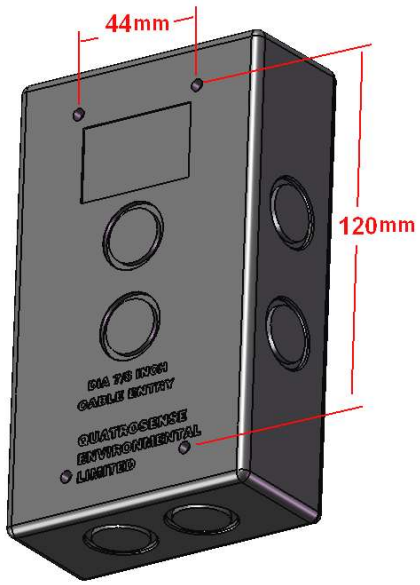
REVISIONS						
ECN	REV.	DESCRIPTION	DATE	DRAW	CHECK	APPROVED
1260	A	Initial Release	2024/10/21	XY	XY	XY



SPECIFICATION

INPUT POWER:
+24VDC nominal, range: 18 to 30VDC 0.3A DC Total Max.
~24VAC nominal, range: 18 to 24VAC 50/60HZ 0.3A AC Total Max.

FUSE:
F2 on Main Board: Polyswitch 750mA
Polyswitch device resets after the fault is cleared and power to the circuit is removed

SENSOR:
Electrochemical
Real-time Supervision test and diagnose with end-of-life notification. When the sensor has reached the end of its life, fault "SENSOR FAIL" will be reported and displayed on the LCD

OUTPUT SIGNAL:
BACnet MS/TP master / slave protocol
3X SPDT RELAYS: 1.0A MAX. @30VDC (RESISTIVE LOAD)
0.3A MAX. @125VAC (RESISTIVE LOAD)

ENCLOSURE:
IP 66 & NEMA 4, 4X, 12 & 13

OPERATING TEMPERATURE:
-20°C to 40°C

AMBIENT HUMIDITY:
5% TO 95% RH (NON- CONDENSING)

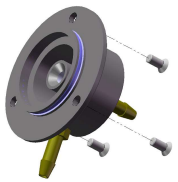
STORAGE TEMPERATURE:
0°C to 20°C

SIZE: 150mm X 90mm X 65mm

WEIGHT: LESS THAN 0.5lbs

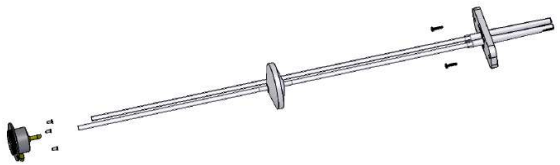
Option Accessories:

*Option Accessories are not included in Q5C or B5C Standard Package.



Pump-thru & Cal Cap Kit
SKU#: 85930-006-005

Splash Guard Kit
SKU#: 85930-007-005



Duct Mount Adapter
Kit: 85930-040-000

		UNLESS OTHERWISE SPECIFIED:		NAME	DATE
		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ± 1/32 ANGULAR: MACH ± .5 degrees BEND ± TWO PLACE DECIMAL ± .02 THREE PLACE DECIMAL ± .010	DRAWN	XY	2024/10/21
			CHECKED	XY	2024/10/21
			ENG APPR.	XY	2024/10/21
			MFG APPR.		
			Q.A.		
		INTERPRET GEOMETRIC TOLERANCING PER:	COMMENTS:		
		MATERIAL			
NEXT ASSY	USED ON	FINISH			
APPLICATION		DO NOT SCALE DRAWING			

Greystone Energy Systems Inc.

TITLE:
B5C, GES
INSTALLATION DRAWING

SIZE	DWG. NO.	REV
B	85950-302-005	A

SCALE: 1:8 | WEIGHT: | SHEET 1 OF 4

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
-	-	See Sheet1	-	-

Factory Calibration and Default Settings

This B5C CO transmitter has been calibrated in our facilities according to the manufacturer's procedures.

- SPAN:
  - B5C-CO-250P: 0 – 250 ppm CO
  - B5C-CO-1000P: 0 – 1000 ppm CO
- CAL GAS:
  - 100 ppm CO balanced with air

The B5C default settings:

- Password: 4321
- Address: 126
- Protocol: BACnet /MSTP Master at 38.4kbps baud rate
- BACnet UTC Offset: 300
- Daylight Saving: Yes
- Device Object ID: 4005
- LCD Backlight: Auto

- Alarm Settings:

Alarm#	Input	On Concentration	Off Concentration	Output Trigger
Alarm1	Instant	30ppm	25ppm	Relay1
Alarm2	Instant	50ppm	40ppm	Relay1, Relay2
Alarm3	Instant	100ppm	95ppm	Relay1,2,3, Buzzer1
Alarm4	Fault	---	---	Relay3, Buzzer3
Alarm5/6/7/8	Disabled			

- Relay & Buzzer Settings:

Relay#	Normally Energized	Latch	On Delay	Off Delay	Style
Relay1	NO	NO	5 seconds	5 seconds	Normal Relay
Relay2	NO	NO	5 seconds	5 seconds	Normal Relay
Relay3	NO	NO	5 seconds	5 seconds	Normal Relay
Buzzer1/2/3	Disabled				

*Note: Each setting can be modified in B5C Menu
*Note: For BACnet settings, see 85950-103-000 Rx (B5 PIC Statement)
*Note: Per UL standard 2075, this B5C sensitivity limits are superior to the standard sensitivity requirements defined in UL2075.

NEXT ASSY | USED ON
APPLICATION

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL ±
ANGULAR: MACH ± BEND ±
TWO PLACE DECIMAL ±
THREE PLACE DECIMAL ±
INTERPRET GEOMETRIC TOLERANCING PER:
MATERIAL
FINISH
DO NOT SCALE DRAWING

	NAME	DATE
DRAWN	XY	
CHECKED	XY	
ENG APPR.	XY	
MFG APPR.		
Q.A.	XY	

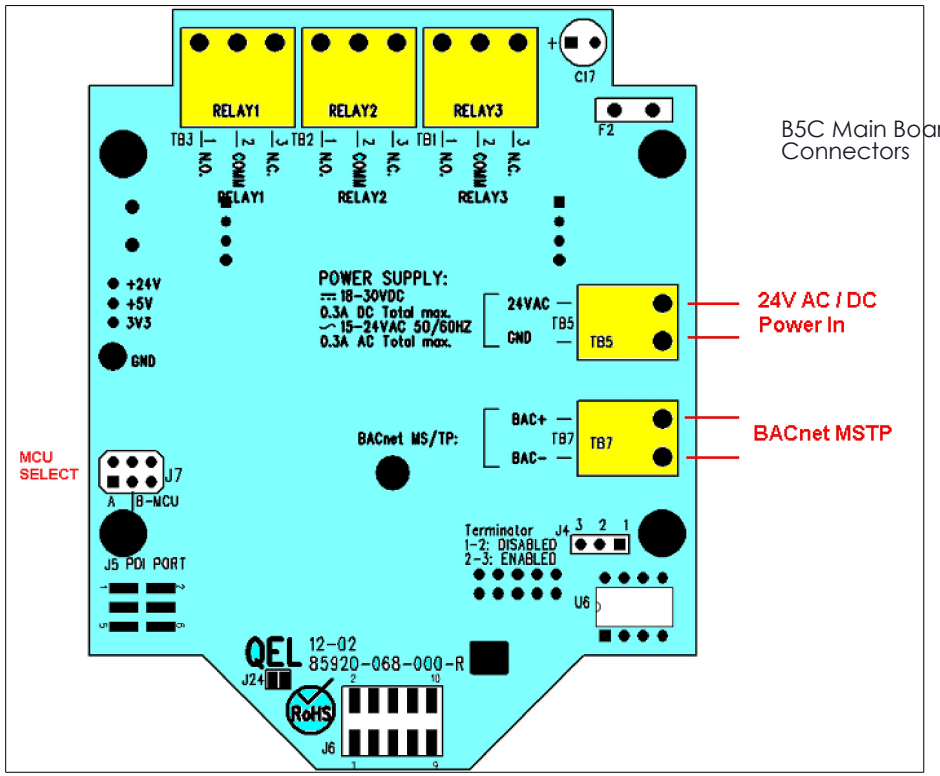
COMMENTS:

Greystone Energy Systems Inc.

TITLE:
B5C, GES
INSTALLATION DRAWING

SIZE B | DWG. NO. 85950-302-005 | REV A

SCALE: 1:2 | WEIGHT: | SHEET 2 OF 4



B5C Main Board Connectors

Note:

- B5C supports BACnet MS/TP master or slave protocol
- B5C default baud rate is 38400bps
- Each B5C on the MS/TP network must have a unique BACnet MAC address and unique Device Instance Number (Object ID).
  - B5C valid MAC addresses are 0-127 for master node, 0-254 for slave node
  - B5C default MAC address is 126
  - Default Device Instance Number is 4005
- Avoid running communication wires or sensor input wires next to AC power wires or the relay output wires. These can be sources of noise that can affect signal quality.
- The B5C has a half wave rectifier on board. You will damage devices if you mix half wave and full wave on the same AC source. Use extreme caution when sharing a common AC source. Sharing a common DC source is less problematic.
- When the B5C input power is AC, the 24VAC can be either grounded or non-grounded. Polarization is very important when the B5 is connected to a network. Make sure the Neutral is connected to the GND of TB5.

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
-	-	See Sheet1	-	-

Twisted Pair?

RS-485 is designed to be a balanced system. The signal on one wire is ideally the exact opposite of the signal on the second wire. In other words, if one wire is transmitting a high, the other wire will be transmitting a low, and vice versa. Although RS-485 can be successfully transmitted using multiple types of media, it should be used with wiring commonly called "twisted pair."

Terminator Enable/Disable?

The terminator on each end of the RS485 loop is designed to match the electrical impedance characteristic of the twisted pair loop, and will prevent signal echoes from corrupting the data on the line. The terminator should be enabled on BOTH ends of the RS485 loop. Short and medium length modbus/485 loops can operate without the terminating resistor. Longer runs may require the terminating resistors. But adding terminator dramatically increases power consumption.

Sensor Location:

Several factors should be considered when selecting locations to install sensors. The following general suggestions should be considered to assure the detection of the target gas. Select the most suitable location for each sensor.

1. Air Currents: If there are fans, winds, or others sources of air movement, gases may tend to rise to collect in certain areas of a facility. The local air currents should be assessed to aid in selecting the sensor location. In outdoor situations considerations such as prevailing winds should be accounted for. Air convection can often be more important in determining gas concentrated areas than factors of Vapor Density.
2. Vapor Density: For the target gas heavier than air. Detecting location should be 9 - 18 inch (0.23m to 0.46m) above the floor.
3. Gas Emission Sources: As a rule, at least one sensor should be located in close proximity to each point where a leak is likely to occur. This is particularly important when a liquid having a low volatility is monitored.
4. Environmental Factors: Designed to rugged outdoor use consider the following in selecting locations. Install sensors where they will be protected from wind, dust, snow, water, vibration and shock.

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL ±
ANGULAR: MACH ± BEND ±
TWO PLACE DECIMAL ±
THREE PLACE DECIMAL ±
INTERPRET GEOMETRIC TOLERANCING PER:
MATERIAL
FINISH
NEXT ASSY | USED ON
APPLICATION | DO NOT SCALE DRAWING

	NAME	DATE
DRAWN	XY	
CHECKED	XY	
ENG APPR.	XY	
MFG APPR.		
Q.A.		

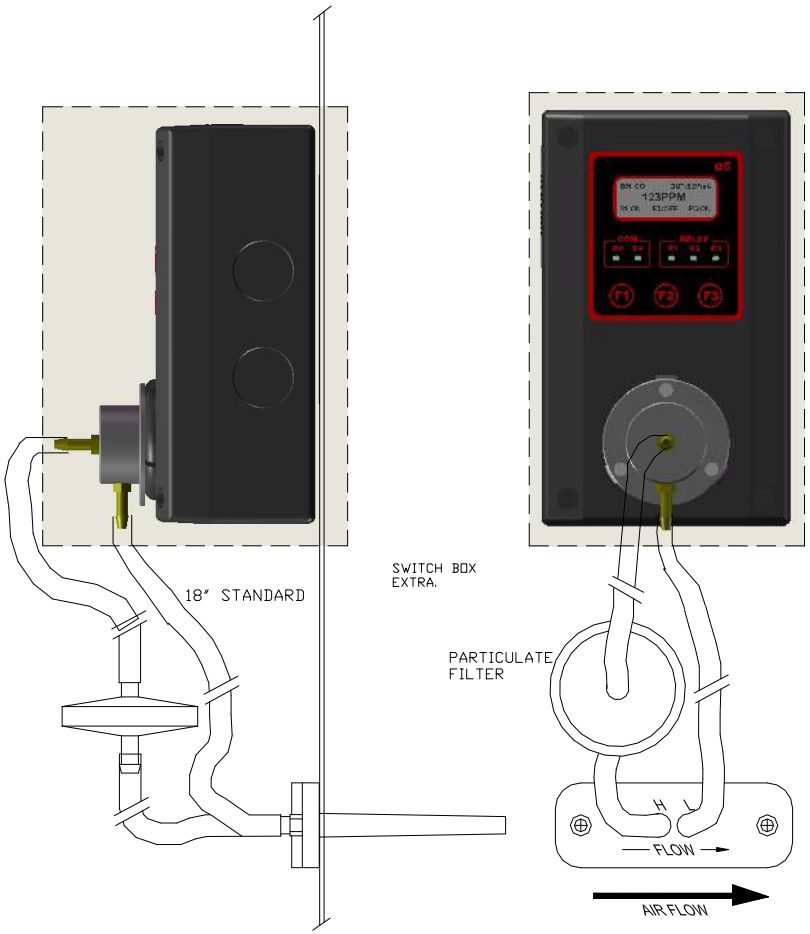
COMMENTS:

Greystone Energy Systems Inc.

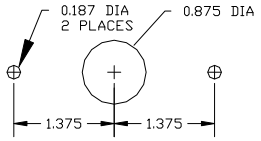
TITLE:
B5C, GES
INSTALLATION DRAWING

SIZE	DWG. NO.	REV
B	85950-302-005	A

SCALE: 1:2 | SHEET 3 OF 4



DUCT MOUNTING OPTION



CUTOUT INFORMATION
FOR FLOW SENSOR

NOTE: GAS SAMPLING OCCURS WHEN AIR FLOW ACROSS THE THE TWO TUBES CAUSES DIFFERENTIAL PRESSURE. THIS METHOD WILL NOT WORK IN STATIC AIR SAMPLING.

NEXT ASSY	USED ON	
APPLICATION		DO NOT SCALE DRAWING

UNLESS OTHERWISE SPECIFIED:

DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL ±
ANGULAR: MACH ± BEND ±
TWO PLACE DECIMAL ±
THREE PLACE DECIMAL ±

INTERPRET GEOMETRIC TOLERANCING PER:

MATERIAL

FINISH

	NAME	DATE
DRAWN	XY	
CHECKED	XY	
ENG APPR.	XY	
MFG APPR.		
Q.A.	XY	

COMMENTS:

Greystone Energy Systems Inc.

TITLE:

B5C, GES

INSTALLATION DRAWING

SIZE	DWG. NO.	REV
B	85950-302-005	A

SCALE: 1:2	WEIGHT:	SHEET 4 OF 4