



MICRO-BORE SUBMERSIBLE LEVEL TRANSMITTER

MICROLEVEL

HIGH ACCURACY 0.63" OD LEVEL TRANSMITTER

The Microlevel by KELLER America is the smallest diameter, media isolated submersible level transmitter in its class. At only 0.63", it is specifically designed for applications that demand small size and high performance.

The Microlevel combines proven piezoresistive silicon sensor technology with KELLER's state-of-the-art signal conditioning circuitry to provide outstanding $\pm 0.25\%$ FS Total Error Band (TEB)₃ accuracy over a wide compensated temperature range.

This level transmitter is approved to NSF 61 and NSF 3727 standards for water quality and includes KELLER America's guaranteed lightning protection, making the Microlevel the ideal solution for ground water level measurement and environmental monitoring applications, especially for installations where space is limited and areas prone to chronic damage due to transients caused by lightning.

For more information on the Microlevel, or any other KELLER product, please contact KELLER America, or view the entire KELLER catalog at kelleramerica.com.

FEATURES

Class-leading 0.63" outside diameter

NSF 61 / NSF 372 approved construction for use in drinking water applications₆

Guaranteed lightning protection included at no additional cost

16-bit internal digital error correction for cost-effective low Total Error Band (TEB)₃

316L stainless steel construction - Optional Titanium for severe applications.

2-year warranty covers defects in materials and workmanship.

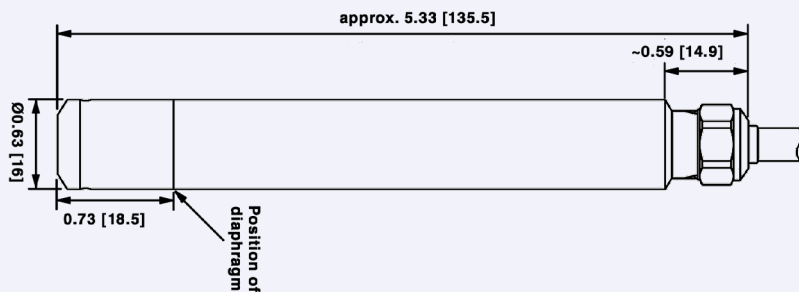
User-rangeable analog output ensures compatibility as requirements change.

RS485 modified-MODBUS compatible interface allows up to 128 transmitters on a single bus.

Standard dual (analog & RS485) outputs simplify interface to controls, data collection, and telemetry systems.

Built in the U.S.A. ARRA Section 1605 Compliant.

Standard 3 day lead time.



Output	White	Black	Blue	Yellow
2-wire (mA)	OUT / GND	+Vcc	RS485A	RS485B

Colors refer to 26AWG PE-jacketed cable conductors.

Braided shield wire connected to transmitter housing. For lightning protection to function properly (4-20mA only) the shield wire must be connected to a good earth ground.

Min. pipe bend radius	1" IPS	1.5" IPS	2" IPS
Schedule 40	18"	5"	3"
Schedule 80	22"	6"	4"



Pressure Ranges_{1,2}

Relative Infinite between 0...3 and 0...900 ft W.C.

1. The Microlevel can be provided with custom calibration at no extra cost. For fluids other than water, the specific gravity must be given at the time the order is placed.

2. Intermediate ranges are realized by deranging the analog output from the next highest basic range: 1, 3, 10, and 30 bar. Level range may be specified in units of lb/in2(psi), inches WC or feet WC. KELLER America uses the International Standard conversion of 2.3067 feet WC/psi.

Accuracy₃

Static ±0.1% FS
Total Error Band ±0.25% BR

3. Static accuracy includes the combined effects of non-linearity, hysteresis, and non-repeatability at room temperature (25°C). Total Error Band (TEB) includes the combined effects of non-linearity, hysteresis, and non-repeatability as well as thermal dependencies, over the compensated temperature range, expressed as a percentage of the basic range (BR).

The calculation for maximum TEB on intermediate ranges (IR) is: $TEB_{IR} = (BR/IR) \times TEB_{BR}$

Output

Current 4...20mA + RS485
Resolution₄ 0.002%

4. Resolution applies to digital output only. Analog resolution is continuous and limited by the process meter and not the instrument.

Certifications

CE EN50081-1, EN50082-2
NSF / ANSI₆ 61, 372

Electrical₅

Supply (4-20mA) 10...30 VDC
Load Resistance (mA) <(Supply-10V)/0.022A

5. Nominal values may be higher depending upon cable length. Cable resistance (~70Ω / 1000ft) adds to the supply requirement. In order to insure proper system operation, calculate the minimum required supply voltage (at the source) as follows:

$$\text{MINIMUM SUPPLY VOLTAGE} = 10 + 0.022 (\text{CABLE LENGTH} \times 0.07) \text{ VDC}$$

Environmental

Protection Rating IP68
Operating Temp. -10...60° C
Compensated Temp. 0...50° C
Wetted Materials 316 L Stainless Steel
Titanium optional
Polyamide
Fluorocarbon
Cable & Sealing PE & EPDM for water / wastewater₆
Hytel & Viton for hydrocarbon
Tefzel & Viton or EPDM as required for chemical interaction

6. NSF 61 and NSF 372 approval applies to 316L stainless steel with PE & EPDM cable sealing option, which is standard on this instrument unless otherwise specified.

Optional Accessories



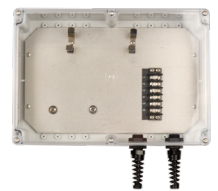
Drying Tube Assembly



Bellows Assembly



Cable Hanger



Termination Enclosure



Interface Converter



Process Meter



Signal Line Surge Protector



Pressure Test Adapter