

MRL21

Submersible Level Transmitter

MeasureX

Features

- High Measuring Accuracy
- Level Measurement Range of 1m H₂O to 200m H₂O
- Rugged Model with IP68 Protection
- Wide Range of Media Compatibility
- Low Static and Thermal Errors
- Reverse Polarity And Transient Current Protected

Description

MRL21 series with SS316L or Tantalum diaphragm is a rugged silicon technology based pressure transmitter suitable for harsh environments. This compact pressure transmitter offers great flexibility and reliability for a wide range of applications with highly competitive pricing. MRL21 is available in pressure ranges from 0m H₂O to 200m H₂O with an output of mA or V. It is suitable for level measurement of liquids compatible with SS316L or Tantalum (for corrosive media such as hydrochloric acid, concentrated nitric acid, nitro-hydrochloric acid, etc.). While the standard Precision is 0.5% FS, you can optionally get a precision of 0.25% FS and 0.1% FS. The robust construction and IP68 protection level of MRL21 with its high performance makes it ideal for demanding long term applications. MRL21 with separate amplifier makes the measuring head small enough (diameter less than 17mm) for limited space conditions.



MRL21 with integrated amplifier



MRL21 with separate amplifier

Applications

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

Technical Specifications

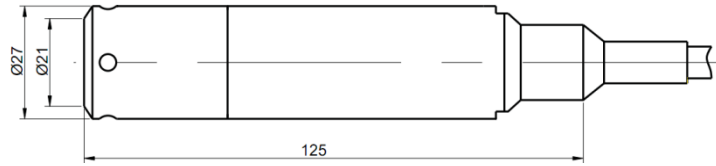
- **Pressure media:** all fluids compatible with SS316L or Tantalum
- **Ranges:** 0 to 200m H₂O
- **Pressure references:** Vented Gauge, Absolute
- **Overpressure rating:** 200% FS
- **Supply voltage:** 12 to 36 VDC
- **Output signals:** 4/20mA, 0/5V, 0/10V, 1/5V
- **Precision:** 0.5% FS (standard), 0.25% FS, 0.1% FS, combine LRH error
- **Long term stability:** <0.1% FS/year
- **Protection Level:** IP68 with cable connection
- **Compensated temp. range:** 0 to 70°C
- **Operating temp. range:** -10 to +80°C
- **Temp. coefficient of zero:** 0.025% FS /°C
- **Temp. coefficient of span:** 0.02% FS /°C
- **Insulation resistance:** 100MΩ @ 50VDC
- **Electrical connection:** 7.6mm shield cable connection
- **Case materials:** SS321
- **Diaphragm materials:** SS316L, Titanium, Hastelloy or Tantalum
- **Sealing:** n-Butyronitrile or fluoro-rubber sealing ring

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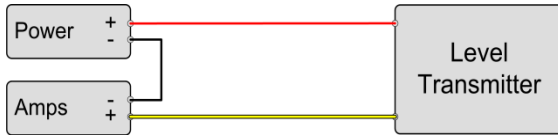
MeasureX

Dimensions

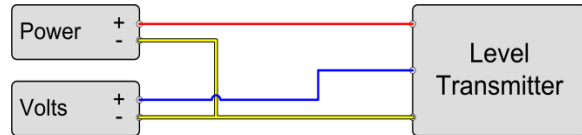


MRL21 with integrated amplifier and IP68 protected cable connector

Connection Diagrams



Power+: Red Signal+: Yellow
4/20mA, 2 wire loop powered



Power+: Red Signal+: Blue GND: Yellow
Voltage, 3-wire

Ordering Code

MRL21							
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)			
	Precision ±⁽¹⁾						
	0.5% FS		0.25% FS		0.1% FS		
	Output Signal						
	4/20mA (2 wire loop-powered)			0/20mA (2 wire loop-powered)			
	0/10V volts		0/5V volts		1/5V volts		
	Cable Length						
	5m		10m				
	20m		and others				
	Diaphragm Material						
	SS316L						
	Tantalum						
	others						
	Amplifier Type						
	Integrated						
	Separated						
MRL21	20m H₂O	VG	0.5%	4/20mA	10m	SS316L	Integrated

Notes:

(1): Sensors with range of up to 3m are available in accuracy of 0.25% and 0.5% FS.
All specifications are subject to change without prior notice

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