

IntelliPoint RF Series

Point Level Switch



The **IntelliPoint RF** From

DREXELBROOK®

Never Needs 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.
- Universal power supply automatically detects input power source.

Diverse Applications

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

Output

- (2) SPDT relays; relay#2 can be configured as an alarm or fault.

Dual Compartment Housing

- Power Supply is isolated from intrinsically-safe sensing element and circuit board.

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 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.

Universal Power Supply

The IntelliPoint electronics use a universal power supply module that can be powered from a 85 to 250 Vac or 21 to 100 Vdc supply without moving jumpers.

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 and power supply 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

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 (-28 to 158°F) KEMA.
-40 to 70°C (-40 to 158°F) FM (CSA pending).

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

Indicators:
LEDs: Green Power, Red Relay 1, Red Relay 2.

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:
85-250 Vac
21-100 Vdc auto-detecting without jumpers
DC to 400 Hz.

Power Consumption:
2 watts maximum.

Relay Contacts:
(2) SPDT.

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

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

Ingress Protection:
IP66 NEMA 4X.

Approvals:

Integral

 II 1/2 GD EEx d[ia] IIC T5...T2  0344
 T90°C KEMA 01 ATEX 2187X
 Temperature Class Process Temperature
 T5 100°C
 T4 135°C
 T3 200°C
 T2 230°C

Remote

 I 1/2 GD EEx d[ia] IIC T5  0344
 T90°C KEMA 01 ATEX 2187X



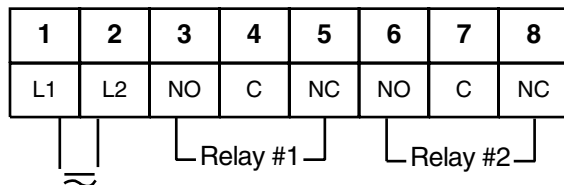
Explosionproof for Class I, Division 1, Groups A, B, C and D; Dust-Ignitionproof for Class II, III, Division 1, Groups E, F and G; Nonincendive for Class I, Division 2, Groups A, B, C & D; Suitable for Class II, III, Groups F & G hazardous outdoor Type 4X, IP66 (classified) locations with Intrinsically 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.



XP with Intrinsically Safe sensing element for Class I, Division 1, Groups A, B, C and D; Class II, Division 1, Groups E, F, G and Class III, Division 1 Class I, Division 2, Groups A, B, C, D with Intrinsically Safe sensing element for Class I, Division 1, Groups A, B, C, D; Class II, Division 2, Groups F & G and Class III, Division 1 with Intrinsically Safe sensing element for Class II, Division 1, Groups F & G and Class III, Division 1. **Max. Amb. +70C Install per 420- 0004-145-CD** Ex d [ia] IIC T5 zone 0/1/2
A seal shall be installed within 50mm of enclosure

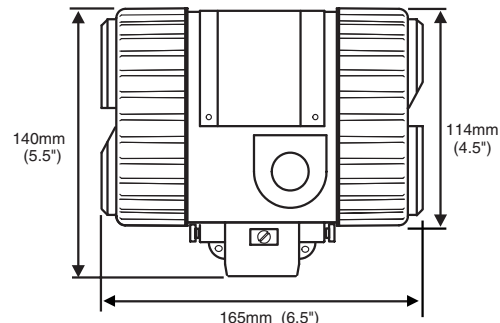
MTTF (Mean Time to Failure):
110 Years
Independently Tested

Wiring



85 to 250 Vac
21 to 100 Vdc
Auto-Detecting

Dimensions



Point Level Measurement

IntelliPoint RF Series

Model Numbering (continued on next page)

IntelliPoint RF™

●Technology

R RF Admittance

●Measurement Type

N No Calibration, Point Level

H No Calibration, Point Level, High Sensitivity

●Input

L Universal Power Supply 21-100 Vdc, 85-250 Vac, 0-400 Hz

●Housing

0 No Approvals, Dual Compartment NEMA 4X/IP66, M20 x 1.5 conduit entries

1 No Approvals, Dual Compartment NEMA 4X/IP66 ¾" NPT conduit entries

2 CENELEC/ATEX Approved, Dual Compartment NEMA 4X/IP66 M20x1.5 conduit entries

3 FM Approved, Dual Compartment NEMA 4X/IP66 ¾" NPT conduit entries

4 CSA Approved, Dual Compartment NEMA 4X/IP66 ¾" NPT conduit entries

●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

●Output

1 Two SPDT Relays, relay #2 configured as alarm or fault

●Sensing Element

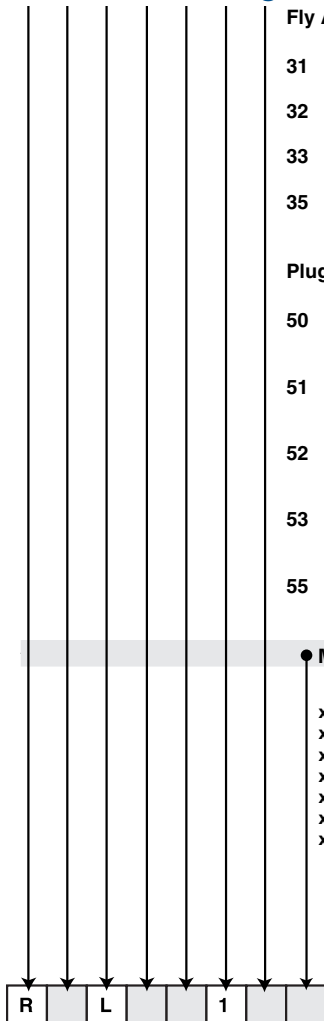
	Application	Sensing Element	Pressure/Temperature	Wetted Parts
00	General purpose	700-1202-001 remote 700-1202-021 integral	13.8 bar @ 232°C (200 PSI @ 450°F)	316SS and PEEK
01	Floating roof with cable attachment and brass bottom weight	700-1202-012 remote 700-1202-022 integral	13.8 bar @ 177°C (200 PSI @ 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 700-1202-031 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
16	High integrity seal for hazardous material (8)	700-0002-360	34.5 bar @ 149°C (500 PSI @ 300°F) (Seal Tyte™)	PFA (flange mounting only)
17	Sanitary (3) low pressure	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
60	Highest pressure and temperature (1)	700-0204-038	138 bar @ 93°C (2000 PSI @ 200°F) 69 bar @ 260°C (1000 PSI @ 500°F)	316SS and Ceramic



Point Level Measurement

IntelliPoint RF Series

Model Numbering



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)
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 305mm2 (12 inches2) heavy duty	700-0207-001	0.1 bar @ 82°C (1 PSI @ 180°F)	304 SS and Polyurethane
51 Flush Mount Sensor 305mm2 (12 inches2) higher temperature	700-0207-002	0.1 bar @ 149°C (1 PSI @ 300°F)	304 SS and TFE
52 Flush Mount Sensor 305mm2 (12 inches2) 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 305mm2 (12 inches2) extra heavy duty	700-0207-004	0.1 bar @ 82°C (1 PSI @ 180°F)	410 SS and UHMW Polyethylene
55 Flush Mount Sensor 203mm2 (8 inches2) heavy duty	700-0207-006	0.1 bar @ 82°C (1 PSI @ 180°F)	304 SS and Polyurethane

● 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")	P00X	IL/CSL factory set for Plugged Chute	
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
 (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





Able Instruments & Controls Limited. Cutbush Park, Danehill, Lower Earley, Reading. Berkshire. RG6 4UT. UK.
Tel: +44 (0) 118 9311188 Fax: +44 (0) 118 9312161 Email: info@able.co.uk Web: www.able.co.uk Buy Online: www.247able.com