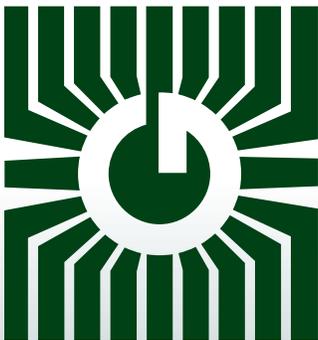


GREYSTONE ENERGY SYSTEMS INC



ULTRA LOW PRESSURE TRANSMITTERS ULP Series



Precision low pressure control/sensing

FEATURES:

- Ranges between -0.125" WC and 1" WC (-30 Pa and 250 Pa)
- Analog output or BAC communications
- 8 switch selectable pressure ranges on analog model
- 2 selectable pressure ranges on BACnet model
- 3 switch selectable current or voltage outputs
- Optional LCD display (Standard on BACnet model)
- Optional alarm relay output (Standard on BACnet model)

*Peace of mind
through reliable
pressure transmitters*

DESCRIPTION:

The ULP Series Ultra Low Pressure Transmitter is used to measure differential pressure in the range of -0.125 to 1"WC (-30 to 250 Pa) and is available in two models, analog output or BACnet communications. It combines precision high sensitivity silicon sensing capabilities and the latest ASIC technology to substantially reduce offset errors due to changes in temperature, stability to warmup, long term instability and position sensitivity.

It is ideal for monitoring pressure for air or other clean inert gas. It features several field selectable uni- or bi-directional pressure ranges for the most flexible application. The device has an on-board auto-zero function as well as a connection for remote zeroing.

Options include an LCD to display the pressure value and an alarm relay with a variable trip point. The LCD and alarm relay are standard on the BACnet model.

SPECIFICATIONS:

Pressure Ranges

Analog Output Model

ULP(*)1 ±1" WC, 0-1" WC, ±0.5" WC, 0-0.5" WC,
 ±250 Pa, 0-250 Pa, ±125 Pa, 0-125 Pa

ULP(*)2 ±0.25" WC, 0-0.25" WC, ±0.125" WC, 0-0.125" WC,
 ±60 Pa, 0-60 Pa, ±30 Pa, 0-30 Pa

BACnet Communications Model

ULP1BAC ±1" WC or ±250 Pa

ULP2BAC ±0.25" WC or ±60 Pa

± 1% FS of selected range

± 1% FS (1 year)

± 2% FS max, 10 - 40°C (50 - 104°F)

Analog Model: 5 or 30 Seconds, switch selectable

BACnet Model: 1 to 60 Seconds, menu or BACnet selectable

100 "WC (24.9 kPa) for ULP1, 40 "WC (9.96 kPa) for ULP2

200 "WC (49.8 kPa) for ULP1, 80 "WC (19.9 kPa) for ULP2

0 - 60°C (32 - 140°F), 0 - 90 %RH non-condensing

-40 - 95°C (-40 - 203°F)

Dry air or inert gas

Analog Model: Pushbutton or digital input auto-zero

BACnet Model: Pushbutton or via BACnet

24 Vac/dc ± 10%

Analog Model: 55 mA max. with relay option

BACnet Model: 50 mA max.

Negligible over specified operating range

Reverse voltage protected and output limited

Screw terminal block (14 to 22 AWG)

Barbed ports for 1/8" to 3/16" ID tubing

Access hole for 1/2" NPT conduit or cable gland

Grey ABS with gasket, UL94-5VB

145 W x 101 H x 63 D mm (5.7" x 4.0" x 2.5")

260 g (9.2 oz)

Accuracy

Stability

Thermal Effect

Response Time

Proof Pressure

Burst Pressure

Operating Conditions

Storage Temperature

Media Compatibility

Zero Adjust

Power Supply

Power Consumption

Input Voltage Effect

Protection Circuitry

Wiring Connections

Pressure Connections

Conduit Connection

Enclosure

Weight

ANALOG OUTPUT

Output Signal

Output Drive

4-20 mA (3-wire), 0-5 or 0-10 Vdc (3-wire), field selectable

750 Ω max (4-20 mA), 2 KΩ min (voltage)

BACnet COMMUNICATIONS

Communications

Baud Rate

MAC Address Range

2-wire RS-485, BACnet MS/TP protocol

Locally set to 9600, 19200, 38400 or 76800

Locally set to 0-127 (factory default is 3)

LCD DISPLAY (Standard on BACnet Model)

Display Size

Digit Height

Symbols

Backlight

38.1 x 16.5 mm (1.5" x 0.65")

11.43 mm (0.45")

" WC, Pa

Enable/disable (switch selectable)

ALARM FUNCTIONS (Standard on BACnet Model)

Alarm Relay Output

Alarm Relay Trip Point

N.O. contact, 2 Amps @ 120 Vac or 30 Vdc

Analog Model: Adjustable over the pressure range (forward or reverse acting)

BACnet Model: Upper and Lower alarms adjustable over the pressure range

Analog Model: 10 or 60 Seconds, switch selectable

BACnet Model: 0 to 10 Minutes, menu or BACnet selectable

Alarm Relay Delay

ANALOG PRODUCT ORDERING INFORMATION:

| MODEL | Product Description |
|-------------|--|
| ULP | Ultra Low Pressure Transmitter |
| CODE | Display |
| A | No display |
| B | LCD Display |
| CODE | Pressure Ranges - Switch Selectable |
| 1 | ±1 "WC, 0-1 "WC, ±0.5 "WC, 0-0.5 "WC, ±250 Pa, 0-250 Pa, ±125 Pa, 0-125 Pa |
| 2 | ±0.25 "WC, 0-0.25 "WC, ±0.125 "WC, 0-0.125 "WC, ±60 Pa, 0-60 Pa, ±30 Pa, 0-30 Pa |
| CODE | Alarm Relay Output |
| - | None (Leave blank) |
| R | Alarm relay, N.O. 2 Amps @ 120 Vac or 30 Vdc |

| | | | | |
|-----|---|---|---|------------------------|
| ULP | B | 1 | R | ← Typical Model Number |
|-----|---|---|---|------------------------|

Greystone Energy Systems Inc. reserves the right to make design modifications without prior notice.

BACnet PRODUCT ORDERING INFORMATION:

| MODEL | Product Description |
|-------------|-------------------------------------|
| ULP | Ultra Low Pressure Transmitter |
| CODE | Pressure Ranges - Selectable |
| 1 | ±1 "WC or ±250 Pa |
| 2 | ±0.25 "WC or ±60 Pa |
| CODE | Communications |
| BAC | BACnet Communications |

| | | | |
|-----|---|-----|------------------------|
| ULP | 1 | BAC | ← Typical Model Number |
|-----|---|-----|------------------------|

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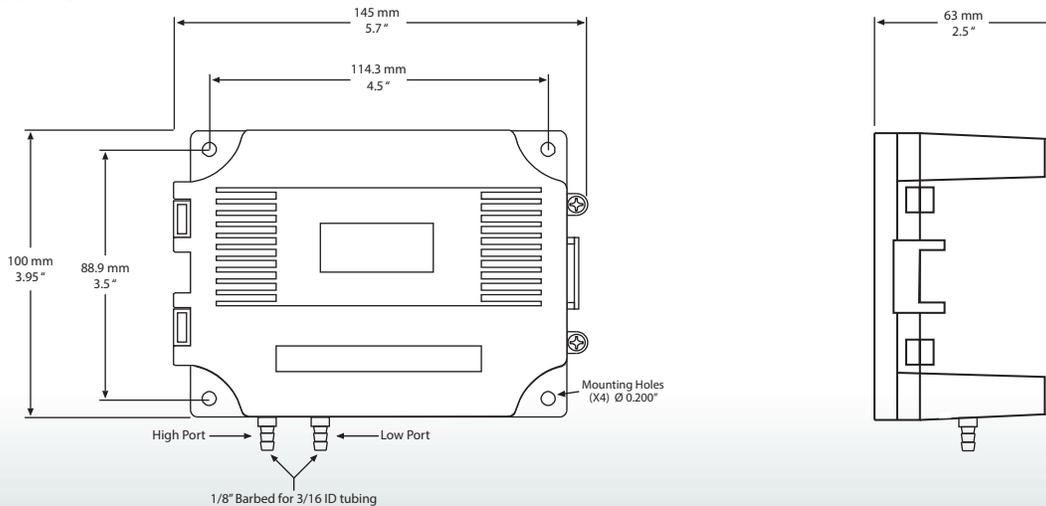
BACnet® COMMUNICATION



BACnet® is a data communication protocol for building automation and control networks. The detector communicates on a standard 2-wire RS-485 MS/TP (master-slave/token-passing) network designed to run at speeds from 9600 to 76800 baud over twisted pair wiring.

BACnet is a registered trademark of ASHRAE. ASHRAE does not endorse, approve or test products for compliance with ASHRAE standards. Compliance of listed products to the requirements of ASHRAE Standard 135 is the responsibility of BACnet International (BI). BTL is a registered trademark of BI.

DIMENSIONS:



ACCESSORIES:



**RPV
Stainless Steel Pick-up Port**

The EPV is a stainless steel wall plate that incorporates a filtered port with a 1/4" barb connection for pneumatic tubing. It can be mounted on a standard junction box and used in conjunction with a low pressure transmitter to monitor room pressure.



**CPV
Continental ABS Pick-up Port**

The EPV is a low profile, decorative ABS enclosure that incorporates a port with a 1/4" barb connection for pneumatic tubing. It can be mounted on a standard junction box and used in conjunction with a low pressure transmitter to monitor room pressure.



**OPV
Outside Pick-up Port**

The OPV, is a weatherproof ABS enclosure with wind shield that incorporates an filtered port with 1/4" barb fitting for connection of pneumatic tubing. It can be mounted on the side of a building and used in conjunction with a low pressure transmitter to monitor building pressure.



**FPP & SPP Series
Pitot Tube**

The FPP and SPP series are used to sense velocity pressure or static pressure respectively. Constructed of 304 stainless steel probes with an ABS mounting bracket, they are available in 150 mm (6") or 300 mm (12") lengths. Kits are available for differential and static that are complete with pneumatic tubing.



**DPFS Series
Differential Pressure Probe**

The DPFS series Averaging Flow Sensor is ideal for sensing differential pressure in the inlet section of variable air volume terminal units and fan terminal units. Units can also be used to sense differential pressure at other locations in the main or branch duct systems. They are made of ABS/polycarbonate (UL94-5V) and available in lengths from 100 mm (4") to 560 mm (22")



**MP Series
Differential Pressure Probes**

The MP series Air Velocity Pitot Tubes are used in conjunction with a DP transmitter to calculate airflow in larger ducts or in areas of turbulent airflow. The units come in pairs in either ABS or 316 S/S and are available in various lengths from 610 mm (24") to 2000 mm (80"). Gasketed mounting collars for both probes are included.



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RoHS
COMPLIANT



Greystone Energy Systems Inc. is one of North America's largest ISO registered manufacturers of HVAC/R sensors and transmitters for Building Automation Management Systems.

We have conscientiously established a worldwide reputation as an industry leader by maintaining leading-edge design technology, prompt technical support, and a commitment to on-time deliveries. We take pride in our Quality Management System which is ISO 9001 certified, assuring our customers of consistent product reliability.

GREYSTONE HAS AN ISO 9001 REGISTERED QUALITY SYSTEM