



Description

The Cal-Mate 3102 is a compact piezoresistive pressure transmitter using a diffused-silicon, oil-filled sensing core and signal-conditioning electronics. Laser trimming and temperature compensation provide stable, accurate output for pressure measurement and control in demanding industrial environments.

Its corrosion-resistant stainless-steel construction, broad pressure range and flexible electrical and process-connection options make it suitable for OEM and industrial control systems.

Application

The 3102 pressure transmitter is suitable for the following industrial applications.

• Pipeline systems and automatic pumping	• Water treatment
• Oil pressure measurement	• Agricultural irrigation
• Automotive parts	• Pump systems
• HVAC pressure system control	• Refrigerant systems

Special Features

- Compact size, easy to install
- Imported signal-conditioning chip with temperature compensation and high accuracy
- High overload capability
- Long-term stability
- Wide application range

Specifications

Parameter	Specification
Model	3102 Pressure Transmitter
Pressure type	Gauge, sealed-gauge or absolute pressure
Measuring range	-1 to 700 bar
Overload / burst pressure	150 % / 200 % of rated range
Accuracy	0.25 % to 0.5 % of full scale
Signal outputs	4-20 mA, 0-5 V, 0-10 V, 0.5-4.5 V, I2C, 0-100 mV or other
Supply voltage	5 V, 3.3-5 V, 8-30 V, 9-30 V, 10 V or 12-30 V depending on output
Zero temperature drift	2 %
Sampling frequency / start-up	2.4 kHz / 150 ms
Operating / storage temperature	-20 to 70 °C / -20 to 70 °C
Protection class	IP65
Wetted parts	Stainless steel
Electrical connections	Cable outlet, Packard, Mini DIN43650, GX12-3 or M12 4-pin
Process connections	G1/4, 1/4 NPT, M20 x 1.5, M10 x 1, G1/8, 1/8 NPT, 7/16-20 UNF female or other

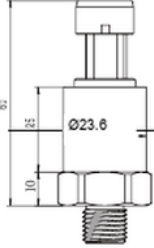
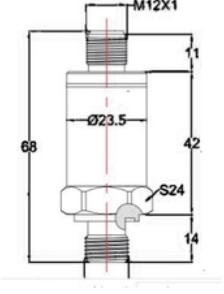
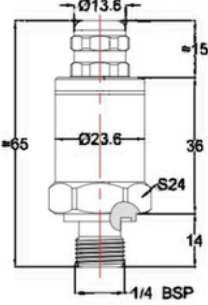
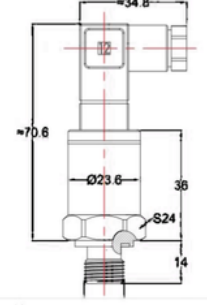
Output Signal

4-20 mA: 8-30 VDC supply, two-wire loop output.

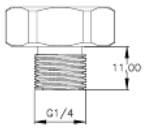
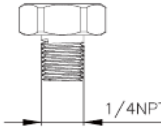
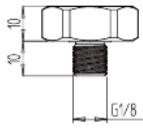
Voltage: 0-5 V, 0-10 V or 0.5-4.5 V options according to supply voltage.

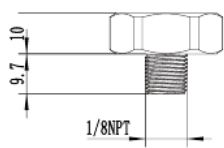
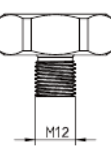
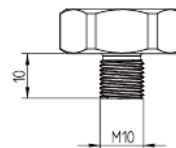
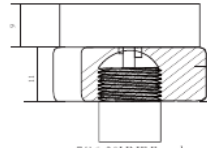
I2C: 3.3-5 V supply for digital communication applications.

Electrical Diagram

Packard		M12 4Pin		Cable Outlet			Mini DIN43650		
									
C1		C2		C3			C4		
4-20mA	Voltage	4-20mA	Voltage	4-20mA	Voltage	I2C	4-20mA	Voltage	
Red/Pin1 VCC Black/Pin2 GND	Red/Pin1 VCC Black/Pin2 GND Yellow/Pin3 VOUT	Brown/Pin1 VCC White/Pin2 GND	Brown/Pin1 VCC White/Pin2 GND Blue/Pin3 VOUT	Red VCC Black GND	Red VCC Black GND Yellow VOUT	Red VCC Yellow SCL Black GND White SDA	Red/Pin1 VCC Black/Pin2 GND	Red/Pin1 VCC Black/Pin2 GND Yellow/Pin3 VOUT	
		I2C	Brown/Pin1 VCC White/Pin2 SCL Blue/Pin3 GND Black/Pin4 SDA						

Process Connections

Unit:mm The hexagon is 24mm			
Number	P1	P2	P3

Thread	1/8 NPT	M12x1.5	M10x1	7/16-20UNF Female
Unit:mm The hexagon is 24mm				
Number	P4	P5	P6	P7

Thread codes P1-P7 cover G1/4, 1/4 NPT, G1/8, 1/8 NPT, M12 x 1.5, M10 x 1 and 7/16-20 UNF female connections. Hexagon size: 24 mm.

How To Order

E.g.

Product Group Name	Model	Range	Output Signal	Power Supply	Process Connection	Electrical Connection	Options
Pressure Transmitter	3102	0...25 bar	4...20 mA	10...32 VDC	1/4 BSP	Cable Outlet	-

Or simply order by item number on the basis of your previous purchases.

Installation

- Select a pressure range, output signal, electrical connector and process thread suitable for the application.
- Tighten the transmitter only at the process-connection hexagon; avoid torsional load on the housing or cable.
- Verify wiring polarity and the applicable supply voltage before energising the instrument.