REDCOS-P DIFFERENTIAL PRESSURE TRANSMITTER

Zones 2, 22

ATEX INSTRUMENTATION | **ZONES 2 (gas) & 22 (dust)**

The RedCos-P-... pressure sensor generation from ±100 Pa to ±7.500 Pa (acc. to type) is a revolution for differential pressure measuring in HVAC systems, in chemical, pharmaceutical, industrial and offshore/onshore plants, for use in hazardous areas zone 2 (gas) and zone 22 (dust).

Highest protection class (ATEX) and IP66 protection, small dimensions, universal functions and technical data guarantee safe operation even under difficult environmental conditions. All sensors are programmable on site without any additional tools.

Pressure transmitter for HVAC systems, e.g. for differential pressure control.

- No additional module in the panel required
- 24 VAC/DC supply
- Outputs 0...10 V, (0)4...20 mA selectable
- Measurement range adjustable
- Actual value indicator (can be switched off)
- All parameters can be adjusted on site without additional tools and measurement devices

EU-Type Examination Certificate

All sensors require a 24 VAC/ DC power supply. The electrical wiring must be realized via integrated junction box.

RedCos-P DIFFERENTIAL PRESSURE TRANSMITTER FOR ZONE 2, 22				
Type:	Max. range:	Overload protected:	Measurement range, min. 20% of max. range:	Item No.:
RedCos-P- 100	± 100 Pa	up to 25.000 Pa	± Measurement range free adjustable, min. range 20 Pa	9A2001
RedCos-P- 250	± 250 Pa	up to 25.000 Pa	± Measurement range free adjustable, min. range 50 Pa	9A2002
RedCos-P- 500	± 500 Pa	up to 50.000 Pa	± Measurement range free adjustable, min. range 100 Pa	9A2003
RedCos-P-1250	± 1.250 Pa	up to 50.000 Pa	± Measurement range free adjustable, min. range 250 Pa	9A2004
RedCos-P-2500	± 2.500 Pa	up to 50.000 Pa	± Measurement range free adjustable, min. range 500 Pa	9A2005
RedCos-P-5000	± 5.000 Pa	up to 75.000 Pa	± Measurement range free adjustable, min. range 1.000 Pa	9A2006
RedCos-P-7500	± 7.500 Pa	up to 120.000 Pa	± Measurement range free adjustable, min. range 1.500 Pa	9A2007

ACCESSORIES AND SPECIAL DESIGNS	
Type:	Technical specifications:
Ex/RedCos-P..-A	Version with one additional intrinsically safe circuit (0)4...20 mA output to connect external actual value indicator in Ex areas
InCos- P..-A	Version with one additional (0)4...20 mA output to connect external actual value indicator in safe area
EXC-RIA-16	Intrinsic safe actual value LCD indicator, for use in zone 1,2,21,22, connectable to ExCos-P..-A or RedCos-P..-A transmitter
NOC-RIA-16	LCD indicator, connectable to InCos-P..-A transmitter
MKR-VA/AL	Mounting bracket for installation on round air-ducts (diameter up to 600 mm)
Kit 2	Includes 2 meter pressure hose (inner diameter 6 mm) and 2 plastic fittings

TECHNICAL SPECIFICATIONS	
Marking:	II 3(1)G Ex nC [ia Ga] IIC T6...T4 Gc II 3(1)D Ex tc [ia Da] IIIC T80°C...T130°C Dc IP66
Certificate:	EU-Type Examination Certificate
Supply voltage / frequency:	24 VAC/DC ± 20% (19,2...28,8 VAC/DC), 50/60 Hz
Current power consumption:	150 mA, ~ 4 W, internal fuse 500 mAT, without bracket, not removable
Galvanic isolation:	Supply for analogue in- and outputs min. 1,5 kV, supply for relay output min. 1,5 kV
Electrical connection:	Terminals 0,14...2,5 mm² at integrated Ex-e terminal box, stripping lenght 9 mm, torque 0,4...0,5 Nm, equipotential bonding 4 mm²
Display / Control elements:	2 x 16 digits, dot-matrix display, backlit, for configuration, user guidance, parameter and actual value indication / 3 buttons for configuration
Sensor / Sensor circuit:	Piezo messure transmitter / Internal intrinsically safe (IS) circuit
Housing:	Aluminium die-cast housing, coated / T6 (T80 °C) at −20...+50 °C
Ambient Temperature - Humidity:	-20...+50 °C (storage temperature -35...+70 °C) / 0...95 % rH, non condensing
Pressure connection:	P+ / P- sleeves Ø 4...6 mm
Measuring range:	± 100 Pa, ±250 Pa, ±500 Pa, ±1.250 Pa, ±2.500 Pa, ±5.000 Pa, ±7.500 Pa in acc. to type. Minimum measuring range is 20 % of full range (e. g. 20 Pa at ±100 Pa sensor)
Response time of sensor:	T90 / 5 s
Accuracy of pressure:	< ± 1 % typically, max. ±2 % of end value ± 1 Pa
Zero point setting:	Via menu. Short-circuit mechanically both tube connectors P+ / P− for the moment of zero point setting
Non linearity and hysteresis:	± 0,05 % typically, max. 0,25 % of end value
Start delay:	5 s
Stability:	Long term stability < 0,2 % / year, temperature influence < 0,02 % / K, supply voltage influence < 0,01 %
Output:	Voltage U [V] or current I [mA], selectable on site via menu, protected against short circuit and external voltage up to 24 V and against polarity reversal
Voltage output U:	0...10 VDC adjustable, invertible, burden > 1 kΩ, influence < 0,05 % / 100 Ω
Current output I:	0...20 mA adjustable, invertible, burden < 500 Ω, influence < 0,1 % / 100 Ω, open circuit voltage < 24 V
Output in alarm mode:	Increasing or decreasing output signal, selectable on site, down to 0 VDC / 0 mA or up to 10 VDC / 20 mA
Scope of delivery:	Sensor, 3 self-tapping screws 4,2 x 13 mm, short circuit tube, Cos-P-...-A with 1 additional plug for cable Ø 6...8 mm
Parameter at delivery:	min./ max. pressure range limits (e.g. RedCos-P-100 = −100...+100 Pa), output 4...20 mA, output in alarm mode decreasing to 0 V / 0 mA
Dimensions:	180 x 107 x 66 mm
Weight:	~ 950 g
Cable entries:	2 x M16x1,5, Ex-e plastic cable gland ~ Ø 5...9 mm