

Submersible Tank Gauging Level Transmitter

- Stainless steel housing and diaphragm
- Pressure ranges from 1mWG to 10mWG
- Piezo-resistive pressure sensor
- Accuracy: $<\pm 0.5\%$ FS BFS (0.25% typical)

Applications include:

- Static tank level
- Container or chamber level
- Vehicle tank level



Description

The IMTG has been designed for use in continuous submersion in liquids such as water, oils and fuels in small tanks and containers where conventional mechanical level switches and sensors are not ideal and more level "control" and measurement is required. The IMTG submersible device uses a silicon pressure sensor which has excellent performance and stability. It is ideal for applications where a small tank level is required from as low as 1m through to 10m high tanks.

The housing is stainless steel and with a choice of PVC, PUR, FEP or TPE cable material enables compatibility to water, oils and fuels. Every device is temperature compensated and calibrated, supplied with a traceable serial number and calibration certificate. Gauge or sealed gauge versions are available.

Instrumentation:

These pressure transducers are compatible with a wide range of AIC's instrumentation. Models include:

- Panel Mount
 - PM4-IV (2 or 3 wire), PM4-SG (4 wire) or PM4-WT (4 wire) single channel input
 - PM4-IV3 (2 or 3 wire) up to 3 channels of input with arithmetic functions
 - PM4-LN (2 or 3 wire) single channel input with 50 point lineariser
- DIN Rail mount
 - RM4-IV (2 or 3 wire), RM4-SG (4 wire) or RM4-WT (4 wire) single channel input
 - RM4-I4 (2 wire) or RM4-V4 (3 wire) up to 4 channels of input with arithmetic functions
- Wall mount scanning displays
 - LD5-IV8 up to 8 channel input. Displays from 20mm to 200mm digit height
- Large digit displays
 - LD-IV (2 or 3 wire), LD-WT (4 wire) single channel input. Displays from 38mm to 200mm digit height

IMTG-1.0-0

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Specifications

Pressure Specification

Pressure Range unsealed (mWG G):	1.0	1.6	2.5	3.5	5.0	6.0	7.5	10
Pressure Range sealed (mWG SG):	1.0	1.6	2.5	3.5	5.0	6.0	7.5	10
Permissible overpressure (mW):	20	20	20	20	50	50	50	50

Output Signal and Supply Voltage

Wire system	Output	Supply Voltage
2 Wire	4-20mA (2 wire)	9-32VDC
3 Wire	0.5 to 4.5V DC / ratiometric 0.5 to 4.5V dc / non-ratiometric (others on request)	5V DC 8-30V DC
4 Wire	Passive mV/V (dependent on range) 2mV/V (rationalised)	2-12V DC 2-12V DC

Output Specifications

Accuracy (non linearity)	Standard: $<\pm 0.5\%$ /FS (BFSL) Optional: $<\pm 0.25\%$ /FS (BFSL)
Hysteresis	$<\pm 0.1\%$ /FS
Settling errors (offsets)	2 wire Zero and Full Scale $<\pm 0.5\%$ /FS 3 wire Zero and Full Scale $<\pm 0.5\%$ /FS 4 wire Zero and Full Scale $<\pm 0.1\%$ /FS
Permissible load	2 wire $R_{max} = (\text{Supply voltage} - 9 \text{ min})/0.02 \text{ Ohms}$
Output resistance	4 wire $R_{min} = 11k \text{ Ohm}$

Other Specifications

Process temperature	-20 to +60°C (non freezing)
Storage temperature	-40 to +70°C
Housing	303 Stainless steel
Diaphragm	316 Stainless steel
'O' ring material	Viton (others on request)
Cable	PUR (others on request)
Current consumption	2 wire: limits at 25mA, 3 wire: Typ. 6mA, 4 wire: Typ. 5mA
Weight	Transmitter approx. 75g, cable approx 58g per meter
Dimensions	Transmitter body length 80mm (nom.), diameter 24mm
Operational life	100×10^6 cycles
Wiring 2 wire PUR cable	Red + supply, Blue - Supply, White Ground, Screen Green
Wiring 3 wire PUR cable	Red + supply, Blue - Supply, + Output Yellow, White Ground, Screen Green
Wiring 4 wire PUR cable	Red + supply, Blue - Supply, + Output White, - Output Yellow, Screen Green
Consult for other cable types	

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