

Universal Lite™ 509-15 Series

RF Level Transmitter



Easy Calibration Saves Time

Push button calibration is menu-driven through a full 4-digit LCD display that resides integral to the electronic unit. No hand-held calibration/configuration terminals are required for a fast basic setup.

Consistent Accuracy

Microprocessor-based circuitry means precise level indication along the entire sensing element. Internal circuitry provides ambient temperature compensation.

Reliability

Drexelbrook's exclusive circuitry ensures dependable level indication in applications with light or moderate coatings.

Eliminate Routine Maintenance

No moving parts to break or wear out. No need for routine maintenance or recalibration.

Digital Display

An optional full 4-digit LCD display can be set up to read in percent or engineering units.

The DREXELBROOK® Universal Lite RF Level indicating transmitter provides a low-cost solution to most level applications and is superior in reliability and performance.

Drexelbrook's 509-15 Series two-wire RF Level transmitter provides dependable, low-cost level indication and control that is suitable for all liquid, and interface applications that do not leave a severe build-up on the sensing element. For applications where heavy build-up is expected, Drexelbrook offers the Universal Admittance transmitter.

A convenient integrally mounted package (or remote up to 50 feet) comes with optional local indication through a full 4-digit LCD display. Calibration and configuration is quick and easy through menu-driven push button selection.

Each system is available with:

- User definable display. (percent or engineering units).
- Easy 2-point calibration.
- Adjustable time delay provides signal damping.
- Meter trim to adjust the output signal to a known plant standard.
- Real-time View of input capacitance values.
- Optional display/keypad for quick and easy setup and local indication.

The Universal Lite can also be configured with the HART® Model 275 Communicator or optional AMETEK Drexelbrook PC software for more detailed setup and diagnostics.



Continuous Level Measurement

Universal Lite™ 509-15 Series

Specifications

Power Requirement

18 to 30 Vdc, HART®
13 to 30 Vdc, Analog

Output

4-20mA Analog,
4-20mA HART Protocol,
Digital HART Protocol

Maximum Load Resistance

550 ohms, HART® with modem/gateway
650 ohms @ 24 Vdc, Analog

Minimum Resistance

250 ohms for HART® protocol

Supply Voltage Effect

0.05% / 10Vdc

Linearity

0.25% of span

Response Time:

Less than 1 second with no damping time
1-90 seconds programmable damping time

Spark Protection

10A standard (100A optional)

Fail Safe

Direct Acting/Reverse Acting

Electronic Housing:

Meets NEMA 1-5 and 12 including NEMA 4X. Suitable for Class I, Groups A, B, C, D; Class II, Groups E, F & G; Class III; Div. 1 & 2. The housing is suitable for Explosion Proof installations in Div. 1 hazardous locations when the electronics are powered from an approved source. Refer to system Control Drawings for proper and safe installation and wiring.

Ambient Temperature Limits

-40°F to 185°F (-40°C to 85°C)

Maximum Cable Length

50 feet (15 m) (remote systems)

Span Range (Typical)

3" (76 mm) to 100' (30 m) on water-based materials. 3' (914 mm) to 100' (30 m) on organic materials
140 feet maximum span range for a 509-15-38 system

Calibration

Three button keypad,
PC-based software,
or Model 275 Calibrator

Area Classifications:

Cables and Sensors are intrinsically safe for all Groups, Division 1 & 2 when the electronics are powered from an approved source. The electronics are intrinsically safe for Groups C, D, E, F & G, Division 1 when powered from an approved source. The system (electronic unit, cable and sensor) is designed to be non-incendive and non-sparking and suitable for all Groups, Div. 2 without intrinsic safety barriers.

Display

Integral 4-digit LCD

Minimum Resistance Sensing Element to Ground

100,000 ohms (with less than a 1.0% effect on output signal)

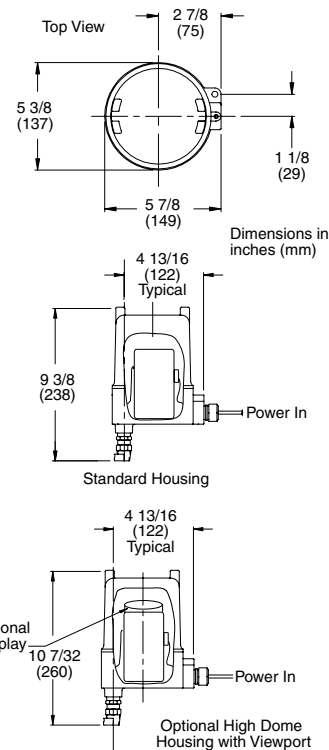
Temperature Stability

0.15% per 30°F (17°C)

Approvals

CE Mark, KEMA (GENELEC), FM, CSA

Dimensions



Model Number of Electronics

409 - 1400 - 0 0 9 - 0 0 Electronic Unit

Agency Approvals

0 = None
F = FM
C = CSA
K = KEMA

Frequency

0 = 100 kHz
1 = 15 kHz
2 = 400 kHz (Integral Only)

Housing options

1 = Chassis only
4 = Remote Nema 4X Explosionproof with 3/4-inch NPT
5 = Integral Nema 4X Explosionproof with viewport and 1-inch NPT
6 = Remote Nema 4X with Drexelcote and 3/4-inch NPT
8 = Integral Nema 4X with Drexelcote and 3/4-inch NPT
9 = Integral Nema 4X Explosionproof with 3/4-inch NPT
C = Integral Nema 4X Explosionproof with 1-inch NPT
D = Integral Nema 4X Explosionproof with Drexelcote and 1-inch NPT
E = Remote Nema 4X Explosionproof with viewport and 3/4-inch NPT
F = Integral Nema 4X Explosionproof with viewport and 3/4-inch NPT

Display/Keypad Option (401-44-3)

0 = Without display/keypad
1 = With display/keypad

Denotes default value

U.S.A. Sales: 800-553-9092 • 24-Hour Service: 800-527-6297 • International Support: 215-674-1234 • Fax: 215-674-2731

AMETEK®
DREXELBROOK

205 Keith Valley Road
Horsham PA 19044 U.S.A.
E-mail - drexelbrook.info@ametek.com
Web - www.drexelbrook.com

AMETEK Nihon Drexelbrook
2 Chome • 12-7 Minami Gyotoku
Ichikawa City • Chiba 27201 Japan
Phone: 81-473-56-6513
Fax: 81-473-56-6535
E-mail: nd@nihon-drexelbrook.co.jp

AMETEK Singapore Pte. Ltd.
10 Ang Mo Kio Street 65
#05-12 Techpoint • 569059 Singapore
Phone: 65-6484-2388
Fax: 65-6481-6588
E-mail: aspl@ametek.com.sg

AMETEK Precision Instruments Europe
Rudolf-Diesel-Strasse 16
D-40670 Meerbusch Germany
Phone: 49-2159-9136-0
Fax: 49-2159-9136-39
Web: www.ametek.de