



Clear Line™ 506-7100 Series

In-Line Fluid Detector



No Maintenance

Cote-Shield™ circuitry ensures dependable detection regardless of conductive coatings or product build-up on the sensor.

Easy to Install

Mounts directly into existing pipelines between two standard 150-lb. flat-faced flanges.

Simple Operation

Factory calibrated. No need for field adjustments, even with variations in product temperature, density or conductivity. No routine maintenance required.

Low Level/Interface Detection

The Drexelbrook Clear Line Detector is ideally suited for empty pipe and tank applications in pharmaceutical, chemical, and food processing facilities. This reliable instrument monitors the presence or absence of fluid in a pipe for complete assurance that the tank is empty. It can also be used for interface detection to accurately determine when material changes from one phase to another. This is especially useful in processes involving materials separation.

Perfect for Shear-Sensitive Products

The sanitary, crevice-free design of the Clear Line means no cracks or crevices and the ultra-smooth surface is ideal for shear-sensitive products. Easily mounted between flat-faced flanges the Clear Line does not interfere with product flow in any way.

No Recalibration Required

Each Clear Line detector is factory-calibrated to provide reliable, repeatable performance regardless of changes in process fluids and coatings, or variations in temperature, conductivity, and density. It works without recalibration on processes where fluids can vary from organics to caustics.

Optional Alarm Lights

Available with NEMA 4 Housing. Relay contacts (5A DPDT) can be used to switch optional alarm lights and provide contact closure for other functions.



Point Level Measurement

Clear Line™ 506-7100 Series

Specifications

Electronics

Power requirement:

120 ± 25 Vac, 50/60 Hz, 1 watt
 240 ± 50 Vac, 50/60 Hz, 1 watt (optional)
 12-30 Vdc 1 watt (optional)

Ambient temperature:

-40°F to 140°F (-40°C to 60°C)

Level Output:

DPDT relay

Contact Rating:

120 Vac; 5A non-inductive, 3 A inductive
 230 Vac; 5A non-inductive, 2 A inductive
 24 Vdc; 5A non-inductive
 Min. Rating 100mA / 12VDC

Time Delay:

Adjustable 0-120 sec, for pump start/stop.

Fail-safe

Empty-pipe fail-safe (factory set); relay will de-energize, indicating empty pipe upon loss of power.

RFI Protection (built in):

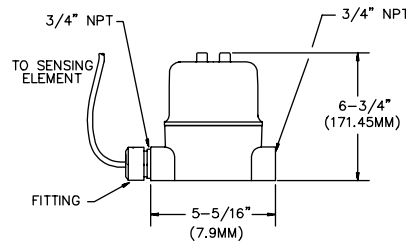
The operating point for unit in housing is unaffected by 5W field @ 27 MHz, 150 MHz, or 450 MHz at a distance of 5 ft. from exposed sensor, cable, or power line.

Standard housings:

NEMA 1-5 and 12 Explosionproof for Class I, Groups A, B, C, D, and Class II, Groups E, F, G (Div. 1 and 2).

Optional Housing:

NEMA 4 with red and green indicating lights.



Sensor

Process temperature/pressure:

340°F max @ 100 PSI max

Material compatibility:

Process-wetted parts: 316L SS & TFE

Mounting:

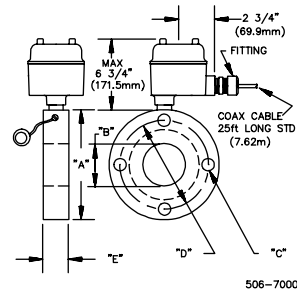
See chart below - column (11)

Measuring Cable:

4-terminal coaxial cable, 10 ft. standard; 160°F max. temp. limit; less than 5/8" O.D. at largest point.

Hazardous Areas:

Sensing element and cable are intrinsically safe for Class I, Groups A, B, C, D, Division 1 and 2; and Class II, Groups E, F, G, Division 1 and 2.



(1) System Model No.	(2) Pipe Size	(3) O.D. "A"	(4) I.D. "B"	(5) Number of Holes	(6) Dia. of Holes "C"	(7) Dia. of Bolt Circle "D"	(8) Width "E"	(9) Wetted Parts	(10) Temp and Press "F @ PSI	(11) Sensor Mounting
506-7031-020	2	6	2.14	4	3/4	4-3/4	1-11/16	TFE/316 LSS	340° @ 100	Vertical only
506-7031-030	3	7-1/2	3.15	4	3/4	6	2-1/8	TFE/316 LSS	340° @ 100	Vertical only
506-7031-040	4	9	4.12	8	3/4	7-1/2	2-3/8	TFE/316 LSS	340° @ 100	Vertical only
506-7031-060	6	11	6.20	8	7/8	9-1/2	2-15/16	TFE/316 LSS	340° @ 100	Vertical only

- (1) Sensor mates with ANSI 150-lb. flat-face flanges in nominal pipe sizes as noted.
- (2) "B" dimension is slightly larger than schedule 40 nominal pipe I.D.
- (3) For other metal wetted parts, consult factory.
- (4) Vertical only: sensor must be mounted in a vertical run of pipe or sloping pipe run to provide material drainage.

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