



GENERAL PURPOSE SUBMERSIBLE LEVEL TRANSMITTER

LEVELGAGE

CUSTOM RANGE ANALOG LEVEL TRANSMITTER

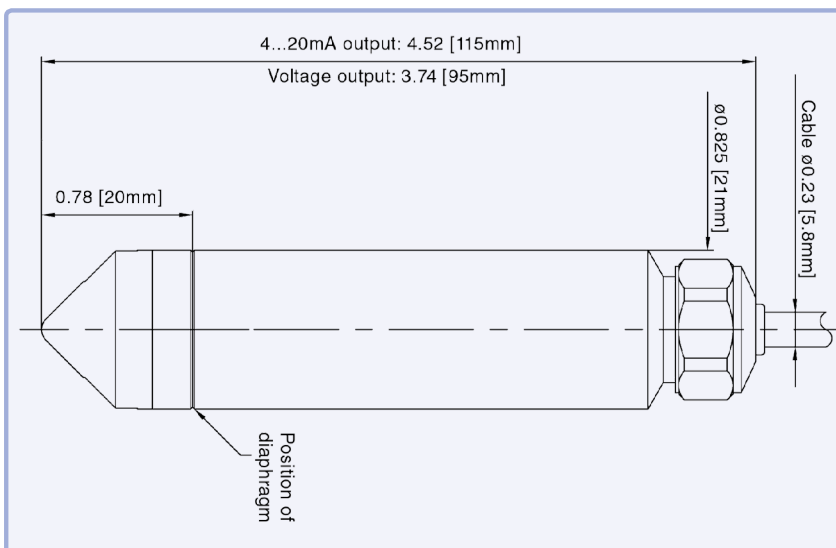
The Levelgage by Keller America provides standard features that far exceed those of comparably priced instruments, including standard $\pm 1\%$ FS Total Error Band (TEB)₃ or optional $\pm 0.5\%$ FS TEB₃ accuracy. This level transmitter is approved to NSF 61 and NSF 372₆ standards for water quality and includes Keller America's guaranteed lightning protection, making the Levelgage an outstanding value for liquid level measurement.

The ability of the Levelgage to provide this level of sustained performance over a wide range of operating conditions makes it ideally suited to an equally wide range of applications, including drinking water, stream and reservoir level, environmental monitoring, tank level, wastewater, and for installations in areas prone to chronic damage due to transients caused by lightning.

For more information on the Levelgage, or any other Keller product, please contact Keller America, or view the entire Keller catalog at <http://www.kelleramerica.com/datasheets.html>.

FEATURES

- NSF 61 / NSF 372 approved construction for use in drinking water applications₆
- 4...20mA models include guaranteed lightning protection at no additional cost
- 16-bit internal digital error correction for cost-effective low Total Error Band (TEB)₃
- 316L stainless steel construction
- 2-year warranty covers defects in materials and workmanship
- Industry standard analog 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	Red
2-wire (mA)	OUT / GND	+Vcc	N/A
3-wire (VDC)	GND	+VCC	+OUT
Braided shield wire connected to transmitter housing			

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





Pressure Ranges_{1,2}

Relative	Infinite between 0...3 thru 0...900 ft W.C
Absolute	Infinite between 0...2 thru 0...11 bar

1. The Levelgag 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 (relative) 2, 4, and 11 bar (absolute). 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	Standard ±0.25% FS
Total Error Band	Standard ±1% BR, Optional ±0.5% 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
Voltage	0...5, 0...10VDC ₄

4. Other voltage output options available on request.

Certifications

CE	EN50081-1, EN50082-2
NSF / ANSI ₆	61, 372

Electrical₅

Supply (4-20mA)	11...28 VDC
Supply (0-5VDC)	8...28 VDC
Supply (0-10VDC)	13...28 VDC
Load Resistance (mA)	<(Supply-11V)/0.022A
Load Resistance (VDC)	>4k ohm

5. Nominal values may be higher depending upon cable length. Internal lightning protection increases the minimum-required supply voltage from 8VDC to 11VDC, due to internal resistance of the surge protectors. In addition, 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:

For two-part (internal+external) system (recommended):
 MINIMUM SUPPLY VOLTAGE = 11.6 + 0.022 (CABLE LENGTH x 0.07) VDC

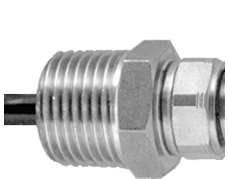
For internal only protector (standard with 4-20mA output):
 MINIMUM SUPPLY VOLTAGE = 11 + 0.022 (CABLE LENGTH x 0.07) VDC

Environmental

Protection Rating	IP68
Operating Temp.	-10...60° C
Compensated Temp.	-10...80° C
Wetted Materials	316 L Stainless Steel Polyamide
Cable & Sealing	PE & EPDM for water / wastewater ₆ Hytrek & Viton for hydrocarbons Tefzel & Viton or EPDM as required for chemical interaction

6. NSF 61 and NSF 372 approval applies only to PE & EPDM construction material option, which is standard on this instrument unless otherwise specified.

Optional Accessories



1/2" NPT Conduit Fitting



Drying Tube Assembly



Bellows Assembly



Cable Hanger



Termination Enclosure



Stabilizing Weight



Process Meter



Open-faced Nose Cap



Signal Line Surge Protector



Pressure Test Adapter