

WELL WATCHER™

Hydrostatic Level Gauging System

WELL WATCHER

The Complete Level Measurement System...All in One Package



Features

- ◆ Two-year factory warranty on the system
- ◆ Solid-state silicon sensors with milliamp output
- ◆ Rugged stainless steel sensor housing—excellent environmental protection
- ◆ Excellent media compatibility
- ◆ Sensor vented to the atmosphere through the surface end of the cable
- ◆ Microprocessor-controlled meter for quick, easy setup and calibration
- ◆ Selectable setup via 2 front keys or via a PC with optional Infrared LED pen
- ◆ Programmable dual setpoints
- ◆ Meter can be factory-calibrated for inches of water, feet of water, meters of water, or any desired engineering units
- ◆ Easily programmed to read "Drawdown"
- ◆ Compact NEMA 4X weathertight housing
- ◆ Large, easy-to-read 4 digit LED display
- ◆ Optional lightning and secondary surge protection

Advantages

- ◆ Complete easy-to-use system—all in one package
- ◆ Variety of reliable stainless steel sensors
- ◆ Microprocessor-controlled digital display
- ◆ Setpoints and signal outputs for remote monitoring, recording and control
- ◆ Continuous measurement and display
- ◆ Simple installation—virtually no maintenance
- ◆ Low system pricing

The New AMETEK WELL WATCHER Level System Answers Your Level Measurement Needs For: ◆ Municipal Water/Wastewater ◆ Industrial Water Treatment ◆ Landfill Monitoring ◆ Hazardous Waste Treatment ◆ Flood Control ◆ Ground Water Monitoring

With 45 years of experience in high-quality level measurement technology, AMETEK Drexelbrook gives a new dimension of simplicity and reliability to liquid level measurement...The WELL WATCHER Level System.

Until the development of WELL WATCHER, level measurement had been a complex process. Mechanical systems, such as floats and bubblers, required intensive maintenance. Other devices, such as radar technology, conductivity probes, ultrasonic or radiation devices were expensive and limited to narrow applications. WELL WATCHER now provides you with one basic easy-to-use system that is simple to install and requires virtually no maintenance!

The system is composed of a rugged stainless steel transmitter and microprocessor-controlled digital meter.

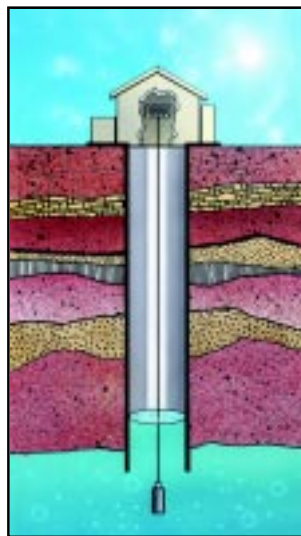
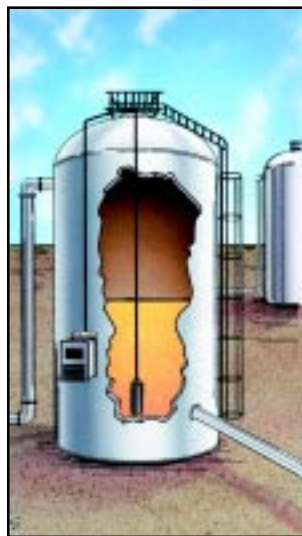
The transmitter is simply lowered into a well, tank or reservoir to hydrostatically measure the level of liquid. The meter then displays the level data, and if required, transmits the level data to another receiver for remote monitoring, recording and control. Two relays are provided for pump control or to activate alarms. It's that easy.

The WELL WATCHER is a factory-calibrated system and carries a full two-year warranty. This user-friendly system handles applications from basic well level measurement to more sophisticated process tank level control. WELL WATCHER even allows for on-the-spot calibration! All of these features combine to give you a cost-effective liquid level measurement system able to handle your most specific level measurement needs.

DESCRIPTION

The AMETEK WELL WATCHER Level System uses a stainless steel transmitter. A series of perforations in the bottom of the unit protects the sensing port from either clogging or damage. The same snub-nosed end can also unscrew, allowing for easy calibration checks.

The customized WELL WATCHER meter displays data from the transmitter, provides excitation voltage and transmits an analog signal for remote recording, alarm or control functions. It is easy to calibrate by front panel adjustments. Its dual-programmable setpoints permit high-high, low-low, or high-low control with adjustable hysteresis. The large, easy-to-read LED display gives local indication while the optional isolated analog output can interface with ancillary display, recording or control devices. Combined into one convenient package, the AMETEK WELL WATCHER Level System provides you with the most versatile level measurement system on the market!



SPECIFICATIONS

RANGES

Feet of Water: 0 to 14, 0 to 35, 0 to 69, 0 to 138, 0 to 230, 0 to 345, 0 to 460, 0 to 690

Meters of Water: 0 to 4, 0 to 10, 0 to 21, 0 to 42, 0 to 70, 0 to 105, 0 to 140, 0 to 210

TRANSMITTER TEMPERATURE RANGES

Max. Operating: -40° to 82° C (-40° to 180° F)

Compensated: -29° to 82° C (-20° to 180° F)

Temp. Effects: Typical $\pm 1\%$ output change for $\pm 25^\circ$ C temp. Change within compensated range when calibrated at 25° C

Accuracy: $\pm 0.25\%$ full scale (Including linearity, hysteresis, repeatability) B.S.L.

TRANSMITTER OUTPUT: 4 to 20mADC, limited to 30 mADC

TRANSMITTER POWER SUPPLY: 24 VDC from meter

TRANSMITTER ELECTRICAL CONNECTION: Attached #20 AWG polypropylene insulated and shielded conductors in a black polyurethane jacket. Unspliced lengths to 3000 ft. (1622 m)

METER HOUSING CONSTRUCTION: Fiberglass reinforced polyester with a transparent polycarbonate hinged cover

TRANSMITTER CABLE COLOR CODE: RED (+) excitation, BLACK (-) excitation, GREEN (caseground).

TRANSMITTER CONSTRUCTION

Diaphragm: Type 316L stainless steel

Housing-Type: 316 stainless steel

Nut/Washer-Type: 316 stainless steel

Cable Grommet: Viton

METER DISPLAY: 4 digit, 0.56 inch high (13 mm), LED display.

METER INPUT VOLTAGE: 90 to 264 VAC @ 47 to 70 Hz

METER POWER CONSUMPTION: 4 VA

METER RANGES: Calibrated to transmitter range in psi, inches, feet, meters of water, or other desired engineering units -1999 to 9999.

METER TEMPERATURE RANGES

Operating: -10° to 60° C

Storage: -40° C to 85° C (-40° F to 185° F).

METER OUTPUT: 0 to 20 mA, 4 to 20 mA or 0 to 10 V, 1 to 5 V selectable. Adjustable over a user defined part of the reading via keypad setup.

Specifications subject to change without notice

Ordering Information

The standard WELL WATCHER liquid level measurement system consists of: A 316 stainless steel, snubnosed, AMETEK Model 750 series submersible transmitter with cable support; a fully-calibrated, microprocessor based meter/controller; NEMA 4x meter housing; and specified lengths of factory installed, waterproof cable1.

Select from the following ranges and options to customize the WELL WATCHER System to meet your particular application requirements.

Transmitter With Cable

TRANSMITTER/DISPLAY RANGE ATTACHED CABLE		
WWA	0 to 14 ft. (0 to 4.2 m)	50 ft. (16.2 m)
WWB	0 to 35 ft. (0 to 10.5 m)	75 ft. (24.3 m)
WWC	0 to 69 ft. (0 to 21.1 m)	100 ft. (32.4 m)
WWD	0 to 138 ft. (0 to 42.2 m)	200 ft. (64.9 m)
WWE	0 to 230 ft. (0 to 70.3 m)	300 ft. (97.3 m)
WWF	0 to 345 ft. (0 to 105.4 m)	425 ft. (137.8 m)
WWG	0 to 460 ft. (0 to 140.5 m)	550 ft. (178.4 m)
WWH	0 to 690 ft. (0 to 211.0 m)	750 ft. (243.2 m)

Meter Output

A	Two relays
B	Two relays, analog output (specify from Analog Output table ²)
C	Two relays, RS232 output

Lightning Protection on Signal/Output Lines

0	No lightning protection
1	Lightning and surge protector (1) for excitation/signal line only between meter and level transmitter.
2	Lightning and surge protector (1) for analog output line only between meter and receiving instrument.
3	Lightning and surge protectors (2) for excitation/signal and analog output lines.

Lightning Protection on AC Power Line

0	No lightning protection for input line to meter
1	Lightning and surge protector for 115 VAC input line to the meter
2	Lightning and surge protector for 230 VAC input line to the meter

(1) Additional length of factory installed cable is available. Specify part #K515076 and additional length (feet) of cable required.

(2) Analog output from Type B meter will be set up and calibrated 4/20 mA for zero to full scale unless otherwise specified.

Analog Output (only with type B meter)

0	None
1	0-20mA
2	4-20mA
3	0-10Vdc
4	1-5Vdc

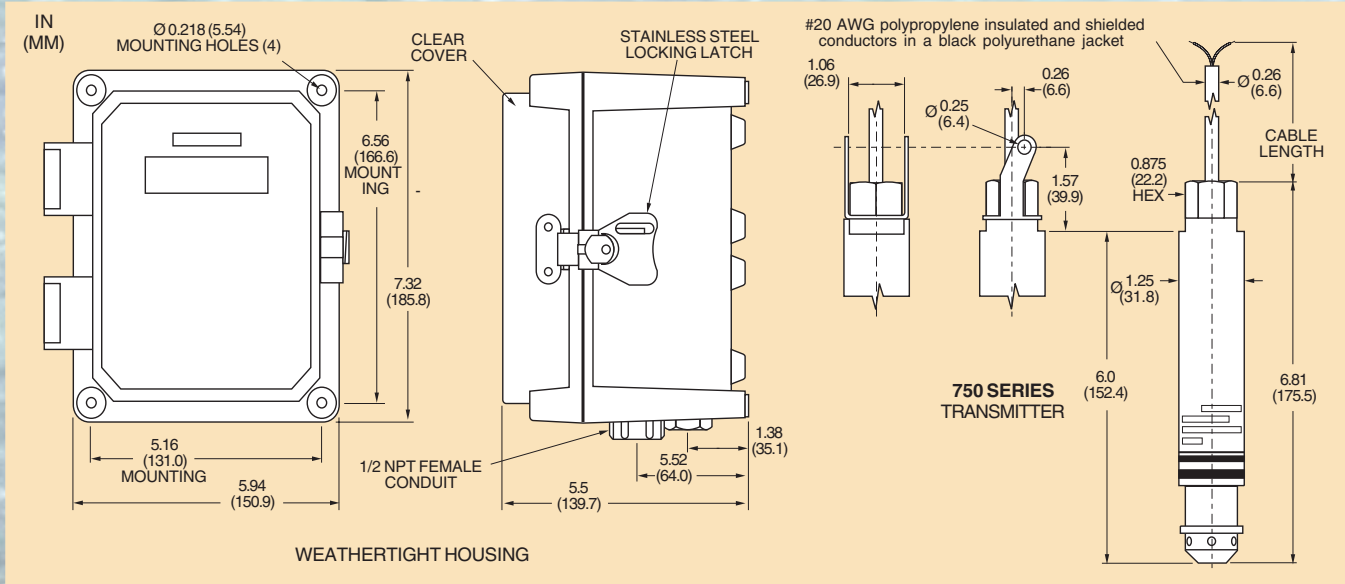
Accessories

K515076	Additional factory-installed waterproof cable
K554149	Metal conduit connector for NEMA 4x weathertight housing
K554127	Cable strain relief cord grip for NEMA 4x weathertight housing 0.11 in. to 0.26 in.
K574533	Analog output circuit board
K574534	RS232 output circuit board
K554168	Cable strain relief cord grip for NEMA 4x weathertight housing 0.20 in. to 0.35 in.
LMA912	Lightning and surge protector for excitation and signal lines between meter and milliamp transmitter
LMA918	Lightning and surge protector for 115 VAC input line to the meter.
LMA919	Lightning and surge protector for 230 VAC input line to the meter

Specify model number and corresponding option codes. For example:

To specify a WELL WATCHER system to measure 69 feet of water with a two relay, 4/20 mA output meter, NEMA 4x weathertight housing and lightning protection for both the signal and 4/20 mA output lines and the analog output calibrated for 0 to 50 feet of water: **WWC B 2 3 0 (0-50 FW)**

Dimensions



Printed in the U.S.A.
on recycled paper

ISO 9001 REGISTERED MANUFACTURER

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