

Differential Pressure Gauge

Model 700.06, with magnetic piston and separating diaphragm

WIKA data sheet PM 700.06

Mini DP Gauge

Applications

- Liquid level measurement in beverage tanks
- Liquid level measurement of liquid gases
- Cryogenic industries

Special features

- Aluminum body construction
- Silicone separating diaphragm
- 600 psi maximum working pressure
- Overpressure safe 350 psi either side
- Optional 4...20 mA or 0.5...4.5 VDC output signal

Description

The 700.06 is primarily used for monitoring differential pressures, at high working pressures typically found in the cryogenic industries.

Model 700.06 is a cost effective solution for differential pressure measurement. Its rugged design features a black anodized aluminum body ideal for installations in both indoor and outdoor environments.

Model 700.06 utilizes a silicone separating diaphragm ideal for liquid level, low temperature measurements. It meets current and future beverage industry requirements.

This piston-type differential pressure gauge offers unique advantages due to its compact design and/or its easily readable 1-1/2" dial size.



Model 700.06



Model 700.06 with output signal

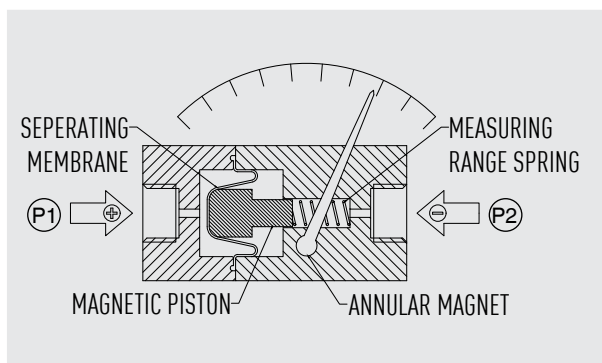
Model 700.06 can be optionally supplied with either a 2-wire 4...20 mA output signal or a 0.5...4.5 VDC ratio metric output signal with a very low power consumption.

The industry best low media temperature capability of -65°F (-54°C) makes model 700.06 the ideal solution for cryogenic applications.

Specifications

Differential pressure gauge, model 700.06	
Nominal size	1.5" (41 mm)
Accuracy class	± 5.0 % of full span at decreasing differential pressure
Measuring range	0...36 in.WC 0...50 in.WC 0...53 in.WC 0...75 in.WC 0...100 in.WC 0...150 in.WC 0...200 in.WC 0...250 in.WC
Scales	Non-graduated scales with yellow band from 0 to 1/3 point and Green band from 1/3 point to full scale range
Max. working pressure	600 psi (40 bar)
Overpressure safety	350 psi (24 bar) either side
Burst pressure	4000 psi (based on laboratory tests in a controlled environment)
Permissible ambient temperature range	-40...+140 °F (-40...+60 °C)
Permissible media temperature range	-65...+140 °F (-54...+60 °C)
Ingress protection	IP65 per EN/IEC 60529
Process connection	2 x 1/8"NPT female in-line (end connection)
Sensor block (wetted)	Black anodized aluminum
Pressure elements (wetted)	Ceramic magnet, 302 SS spring, aluminum, brass, acetal thermoplastic
Elastomers (wetted)	Silicone O-ring and membrane
Dial	White aluminum
Pointer	Black aluminum
Window	Acrylic

Illustration of operating principle



Design and operating principle

Pressures p_1 and p_2 prevail in the + and - measuring chambers, separated by the pressure-loaded magnetic piston and the separating diaphragm. The difference in pressure causes a lateral movement of the piston supported by the measuring range spring.

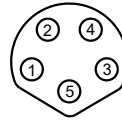
An annular magnet attached to the instrument pointer follows the magnet located inside the piston so that each piston position is assigned to a defined position of the pointer.

This design enables a complete mechanical separation of the measuring system and the indicator while eliminating any leakage to the outside. A silicone membrane separates the high pressure from the low pressure side.

Options

■ VDC output signal:

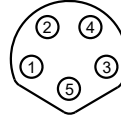
Ratio metric output signal: 0.5...4.5 VDC
 Supply voltage: 5 VDC \pm 0.5
 Startup time: < 250 ms
 Power consumption: < 200 mW
 Enclosure rating: IP65
 Electrical connection: M8 thread



PINOUT:
 1: 0V (SUPPLY NEGATIVE)
 3: 5V (SUPPLY POSITIVE)
 5: V_{out}

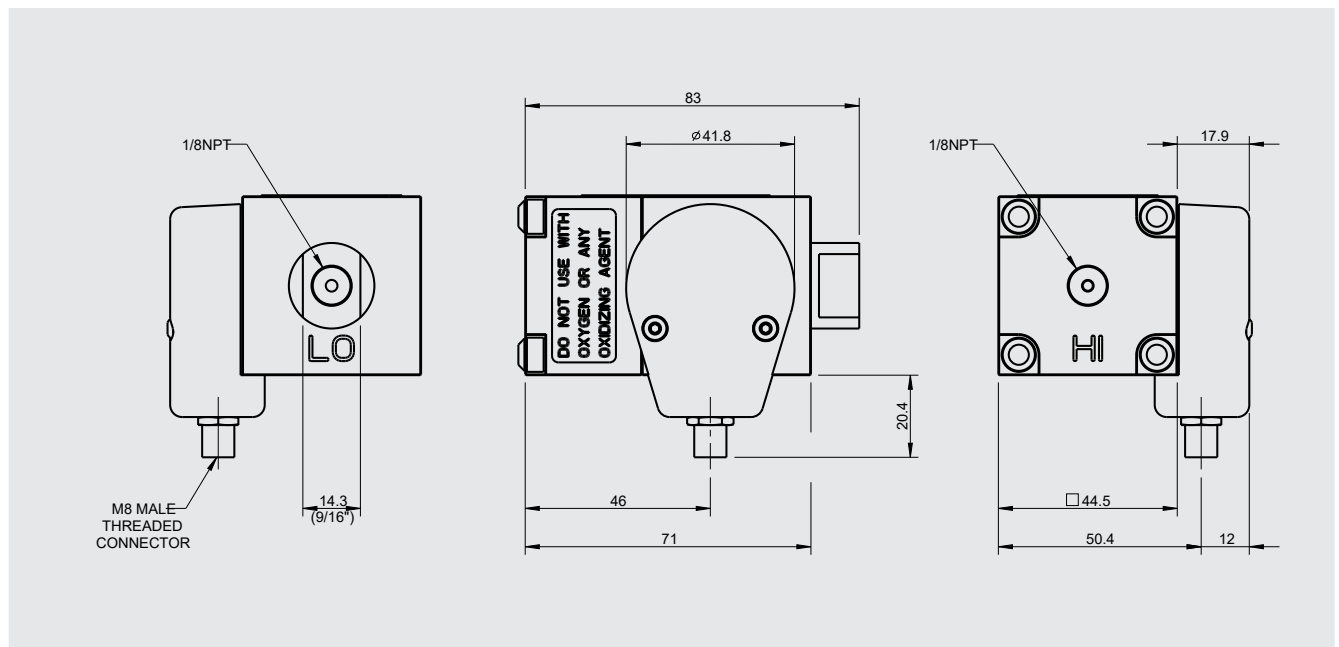
■ mA output signal:

Output signal: 4...20 mA, 2-wire
 Supply voltage: 24 VDC \pm 1.0
 Startup time: TBD (contact factory)
 Power consumption: TBD (contact factory)
 Enclosure rating: IP65
 Electrical connection: M8 thread



PINOUT:
 3: +LOOP
 5: -LOOP

Dimensions in mm



Modifications may take place and materials specified may be replaced by others without prior notice.
 Specifications and dimensions given in this data sheet represent the state of engineering at the time of printing.