, Ground

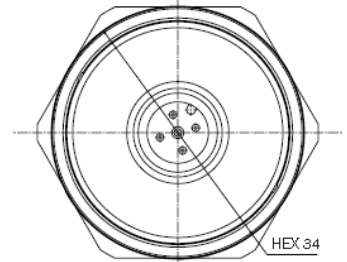
**Connection ModBus:**

- Pin 1:** 24 VDC ± 10%
- Pin 2:** N/A
- Pin 3:** MODBUS RTU B
- Pin 4:** MODBUS RTU A
- Pin 5:** 0 VDC, Ground

**Connection LED's:**

- Pin 1:** 24 VDC ± 10%
- Pin 2:** Output 2 (100%)
- Pin 3:** 0 VDC, Ground
- Pin 4:** Output 1 (75%)

**Note: 4 pin connector only.**



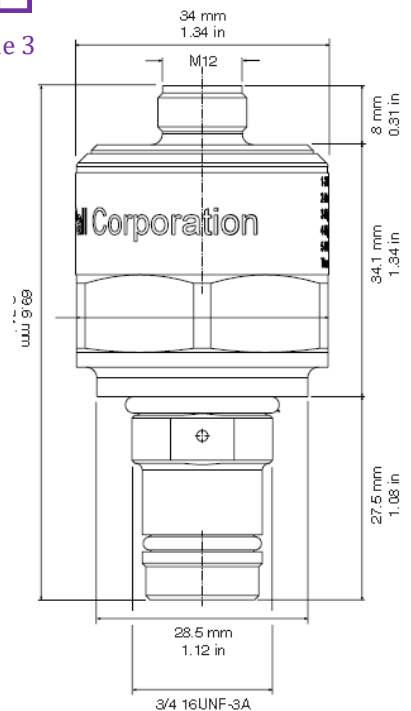
**ASSEMBLY PART/CAT NO.: RCA222Z**         

Table 1      Table 2      Table 3

Table 1	
Differential Pressure Range	CODE
0.5-2.0 bar (8-29 psi)	K20
1.0-4.0 bar (15-58 psi)	K40
2.0-8.0 bar (29-116 psi)	K80

Table 2	
Output Type	CODE
Connection 4-20mA	OMIT
Connection ModBus	M
Connection LED's	LED

Table 3			
SWITCH OUTPUT SETTING	CODE	75% SWITCH POINT	100% SWITCH POINT
1.1 bar (WITH K20 ONLY)	11	0.8 bar (12 psi)	1.1 bar (16 psi)
2.4 bar (WITH K40 ONLY)	24	1.8 bar (26 psi)	2.4 bar (35 psi)
3.4 bar (WITH K40 ONLY)	34	2.4 bar (35 psi)	3.4 bar (50 psi)
6.9 bar (WITH K80 ONLY)	69	4.8 bar (70 psi) 6.9 bar	6.9 bar (100 psi)
M (ModBus) No switched output.	OMIT	N/A	N/A



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