

VeriGAP™ 504-1200 Series

Two-Wire Ultrasonic Gap Switch



No Calibration Ever

The unit needs no calibration or gain adjustments, regardless of the material to be measured. Measurement not affected by variations in liquid viscosity, density, pressure or electrical properties.

Simple, Economical Installation

One piece design for simplified installation and operation. Two-wire design eliminates the need for line power, conduit, or pull boxes in the field. Sensing element is easily installed in existing vessel openings, and of course...no calibration is needed.

Intrinsically Safe Operation

Transmitter and signal are FM approved intrinsically safe when powered from an intrinsically safe source.

No Calibration Needed

The 504-1200 Series two-wire level switch is an integral unit assembly which senses liquid presence by ultrasonic techniques. No calibration of any kind is needed.

Ideal for Spill Prevention

The two-wire gap switch is ideal as a high-level spill prevention system for non-coating liquids. A special patented Verify circuit lets you meet spill prevention regulations and prevent unnecessary down-time, lost products, and regulatory fines.

Completely Self-Checking

The optional Verify™ test checks not only the electronics, but also the relay and the entire control loop, including final control elements. When the Verify circuit is activated at the push of a button, a signal is sent to the electronics to check the integrity of the sensing element and crystals and then simulate a high level in the tank. If the unit alarms, the operator knows that it will respond during an actual high level situation. This Verify feature can also be paired with our AutoVerify™ receivers, which initiate the Verify test every 10 seconds, but do not let the relays activate any final controls or alarming. If the unit should fail the Verify test, a separate fault relay is activated. A manual override allows for the vital testing of the full control loop.

Two-Wire Operation

This two-wire device changes its current state from normal to alarm when liquid bridges the sensor gap. During normal operating conditions, the unit draws 14-20mA, and during alarm conditions, the unit draws 4-10mA. Any other currents outside these windows causes Drexelbrook two-wire receivers to generate a fault alarm, giving you continuous loop diagnostics (open and short circuit, disconnected loop wires) and control or indication of liquid level at that



Point Level Measurement

VeriGAP™ 504-1200 Series

Specifications

Power Requirements:

13-30 Vdc, 50/60 Hz

Level Output:

4-10 mA (Alarm State), 14-20 mA (Normal State)

Operating Temperature:

-40°F to 160°F (note 1)

Fail Safe:

High Level or Low Level (Field-Selectable)

Repeatability:

1/16"

Response Time:

50 microseconds

Housing:

Nema 1 to 4X, 5 & 12

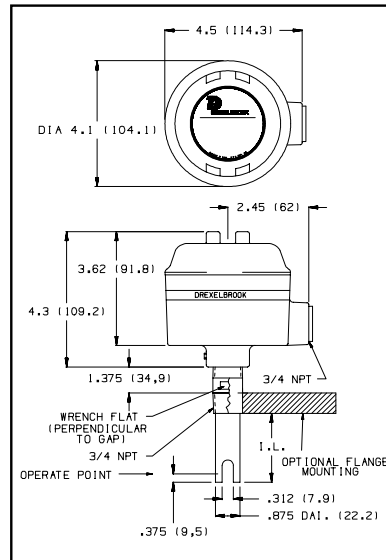
Area Classification:

Class 1 Div. I or II, Groups A,B,C,D, Class 2 Div. I or II Groups E, F, and G

RFI Effect:

No effect on operating point from a 5-watt field @27,150 or 450 MHz

Dimensions:



Sensing Elements - note 3

Model Number (System Number)	Mat'l of Construction	Standard Mounting	Process Temperature	Process Pressure	Standard Insertion Length	Comments
705-1-1 (504-1200-1)	316 SS	3/4-inch NPT	-40°F to 250°F	1000 PSIG Max.	2 3/8, 6 3/8, 12 3/8, 18 3/8, or 24 3/8 inches	
705-1-5 (504-1200-5)	Hast. C	3/4-inch NPT	-40°F to 250°F	1000 PSIG Max.	2 3/8-inches	
705-1-601 (504-1200-8)	316 SS	1 1/2-inch Triclamp	-40°F to 250°F	1000 PSIG Max.	2 3/8-inches	3A Approved sanitary
705-31-1 (504-1200-2)	316 SS	1-inch NPT	-40°F to 250°F	50 PSIG Max.	Adjustable from 2 to 36 inches	
705-2-1 (504-1200-11)	316 SS	3/4-inch NPT	-40°F to 350°F	1000 PSIG Max.	2 3/8, 6 3/8, 12 3/8, 18 3/8, or 24 3/8 inches	with 6-inch cooling extension
705-2-5 (504-1200-15)	Hast. C	3/4-inch NPT	-40°F to 350°F	1000 PSIG Max.	2 3/8-inches	with 6-inch cooling extension
705-32-1 (504-1200-31)	316 SS	1-inch NPT	-40°F to 350°F	50 PSIG Max.	Adjustable from 2 to 36 inches	

Note 1: Unit will operate above 160°F with reduced component life.

Note 2: For critical applications, it is recommended to use a combination of the two wire ultrasonic gap switch and the two-wire RF Admittance transmitter (LCT™) as High and High-High alarms. Both systems have Verify features and can be tied to a single power-supply receiver.

Note 3: Other sensors are available. See your Drexelbrook representative for your specific requirement.

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