



HIGH ACCURACY SDI-12 LEVEL TRANSMITTER

DIGILEVEL

CONVERTIBLE WITH EMULATE MODES FOR OTHER POPULAR SDI-12 INSTRUMENTS

The Digilevel employs KELLER's proven piezoresistive sensor technology coupled with an SDI-12 serial digital interface to create a more versatile and valuable tool for environmental level monitoring applications. SDI-12 is a standard communications protocol used to interface microprocessor-based sensors with data recorders for environmental data acquisition.

This convertible instrument may be used for either submersible level or bubbler pressure measurement with user-selectable pressure connection caps. The conical cap is designed to promote automatic cleaning of the sensing diaphragm, helpful where the submersible level transmitter is deployed in high-silt conditions. The optional bubbler transmitter cap provides a 1/8"NPT female pipe thread for connection to the bubbler apparatus.

The Digilevel is ideal for remote applications where battery-powered operation with minimal current draw and networking multiple sensors to a data recorder are required.

The Digilevel is compatible with all SDI-12 v1.3 commands. In addition, it is capable of operating in several emulate modes for popular SDI-12 level/pressure transmitters including manufacturer-specific extended commands. A graphical user interface and Dongle are available options for those who may be unfamiliar with SDI-12 commands.

FEATURES

Standard $\pm 0.1\%$ FS TEB or optional 0.05% FS TEB or USGS OSW accuracies available

- $\pm 0.1\%$ FS TEB₂ on ranges up to 900 ft W.C.
- Meets OSW spec on ranges up to 70 ft W.C. 0...40° C.

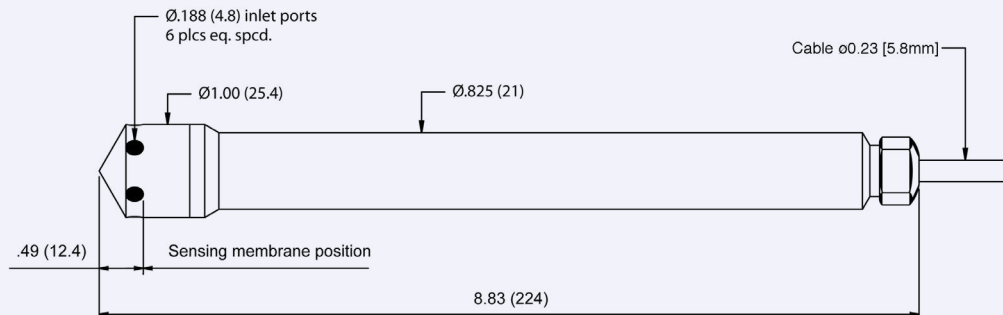
16-bit internal digital error correction for cost-effective low Total Error Band (TEB)₂

Multi-stage lightning protection included at no additional cost.

316L SS construction standard - Optional Titanium for severe applications.

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

2-year warranty covers defects in materials and workmanship.



Red	Black	White
+Vcc	GND	SDI-12
Colors refer to 26AWG PE-jacketed cable conductors.		



Pressure Ranges₁

Standard	Infinite between 0...10 and 0...900 ft W.C
Optional OSW	0...10 up to 0...70ft W.C.

1. Ranges below 10 ft.WC available. Consult factory for details.

Accuracy_{2,3,4}

Pressure	Standard $\pm 0.1\%$ FS TEB Optional $\pm 0.05\%$ FS TEB Optional Opt. ± 0.01 ft when reading ≤ 10 ftWC or $\pm 0.1\%$ of reading > 10 ftWC
Temperature	typ. ± 0.5 °C
Supply Verification	± 0.2 VDC

2. 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.

3. Optional 0.05% FS TEB spec is limited to a compensated temperature range of 0...40° C.

4. Optional accuracy is written in compliance with USGS OSW specification mandates and limited to a maximum range of 70 ftWC and a compensated temperature range of 0...40° C

Output

Digital	SDI-12
Resolution	12-bit
Comm. Protocol	SDI-12 V1.3
Baud Rate	1200 bits/s

Certifications

CE	EN50081-1, EN50082-2
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Electrical₅

Supply	8...28 VDC
Power Consumption	< 1 mA quiescent max. 20mA active
Startup Time	< 5 ms (interface ready)
Load Resistance (mA)	$< (\text{Supply}-6\text{V})/0.0055\text{A}$
Insulation GND-CASE	> 10 M Ω @ 300 V

5. Nominal values may be higher depending upon cable length. Cable resistance ($\sim 70\Omega / 1000\text{ft}$) adds to the supply requirement. In order to insure proper system operation, calculate the minimum required supply voltage (at the source) as follows: MINIMUM SUPPLY VOLTAGE = $10 + 0.025 (\text{CABLE LENGTH} \times 0.07)$ VDC

Environmental

Protection Rating	IP68
Compensated Temp.	-10...60° C 0...40° C ₆
Wetted Materials	316 L Stainless Steel Titanium Optional, Polyamide
Cable & Sealing	PE & EPDM for water / wastewater Hytrel & Viton for hydrocarbons Tefzel & Viton or EPDM as required for chemical interaction

6. Optional compensated temperature range applies to transmitters built to optional 0.05% FS TEB and to transmitters built to USGS OSW accuracy specifications.

7. Standard accuracy only. Titanium construction not available for USGS specification.

Optional Accessories



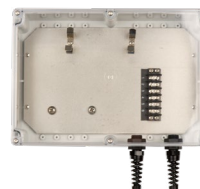
1/2" NPT Conduit Fitting



Drying Tube Assembly



Bellows Assembly



Termination Enclosure



Stabilizing Weight



Pressure Test Adapter



Cable Hanger