2Point® Specs, Sensors & Systems

5Digit Model Available for Gallons and Pounds

Technical Information

Sensor Input: Isolated sensor input accepts 4-20 mA signal and allows remote data collection to other devices or networks. Loop power up to 24VDC available.

Input Power: 24VDC unregulated or 24VAC / 140mA

Security Levels: 3 levels of access protect data changes with DIP switch on back

Control Circuits: Two Form A relays (Normally Open), 10.0 amps 125VAC (noninductive). For more detail see Controller Operation inside.

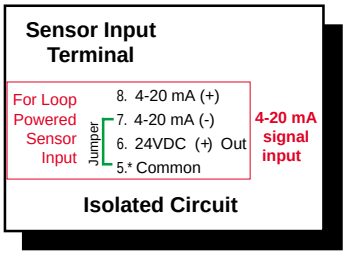
Programmed Memory: EEPROM - Loss of power will not affect existing programmed data.

Mounting Format: NEMA 4, metal enclosure 8.5"h x 10"w x 2.5"d or as a flush mount in your existing enclosure. Mounts with six (6) 10/32 studs and a NEMA4 sealing gasket.

Overall Dimensions: Tall: 8.5" (21.5mm), Wide: 10.0" (25.5mm), Deep 2.25" (57mm), Weight: 2 lbs.

Level Sensor Input

Input is an isolated 4-20 mA circuit. It has loop powered up to 24VDC available for two wire sensors. It accepts any type of 4-20 mA process signal from a wide variety of sensors. This provides tremendous design flexibility on your application. Some of the more common types of input sensors are pressure transducers, ultrasonic, submersible transducers, capacitance probes and bubbler systems measuring back pressure. Existing bubblers systems can easily be upgraded to use the 2Point® controller.



Complete Control Systems

A variety of complete turnkey systems are available to control your application. The system includes: a 2Point® controller in a NEMA 4 enclosure and either a transducer or bubbler to send the level information to 2Point®. Two control relays provide pump control and alarm points, make up or sump is DIP switch selectable.

Transducer System: A variety of sensors can be input into the 2Point® controller. Connections for the 24 VAC or DC input power, control relays and sensor connections are made with a snap on Phoenix type connector or miscro screw connections. Your choice of NPT fittings on the pressure transducer or cable length with the submersible sensors. See specification key to order.

Bubbler System: This system uses the bubbler principle to sense level. It can be housed in one enclosure with the air pump, 2Point controller and pressure sensor. Or the air supply pump and sensor can be in one NEMA 4 enclosure which will send the 4-20mA signal to the 2Point controller located in another area over a shielded, twisted pair cable. The air supply is a low pressure, low flow diaphragm pump located in the enclosure. The back pressure from the bubbler stand pipe is converted to a 4-20 mA signal with a pressure transducer in the NEMA enclosure.

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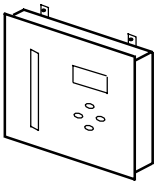
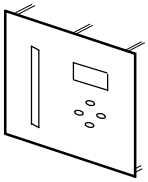
System Enclosures:



Complete 2Point Enclosure: Metal NEMA 4 8.5"h x 10"w x 2.5"d enclosure with tabs top and bottom for wall mount. Power connection choices are 1/2" knockout or screw connectors. **C2P**

Flush Mount: The metal face has six 10/32 studs and sealing gasket to flush mount into any type of enclosure or swing out panel. Full size paper template for cut out is provided. **F2P**



Level Sensors: There are many types of sensors and installations. 2Point® accepts any type of sensor producing a 4-20 mA signal. The following are basic types, but not the only sensors that will work. 2Point® provides up to 24VDC to power loop sensors.

Pressure Transducer E&H PMC 131: Installs externally to tank with 1/2" NPT male fitting. **PT**

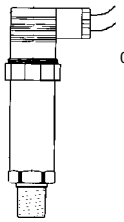
Bubbler by DistaView®: Uses the traditional bubbler principle to sense level. See bottom of first page for complete description. **PB**

Other Sensor Types: A variety of special application sensors are available. Specific information about ultrasonic, capacitance probes, microwave and laser sensing devices is available from your rep. 2Point® accepts any 4-20 mA process signal. **OT**

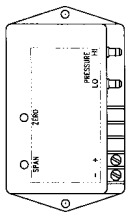
No Sensor: Supplied by others. **XX**

Select Sensor Range: There are a variety of sensor ranges available. The maximum height of the liquid covering the sensor or bubbler stand pipe must be determined to insure the correct range transducer. Specific gravity of the material may also affect the correct range. See back page questions.

Endress & Hauser Pressure Sensor PMC 131 RANGE	Order Code
0-50 INWC	**050W**
0-100 INWC	**100W**
0-5 PSIG	**005P**
0-15 PSIG	**015P**
0-30 PSIG	**030P**
0-50 PSIG	**050P**
0-150 PSIG	**150P**



2Point Bubbler Transducer RANGE	Order Code
0-10 INWC	**B10W**
0-15 INWC	**B15W**
0-20 INWC	**B20W**
0-30 INWC	**B30W**
0-50 INWC	**B50W**
0-80 INWC	**B80W**
0-100 INWC	**BB1W**
0-1 PSI	**B01P**
0-2 PSI	**B02P**
0-3 PSI	**B03P**
0-5 PSI	**B05P**
0-10 PSI	**B10P**
0-15 PSI	**B15P**
0-20 PSI	**B20P**
0-30 PSI	**B30P**



RANGE ORDER CODE

Range Sensor Enclosure

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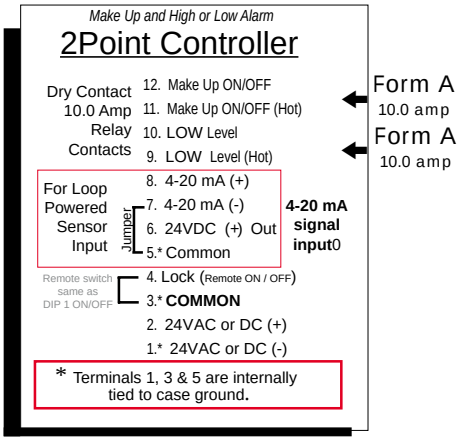
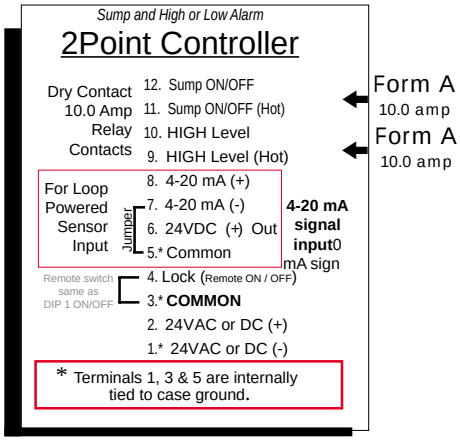
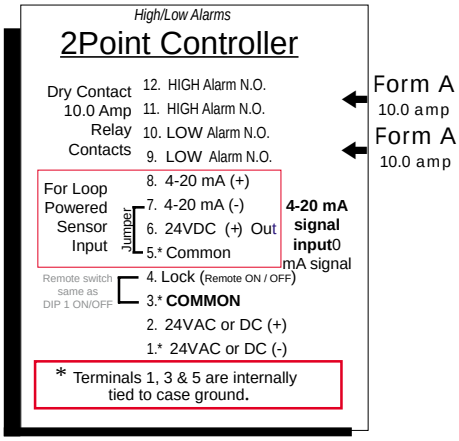
2Point® Controller -

Two set point controller with the ability to control a single pump and one alarm point or two alarm points. It is able to be DIP switch configured as a Sump, Makeup or discrete alarm controller.

ML Make Up with Low Alarm
MH Make Up with High Alarm
SL Sump with Low Alarm
SH Sump with High Alarm
2H Two High Alarms
2L Two Low Alarms
HL High and Low Alarms





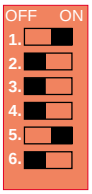


Display

3 3 Digit Model for Inches, Feet, etc., up to 999 units.
5 5 Digit Model for Gallons, Pounds, etc., up to 68000 units.

Units of Measurement

1	Inches	Range measured & displayed on vertical bar in Inches.
2	Centimeters	Range measured & displayed on vertical bar in Inches.
5	Feet	Range measured & displayed on vertical bar in Feet.
7	Pounds	Range measured & displayed on vertical bar in Pounds.
8	Gallons	Range measured & displayed on vertical bar in Gallons.
6	Special Order	Graphic face shows level in measurements you require.



DIP Selectable

Connectors for Power and Control Relays

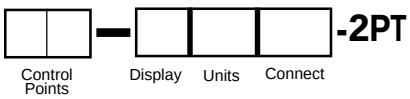
C Microconnectors 8 pin screw on microconnector for two relays, input power & remote security lock. The standard length cable for the 8 pin connection is 15 feet. A 4 pin connector for the 4-20mA signal is supplied. The shielded, twisted pair cable is provided by customer.

K Conduit Connector Two 1/2" conduit knockout holes are provided for all wiring access.

M Rubber Cable Grommets Two NEMA 4 rubber grommets for power and 4-20mA cables.

X Flush Mount If you are flush mounting this in another enclosure you will not require a connector option. The PC terminal has a snap ON/OFF Phoenix type connector with 12 screw terminals

2PT The 2Point controller has an isolated 4-20mA input connection so it can accept any type of sensor. It provides loop power to the sensor if necessary or can accept powered sensors. Two 10.0 amp Form A relays (normally open) provide control of external alarms, pumps and other devices. 24 Volts AC or DC (unregulated is acceptable) at 500 mA is required.



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Application Notes for Quotes & Orders - More details, less confusion.

Contact Name: _____ Company: _____

Phone: ( ) _____-- _____ ext. _____ • Fax: ( ) _____-- _____

Department _____ Rep Name _____ Date ___/___/___

Material Being Measured: What is it? _____

(Sensor diaphragm is 316 stainless steel. Other diaphragm types are special order.)

- Normal Operating Temperature: _____ ❑ °F ❑ °C
- Max. Temperature: _____ ❑ °F ❑ °C For how long?_____
- Specific Gravity of Material: _____
- High Viscosity or Particulates that may clog 1/8" orifice? ❑ YES (see note if YES)

NOTE: The Endress & Hauser PMC 131 and PMC 41 pressure transducers have 3/8" diameter orifices to sense pressure. If you are in contact with high viscosity liquids, slurry and/or sludge, you may want to consider a non-clogging flush diaphragm with a straight thread connection. Call for details.

Site Installation Notes:

- 2Point® enclosure is located - Outdoor ❑ / Indoor ❑
- Pressure Sensor or Bubbler will be located - Outdoor ❑ / Indoor ❑
- Distance pressure sensor is from 2Point® controller - approx. feet _____ .
- Depth of liquid above the sensor or length of submersible cable is _____ inches.
- Tank is pressurized? ❑ YES - up to ____ psi. ❑ NO
- Tank is under vacuum? ❑ YES - up to ____ inches Hg. ❑ NO
- Does the controller location have a great deal of dust or caustic vapors in the air?
  ❑ Dusty - What is it? _____ ❑ Vapor - What is it? _____
- Standard E&H transducer thread size is 1/2" NPT male. Is this acceptable? ❑ YES ❑ NO
  If not, what thread size is required? _____

2Point **Controller Notes:**

- Are the devices on each circuit under 10 amps each? ❑ NO ❑ YES Amps _____
  NOTE: On all inductive loads you should install surge suppressors.
- Describe the level control you require for this installation - ✓check one.
  - ❑ Make-Up Differential Form A circuit maintains level within the upper and lower limits of the range. Circuit is activated when the level reaches the lowest point of the range and deactivated at the high point. Discrete Form A circuit controls one high or low alarm point.
  - ❑ Sump Differential Form A circuit maintains level within the upper and lower limits of the range. Circuit is activated when the level reaches the highest point of the range and deactivated at the lowest point. Discrete Form A circuit controls one high or low alarm point.
  - ❑ Two Alarms Two discrete Form A circuits are activated when the level passes each set point. You can specify each set point to activate upon the level rising or falling.
  - ❑ Special Order [**SP**] Custom operations can be programmed. Describe your specific control needs:
    ✎ .....

Comments & Notes: . . . . . .

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