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 BACnet 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 monitoring

GREYSTONE HAS AN **ISO 9001** REGISTERED QUALITY SYSTEM

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
Accuracy	± 1% FS of selected range
Stability	± 1% FS (1 year)
Thermal Effect	± 2% FS max , 10 - 40˚C (50 - 104˚F)
Response Time	**Analog Model:** 5 or 30 Seconds, switch selectable
	BACnet Model: 1 to 60 Seconds, menu or BACnet selectable
Proof Pressure	100 "WC (24.9 kPa) for ULP1, 40 "WC (9.96 kPa) for ULP2
Burst Pressure	200 "WC (49.8 kPa) for ULP1, 80 "WC (19.9 kPa) for ULP2
Operating Conditions	0 - 60˚C (32 - 140˚F), 0 - 90 %RH non-condensing
Storage Temperature	-40 - 95˚C (-40 - 203˚F)
Media Compatibility	Dry air or inert gas
Zero Adjust	**Analog Model:** Pushbutton or digital input auto-zero
	BACnet Model: Pushbutton or via BACnet
Power Supply	24 Vac/dc ± 10%
Power Consumption	**Analog Model:** 55 mA max. with relay option
	BACnet Model: 50 mA max.
Input Voltage Effect	Negligible over specified operating range
Protection Circuitry	Reverse voltage protected and output limited
Wiring Connections	Screw terminal block (14 to 22 AWG)
Pressure Connections	Barbed ports for 1/8" to 3/16" ID tubing
Conduit Connection	Access hole for 1/2" NPT conduit or cable gland
Enclosure	Grey ABS with gasket, IP65 (NEMA 4X) UL94-5VB
	145 W x 101 H x 63 D mm (5.7" x 4.0" x 2.5")
Weight	260 g (9.2 oz)

ANALOG OUTPUT

Output Signal	4-20 mA (3-wire), 0-5 or 0-10 Vdc (3-wire), field selectable
Output Drive	750 Ω max (4-20 mA), 2 KΩ min (voltage)

BACnet COMMUNICATIONS

Communications	2-wire RS-485, BACnet MS/TP protocol
Baud Rate	Locally set to 9600, 19200, 38400 or 76800
MAC Address Range	Locally set to 0-127 (factory default is 3)

LCD DISPLAY (Standard on BACnet Model)

Display Size	38.1 x 16.5 mm (1.5" x 0.65")
Digit Height	11.43 mm (0.45")
Symbols	" WC, Pa
Backlight	Enable/disable (switch selectable)

ALARM FUNCTIONS (Standard on BACnet Model)

Alarm Relay Output	N.O. contact, 2 Amps @ 120 Vac or 30 Vdc
Alarm Relay Trip Point	**Analog Model:** Adjustable over the pressure range (forward or reverse acting)
	BACnet Model: Upper and Lower alarms adjustable over the pressure range
Alarm Relay Delay	**Analog Model:** 10 or 60 Seconds, switch selectable
	BACnet Model: 0 to 10 Minutes, menu or BACnet selectable

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**

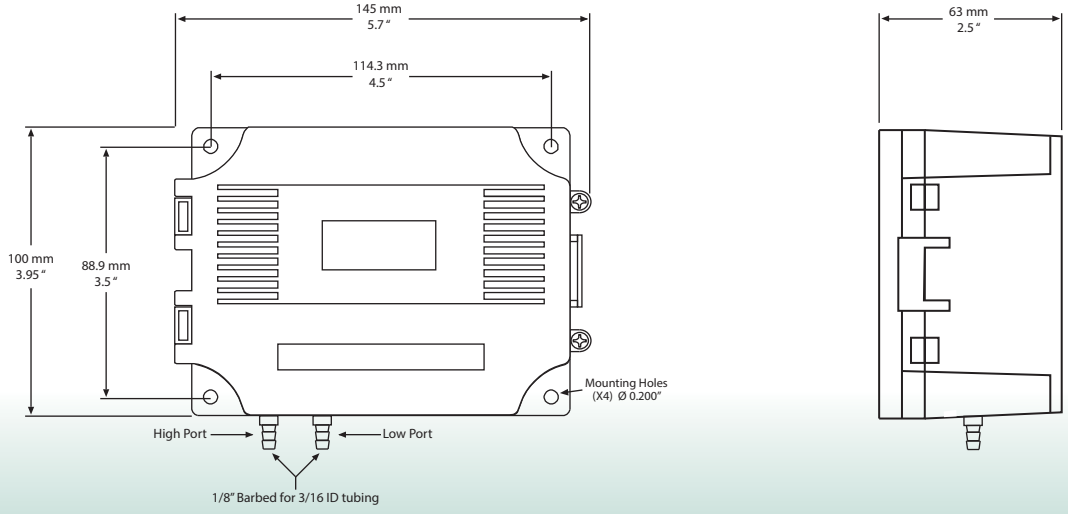
Greystone Energy Systems Inc. reserves the right to make design modifications without prior notice.

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:



GREYSTONE ENERGY SYSTEMS, INC.

RoHS COMPLIANT

ACCESSORIES:

RPV
Stainless Steel Pick-up Port

The RPV is a stainless steel wall plate that incorporates a filtered port with a 1/8" barb connection for pneumatic tubing. It can be mounted on a standard junction box or directly to a wall or ceiling and used in conjunction with a low pressure transmitter to monitor room pressure.

CPV
Continental ABS Pick-up Port

The CPV is a low profile, decorative ABS enclosure that incorporates a port with a 3/16" barb fitting for connection of 0.17" ID pneumatic tubing. It can be mounted on a standard junction box or directly to a wall 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 a port with a 3/16" barb fitting for connection of 0.17" ID 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 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.

GREYSTONE
ENERGY SYSTEMS INC

Greystone Energy Systems Inc.
150 English Drive, Moncton,
New Brunswick, Canada E1E 4G7

(506) 853-3057 Fax: (506) 853-6014
North America: 1-800-561-5611
e-mail: mail@greystoneenergy.com
web site: www.greystoneenergy.com

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

Copyright © Greystone Energy Systems Inc. All Rights Reserved

ULP-SPE-001 12/13

PRINTED IN CANADA