

Intrinsically Safe Differential Pressure Transmitter

FCO454



- ATEX, UKEX and IECEx Gas and Dust certification
- Gas Ex ia IIC T4 Ga ($-20^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$)
- Dust Ex ia IIIC T₂₀₀ 135°C Da ($-20^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$)
- For use in Hazardous Zones 0, 1 and 2
- Accuracy 0.25% of reading
- Wide span adjustment
- 2-wire 4 to 20mA output

The FCO454 is a fully configurable, Intrinsically Safe IP65 rated low differential pressure transmitter, suitable for industrial applications of control, measurement and monitoring.

The output is scalable as linear to differential pressure or as a square-root function to facilitate the use of Pitot Static Tubes or other primary flow elements.

The optional LCD can display a variety of standard engineering units.

The FCO454 can be adjusted from a PC using the 400 Series software utility and cable (in a safe area).

Features

Models/Ranges	Model 1: $\pm 50\text{Pa}$ Model 2: $\pm 150\text{Pa}$ Model 3: $\pm 500\text{Pa}$ Model 4: $\pm 2500\text{Pa}$	Model 5: $\pm 10\text{kPa}$ Model 6: $\pm 20\text{kPa}$ Model 7: $\pm 30\text{kPa}$	
Output	2 wire 4-20mA		
Display Option	Low power LCD		
Adjustable Damping	0.0 to 60.0 seconds		
Measurement functions	Linear, square-root, custom linearisation, various selectable engineering units		
Pneumatic Ports	Options for $\frac{1}{8}$ " or $\frac{1}{4}$ " BSP female fittings Optional: Process manifold on 54mm Centres with $\frac{1}{4}$ " BSP female fittings		
Communications	Internal Micro-USB for instrument configuration (free utility software)		

Performance

Accuracy @ 20°C	10% to 100% range: $< \pm (0.25\% \text{ reading} + 1 \text{ digit})$ 0 to 10% range: $< \pm (0.025\% \text{ range} + 1 \text{ digit})$	
Span Adjustment	10% to 100% of range Note: Span can be set anywhere within instruments range. For span $< 20\%$ of range, accuracy is reduced to $< \pm (0.05\% \text{ range} + 1 \text{ digit})$	
Long Term Drift	Typically 0.2% per annum	
Temperature Coefficients	Zero: $< 0.02\%/^{\circ}\text{C}$ Range: $< 0.02\%/^{\circ}\text{C}$	
Working Temperature	-20 to $+60^{\circ}\text{C}$	
Output Resolution	$0.3\mu\text{A}$ for output 4-20mA	
Overload	100 x DP range	
Static Pressure	-1 to $+10\text{bar}$ Gauge	
Minimum Step Response	100ms	
Output Update	50ms	
Power supply, Zener Barrier	Configuration	Supply Voltage
	2-wire 4 to 20mA	9 to 28Vdc 25mA min. Input parameters are: $U_i=28\text{V}$, $I_i=93\text{mA}$, $P_i=0.65\text{W}$, $L_i=0\text{mH}$ & $C_i=0\mu\text{F}$

Construction

Enclosure	IP65 rated Painted Aluminium enclosure, W122mm x H120mm x D92mm
Dimensions	W172mm x H145mm x D94mm including fittings and connector
Materials in Contact with Media	Standard: brass, nickel, mica & PVC Process manifold version: Stainless Steel, nickel, mica & PTFE
Media Compatibility	Air and non-corrosive gases max 95% humidity non-condensing
Weight	3.5kg

All information in this document is provisional and is subject to change without notice.

Furness Controls has a UKAS accredited laboratory which offers pressure calibration from 0 to 40 kPa and flow calibration from 0.1 ml/min to 2000 litres/min