

Differential Pressure Transmitter

FC0318



- Accuracy 0.25% of reading
- Ultra low pressure measurement
- Wide span adjustment
- 2-wire mA, 3-wire or 4-wire voltage output
- Two configurable relays and bi-colour LED indicators
- Square root function for flow/velocity
- Auto zero and remote zero options
- Backlit display
- Panel mount enclosure with front panel user interface

The FC0318 is a fully configurable differential pressure transmitter in a DIN43700 panel mounted enclosure, with dual trip relays, to suit a wide range of input and output 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.

The large LCD may display a variety of engineering units, and two independent relays with bi-colour indicators can provide alarm signals.

Features

Models/Ranges	Model1: ±50Pa Model2: ±150Pa Model3: ±500Pa	Model4: ±2500Pa Model5: ±10kPa Model6: ±20kPa	High pressure ranges available on request
Output Options	2 wire 4-20mA, 3 wire voltage: 0-1 VDC to 0-10VDC full scale 4 wire voltage: 0-1 VDC to 0-10VDC full scale 4 wire voltage: ±1 VDC to ±10 VDC full scale 4 wire isolated: any of the mA or voltages above		
Display	Most common differential pressure, volumetric flow, mass flow, and velocity units		
Adjustable Damping	0.0 to 60.0 seconds		
Square Root function	Standard		
Trip Level Relays	2 relays, rated 2A @ 55Vac, 30Vdc Relay power supply (inc backlight) 24Vdc minimum 170mA		
Zero Control	Optional: Automatic or Remote		
Pneumatic Ports	Barbs with locknuts for 6mm OD x 4mm ID for flexible tubing		

Performance

Unipolar Accuracy @ 20°C	10% to 100% range: < ± (0.25% reading +1 digit) 0 to 10% range: < ± (0.025% range +1 digit)	
Bipolar Accuracy @ 20°C	10% to 100% range: < ± (0.5% reading +1 digit) 0 to 10% range: < ± (0.05% range +1 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 bipolar specification	
Long Term Drift	Typically 0.2% per annum	
Temperature Coefficients	Zero: < 0.02%/°C Range: < 0.02%/°C	
Working Temperature	-10 to 60°C	
Output Resolution	Better than 0.033 % Span	
Overload	20 x DP range	
Static Pressure	±1 bar Gauge	
Minimum Step Response	100ms	
Output Update	50ms	
Configuration	Output	Supply Voltage
2-Wire	4 to 20mA	9 to 40Vdc, 22mA
3-Wire	0 to 1V, 0 to 2V, 0 to 5V	9 to 36Vdc, 5mA
3-Wire	0 to 10V	14 to 36Vdc, 5mA
4-Wire	0 to 1V, 0 to 2V, 0 to 5V ±1V, ±2V, ±5V	±9 to ±18Vdc, 5mA
4-Wire	±10V	±14 to ±18Vdc, 5mA
4-Wire Isolated	4 to 20mA, 0 to 1V, 0 to 2V, 0 to 5V, 0 to 10V, ±1V, ±2V, ±5V, ±10V	24Vdc ±10%, 12mA
Backlight	24Vdc ±10%, 120mA	
Relays	24Vdc ±10%, 50mA	
Auto Zero	24Vdc ±10%, 30mA	

Construction

Enclosure	DIN43700 Panel mounted Polycarbonate enclosure IP50 rated
Dimensions	Flush mount: 155 x 72 x 150mm
Materials in contact with media	Copper, brass, nickel, mica & PVC
Media Compatibility	Air and non-corrosive gases max 95% humidity non-condensing
Weight	0.7kg

23/10/2012

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

Differential Pressure Transmitter



- Accuracy 0.25% of reading
- Ultra low pressure measurement
- Wide span adjustment
- 2-wire mA, 3-wire or 4-wire voltage output
- Two configurable relays
- Square-root output for flow/velocity
- Auto zero and remote zero options
- Compact ABS enclosure

Suitable for a variety of clean environment applications, the FCO332 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.

The large LCD may display a variety of engineering units, and two independent relays can provide alarm signals.

The FCO332 can be adjusted from a PC using the FCO301 software utility and cable.

Features

Models/Ranges	Model1: $\pm 50\text{Pa}$ Model2: $\pm 150\text{Pa}$ Model3: $\pm 500\text{Pa}$	Model4: $\pm 2500\text{Pa}$ Model5: $\pm 10\text{kPa}$ Model6: $\pm 20\text{kPa}$	High pressure ranges available on request
Output Options	2 wire 4-20mA 3 wire voltage: 0-1 VDC to 0-10VDC full scale 4 wire voltage: 0-1 VDC to 0-10VDC full scale 4 wire voltage: ± 1 VDC to ± 10 VDC full scale 4 wire isolated: any of the mA or voltages above		
Display (Optional)	Most common differential pressure, volumetric flow, mass flow, and velocity units		
Adjustable Damping	0.0 to 60.0 seconds		
Square Root function	Optional		
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 $\frac{1}{8}$ " BSPF $\frac{1}{4}$ " BSPF		

Performance

Enhanced Accuracy @ 20°C	10% to 100% range: $< \pm (0.25\% \text{ reading} + 1 \text{ digit})$ 0 to 10% range: $< \pm (0.025\% \text{ range} + 1 \text{ digit})$	Note: Unipolar span only, standard accuracy applies to bipolar span.
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	
Minimum Step Response	100ms	
Output Update	50ms	
Output Resolution	Better than 0.033 % Span	
Overload	20 x DP range	
Static Pressure	± 1 bar Gauge	

Construction

Enclosure	IP54 rated ABS Choice of mounting options
Dimensions	120 x 80 x 58mm
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

Furness Controls Limited

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Differential Pressure Transmitter



- Accuracy 0.25% Reading
- Ultra low pressure measurement
- Wide span adjustment
- 2-wire mA, 3-wire or 4-wire voltage output
- Two configurable relays
- Square-root output for flow/velocity
- Auto zero and remote zero options
- Robust stainless steel enclosure

Suitable for a variety of clean environment applications the FCO342 low differential pressure transmitter is housed in a IP64 brushed stainless steel enclosure and 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.

The large LCD may display a variety of engineering units, and two independent relays can provide alarm signals.

The FCO342 can be adjusted from a PC using the FCO301 software utility and cable.

Features

Models/Ranges	Model1: $\pm 50\text{Pa}$ Model2: $\pm 150\text{Pa}$ Model3: $\pm 500\text{Pa}$	Model4: $\pm 2500\text{Pa}$ Model5: $\pm 10\text{kPa}$ Model6: $\pm 20\text{kPa}$	High pressure ranges available on request
Output Options	2 wire 4-20mA 3 wire voltage: 0-1 VDC to 0-10VDC full scale 4 wire voltage: 0-1 VDC to 0-10VDC full scale 4 wire voltage: ± 1 VDC to ± 10 VDC full scale 4 wire isolated: any of the mA or voltages above		
Display (Optional)	Most common differential pressure, volumetric flow, mass flow, and velocity units		
Adjustable Damping	0.0 to 60.0 seconds		
Square Root function	Optional		
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 $\frac{1}{8}$ " BSPF $\frac{1}{4}$ " BSPF Front panel calibration ports		

Performance

Enhanced Accuracy @ 20°C	10% to 100% range: $< \pm (0.25\% \text{ reading} + 1 \text{ digit})$ 0 to 10% range: $< \pm (0.025\% \text{ range} + 1 \text{ digit})$	Note: Unipolar span only, standard accuracy applies to bipolar span.
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	
Minimum Step Response	100ms	
Output Update	50ms	
Output Resolution	Better than 0.033 % Span	
Overload	20 x DP range	
Static Pressure	± 1 bar Gauge	

Construction

Enclosure	IP64 rated Stainless Steel Choice of flush mounting or wall mounting options
Dimensions	Flush mount: 160 x 160 x 54mm Wall Mount: 156 x 162 x 56mm
Materials in Contact With Media	Copper, brass, nickel, mica & PVC
Media Compatibility	Air and non-corrosive gases max 95% humidity non-condensing
Weight	1.6kg

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Differential Pressure Transmitter



- Ultra low pressure measurement
- Wide span adjustment
- 2-wire mA, 3-wire or 4-wire voltage output
- Two configurable relays
- Square-root output for flow/velocity
- Polycarbonate enclosure

The FCO352 is a fully configurable IP66 rated low differential pressure transmitter available in 2, 3 or 4 wire configuration to suit a wide range of input and output configurations and has pneumatic connections for standard 54mm centre process manifolds.

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

The FCO352 can be adjusted from the integral four-button keypad or a PC using the FCO301 software utility and cable.

Features

Models/Ranges	Model1: $\pm 50\text{Pa}$ Model2: $\pm 150\text{Pa}$ Model3: $\pm 500\text{Pa}$	Model4: $\pm 2500\text{Pa}$ Model5: $\pm 10\text{kPa}$ Model6: $\pm 20\text{kPa}$
Output Options	2 wire 4-20mA 3 wire voltage: 0-1 VDC to 0-10VDC full scale 4 wire voltage: 0-1 VDC to 0-10VDC full scale 4 wire voltage: ± 1 VDC to ± 10 VDC full scale 4 wire isolated: any of the mA or voltages above	
Display	Most common differential pressure, volumetric flow, mass flow, and velocity units	
Adjustable Damping	0.0 to 60.0 seconds	
Square Root function	Standard	
Trip Level Relays	Optional: 2 relays, rated 2A @ 55Vac, 30Vdc	
Zero Control	Optional: Automatic or Remote	
Pneumatic Ports	$\frac{1}{4}$ " BSP female fittings and mounting for 54mm centres manifold	

Performance

Unipolar Accuracy @ 20°C	10% to 100% range: $< \pm (0.25\% \text{ reading} + 1 \text{ digit})$ 0 to 10% range: $< \pm (0.025\% \text{ range} + 1 \text{ digit})$
Bipolar 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 bipolar specification
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
Minimum Step Response	100ms
Output Update	50ms
Output Resolution	Better than 0.033 % Span
Overload	100 x DP range
Static Pressure	-1 to +10 bar Gauge

Construction

Enclosure	IP66 rated Polycarbonate, M20 cable gland entry Choice of mounting options
Dimensions	144 x 155 x 93mm
Materials in Contact With Media	Stainless steel, nickel, mica & PTFE
Media Compatibility	Air and non-corrosive gases max 95% humidity non-condensing
Weight	1.4kg

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Intrinsically Safe Differential Pressure Transmitter



-  II 1 G ATEX Classification
- CENELEC Classification Ex ia IIC T5 Ga
- Accuracy 0.25% of reading
- Ultra low pressure measurement
- Wide span adjustment
- 2-wire, 4-20mA output

The FCO354 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 large LCD can display a variety of standard engineering units.

The FCO354 can be adjusted from a PC using the FCO301 software utility and cable (in a safe area).

Features

Models/Ranges	Model1: $\pm 50\text{Pa}$ Model2: $\pm 150\text{Pa}$ Model3: $\pm 500\text{Pa}$	Model4: $\pm 2500\text{Pa}$ Model5: $\pm 10\text{kPa}$ Model6: $\pm 20\text{kPa}$
Output Options	2 wire 4-20mA	
Display (Optional)	Most common differential pressure, volumetric flow, mass flow, and velocity units	
Adjustable Damping	0.0 to 60.0 seconds	
Square Root function	Standard	
Pneumatic Ports	$\frac{1}{4}$ " BSP female fittings and mounting for 54mm centres	

Performance

Unipolar Accuracy @ 20°C	10% to 100% range: $< \pm (0.25\% \text{ reading} + 1 \text{ digit})$ 0 to 10% range: $< \pm (0.025\% \text{ range} + 1 \text{ digit})$
Bipolar 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 bipolar specification
Temperature coefficients	Zero: $< 0.02\%/^{\circ}\text{C}$ Range: $< 0.02\%/^{\circ}\text{C}$
Working Temperature	-10 to 40°C
Minimum step response	100ms
Output Update	50ms
Long term drift	Typically 0.2% per annum
Overload	100 x DP range
Max. Static Pressure	-1 to +10 bar Gauge

Construction

Enclosure	IP65 ATEX rated Aluminium enclosure
Dimensions	166 x 160 x 94mm
Materials in contact with media	Stainless steel, nickel, mica & PTFE
Media Compatibility	Air and non-corrosive gases max 95% humidity non-condensing
Weight	3.5kg

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