

MRL24

Submersible Level Transmitter with Integrated Temperature Sensor

MeasureX

Features

- Integrated Pressure and Temperature Sensor
- Level Measurement Range of 1m H₂O to 200m H₂O
- Rugged Model with IP68 Protection
- Wide Range of Media Compatibility
- Low Static and Thermal Errors



Description

MRL24 series with SS316L or Tantalum diaphragm is a rugged silicon technology based pressure transmitter equipped with integrated temperature sensor suitable for simultaneous measurement of level and temperature of any point in liquids.

This compact pressure transmitter offers great flexibility and reliability for a wide range of applications with highly competitive pricing. MRL24 is available in pressure ranges from 0m H₂O to 200m H₂O and temperature range from -20°C to +100°C with an output of mA (or V as option). It is suitable for level measurement of liquids compatible with stainless steel.

While the standard Precision for level sensor is 0.5% FS, you can optionally get a precision of 0.25%. Standard precision of temperature sensor is 1% FS, whereas 0.5% FS is available as option.

The robust construction and IP68 protection level of MRL24 with its high performance makes it ideal for demanding long term applications.

Applications

- Process industries
- Hydrology research
- Data logging
- Level measurement of liquids in tanks
- Water level measurement in dams
- Research projects
- Irrigation and other agricultural applications
- Hydrostatic level control
- Waste water channels
- Petroleum and chemical industries

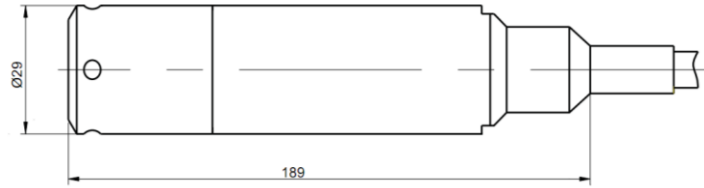
Technical Specifications

- **Pressure media:** all fluids compatible with stainless steel
- **Pressure ranges:** 0 to 200m H₂O
- **Temperature range:** -20°C to +100°C
- **Supply voltage:** 10 to 30 VDC
- **Level output signals:** 4/20mA, 0/5V, 1/5V
- **Temp. output signals:** 4/20mA, 0/5V, 1/5V
- **Level precision:** 0.5% FS (standard), 0.25% FS, combine LRH error
- **Temp. precision:** 1% FS (standard), 0.5% FS
- **Pressure references:** Vented Gauge, Absolute
- **Overpressure rating:** 150% FS
- **Compensated temp. range:** 0 to 70°C
- **Operating temp. range:** -20 to +90°C
- **Temp. coefficient of zero:** 0.02% FS /°C
- **Temp. coefficient of span:** 0.02% FS /°C
- **Insulation resistance:** 500MΩ @ 100VDC
- **Electrical connection:** 7.6mm shield cable connection
- **Case materials:** SS321
- **Diaphragm materials:** SS316L
- **Sealing:** n-Butyronitrile or fluoro-rubber sealing ring
- **Protection Level:** IP68 with cable connection
- **Long term stability:** <0.15% FS/year

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Dimensions



MRL24 with integrated amplifier and IP68 protected cable connector

Connection Instruction

For Pressure Sensor:

- M Red: power+
- M Black: signal +

For Temperature Sensor:

- M Green: power +
- M White: signal +

4/20mA, 2 wire loop powered

For Pressure Sensor:

- M Red: power +,
- M Black: GND,
- M Yellow: signal +

For Temperature Sensor:

- M Green: power +
- M White: signal +

Voltage, 3-wire

Ordering Code

MRL24							
	Range	1, 2, 5,10, 20, 50, 100, 200m H ₂ O or other ranges in bar or psi					
		Pressure Reference					
		VG (vented gauge)			Abs (absolute)		
		Level Precision ±					
		0.5% FS			0.25% FS		
		Temperature Precision ±					
		1% FS			0.5% FS		
		Level Output Signal					
		4/20mA <small>(2 wire loop-powered)</small>		0/5V volts		1/5V volts	
		Temperature Output Signal					
		4/20mA <small>(2 wire loop-powered)</small>		0/5V volts		1/5V volts	
		Cable Length					
		5m			10m		
		20m			and others		
MRL24	20m H₂O	VG	0.5%	0.5%	4/20mA	4/20mA	10m

Note: All specifications are subject to change without prior notice