The Levelgage by KELLER America provides standard features that far exceed those of comparably priced instruments, including standard ±1% FS Total Error Band (TEB) or optional ±0.5% FS TEB accuracy. This level transmitter is approved to NSF 61 and NSF 372 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 applications
- 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)
- 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

<table>
<thead>
<tr>
<th>Output</th>
<th>White</th>
<th>Black</th>
<th>Red</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-wire (mA)</td>
<td>OUT / GND</td>
<td>+Vcc</td>
<td>N/A</td>
</tr>
<tr>
<td>3-wire (VDC)</td>
<td>GND</td>
<td>+VCC</td>
<td>+OUT</td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Min. pipe bend radius</th>
<th>1” IPS</th>
<th>1.5” IPS</th>
<th>2” IPS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schedule 40</td>
<td>22”</td>
<td>4”</td>
<td>3”</td>
</tr>
<tr>
<td>Schedule 80</td>
<td>22”</td>
<td>6”</td>
<td>4”</td>
</tr>
</tbody>
</table>
Pressure Ranges

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

Absolute
Infinite between 0...2 and 0...11 bar

1. The Levelgage 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.

Accuracy

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: \( \text{TEB}_{\text{IR}} = (\text{BR/IR}) \times \text{TEB}_{\text{BR}} \)

Electrical

Supply (4-20mA) 11...28 VDC

Supply (0-5VDC) 8...28 VDC

Supply (0-10VDC) 13...28 VDC

Load Resistance (mA) \(<(\text{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

Output

Current 4...20mA

Voltage 0...5, 0...10VDC

4. Other voltage output options available on request.

Certifications

CE EN50081-1, EN50082-2

NSF / ANSI 61, 372

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

Hytrel & 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.