



The Point™

RF Series Point Level Switch



The POINT

Auto-Calibration!

Intelligent Electronics Save Time and Money

- UNIQUE! - NO calibration or setpoint adjustments, for most applications.
- UNIQUE! - Ignores changes in dielectric or conductivity.
- Automatically recognizes and ignores coatings to prevent false alarms.
- Universal power supply automatically detects & adjusts to input power source.

Diverse Applications

- Detects the absence or presence of liquids, slurries, and granulars.
- Capable of high pressures and temperatures.

Economical Without Sacrifice

- Retains superior performance.
- Less maintenance than other technologies; no moving parts to hang up or wear out.

Output

- DPDT relay dry contacts at 5A, 120VAC.

Remote or Integral Electronics

- Unlike many technologies, electronics can be remote mounted to a convenient or safe location

One of the Drexelbrook RF Point Level Switches You Won't Have to Calibrate

Simply install ThePoint Series into the tank and apply power...that's it! Unlike other RF or capacitance systems that require calibration via setpoint potentiometers, jumpers, magnets, or pushbuttons, ThePoint Series reliably detects the absence or presence of material without any adjustments.

ThePoint Series software continuously monitors the application for changes in composition, dielectric or conductivity, and maintains a repeatable trip point on the probe. Other RF and capacitance systems require calibration adjustments when the process material is changed. Since ThePoint Series recognizes changes in material, it is ideal for non-dedicated tanks that are used for a wide variety of products.

Lower Cost of Ownership

In addition to lower initial investment, ThePoint continues to save with little or no maintenance compared with other technologies. Further, the sensor can be lengthened or shortened in the field, saving need for additional purchases.

Universal Power Supply

ThePoint electronics use a universal power supply module that can be powered from a 19 to 250 Vac or 18 to 200 Vdc supply without moving jumpers.



Point Level Measurement

The Point™

Specifications

Technology:

RF Admittance.

Calibration:

None (for most applications).

Modes Of Operation:

High and Low Level.

Repeatability:

2 mm (0.08 inch) conductive liquids.

Response Time:

Less than one second.

Ambient Electronic Temperature:

-40 to 70°C (-40 to 158°F) FM, CSA

Storage Temperature:

-40 to 85°C (-40 to 185°F).

Indicators:

LEDs: Green Power, Red Relay 1.

Time Delay:

0-60 seconds, forward or reverse-acting.

Supply Voltage:

19-250 VAC

18-200 VDC

Auto-detecting without jumpers.

Power Consumption:

4 watts maximum.

Relay Contacts:

DPDT dry contacts at 5A, 120Vac.

Maximum Contact Load:

5A/30 VDC

5A/250 VAC **Maximum Switching Capacity:**

2000 VA/150 Watt.

Minimum Contact Load (DC):

100 mA/12 VDC

Housing:

Powder-Coated aluminum with two cable entries.

Cable Entry:

M20 x 1.5

¾-inch NPT

Ingress Protection:

IP66 NEMA 4X

Approvals:**Remote**

Explosion-proof for Class I, Division 1, Groups A, B, C, and D; Dust-Ignition proof for Class II, III, Division 1, Groups E, F, and G; Non-incendiary for Class I, Division 2, Groups A, B, C, & D; Suitable for Class II, III, Groups F & G hazardous outdoor Type 4X, IP66 (classified) locations with Intrinsically Safe connections to Class I, II, III, Division 1, Groups A, B, C, D, E, F, and G hazardous (classified) locations in accordance with Control Drawing 420-0004-181-CD.

Integral:

[Same, but Group A does not apply.]

**Integral Sensors**

Class I, Groups B, C, D; Class II, Groups E, F, G; Class III; Type 4, 4X, IP66; T5 for Ta = 70o C. Class I, Division 2, Groups A, B, C, D; Class II, Division 2, Groups F, G; Class III; Type 4, 4X, IP66; T5 for Ta = 70o C

Remote Sensors

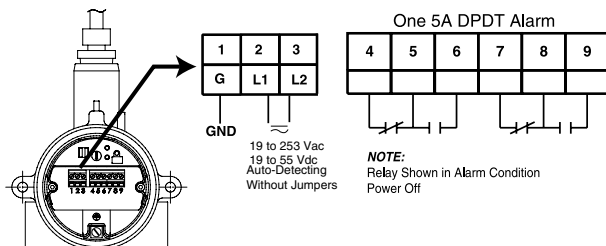
Class I, Groups A, B, C, D; Class II, Groups E, F, G; Class III; Type 4, 4X, IP66; T5 for Ta = 70o C. Class I, Division 2, Groups A, B, C, D; Class II, Division 2, Groups F, G; Class III; Type 4, 4X, IP66; T5 for Ta = 70o C



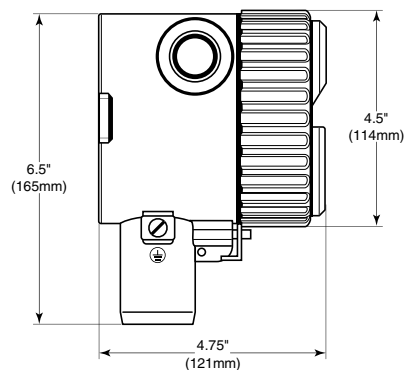
II 1/2 GD EEx d[ia] IIC T2..T5,
Ta = -30°C to +70°C

SAA (Pending)

Wiring



Dimensions



Point Level Measurement

The Point™

Model Numbering (continued on next page)

ThePoint™

● Technology

P RF Admittance

● Measurement Type

- N** No Calibration, 2 pF Preload
- H** No Calibration, 0.5 pF Preload, with High Sensitivity
- L** No Calibration, 2 pF Fixed Preload
- T** No Calibration, 10 pF Preload
- V** No Calibration, 10 pF Fixed Preload
- P** No Calibration, 0.5 pF Fixed Preload (High Sensitivity)
- M** Manual Calibration
- G** Manual Calibration (High Sensitivity)



All Calibration modes are built into the standard unit. Modes can be changed in the field as required (See Instruction Manual)

● Input

L Universal Power Supply 19-250 VAC, 18-200 VDC

● Output

1 One DPDT Relay, dry contact, 5A, 120VAC (Min 100 mA / 12 VDC)

● Housing

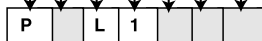
- 0** No Approvals, NEMA 4X/IP66, M20 x 1.5 conduit entries
- 1** No Approvals, NEMA 4X/IP66 ¾" NPT conduit entries
- 2** CENELEC/ATEX
- 3** FM Approved
- 4** CSA Approval

● Electronics

- 0** Integral
- 1** Remote, no cable
- 2** Remote with 3 m (10 feet) cable
- 3** Remote with 7.6 m (25 feet) cable
- 4** Remote with 10.6 m (35 feet) cable
- 5** Remote with 15.2 m (50 feet) cable
- 6** Remote with 23 m (75 feet) cable

● Sensing Element

Application	Sensing Element	Pressure/Temperature	Wetted Parts
00 General purpose	700-1202-001 remote 700-1202-021 integral	13.8 bar @ 232°C (200 PSI @ 450°F)	316SS and PEEK
01 Floating roof with cable attachment and brass bottom weight	700-1202-012 remote 700-1202-022 integral	13.8 bar @ 177°C (200 PSI @ 350°F)	316SS, Brass, and PEEK
02 General purpose, longer insertion lengths with cable attachment and 316SS bottom weight	700-1202-014 remote 700-1202-024 integral	13.8 bar @ 177°C (200 PSI @ 350°F)	316SS and PEEK
03 Proximity	700-1202-018 remote 700-1202-028 integral	13.8 bar @ 232°C (200 PSI @ 450°F)	316SS and PEEK with 76 mm (3) 316SS proximity plate
04 General purpose, high temperature and pressure	700-1202-041 remote 700-1202-042 integral	69 bar @ 121°C (1000 PSI @ 250°F) 20.7 bar @ 232°C (300 PSI @ 450°F)	316SS and PEEK
06 General purpose with FDA approved materials of construction	700-1202-031 remote 700-1202-032 integral	13.8 bar @ 232°C (200 PSI @ 450°F)	316SS and FDA grade PEEK
07 General purpose Granular materials	700-1202-010 remote 700-1202-020 integral	13.8 bar @ 232°C (200 PSI @ 450°F)	316SS and PEEK with 7/8 inch dia. 316SS collar
09 General purpose Granular materials with FDA approved materials of construction	700-1202-033 remote 700-1202-034 integral	13.8 bar @ 232°C (200 PSI @ 450°F)	316SS and FDA grade PEEK with 7/8 inch dia. 316SS collar
10 Corrosive liquids (2)(4)(9)	700-0001-018	3.4 bar @ 149°C (50 PSI @ 300°F)	PFA
11 General purpose, higher pressure TFE compatibility required	700-0201-005	69 bar @ 38°C (1000 PSI @ 100°F) 13.8 bar @ 232°C (200 PSI @ 450°F)	316SS and TFE
12 Corrosive material, higher pressure	700-0201-005 Hastelloy C	69 bar @ 38°C (1000 PSI @ 100°F) 13.8 bar @ 232°C (200 PSI @ 450°F)	Hastelloy C and TFE
13 Sanitary (3)	700-0201-036	69 bar @ 38°C (1000 PSI @ 100°F) 13.8 bar @ 232°C (200 PSI @ 450°F)	316/316L SS and TFE
14 General Purpose, low pressure	700-0202-002	3.4 bar @ 149°C (50 PSI @ 300°F) 1.4 bar @ 232°C (20 PSI @ 450°F)	316SS and TFE
15 Heavy duty, agitated tanks or material with high bulk density (1)	700-0202-043	69 bar @ 38°C (1000 PSI @ 100°F) 13.8 bar @ 232°C (200 PSI @ 450°F)	316SS and TFE



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Model Numbering

Sensing Element (Continued)				
17	Sanitary (3) lowpressure	700-0202-036	3.4 bar @ 149°C (50 PSI @ 300°F) 1.4 bar @ 232°C (20 PSI @ 450°F)	316SS and TFE
18	Corrosive material, higher pressure with waterlike viscosity (4)	700-0001-022	69 bar @ 38°C (1000 PSI @ 100°F) 34.5 bar @ 149°C (500 PSI @ 300°F)	TFE
20	Miniature Pilot Plant Sensor (1)(7)	700-0209-002	6.9 bar @ 121°C (100 PSI @ 250°F) 0 bar @ 232°C (0 PSI @ 450°F)	316 SS and TFE
Fly Ash Precipitators, Baghouse, and Economizers (1) (6)				
Application		Sensing Element	Pressure/Temperature	Wetted Parts
31	No hopper Installation	700-0029-001	0.1 bar @ 260°C (2 PSI @ 500°F)	316SS and TFE (CS Inactive)
32	Hopper Installation up to 200mm (8 inches)	700-0029-002	0.1 bar @ 260°C (2 PSI @ 500°F)	316SS and TFE (CS Inactive)
33	Hopper Installation up to 250mm (10 inches)	700-0029-003	0.1 bar @ 260°C (2 PSI @ 500°F)	316SS and TFE (CS Inactive)
34	Hopper Installation up to 330mm (13 inches)	700-0029-004	0.1 bar @ 260°C (2 PSI @ 500°F)	316SS and TFE (CS Inactive)
35	Hopper Installation up to 400mm (16 inches)	700-0029-005	0.1 bar @ 260°C (2 PSI @ 500°F)	316SS and TFE (CS Inactive)
Mounting Type (See separate Mounting Chart for first three digits)				
	IL	CSL	IL	CSL
xxxA	152 mm (6")	51 mm (2")	xxxH	914 mm (36") 254 mm (10")
xxxB	305 mm (12")	51 mm (2")	xxxJ	914 mm (36") 0 mm (0")
xxxC	305 mm (12")	89 mm (3.5")	xxxK	1219 mm (48") 254 mm (10")
xxxD	457 mm (18")	51 mm (2")	xxxL	1524 mm (60") 254 mm (10")
xxxE	457 mm (18")	89 mm (3.5")	A1BX	IL/CSL factory set for Fly Ash
xxxF	457 mm (18")	254 mm (10")	xxxZ	Other
xxxG	457 mm (18")	0 mm (0")		



- Notes:**
- (1) Available with remote electronics only
 - (2) Use A1P mounting option
 - (3) Choose from sanitary mounting options only
 - (4) Available with 0-inch CSL only
 - (5) Use P00X mounting option
 - (6) Use A1B mounting option
 - (7) Use A8B mounting option (¼-inch NPT)
 - (8) Choose from flange mounting only
 - (9) FM approved with remote electronics only
- Not all mounting options available with all sensing elements

NPT Threads		
A1B	¾" NPT	316SS
A1C	¾" NPT	Hastelloy C
A1P	¾" NPT	PFA
A2B	1" NPT	316SS
A2C	1" NPT	Hastelloy C

Sanitary TriClamps		
C2B	1" TriClamp	316SS
C3B	1½" TriClamp	316SS
C4B	2" TriClamp	316SS

DIN Flanges		
E01	25 mm 16bar	RF 316/316L SS
EP1	25 mm 40 bar	RF 316/316L SS
EQ1	50 mm 16 bar	RF 316/316L SS
ER1	50 mm 40 bar	RF 316/316L SS
ES1	80 mm 16 bar	RF 316/316L SS
ET1	80 mm 40 bar	RF 316/316L SS
EU1	100 mm 16 bar	RF 316/316L SS
EV1	100 mm 40 bar	RF 316/316L SS
EW1	150 mm 16 bar	RF 316/316L SS
EX1	150 mm 40 bar	RF 316/316L SS

DIN Flanges (cont.)		
E02	25 mm 16 bar	RF Carbon Steel
EP2	25 mm 40 bar	RF Carbon Steel
EQ2	50 mm 16 bar	RF Carbon Steel
ER2	50 mm 40 bar	RF Carbon Steel
ES2	80 mm 16 bar	RF Carbon Steel
ET2	80 mm 40 bar	RF Carbon Steel
EU2	100 mm 16 bar	RF Carbon Steel
EV2	100 mm 40 bar	RF Carbon Steel
EW2	150 mm 16 bar	RF Carbon Steel
EX2	150 mm 40 bar	RF Carbon Steel

ANSI Flanges		
DA1	1" 150#	RF 316/316L SS
DB1	1½" 150#	RF 316/316L SS
DC1	2" 150#	RF 316/316L SS
DD1	2½" 150#	RF 316/316L SS
DE1	1" 300#	RF 316/316L SS
DF1	1½" 300#	RF 316/316L SS
DG1	2" 300#	RF 316/316L SS
DH1	2½" 300#	RF 316/316L SS
DI1	3" 150#	RF 316/316L SS

ANSI Flanges (cont.)			
DJ1	3"	300#	RF 316/316L SS
DK1	4"	150#	RF 316/316L SS
DL1	4"	300#	RF 316/316L SS
DM1	6"	150#	RF 316/316L SS
DN1	6"	300#	RF 316/316L SS
DA2	1"	150#	RF Carbon Steel
DB2	1½"	150#	RF Carbon Steel
DC2	2"	150#	RF Carbon Steel
DD2	2½"	150#	RF Carbon Steel
DE2	1"	300#	RF Carbon Steel
DF2	1½"	300#	RF Carbon Steel
DG2	2"	300#	RF Carbon Steel
DH2	2½"	300#	RF Carbon Steel
DI2	3"	150#	RF Carbon Steel
DJ2	3"	300#	RF Carbon Steel
DK2	4"	150#	RF Carbon Steel
DL2	4"	300#	RF Carbon Steel
DM2	6"	150#	RF Carbon Steel
DN2	6"	300#	RF Carbon Steel

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