



## The Point™

### RF Series Point Level Switch



# The POINT

*Auto-Calibration!*

#### Intelligent Electronics Save Time and Money

- UNIQUE! - NO calibration or setpoint adjustments.
- 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.

**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 420-0004-144-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**

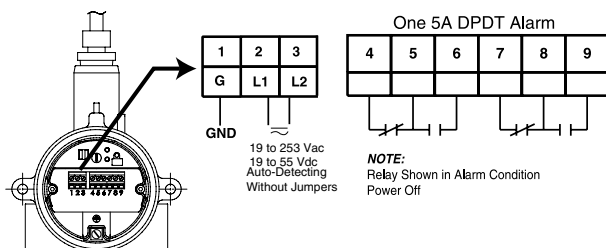
Class I, Groups A, B, C, D; Class II, Groups E, F, G; Class III; Type 4, 4X, IP66; T5 for Ta = 70o C. Class I, Division 2, Groups A, B, C, D; Class II, Division 2, Groups F, G; Class III; Type 4, 4X, IP66; T5 for Ta = 70o C



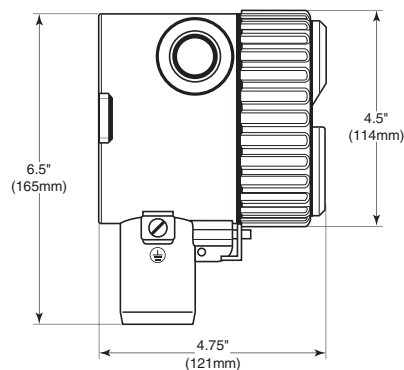
II 1/2 GD EEx d[ia] IIC T2..T5,  
Ta = -30°C to +70°C

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, Point Level
- H** No Calibration, Point Level, High Sensitivity

##### ● 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

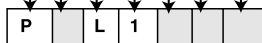
- 0** No Approvals, NEMA 4X/IP66, M20 x 1.5 conduit entries
- 1** No Approvals, NEMA 4X/IP66 ¾" NPT conduit entries
- 2** CENELEC/ATEX
- 3** FM Approved
- 4** CSA Approval

##### ● 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   |
|---|--|---|--|
| <b>00</b> General purpose   | 700-1202-001 remote<br>700-1202-021 integral | 13.8 bar @ 232°C (200 PSI @ 450°F)                                      | 316SS and PEEK   |
| <b>01</b> Floating roof with cable attachment and brass bottom weight                             | 700-1202-012 remote<br>700-1202-022 integral | 13.8 bar @ 177°C (200 PSI @ 350°F)                                      | 316SS, Brass, and PEEK                                   |
| <b>02</b> General purpose, longer insertion lengths with cable attachment and 316SS bottom weight | 700-1202-014 remote<br>700-1202-024 integral | 13.8 bar @ 177°C (200 PSI @ 350°F)                                      | 316SS and PEEK   |
| <b>03</b> Proximity   | 700-1202-018 remote<br>700-1202-028 integral | 13.8 bar @ 232°C (200 PSI @ 450°F)                                      | 316SS and PEEK with 76 mm (3) 316SS proximity plate      |
| <b>04</b> General purpose, high temperature and pressure  | 700-1202-041 remote<br>700-1202-042 integral | 69 bar @ 121°C (1000 PSI @ 250°F)<br>20.7 bar @ 232°C (300 PSI @ 450°F) | 316SS and PEEK   |
| <b>06</b> General purpose with FDA approved materials of construction                             | 700-1202-031 remote<br>700-1202-032 integral | 13.8 bar @ 232°C (200 PSI @ 450°F)                                      | 316SS and FDA grade PEEK                                 |
| <b>07</b> General purpose Granular materials  | 700-1202-010 remote<br>700-1202-020 integral | 13.8 bar @ 232°C (200 PSI @ 450°F)                                      | 316SS and PEEK with 7/8 inch dia. 316SS collar           |
| <b>09</b> General purpose Granular materials with FDA approved materials of construction          | 700-1202-033 remote<br>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 |
| <b>10</b> Corrosive liquids (2)(4)(9)   | 700-0001-018                                 | 3.4 bar @ 149°C (50 PSI @ 300°F)  | PFA  |
| <b>11</b> General purpose, higher pressure TFE compatibility required                             | 700-0201-005                                 | 69 bar @ 38°C (1000 PSI @ 100°F)<br>13.8 bar @ 232°C (200 PSI @ 450°F)  | 316SS and TFE  |
| <b>12</b> Corrosive material, higher pressure   | 700-0201-005<br>Hastelloy C                  | 69 bar @ 38°C (1000 PSI @ 100°F)<br>13.8 bar @ 232°C (200 PSI @ 450°F)  | Hastelloy C and TFE                                      |
| <b>13</b> Sanitary (3)  | 700-0201-036                                 | 69 bar @ 38°C (1000 PSI @ 100°F)<br>13.8 bar @ 232°C (200 PSI @ 450°F)  | 316/316L SS and TFE                                      |
| <b>14</b> General Purpose, low pressure   | 700-0202-002                                 | 3.4 bar @ 149°C (50 PSI @ 300°F)<br>1.4 bar @ 232°C (20 PSI @ 450°F)    | 316SS and TFE  |
| <b>15</b> Heavy duty, agitated tanks or material with high bulk density (1)                       | 700-0202-043                                 | 69 bar @ 38°C (1000 PSI @ 100°F)<br>13.8 bar @ 232°C (200 PSI @ 450°F)  | 316SS and TFE  |
| <b>17</b> Sanitary (3) lowpressure  | 700-0202-036                                 | 3.4 bar @ 149°C (50 PSI @ 300°F)<br>1.4 bar @ 232°C (20 PSI @ 450°F)    | 316SS and TFE  |
| <b>18</b> Corrosive material, higher pressure with waterlike viscosity (4)                        | 700-0001-022                                 | 69 bar @ 38°C (1000 PSI @ 100°F)<br>34.5 bar @ 149°C (500 PSI @ 300°F)  | TFE  |
| <b>20</b> Miniature Pilot Plant Sensor (1)(7)   | 700-0209-002                                 | 6.9 bar @ 121°C (100 PSI @ 250°F)<br>0 bar @ 232°C (0 PSI @ 450°F)      | 316 SS and TFE   |



# Point Level Measurement

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### Model Numbering

| Fly Ash Precipitators, Baghouse, and Economizers (1) (6) |   | 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          |                                     |
| 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")    |                                     |

| P | L | 1 |  |  |  |  |  |
|---|---|---|--|--|--|--|--|
|---|---|---|--|--|--|--|--|

- 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 (1/4-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 | 3/4" NPT | 316SS       |
| A1C | 3/4" NPT | Hastelloy C |
| A1P | 3/4" NPT | PFA         |
| A2B | 1" NPT   | 316SS       |
| A2C | 1" NPT   | Hastelloy C |

#### Sanitary TriClamps

|     |                 |       |
|-----|-----------------|-------|
| C2B | 1" TriClamp     | 316SS |
| C3B | 1 1/2" 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 | 1 1/2" 150# | RF 316/316L SS |
| DC1 | 2" 150#     | RF 316/316L SS |
| DD1 | 2 1/2" 150# | RF 316/316L SS |
| DE1 | 1" 300#     | RF 316/316L SS |
| DF1 | 1 1/2" 300# | RF 316/316L SS |
| DG1 | 2" 300#     | RF 316/316L SS |
| DH1 | 2 1/2" 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 | 1 1/2" 150# | RF Carbon Steel |
| DC2 | 2" 150#     | RF Carbon Steel |
| DD2 | 2 1/2" 150# | RF Carbon Steel |
| DE2 | 1" 300#     | RF Carbon Steel |
| DF2 | 1 1/2" 300# | RF Carbon Steel |
| DG2 | 2" 300#     | RF Carbon Steel |
| DH2 | 2 1/2" 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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