

Differential Pressure Transmitter

FCO452



- Accuracy 0.25% of reading
- Ultra low pressure measurement
- Wide span adjustment
- 2-wire mA or 4-wire voltage output
- High brightness display
- Two configurable relays
- Square-root output for flow/velocity
- Auto zero and remote zero options

Suitable for industrial environments, the FCO452 low differential pressure transmitter is available in a variety of voltage or current loop configurations.

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.

Optional OLED or LCD may display a variety of engineering units, and two independent relays can provide alarm signals.

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: $\pm 30\text{kPa}$ Model 8: $\pm 1\text{bar}$ Model 9: -1 to +2bar	Model 10: -1 to +6bar Model 11: -1 to +10bar Model 12: 0 to +1500mbar abs
Output Options	2 wire 4-20mA (only available for models 1 to 7) 4 wire isolated 4-20mA: (only available for models 1 to 7) 4 wire isolated voltage: 0-1 VDC to 0-10VDC full scale 4 wire isolated voltage: ± 1 VDC to ± 10 VDC full scale			
Display options	Low power LCD High brightness blue OLED (Requires local 24VDC power)			
Keypad	Membrane keypad for easy field configuration			
Adjustable Damping	0.0 to 60.0 seconds			
Measurement functions	Linear, square-root, custom linearisation, various selectable engineering units			
Trip Level Relays	Optional: 2 relays, rated 2A @ 55Vac, 30Vdc			
Zero Control	Optional: Automatic or Remote			
Pneumatic Ports	Barbs with locknuts for 6mm OD x 4mm ID for flexible tubing Options for 4mmOD x 3mm ID tube fittings, $\frac{1}{8}$ " BSPF or $\frac{1}{4}$ " BSPF Optional: Process manifold on 54mm Centres			
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	-10 to 60°C	
Output Resolution	0.3 μA for output 4-20mA 0.1mV for outputs 0-1V, $\pm 1\text{V}$, 0-2V, $\pm 2\text{V}$ 0.35mV for outputs 0-5V, $\pm 5\text{V}$, 0-10V, $\pm 10\text{V}$	
Overload	Models 1 to 7: 20 x DP range	Models 8 to 12: 1.5 x range
Static Pressure	Models 1 to 7: -1 to +10bar Gauge	Models 8 to 12: Do not exceed instrument range
Minimum Step Response	100ms	
Output Update	50ms	
Power supply	Configuration	Supply Voltage
	2-wire 4 to 20mA	9 to 40Vdc, 22mA
	4-wire isolated	24Vdc $\pm 10\%$, 30mA
	Relays, OLED Display or Autozero	24Vdc $\pm 10\%$, 100mA

Construction

Enclosure	IP66 rated Painted Aluminium enclosure
Dimensions	W163mm x H128mm x D92mm
Materials in Contact With Media	Standard: Copper, brass, nickel, mica & PVC Process manifold version: Stainless Steel, mica & PTFE
Media Compatibility	Air and non-corrosive gases max 95% humidity non-condensing
Weight	1kg

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