GREYSTONE ENERGY SYSTEMS INC

TECHNICAL DATA SHEET **Q6/B6 Series**

SMART COMBO GAS TRANSMITTERS

The Q6/B6 Series gas sensor/transmitters detect Carbone Monoxide and Nitrogen Dioxide using electrochemical sensing technologies. They are housed in a NEMA 4X enclosure with an integral buzzer. The main unit features an LCD display, LED relay indicators, and supports RS-485, Modbus, or BACnet communications. Users can replace pre-calibrated sensors to reduce calibration costs and downtime. The units offer multiple display screens for various data and are protected by a password. They can operate as stand-alone units or be connected to QEL or third-party controllers. The combo unit includes a main unit and a remote unit for installation at different elevations, optimizing response times for gases pooling at floor or ceiling heights.

- Uses **Electrochemical**
- **Pre-calibrated sensors** available for easy replacement **without calibration**
- **Three on-board user-programmable relays** common to both sensors
- **Non-proprietary set-up** and calibration procedures
- **Removeable terminal blocks** for easy wiring
- **Digital display** of concentration, relay status, TWA, STEL, PDV
- **Stand-alone operation**
- **RS-485 communication** to controller
- **RS-485 communication** through BACnet and Modbus
- **Integral buzzer** with three tones
- **Splash guard** available
- **Duct mount** available
- **Flow-Through/calibration cap** available
- **Operates** on 24 VAC/VDC

SPECIFICATIONS

POWER SUPPLY	24 Vac (15-24 Vac);24Vdc (18-30Vdc) AC Power must not be grounded
FUSE	0.750A Polyswitch
SUPPLY CURRENT | POWER CONSUMPTION	MAX 300mA | 7.2W
SENSING ELEMENT TECHNOLOGY	Electrochemical
SENSOR LIFE	2 to 3 years, typical
ACCURACY	± 2.5% of reading
REPEATIBILITY	± 1% of reading
SHELF LIFE	6 months from the date of purchase
RESPONSE TIME	Less than 30 seconds for 90% step change
COVERAGE AREA	696.7 sqm(7500 sqft
MOUNTING HEIGHT	**CO:** 4.0 to 6.0' (1.20to 1.83m) above floor **O2:** 0.5 to 1.5' (0.15 to 0.46m) above floor
FACTORY CALIBRATION RANGE	**CO:** 0-250ppm **NO2:** 0-10ppm
DISPLAY	LCD graphic display c/w backlight
PANEL CONTROL	**Keypad:** 3 Capacitive touch sensing keys: F1, F2, F3
PANEL INDICATOR	5 Status LED's RS-485 TX & RS-485 RX (Green) Relay 1, Relay 2, Relay 3 (Red)
WARM UP TIME	1 hour
RELAYS OUTPUTS	3 Relays SPDT (Form C), dry contacts 1.0 A maximum at 30 VDC (resistive load) 0.3 A maximum at 125 VAC (resistive load)

RoHS COMPLIANT

PRINTED IN CANADA

Greystone Energy Systems, Inc.
321 Desbrisay Avenue, Moncton,
New Brunswick, Canada E1E 0J2

Ph: +1 (506) 853-3057 Fax: +1(506) 853-6014
North America: 1-800-561-5611
E-mail: mail@greystoneenergy.com

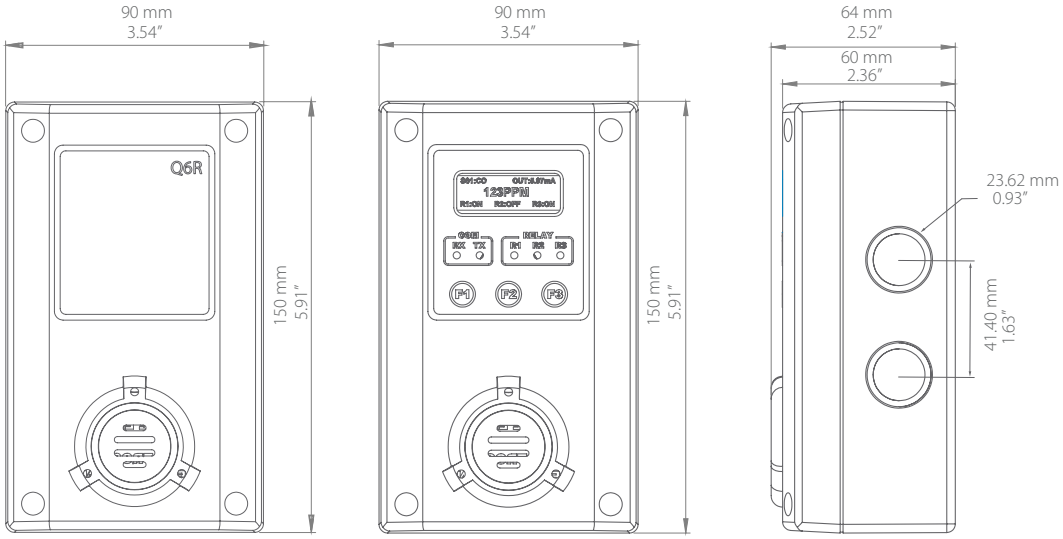
www.greystoneenergy.com

SPECIFICATIONS

TIME DELAYS	Actuation (Make) or De-Actuation (Break) @ 0 - 999 seconds
RELAYS LIFE EXPECTANCY	Mechanical @ 50 million & Electrical @ 200,000 operations
DIGITAL OUTPUT	Q6: RS-485 Modbus RTU/OptoMux (Proprietary GES Controller Protocol) connects to Q4C Controller, M-Controller2 and Q-Controller B6: RS-485 Serial BACnet MS/TP(Master and slave - Default : Master)
BAUD RATE	**Q6:** 1200, 2400, 4800,9600, 14400, 19200, 28800, 38400, 57600, 76800 Bits/Second (Default: 4800 BPS) **B6:** 9600,19200,38400,76800 Bits/Second (default:38400)
BUZZER	80 db at 10 cm, 2700 Hz Buzzer with 3 programmable tones
OPERATING ENVIRONMMENT	Indoor Use only
OPERATING TEMPERATURE	- 20 to 50°C (4 to 122°F)
STORAGE TEMPERATURE	**Storage:** 0 to 40°C (32 to 104°F), depends on sensor specification
OPERATING HUMIDITY	5% to 95% RH non condensing
OPERATING PRESSURE	Atmospheric +/-10%
ENCLOSURE	Plastic Enclosure ,Polycarbonate Lexan, Fire retardant UL94 V-0 IP 66 & NEMA 4, 4X, 12 & 15
WIRING	12 AWG to 24 AWG for Screw Terminals Blocks(De -Pluggable)
CABLE SPECIFICATION	BELDEN 9841 or equivalent ,120 ohms Input
DIMENSIONS	150mm x 90mm x 65mm (5.91″ x 3.54″ x 2.56″)
WEIGHT	0.23Kg(0.5lbs)

Ensure a complete understanding of all applicable Federal, State, Provincial and Local Health and Safety laws and regulations before using these products.

DIMENSIONS



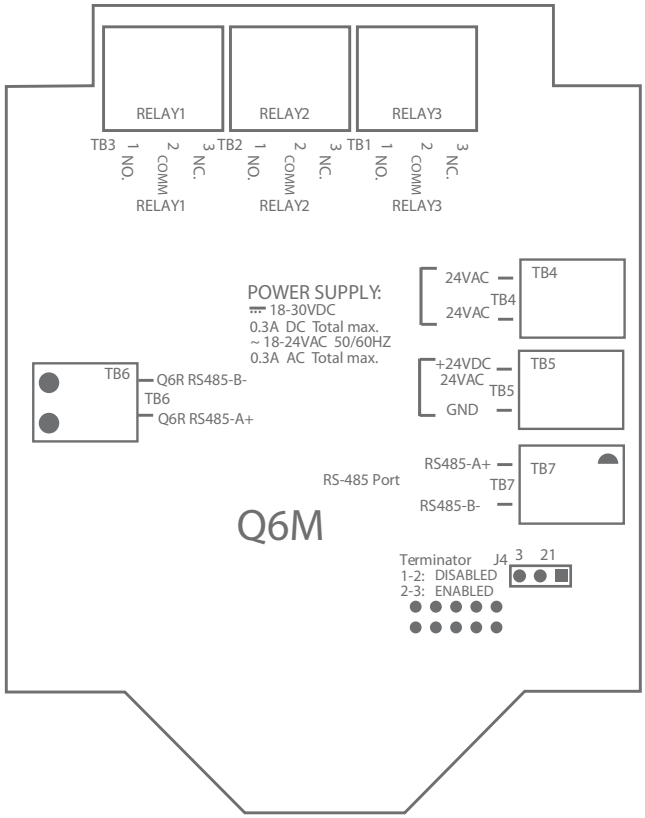
ACCESSORIES

Q-CONTROLLER	Communication central unit, RS-485 port, Modbus protocol, BACnet/IP, 3 Relay, 128 Analog outputs
M-CONTROLLER2	Communication central unit, RS-485 port, Modbus protocol, 3 Relay , 8 Analog outputs
Q4C- CONTROLLER	Communication central unit, RS-485 port, Modbus protocol, BACnet /IP, 3 Relays
DUCT MOUNT	Mounting kit for duct installation
SPLASH GUARD	Unit cover for wet application application
CALIBRATION KIT	Kit for gas calibration (please refers to manual)

Greystone Energy Systems, Inc.
321 Desbrisay Avenue, Moncton,
New Brunswick, Canada E1E 0J2

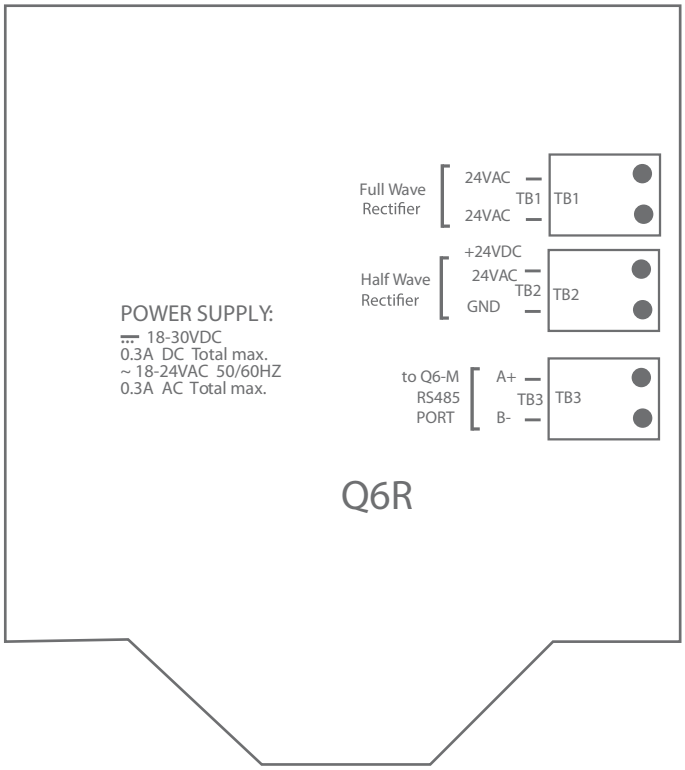
Ph: +1 (506) 853-3057 Fax: +1(506) 853-6014
North America: 1-800-561-5611
E-mail: mail@greystoneenergy.com

WIRING INFORMATION



Q6 MAIN SENSOR UNIT

TERMINAL		FUNCTION
TB1 TB2 TB3	NC: Normally Close COM: Common NO: Normally Open	3 x Relays Outputs
TB4	24VAC 24VDC	Power IN Full Wave
TB5	24VAC 24VDC	Power IN Half Wave
TB7	A+ B-	RS-485 Port for Controller
TB6	A+ B-	RS-485 port to Q6R

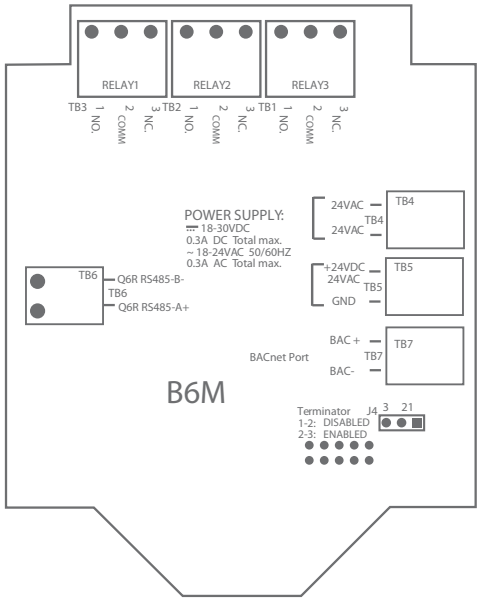


Q6R REMOTE SENSOR UNIT

TERMINAL		FUNCTION
TB1	24VAC 24VDC	Power IN Full Wave
TB2	24VAC 24VDC GND	Power IN Half Wave
TB3	A+ B-	RS-485 Port to Q6M

Greystone Energy Systems, Inc.
321 Desbrisay Avenue, Moncton,
New Brunswick, Canada E1E 0J2
Ph: +1 (506) 853-3057 Fax: +1(506) 853-6014
North America: 1-800-561-5611
E-mail: mail@greystoneenergy.com

WIRING INFORMATION



B6 MAIN SENSOR UNIT

TERMINAL		FUNCTION
TB1 TB2 TB3	NC: Normally Close COM: Common NO: Normally Open	3 x Relays Outputs
TB4	24VAC 24VDC	Power IN Full Wave
TB5	24VAC 24VDC	Power IN Half Wave
TB7	A+ B-	BACnet MS/TP port
TB6	A+ B-	RS-485 port to Q6R

ORDERING CODE

MODEL #	DESCRIPTION
Q6-CO-250P-0-A-G Q6R-NO2-10P-0-A-G	Analog Combo Transmitter Carbon Monoxide 0-250PPM-Nitrogen Dioxide 0-10PPM, Electrochemical, Standard Enclosure
B6-CO-250P-0-A-G Q6R-NO2-10P-0-A-G	BACnet Combo transmitter Carbon monoxide 0-250PPM-Nitrogen Dioxide 0-10PPM, Electrochemical, Standard Enclosure

GAS TYPE		SPAN RANGE	ORDERING CODE	SENSING TECHNOLOY				
Carbon Monoxide	CO	0-250ppm	CO-250P	Electrochemical	7500 (696.7)	49 (14.9)	Mid	- 4 to 122 (- 20 to 50)
Nitrogen Dioxide	NO2	0-10ppm	NO2-10P	Electrochemical	7500 (696.7)	49 (14.9)	Low	- 4 to 122 (- 20 to 50)

***Low** = 0.5 to 1.5' (0.15 to 0.46m) above floor
***Mid** = 4.0 to 6.0'(1.20to 1.83m) above floor
***High** = 0.5 to 1.5' (0.15 to 0.46m) below ceiling

Greystone Energy Systems, Inc.
321 Desbrisay Avenue, Moncton,
New Brunswick, Canada E1E 0J2

Ph: +1 (506) 853-3057 Fax: +1(506) 853-6014
North America: 1-800-561-5611
E-mail: mail@greystoneenergy.com