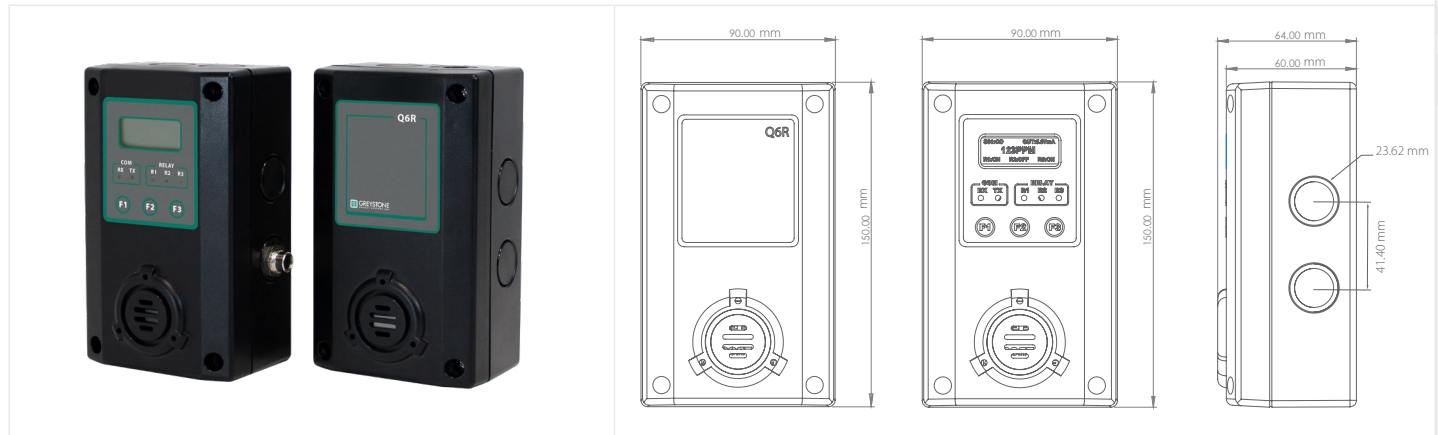


## SMART COMBO GAS TRANSMITTERS



Q6/B6 SERIES

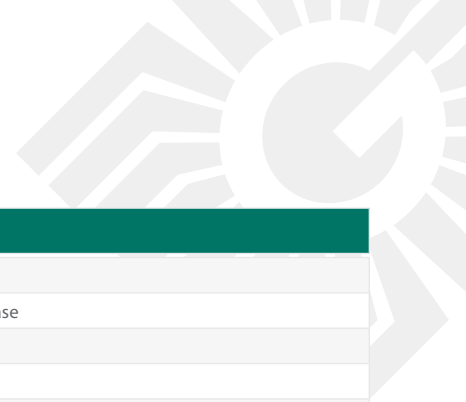
## PRODUCT DESCRIPTION

The Q6/B6 Series gas sensor/transmitters detect Carbon 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

VOLTAGE	24 VDC Nominal, range 18-30 VDC, 0.3 A DC Total Max 24 VAC Nominal, range 15-24 VAC, 0.3 A AC Total Max AC Power must not be grounded
FUSE	0.750A Polyswitch
SENSING ELEMENT TECHNOLOGY	Toxic gases: Electrochemical
SENSOR LIFE	Toxic gases : Electrochemical 2 to 3 years, typical
ACCURACY	± 2.5% of reading



## SPECIFICATIONS

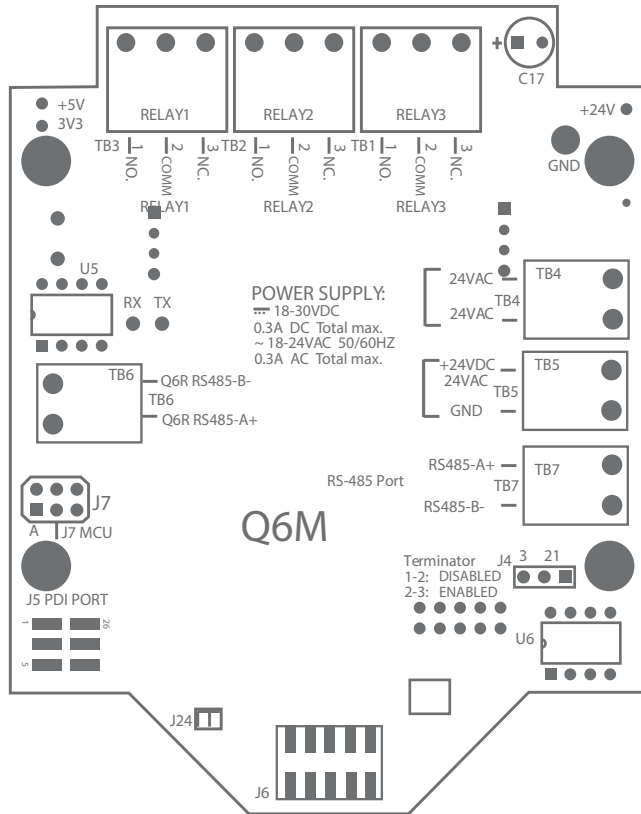
REPEATABILITY	± 1% of reading
SHELF LIFE	Electrochemical (toxic): 6 months from the date of purchase
RESPONSE TIME	Less than 30 seconds for 90% step change
COVERAGE AREA	(see table of gas)
MOUNTING HEIGHT	(see table of gas)
FACTORY CALIBRATION RANGE	(see table of gas)
DISPLAY	LCD graphic display c/w backlight
PANEL CONTROL	Keypad: 3 Capacitive touch sensing keys: F1, F2, F3
PANEL INDICATOR	5 Status LED's RS-485 TX Status (Green) RS-485 RX Status (Green) Relay 1 Status (Red) Relay 2 Status (Red) Relay 3 Status (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)
TIME DELAYS	Actuation 0 to 60 min in 5min increments De-actuation 0 to 60 min in 5 min increments
RELAYS LIFE EXPECTANCY	Mechanical : 50,000,000 Operations minimum @36000 operations/hours electrical : 200000 operations minimum @ rated load
DIGITAL OUTPUT	Q6: RS-485 Modbus RTU/OptoMux (Proprietary GES Controller Protocol) connects to Q4C Controller, M-Controller 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 ENVIRONMENT	Indoor Use only
OPERATING TEMPERATURE	(see table of gas)
STORAGE TEMPERATURE	Storage : 0° C to 40° C, depends on sensor specification
OPERATING HUMIDITY	5% to 95% RH non condensing
STORAGE HUMIDITY	Atmospheric +/-10%
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), 16 AWG or 18 AWG wire for Power supply ( 1km max)
CABLE SPECIFICATION	BELDEN 9841 or equivalent ,120 ohms Input
DIMENSIONS	5.91"x 3.54" x 2.56"(150 mm x 90 mm x 65 mm)
WEIGH	LESS THAN 0.5lbs

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

## ACCESSORIES

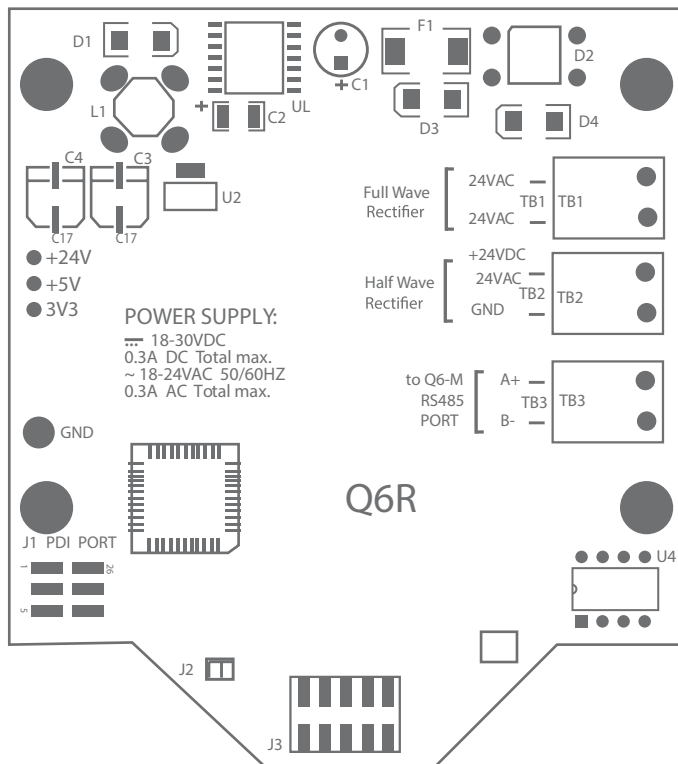
Q-CONTROLLER	Communication central unit, RS-485 port, Modbus protocol, BACnet /MSTP, 3 Relay , 16 Analog outputs
M-CONTROLLER	Communication central unit, RS-485 port, Modbus protocol, BACnet /MSTP, 3 Relay , 8 Analog outputs
Q4C- CONTROLLER	Communication central unit, RS-485 port, Modbus protocol, BACnet /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)

## WIRING INFORMATION



### Q6 MAIN SENSOR UNIT

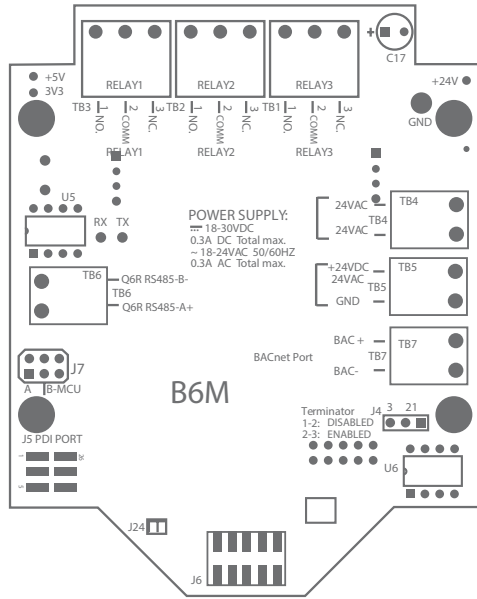
TERMINAL	FUNCTION
TB1 TB2 TB3	NC: Normally Close COM: Common NO: Normally Open 3 x Relays Outputs
TB4	24VAC 24VDC Power IN Full Wave
TB5	24VAC 24VDC Power IN Half Wave
TB7	A+ B- RS-485 Port for Controller
TB6	A+ B- RS-485 port to Q6R



### Q6R REMOTE SENSOR UNIT

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

## 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

6 - C O - 2 5 0 P - - X - G

Q..... Standard  
B..... BACnet



### Enclosure Type

Enclosure, Standard ..... O  
Enclosure w/Pump-thru Cap Kit ..... P  
Enclosure w/Splash Guard Kit ..... S  
Enclosure w/Duct-Mount Kit ..... D

Revision (Factory Provided) ..... X

Greystone Product ..... G

Q 6 R - N O 2 - 1 0 P - - X - G



### Enclosure Type

Enclosure, Standard ..... O  
Enclosure w/Pump-thru Cap Kit ..... P  
Enclosure w/Splash Guard Kit ..... S  
Enclosure w/Duct-Mount Kit ..... D

Revision (Factory Provided) ..... X

Greystone Product ..... G

GAS TYPE	SPAN RANGE	ORDERING CODE	SENSING TECHNOLOGY	AREA FT <sup>2</sup> (M <sup>2</sup> )	RADIUS FT (M)	MOUNTING HEIGHT	OPERATING TEMPERATURE F ( C)
Carbon Monoxide	CO	CO-250P	Electrochemical	7500 (696.7)	49 (14.9)	Mid	- 4 to 122 ( - 20 to 50)
Nitrogen Dioxide	NO <sub>2</sub>	NO <sub>2</sub> -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' (1.20 to 1.83m) above floor

\*High = 0.5 to 1.5' (0.15 to 0.46m) below ceiling