

## Universal II™ Series

### Level Transmitter



#### Intrinsically-Safe Two-Wire Design

Two-Wire design eliminates need for line power at the field transmitter and saves on costs for associated hardware. The units can be made intrinsically safe when powered from an approved source.

#### Rugged Construction

No moving parts to deteriorate or break down. No routine cleaning or recalibration necessary. Rugged construction resists corrosion and abrasion.

#### No Calibration Shifts

No calibration shifts due to changes in temperature or material densities. Cote-Shield™ circuitry ensures dependable measurements regardless of coatings on the sensing element or build-up on the vessel wall.

#### Proven Performance

Based on technology that has been used successfully at major plants for over a decade.

**AMETEK Drexelbrook's Universal II Continuous Level Transmitter provides dependable level measurements in all kinds of process liquids, slurries, granulars, and interfaces.**

The Universal II Continuous Level Transmitter offers increased reliability, low maintenance and intrinsically safe design.

Field-proven RF technology ensures dependable level measurements in a wide range of conductivities, regardless of coatings or product build-up on the sensor. Calibration is not affected by variations in material densities or changes in temperature.

The Two-Wire, DC-Powered, Electronics can be remotely mounted up to 100 feet from the sensing element, or integrally mounted with the sensing element. All transmitters and signal wires are intrinsically safe when used with an approved power supply.

With the most comprehensive line of standard sensing elements in the industry, each system is configured to meet the specifications of your particular application.

Continuous Level Measurement



# Continuous Level Measurement

## Universal II™ 508-45 Series

### Specifications

**Output**

4-20 mA<sub>dc</sub>

**Supply Voltage**

11.5 - 50 V<sub>dc</sub> at transmitter

**Maximum Load Resistance**

$V_s$  (power supply) -11.5  
.02

(i.e. max 625 ohms @ 24 V<sub>dc</sub>)

**Supply Voltage Error**

± 0.2% maximum of full scale  
from 11.5 to 50 V<sub>dc</sub>

**Accuracy**

± 1% nominal

**Ambient Temperature Limits**

-40°F to 170°F (-40°C to 77°C)

**Output Isolation**

4000 volt minimum  
signal wire to sensor

**Load Regulation**

0.2% for zero to maximum  
load resistance

**Response Time**

0.5 seconds (standard)  
0.5-30 seconds (optional)

**Allowable Static Discharge to Sensor**

10 amps maximum  
100 amps with optional protection circuit

**Sensing Element Connection**

¼-inch NPT (standard)  
Flange mounting (optional)

**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.

**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  
non-incendive and non-sparking and  
suitable for all Groups, Div. 2 without  
intrinsic safety barriers.

**Maximum Cable Length**

100 feet (30 m) (remote mount only)

**Approvals**

CE Mark, KEMA (CENELEC), SSA,  
CSA, FM

### Process Specifications Sensing Element

Sensing Element-dependent.  
See UIII Catalog Pages. Substitute  
Universal III Electronic Unit.

### Typical Applications

Sensing Element-dependent  
See UIII Catalog Pages. Substitute  
Universal II Electronic Unit.

### Model Number of Electronics

408 - 82 **3** 0 - **0** **0** **9** - 0 0 Electronic Unit

**Phasing**  
0 = 0 degree phasing  
3 = 45 degree phasing  
for coating rejection

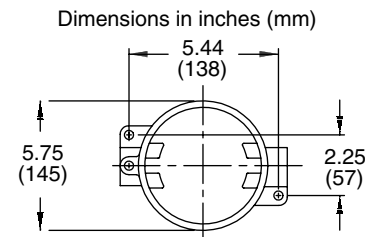
**Agency Approvals**  
C = CSA  
K = KEMA  
F = FM  
0 = No approvals

**Frequency**  
0 = 100 kHz  
1 = 15 kHz

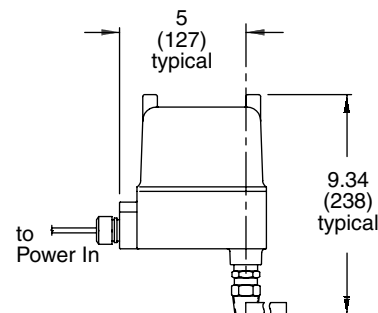
**Housing options**  
4 = Remote Nema 4X Explosionproof  
6 = Remote Nema 4X Explosionproof with Drexelcote  
8 = Integral Nema 4X Explosionproof with Drexelcote  
9 = Integral Nema 4X Explosionproof

Denotes default value

### Dimensions



Top View



Integral Mount Housing

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

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