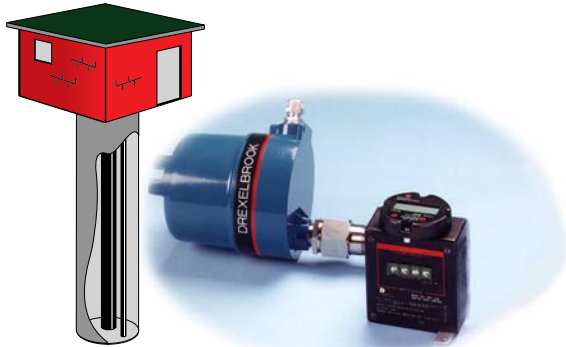


Smart CheckWell™

Water Level Monitoring System



Simple Calibration and Installation

No need for air supplies or vent ports. Sensing element is easily installed in new or existing wells. Easy to configure.

Saves Time & Money;

Low Cost of Ownership. Low price per foot makes the Drexelbrook system the preferred choice.

Not Affected by Oil Layer on Water

Oil on the surface of the water does not "fool" the system. Unlike other technologies, the Drexelbrook unit measures only the level of water in the well.

Not Affected by Electrical Noise

Electrical noise from submerged pumps does not interfere with or affect the reliability of the level signal.

No Maintenance

No need for routine cleaning due to mineral deposits, or recalibration. No vents to clog or maintain. No wiring in well to short out. Unaffected by lightning and electrical surges (standard) or RFI (optional). Once installed, never needs to be pulled out of the well.

The Drexelbrook Smart CheckWell Level Monitor combines field-proven RF technology with the convenience of "smart" technology to provide dependable, low cost continuous level or drawdown measurement in water wells or aqueduct systems.

Because the measurement technology is not density dependent, the CheckWell system will ignore oil within the well and will only measure the water level. The rugged PFA covered sensing element with 316 SS weight assembly is totally inert and never needs to be removed from the well for maintenance/replacement.

Calibration and calibration checks are done anywhere on the two-wire loop. No need to pull the sensing element from the well. No vents to maintain. No electronics in the well or cable to fail.

The Smart CheckWell Level Monitor produces a continuous linear 4-20 mA/HART protocol output signal, directly proportional to the level in the well. This output can be used for remote monitoring/recording, alarm signals, and controlling the pump using optional current-actuated relays.

The Drexelbrook Smart CheckWell level monitor provides automatic, continuous monitoring of level or drawdown in water wells up to 800 feet (244m) deep.

- Easily installed
- Easily Calibrated
- Requires no routine maintenance.
- Simple, all electronic, no-moving-part design for exceptional reliability.
- Unaffected by density variation, mineral or oil deposits on sensing element, and oil on top of water.



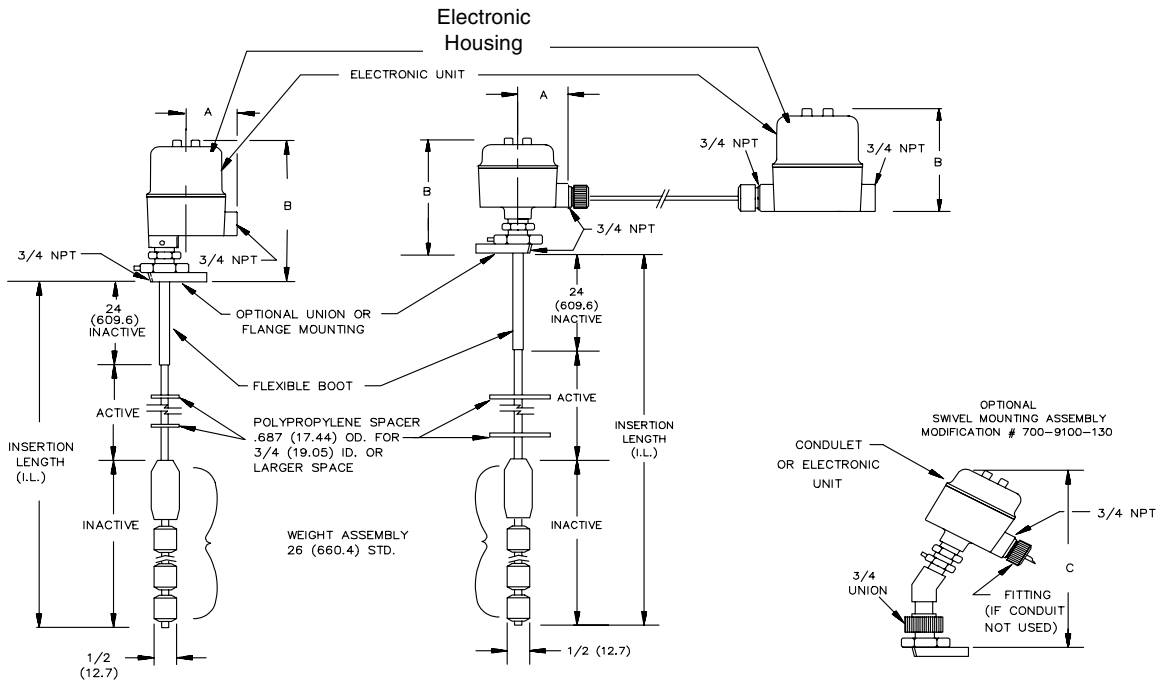
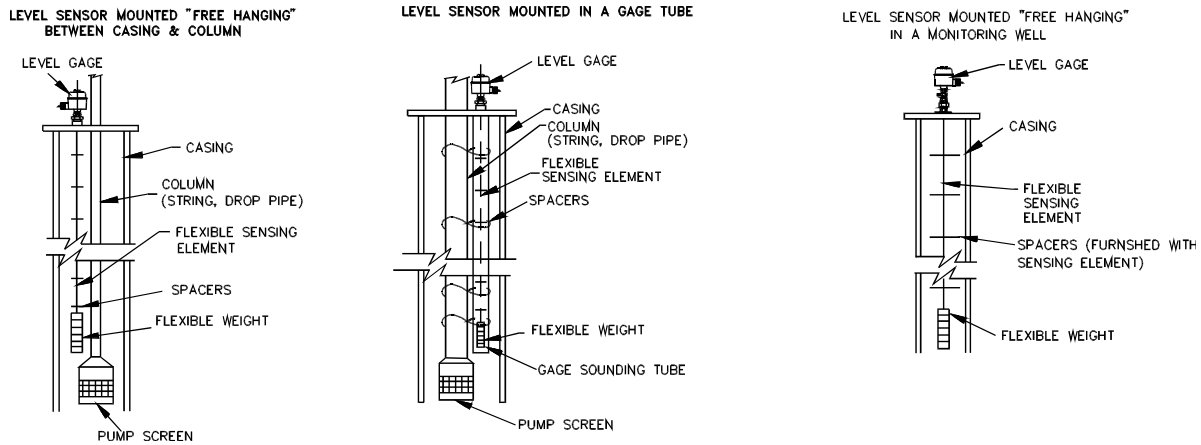
Continuous Level Measurement

Smart CheckWell™

Sensing Element Specifications for # 700-0005-035 (PFA)

Temperature	Pressure	O.D.	Wetted Parts	Mounting
140°F (60°C)	500 psi (33.3 bar)	3/32-in. (2.4mm)	316SS & PFA	3/4-in. NPT, Flange, Union, or Angle Swivel *140°F (60°C)

Well Gauge Installation Details



Max. Clearance Dimensions	A	B	C	D
509-75-938 Series (Integral)	5" (127mm)	10.23" (259.7mm)	12" (304.8mm)	3/4" (19.05mm)
509-75-738 Series (Remote)	3.25" (82.55mm)	6.69" (170.2mm)	12" (304.8mm)	3/4" (19.05mm)

For complete mounting and wiring details, see the following drawings:

- 509-75-937 (Integral Smart CheckWell): 509-75-937-CD1 • 509-75-737 (Remote Smart CheckWell): 509-75-737-CD1

Continuous Level Measurement

Smart CheckWell™

Electronic Unit Specifications

509-75 Series System / 409-1000 Series Electronics

Power Requirement	24 VDC nominal, 12 to 50 VDC
Span Range	Up to 800 ft (244m).
Output	4-20 mA _{dc} , HART protocol, level or drawdown
Load Resistance	600 ohms max. @ 24VDC, 250 ohms min.
Ambient Temperature Limits (electronic unit)	-40°F to 185°F (-40°C to 85°C)
Response Time	Less than one second to 90% of final value when damping time = 0. Damping time up to 30 seconds.
Transient Protection (lightning/surge)	100 Amps, built into electronics, up to 1000 Amps with optional circuit.
RFI Protection	Inherent with unit against standard walkie-talkie and telemetering interference; 5 ft. standard distance with proper installation. Separate RFI Filters are also available for severe cases.
Minimum Water Conductivity	Below 50 microsiemens/cm, consult factory
Effects of Oil on Top of Water	Negligible
Warm Up Time	2 seconds
Accuracy (Controlled Conditions)	1% full scale
Temperature Effect	±0.25%
Linearity	±0.25%
Supply Voltage Effect	±0.25% of output at max. span per 39.2 volt change
Cable Length (Remote Electronic Unit)	25 ft. (7.6m) standard; Max. 150 ft. (46m)
Calibration	HART® handheld communicator or PC (Laptop) software

Intrinsic Safety, Sensing Element and Cable: Intrinsically safe for Class I Groups A,B,C and D; Class II Groups E,F,G (Div. 1 and 2).

Intrinsic Safety, Electronics and Signal Wires: Intrinsically safe for Class I Groups C and D, Class II Groups E, F, G (Div. 1) when powered by an intrinsically safe power supply. Non-incendive for Class I Groups A, B, C and D; Class II Groups E, F, G (Div. 2).

Housing: Nema 1,3,4,5 and 12. FM approved explosionproof for Class I Groups A,B,C,D (Div. 1 or 2), and Class II Groups E,F,G (Div. 1 or 2).

Other Approvals: FM, CSA, CENELEC

***Max. Load resistance:** $\frac{V_s - 12V}{0.02} \Omega$ V_s = power supply voltage

Continuous Level Measurement

Other Great Solutions By: DREXELBROOK®

Universal III™ 509-75 Series

Level Transmitter



DM330 Series

Magnetostrictive Liquid Level Sensor



Wireless Interface Solutions

Wireless Analog / Digital Link

Tube Mount NEMA 4x Transmitter DIN-Rail / Receiver Set



USonic™ Series

Ultrasonic Level Transmitter



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