



IntelliPoint RF™ Series

Two-Wire Point Level Switch

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



The **IntelliPoint RF** From

DREXELBROOK®

Auto-Calibration!

Intelligent Electronics

- No calibration or setpoint adjustments.
- Ignores changes in dielectric or conductivity.
- Automatically recognizes and ignores coatings to prevent false alarms.
- Continuous self-test monitors circuits and sensing elements for faults.

Diverse Applications

- Detects the absence or presence of liquids, slurries, interfaces and granulars.

Output

- 8mA (Alarm) 16mA (Normal) or 8mA (Normal) and 16 mA (Alarm)

Remote or Integral Electronics

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

The only RF switch you won't calibrate. Simply install the IntelliPoint RF 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, the IntelliPoint RF Series reliably detects the absence or presence of material without any adjustments.

The IntelliPoint RF 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 the the IntelliPoint RF Series recognizes changes in material, it is ideal for non-dedicated tanks that are used for a wide variety of products.

Self-Test Feature

Automatic and manual test functions ensure proper system operation. An AutoVerify™ self-check circuit continuously monitors that the complete system is functioning properly. The Manual Certify not only checks the function of the system, but also checks the AutoVerify self-test circuits to make sure that they are also working properly.

Dual Compartment Housing

New dual compartment housing separates the customer wiring from the sensing element and operating circuits. The encapsulated power supply/terminal block design eliminates the possibility of damage caused by moisture in the conduit.

Point Level Measurement



Point Level Measurement

IntelliPoint RF™ Series

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:
-30 to 70°C (-22 to 158°F)

Storage Temperature:
-40 to 85°C (-40 to 185°F)

Indicators:
LEDs: Green Power, Red Alarm

Self-Check:
AutoVerify automatically and continuously checks electronics and sensing element for faults. Manual Certify checks that the AutoVerify circuits are functioning.

Time Delay:
0-60 seconds, forward or reverse-acting

Supply Voltage:
13-30 Vdc

Power Consumption:
2 watts maximum

Output:

8 mA - Alarm	8 mA - Normal
16 mA - Normal	16 mA - Alarm
22 mA - Fault	5 mA - Fault

Housing:
Dual Compartment, Powder-Coated aluminum with two cable entries

Cable Entry:
M20 x 1.5 CENELEC
¾-inch NPT FM/CSA

Ingress Protection:
IP66 NEMA 4X

Approvals:



FM approved. Explosion-proof for use in Class I, Division 1, Groups A, B, C, & D; Dust-Ignition proof for Class II, III, Division 1, Groups E, F, & G; Non-incendiary for use in Class I, Division 2, Groups A, B, C & D; Suitable for Class II, III, Groups F & G Hazardous (Classified) Indoor and Outdoor Type 4, 4X, IP66 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 entity requirements and control drawing 420-0004-173-CD.



Class I, Groups A, B, C, and D with Intrinsically Safe sensing element; Class II, Groups E, F & G; Class III



II 1G EEx ia IIC T5 Ta = -30°C - +75°C
II 1D T90°C

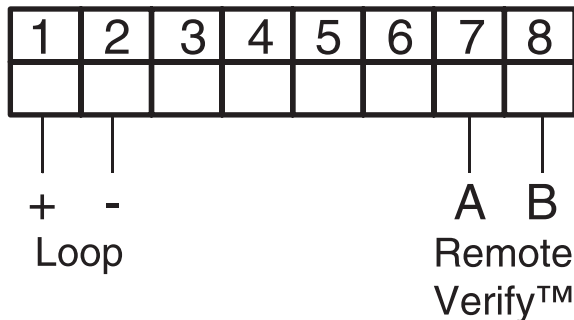


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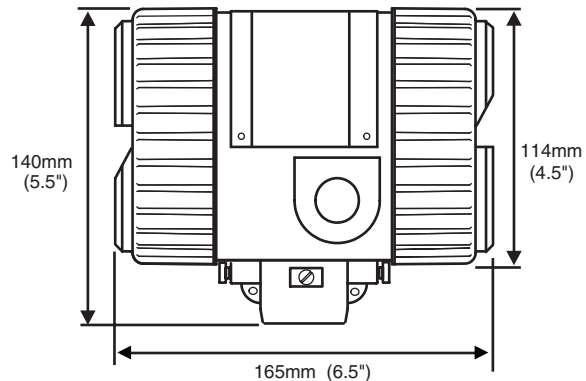
MTTF (Mean Time to Failure):

110 Years, Independently Tested

Wiring



Dimensions



Point Level Measurement

IntelliPoint RF™ Series

Model Numbering (continued on next page)

● Technology			
R	RF Admittance		
● Measurement Type			
L	No Calib., 2 pF Fixed Preload		
P	No Calib., 0.5 pF Fixed Preload (Hi. Sens.)		
M	Manual Calib.		
G	Manual Calib. (Hi. Sens.)		
● Input			
T	Two wire Power Supply, 13-30 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	ATEX Approved, NEMA 4X/IP66, M20 X 1.5 conduit entries		
3	FM Approved, NEMA 4X/IP66, ¾" NPT conduit entries		
4	CSA Approved, NEMA 4X/IP66, ¾" NPT conduit entries		
5	No Approvals, NEMA 4X/IP66, M20 X 1.5 conduit entries, Dual Seal, Perm-a-Seal sensors – only		
6	No Approvals, NEMA 4X/IP66, ¾" NPT conduit entries, Dual Seal, Perm-a-Seal sensors – only		
7	FM Approved, NEMA 4X/IP66, ¾" NPT conduit entries, Dual Seal, Perm-a-Seal sensors – only		
8	CSA Approved, NEMA 4X/IP66, ¾" NPT conduit entries, Dual Seal, Perm-a-Seal sensors – only		
9	No Approvals, NEMA 4X/IP66, M20 X 1.5 conduit entries, Dual Seal, Non Perm-a-Seal sensors – only		
A	No Approvals, NEMA 4X/IP66, ¾" NPT conduit entries, Dual Seal, Non Perm-a-Seal sensors – only		
B	FM Approved, NEMA 4X/IP66, ¾" NPT conduit entries, Dual Seal, Non Perm-a-Seal sensors – only		
C	CSA Approved, NEMA 4X/IP66, ¾" NPT conduit entries, Dual Seal, Non Perm-a-Seal sensors – only		
● Electronics			
0	Integral	7	Rmt. w/ (25 ft.) Tri-Ax Cable
1	Remote, no cable	8	Rmt. w/ (50 ft.) Tri-Ax Cable
2	Rmt. w/ 3 m (10 ft.) G.P. Cable	9	Rmt. w/ (75 ft.) Tri-Ax Cable
3	Rmt. w/ 7.6 m (25 ft.) G.P. Cable	A	Rmt. w/ (10 ft.) Hi-Temp. Cable
4	Rmt. w/ 10.6 m (35 ft.) G.P. Cable	B	Rmt. w/ (25 ft.) 1st 10ft Hi-Temp. Cbl.
5	Rmt. w/ 15.2 m (50 ft.) G.P. Cable	C	Rmt. w/ (35 ft.) 1st 10ft Hi-Temp. Cbl.
6	Rmt. w/ 23 m (75 ft.) G.P. Cable	D	Rmt. w/ (50 ft.) 1st 10ft Hi-Temp. Cbl.
E	Rmt. w/ (75 ft.) 1st 10ft Hi-Temp. Cbl.		
F	Rmt. w/ (5 ft.) G.P. Cable		
G	Rmt. w/ (5 ft.) Tri-Ax Cable		
H	Rmt. w/ (10 ft.) Tri-Ax Cable		
J	Rmt. w/ (35 ft.) Tri-Ax Cable		
K	Rmt. w/ (5 ft.) Hi-Temp. Cable		
● Output			
0	8-16 mA Output		
● Sensing Element			
	Application	Sensing Element	Pressure/Temperature
00	General purpose	700-1202-001 remote 700-1202-021 integral	13.8 bar @ 232°C (200 PSI @ 450°F)
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)
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)
03	Proximity	700-1202-018 remote 700-1202-028 integral	13.8 bar @ 232°C (200 PSI @ 450°F)
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)
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)
07	General purpose Granular materials	700-1202-010 remote 700-1202-020 integral	13.8 bar @ 232°C (200 PSI @ 450°F)
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)
10	Corrosive liquids (2)(4)(9)	700-0001-018 remote	3.4 bar @ 149°C (50 PSI @ 300°F)
11	General purpose, higher pressure TFE compatibility required	700-0201-005 int/rem	69 bar @ 38°C (1000 PSI @ 100°F) 13.8 bar @ 232°C (200 PSI @ 450°F)
12	Corrosive material, higher pressure	700-0201-005 int/rem Hastelloy C	69 bar @ 38°C (1000 PSI @ 100°F) 13.8 bar @ 232°C (200 PSI @ 450°F)
13	Sanitary (3)	700-0201-036 int/rem	69 bar @ 38°C (1000 PSI @ 100°F) 13.8 bar @ 232°C (200 PSI @ 300°F)
14	General Purpose, low pressure	700-0202-002 int/rem	3.4 bar @ 149°C (50 PSI @ 300°F) 1.4 bar @ 232°C (20 PSI @ 450°F)
15	Heavy duty, agitated tanks or material with high bulk density (1)	700-0202-043 remote	69 bar @ 38°C (1000 PSI @ 100°F) 13.8 bar @ 232°C (200 PSI @ 450°F)
16	High Integrity Seal for Hazardous Materials	700-0002-360 int/rem	34.5 bar @ 149°C (500 PSI @ 300°F)
17	Sanitary (3) lowpressure	700-0202-036 int/rem	3.4 bar @ 149°C (50 PSI @ 300°F)
			Wetted Parts
			316SS and PEEK
			316SS, Brass, and PEEK
			316SS and PEEK
			316SS and PEEK with 76 mm (3) 316SS proximity plate
			316SS and PEEK
			316SS and FDA grade PEEK
			316SS and PEEK with 7/8 inch dia. 316SS collar
			316SS and FDA grade PEEK with 7/8 inch dia. 316SS collar
			PFA
			316SS and TFE
			Hastelloy C and TFE
			316/316L SS and TFE
			316SS and TFE
			316SS and TFE
			PFA
			316SS and TFE

(continued on next page)

Point Level Measurement

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Model Numbering (continued from previous page)

	18	Corrosive material, higher pressure with waterlike viscosity (4)	700-0001-022 int/rem	69 bar @ 38°C (1000 PSI @ 100°F) 34.5 bar @ 149°C (500 PSI @ 300°F)	TFE
	19	Interface Measurement	700-0002-023 int/rem	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 remote	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 remote	0.1 bar @ 260°C (2 PSI @ 500°F)	316SS and TFE
	32	Hopper Installation up to 200mm (8 inches)	700-0029-002 remote	0.1 bar @ 260°C (2 PSI @ 500°F)	316SS and TFE
	33	Hopper Installation up to 406mm (16 inches)	700-0029-003 remote	0.1 bar @ 260°C (2 PSI @ 500°F)	316SS and TFE
	34	Hopper Installation up to 521mm (20.5 inches)	700-0029-004 remote	0.1 bar @ 260°C (2 PSI @ 500°F)	316SS and TFE
	35	Hopper Installation up to 635mm (25 inches)	700-0029-005 remote	0.1 bar @ 260°C (2 PSI @ 500°F)	316SS and TFE
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 remote	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 remote	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 remote	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 remote	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 remote	0.1 bar @ 82°C (1 PSI @ 180°F)	304 SS and Polyurethane
High Pressure / High Temperature					
	60	High Pressure & Temp.	700-0204-038 remote	137.9 bar @ 93°C (2000 PSI @ 200°F) 68.9 bar @ 260°C (1000 PSI @ 500°F)	316SS and Ceramic
	61	High Temperature	700-0204-002 remote	0 bar @ 816°C (0 PSI @ 1500°F)	316SS and Ceramic
	62	High Pressure & Temp.	700-0204-048 remote	275.8 bar @ 316°C (4000 PSI @ 600°F)	316SS
	ZZ	Sensing Element Not Listed			
		Mounting Type (See separate Mounting Chart for first three digits)			
		IL	CSL	IL	CSL
	xxx1	457 mm (18")	152 mm (6")	xxxG	457 mm (18") 0 mm (0")
	xxx2	305 mm (12")	152 mm (6")	xxxH	914 mm (36") 254 mm (10")
	xxxA	152 mm (6")	51 mm (2")	xxxJ	914 mm (36") 0 mm (0")
	xxxB	305 mm (12")	51 mm (2")	xxxK	1219 mm (48") 254 mm (10")
	xxxC	305 mm (12")	89 mm (3.5")	xxxL	1524 mm (60") 254 mm (10")
	xxxD	457 mm (18")	51 mm (2")	P00X	IL/CSL Other
	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



Not all mounting options available with all sensing elements

- Notes:** CSL (Cote-Shield Length) should extend through Nozzle + Typical "Wall Buildup" + 2 Inches
- (1) Available with remote electronics only
 - (2) Use A1P mounting option
 - (3) Choose only sanitary mounting options
 - (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

NPT Threads			A2B 1"NPT 316SS			A2C 1"NPT Hastelloy C			Sanitary TriClamps			C2B 1"TriClamp 316SS			C4B 2"TriClamp 316SS		
A1B 3/4"NPT	316SS								C3B 1 1/2"TriClamp	316SS							
A1C 3/4"NPT	Hastelloy C																
A1P 3/4"NPT	PFA																
DIN Flanges						ANSI Flanges											
E01 25 mm 16 bar	RF 316/316L SS	E02 25 mm 16 bar	RF CS	DA1 1" 150#	RF 316/316L SS	DA2 1" 150#	RF CS	DB1 1 1/2" 150#	RF 316/316L SS	DB2 1 1/2" 150#	RF CS	DC1 2" 150#	RF 316/316L SS	DC2 2" 150#	RF CS	DD1 2 1/2" 150#	RF 316/316L SS
EP1 25 mm 40 bar	RF 316/316L SS	EP2 25 mm 40 bar	RF CS	DE1 1" 300#	RF 316/316L SS	DE2 1" 300#	RF CS	DF1 1 1/2" 300#	RF 316/316L SS	DF2 1 1/2" 300#	RF CS	DG1 2" 300#	RF 316/316L SS	DG2 2" 300#	RF CS	DH1 2 1/2" 300#	RF 316/316L SS
EQ1 50 mm 16 bar	RF 316/316L SS	EQ2 50 mm 16 bar	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
ER1 50 mm 40 bar	RF 316/316L SS	ER2 50 mm 40 bar	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						
ES1 80 mm 16 bar	RF 316/316L SS	ES2 80 mm 16 bar	RF CS														
ET1 80 mm 40 bar	RF 316/316L SS	ET2 80 mm 40 bar	RF CS														
EU1 100 mm 16 bar	RF 316/316L SS	EU2 100 mm 16 bar	RF CS														
EV1 100 mm 40 bar	RF 316/316L SS	EV2 100 mm 40 bar	RF CS														
EW1 150 mm 16 bar	RF 316/316L SS	EW2 150 mm 16 bar	RF CS														
EX1 150 mm 40 bar	RF 316/316L SS	EX2 150 mm 40 bar	RF CS														



205 Keith Valley Road, Horsham, PA 19044 U.S.A.
 Tel: 215-674-1234 Fax: 215 674-2731
 Email: drexelbrook.info@ametek.com
 Web: www.drexelbrook.com