

Differential Pressure Transmitter

FCO432



- 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 a variety of clean environment applications, the FCO432 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: $\pm 1\text{ VDC}$ to $\pm 10\text{ VDC}$ full scale
Display options	Low power LCD High brightness blue OLED (Requires local 24VDC power)
Keypad	Optional: 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, $\frac{1}{8}"\text{BSPF}$ or $\frac{1}{4}"\text{BSPF}$
Communications	Internal Micro-USB for instrument configuration (free utility software) Optional external RS232, RS485 or USB port.
Communication Protocols	Modbus-RTU Fbus 300 series Legacy

Performance

Enhanced Accuracy @ 20°C	10% to 100% range: $< \pm (0.25\% \text{ reading} + 1 \text{ digit})$ 0 to 10% range: $< \pm (0.025\% \text{ range} + 1 \text{ digit})$
Standard Accuracy @ 20°C	10% to 100% range: $< \pm (0.5\% \text{ reading} + 1 \text{ digit})$ 0 to 10% range: $< \pm (0.05\% \text{ range} + 1 \text{ digit})$
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 the standard specification
Long Term Drift	Typically 0.2% per annum
Temperature Coefficients	Standard Zero: $< 0.2\%/^{\circ}\text{C}$ Range: $< 0.4\%/^{\circ}\text{C}$ Enhanced 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: $\pm 1\text{ bar Gauge}$ Models 8 to 12: Do not exceed instrument range
Minimum Step Response	100ms
Output Update	50ms
Power supply	Configuration 2-wire 4 to 20mA 4-wire isolated Relays, OLED Display or Autozero Supply Voltage 9 to 40Vdc, 22mA 24Vdc $\pm 10\%$, 30mA 24Vdc $\pm 10\%$, 100mA

Construction

Enclosure	IP54 rated ABS enclosure
Dimensions	W120mm x H85mm x D58mm
Materials in Contact With Media	Copper, brass, nickel, mica & PVC
Media Compatibility	Air and non-corrosive gases max 95% humidity non-condensing
Weight	0.5kg

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