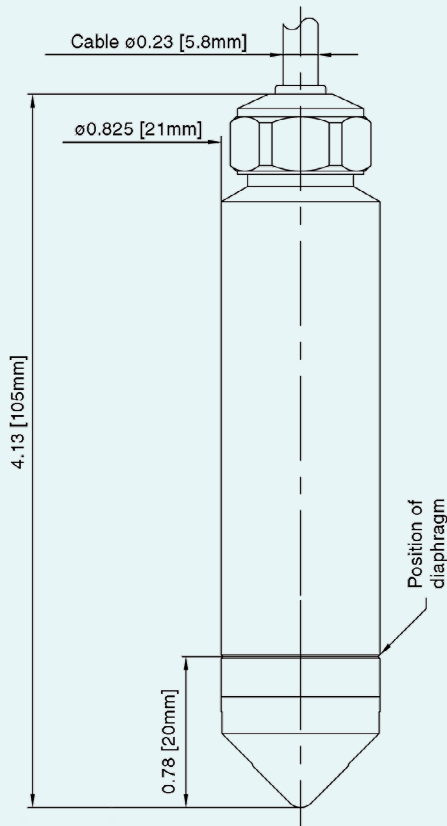


# Acculevel

## High accuracy submersible level transmitter

### Features:

- Certified to NSF/ANSI 61 and 372 standards for use in drinking water applications
- Excellent 0.1% FS static accuracy, 0.25% Total Error Band (TEB)
- 4...20mA models include guaranteed lightning protection at no additional cost
- 316L stainless construction standard - 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
- 2021 IIJA Build America, Buy America-compliant configurations available
- Available with optional, removable cable.
- Standard 3-day lead time



Output	White	Black	Red	Blue	Yellow
2-wire (mA)	OUT / GND	+Vcc	N/A	RS485A	RS485B
3-wire (VDC)	GND	+Vcc	+OUT	RS485A	RS485B

Colors refer to 26AWG PE-jacketed cable conductors.

Braided shield wire connected to transmitter housing. For lightning protection to function properly the shield wire must be connected to a good earth ground!

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



# Acculevel - SPECIFICATIONS

Pressure Ranges <sub>1,2</sub>	
Relative	Infinite between 0...3 and 0...900 ft W.C.
Absolute	Infinite between 0...2 and 0...11 bar (0...29 to 0...160 PSIA)

1. The Acculevel 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.

Output	
Current	4-20mA + RS485
Voltage <sub>3</sub>	0...5, 0-10VDC + RS485
Resolution <sub>4</sub>	0.002%

3. Other voltage output options available on request.

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

Accuracy <sub>5</sub>		
	Standard	Optional
Static	±0.1% FS	±0.05% FS
Total Error Band	±0.25% FS	±0.1% FS
Temperature	typ. ± 0.3 °C	

5. 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:  $TEB_{IR} = (BR/IR) \times TEB_{BR}$

Electrical			
	Supply <sub>6</sub>	Current	Load resistance
4-20mA + RS485 with lightning protection <sub>7</sub>	11...32 VDC	3.2-22 mA	< (Supply-11V)/0.022A
4-20 mA + RS485 w/o lightning protection <sub>7</sub>	8...32 VDC	3.2-22 mA	< (Supply-8V)/0.022A
0-5VDC + RS485 <sub>7</sub>	8...32 VDC	< 8 mA	> 5k ohm
0-10VDC + RS485 <sub>7</sub>	13...32 VDC	< 8 mA	> 5k ohm
Start-up time	250 ms		
Communications	KELLER-bus, MODBUS RTU <sub>7</sub>		

6. 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 loop resistance (~76Ω / 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 internal only protector (standard with 4-20mA output):  
MINIMUM SUPPLY VOLTAGE = 11 + 0.022 (CABLE LENGTH x 0.076) VDC  
For two-part (internal+external) system (recommended):  
MINIMUM SUPPLY VOLTAGE = 11.6 + 0.022 (CABLE LENGTH x 0.076) VDC

7. Disturbance of the analog interface occurs during communication via the digital interface. Simultaneous operation of the analog and digital interface is not recommended.

# Acculevel - SPECIFICATIONS

## Certifications

CE	EN 61000-6-1 to 6-4 / EN 61326-1 / EN 61326-2-3
NSF / ANSI <sub>8</sub>	61, 372

## Environmental

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

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

## Optional Accessories



1/2" NPT Conduit Fitting



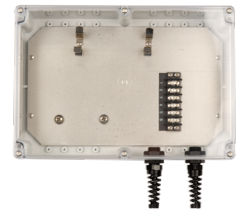
Drying Tube Assembly



Bellows Assembly



Cable Hanger



Termination Enclosure



Pressure Test Adapter



Open-faced Nose Cap



Signal Line Surge Protector



Piezometer Nose Cap



Stabilizing Weight



Detachable Cable Option



Interface Converter (RS485)



Process Meter