

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



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:

2 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

0 -200 mA / 12 VDC (Optional)

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



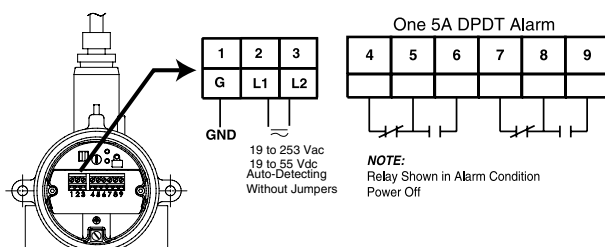
II 1/2 GD EEx d[ia] IIC T2..T5,
Ta = -30°C to +70°C

SAA (For Remote Electronics)

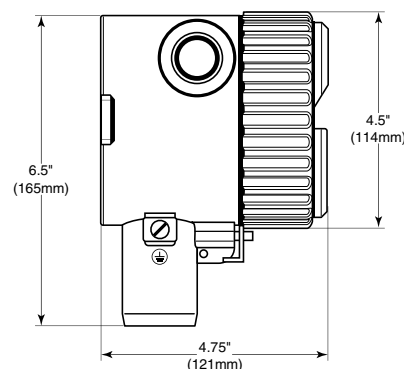
Electronics Ex d[ia] IIC T5 DIP A21
Ta = -100°C

Sensing Element Ex ia IIC T6

Wiring



Dimensions



Point Level Measurement

The Point™

Model Numbering (continued on next page)

● Technology					
P	RF Admittance				
● Measurement Type					
N	No Calibration, 2 pF Preload	V	No Calibration, 10 pF Fixed Preload	<i>NOTE: All Calibration modes are built into the standard unit. Modes can be changed in the field as required (See Instruction Manual)</i>	
H	No Calibration, 0.5 pF Preload, w/ High Sensitivity	P	No Calibration, 0.5 pF Fixed Preload (High Sensitivity)		
L	No Calibration, 2 pF Fixed Preload	M	Manual Calibration		
T	No Calibration, 10 pF Preload	G	Manual Calibration (High Sensitivity)		
● Input					
L	Universal Power Supply 19-250 VAC, 18-200 VDC				
● Output					
1	One DPDT Relay, dry contacts, 5A, 120VAC (Min 100 mA / 12 VDC)				
2	One DPDT Relay, gold plated contacts (Max 200 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	7	Rmt. w/ (25 ft.) Tri-Ax Cable	E	Rmt. w/ (75 ft.) 1st 10ft Hi-Temp. Cbl.
1	Remote, no cable	8	Rmt. w/ (50 ft.) Tri-Ax Cable	F	Rmt. w/ (5 ft.) G.P. Cable
2	Rmt. w/ 3 m (10 ft.) G.P. cable	9	Rmt. w/ (75 ft.) Tri-Ax Cable	G	Rmt. w/ (5 ft.) Tri-Ax Cable
3	Rmt. w/ 7.6 m (25 ft.) G.P. cable	A	Rmt. w/ (10 ft.) Hi-Temp. Cable	H	Rmt. w/ (10 ft.) Tri-Ax Cable
4	Rmt. w/ 10.6 m (35 ft.) G.P. cable	B	Rmt. w/ (25 ft.) 1st 10ft Hi-Temp. Cbl.	J	Rmt. w/ (35 ft.) Tri-Ax Cable
5	Rmt. w/ 15.2 m (50 ft.) G.P. cable	C	Rmt. w/ (35 ft.) 1st 10ft Hi-Temp. Cbl.	K	Rmt. w/ (5 ft.) Hi-Temp. Cable
6	Rmt. w/ 23 m (75 ft.) G.P. cable	D	Rmt. w/ (50 ft.) 1st 10ft Hi-Temp. Cbl.		
● 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 316SS and PEEK	
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	
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	
19	Interface Measurement	700-0002-023	69 bar @ 38°C (1000 PSI @ 100°F) 34.5 bar @ 149°C (500 PSI @ 300°F)	316SS and 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	

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Point Level Measurement

Model Numbering (Continued from Previous Page)

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)		
Plugged Chute Detection (1) (5)						
	Application	Sensing Element	Pressure/Temperature	Wetted Parts		
50	Flush Mount Sensor 305mm ² (12 inches ²) heavy duty	700-0207-001	0.1 bar @ 82°C (1 PSI @ 180°F)	304 SS and Polyurethane		
51	Flush Mount Sensor 305mm ² (12 inches ²) higher temperature	700-0207-002	0.1 bar @ 149°C (1 PSI @ 300°F)	304 SS and TFE		
52	Flush Mount Sensor 305mm ² (12 inches ²) with curved radius 153, 229, 305 mm (6, 9, or 12 inches)	700-0207-003	0.1 bar @ 82°C (1 PSI @ 180°F)	304 SS and Neoprene		
53	Flush Mount Sensor 305mm ² (12 inches ²) extra heavy duty	700-0207-004	0.1 bar @ 82°C (1 PSI @ 180°F)	410 SS and UHMW Polyethylene		
55	Flush Mount Sensor 203mm ² (8 inches ²) heavy duty	700-0207-006	0.1 bar @ 82°C (1 PSI @ 180°F)	304 SS and Polyurethane		
ZZ	Sensing Element Not Listed					
Mounting Type (See separate Mounting Chart for first three digits)						
	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")	P00X	IL/CSL Other		
xxxF	457 mm (18")	254 mm (10")	A1BX	IL/CSL factory set for Fly Ash		
xxxG	457 mm (18")	0 mm (0")	xxxZ	Other		

- Notes:** (1) Available with remote electronics only (6) Use A1B mounting option
 (2) Use A1P mounting option (7) Use A8B mounting option (¼-inch NPT)
 (3) Choose only sanitary mounting options (8) Choose from flange mounting only
 (4) Available with 0-inch CSL only (9) FM approved with remote electronics only
 (5) Use P00X mounting option

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	C4B	2" TriClamp	316SS
C3B	1½" TriClamp	316SS			

ANSI Flanges

DA1	1" 150#	RF 316/316L SS	DA2	1" 150#	RF CS
DB1	1½" 150#	RF 316/316L SS	DB2	1½" 150#	RF CS
DC1	2" 150#	RF 316/316L SS	DC2	2" 150#	RF CS
DD1	2½" 150#	RF 316/316L SS	DD2	2½" 150#	RF CS
DE1	1" 300#	RF 316/316L SS	DE2	1" 300#	RF CS
DF1	1½" 300#	RF 316/316L SS	DF2	1½" 300#	RF CS
DG1	2" 300#	RF 316/316L SS	DG2	2" 300#	RF CS
DH1	2½" 300#	RF 316/316L SS	DH2	2½" 300#	RF CS
DI1	3" 150#	RF 316/316L SS	DI2	3" 150#	RF CS
DJ1	3" 300#	RF 316/316L SS	DJ2	3" 300#	RF CS
DK1	4" 150#	RF 316/316L SS	DK2	4" 150#	RF CS
DL1	4" 300#	RF 316/316L SS	DL2	4" 300#	RF CS
DM1	6" 150#	RF 316/316L SS	DM2	6" 150#	RF CS
DN1	6" 300#	RF 316/316L SS	DN2	6" 300#	RF CS

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