Gas Monitor

Belimo gas monitors are factory calibrated and can monitor up to two gases simultaneously. All monitors feature audible and visual alarms, and CAN bus communication, allowing for standalone operation and networking of up to 32 devices. Select models feature relays and analog outputs to control ventilation directly, as well as BACnet MS/TP allowing for integration into a BMS. All gas monitors are wired via a daisy chain and are backed by a five-year warranty.

5

5-year warranty

UL CERTIFIED®

SAFETY
SIGNALING
US·CA
E522421

Gas Monitor

CSA® C US

BACnet® BTL TESTING LABORATORIES

Type Overview

Type	Measured values	Number of relays	Output signal active gas	Communication
22G14-5A	NO_2	1	2x AO	CAN bus, BACnet MS/TP
22G14-5B	NO_2	2	-	CAN bus, BACnet MS/TP
22G14-5C	NO_2	0	-	CAN bus

Technical data

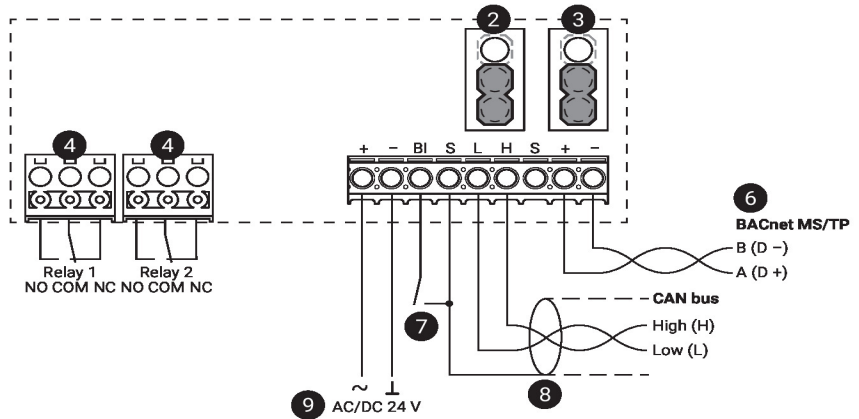|		
Electrical Data	Nominal voltage	AC/DC 24 V
	Nominal voltage frequency	50/60 Hz
	Power consumption AC	5 VA
	Power consumption DC	1.7 W
	Cable entry	2 top, 2 bottom, 1 rear – 1/2" EMT
	Cable specification	Power cable: 18...20 AWG Communication cable: 24 AWG twisted shielded pair, low capacitance
	Fuse	Thermal PTC, auto-reset
Data bus communication	Communication	CAN bus BACnet MS/TP
Functional Data	Sensor Technology	Electro-chemical
	Application	air
	Output signal active note	Analog outputs (2), 2...10 V or 4...20 mA, user selectable with jumper
	Output signal relay note	Relays (1 or 2) SPDT, 5A @ AC 125 V, non-inductive
	Mounting	Install between 3 ft [1 m] from the floor to half of the ceiling height
	Max. altitude	6562 ft [2000 m] above sea level
	Max. altitude note	Calibration verification is recommended above 610 m [2000 ft]
	Coverage area	Radius: 15 m [50 ft] Area: 700 m² [7500 ft²] There can be no obstructions such as walls, stairs, elevators, shelving with solid fill, tool chests, etc.
	Display	LCD With backlight Gas type, gas concentration, alarm level status
	Response time	<30 s (T90)
	Alarm	Audible alarm Built-in white strobe for level 3
	Warm-up time	5 minutes
Measuring Data	Measured values	NO_2
	Measuring range gas	0...10 ppm
	Calibration	Sensor modules are recommended to be calibrated annually.
	Long-term stability	<2% per month
	Measurement Repeatability	<+2% NO_2 equivalent
Materials	Housing	UL94 5VA
Safety Data	UL Approval	cULus according to UL2075, ULC-S588 cCSAus listed to C22.2 No. 61010-1-12, UL Std. No. 61010-1 (3rd Edition), harmonized under IEC/EN 61010-1 BTL listed No. BTL-30001
	Pollution degree	2
	Ambient humidity	15...90% RH continuous, 0...99% RH intermittent, non-condensing
	Ambient temperature	-20...40°C [-4...104°F]

Accessories

Spare parts	Description	Type
	Sensor module NO$_2$ (Nitrogen Dioxide), 0...10 ppm, Electro-chemical	R-G14

Communication module	Description	Type
	Communication module, CAN bus, BACnet MS/TP, 1 SPDT Relay, 2 Analog Outputs	C-22G-5A
	Communication module, CAN bus, BACnet MS/TP, 2 SPDT Relays	C-22G-5B
	Communication module, CAN bus	C-22G-5C

Electrical accessories	Description	Type
	Audible alarm	A-22G-A16

Mechanical accessories	Description	Type
	Splash proof enclosure, Wall mount	A-22G-A12
	Duct mount enclosure, Duct mount	A-22G-A13

22G..-5A / C-22G-5A

BACnet MS/TP
B (D −)
A (D +)

CAN bus
High (H)
Low (L)

Relay 1
NO COM NC

AN1 G AN2

+ − BI S L H S + −

AC/DC 24 V

22G..-5B / C-22G-5B

BACnet MS/TP
B (D −)
A (D +)

CAN bus
High (H)
Low (L)

Relay 1   Relay 2
NO COM NC   NO COM NC

+ − BI S L H S + −

AC/DC 24 V

22G..-5C / C-22G-5C

CAN bus
High (H)
Low (L)

+ − S L H

AC/DC 24 V
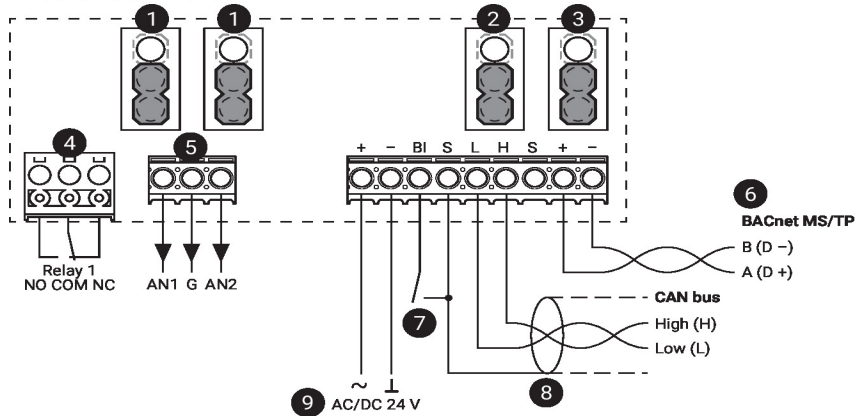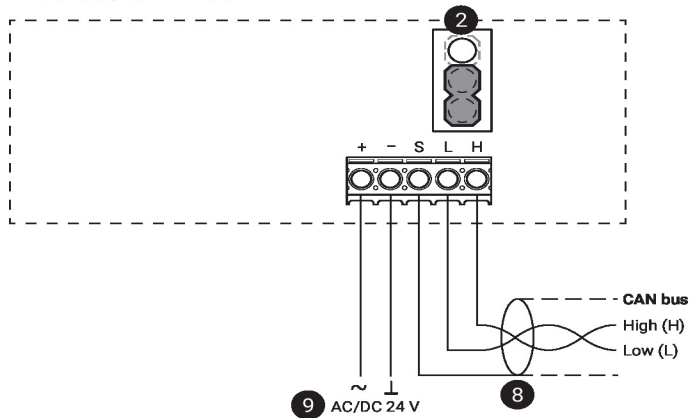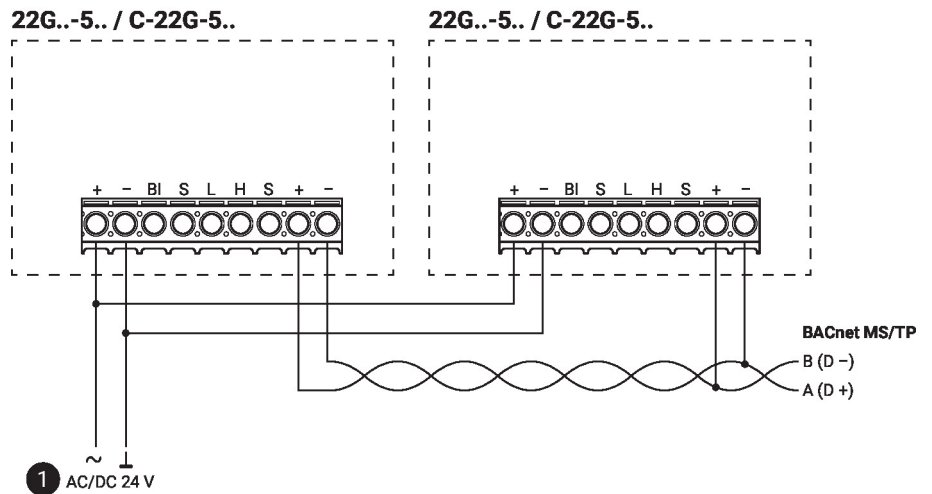
① Analog outputs
Down position: 2...10 V (factory setting)
Up position: 4...20 mA

② End of line (EOL) jumper: CAN bus
Down position: Termination OFF (factory setting)
Up position: Termination ON (first and last unit only
                 should have this jumper in the up position)

③ End of line (EOL) jumper: BACnet MS/TP
Down position: Termination OFF (factory setting)
Up position: Termination ON (first and last unit only
                 should have this jumper in the up position)

④ Relay output

⑤ Analog output

⑥ Shield connected at the first unit only, at others only looped through

⑦ Binary input to limit switch

⑧ Shield connected at the first unit only, at others only looped through
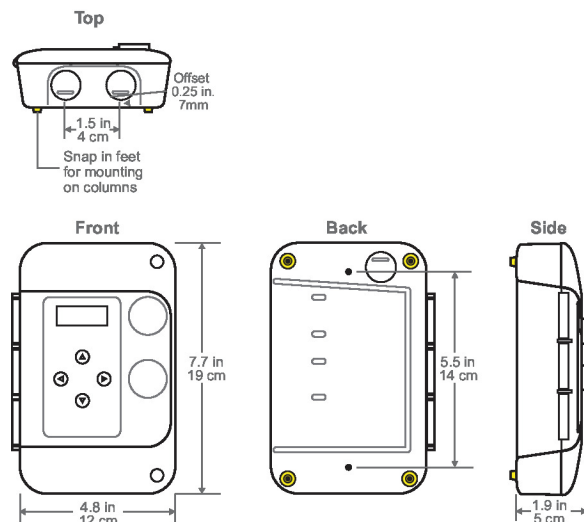
⑨ No connection to the ground

Wiring CAN bus   CAN bus

22G...-5.. / C-22G-5..   **22G...-5.. / C-22G-5..**

CAN bus ①
⊥
AC/DC 24 V
~

Low (L)
High (H)

②
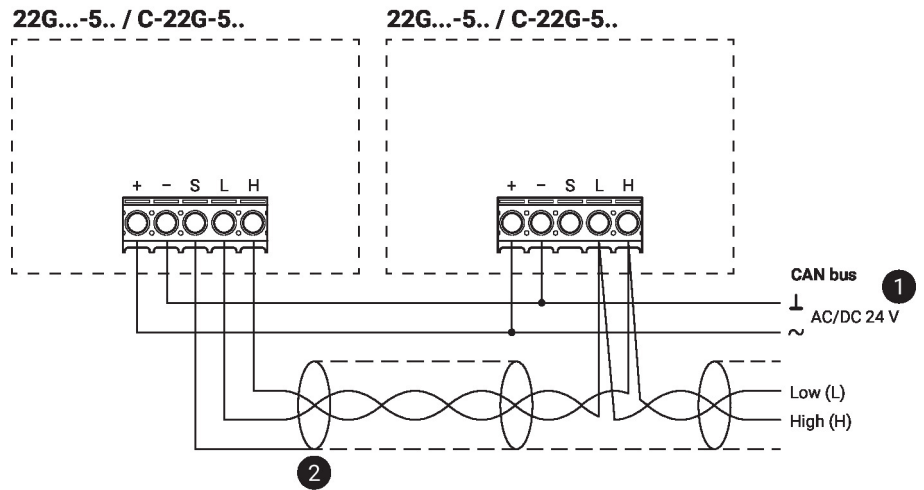
① No connection to the ground

② Shield connected at the first unit only, at others only looped through

Wiring RS485 BACnet MS/TP

22G..-5.. / C-22G-5..   **22G..-5.. / C-22G-5..**

BACnet MS/TP
B (D –)
A (D +)

① AC/DC 24 V
~ ⊥

① No connection to the ground

Dimensions

Top
Offset 0.25 in. 7mm
1.5 in. 4 cm
Snap in feet for mounting on columns

Front
7.7 in 19 cm
4.8 in 12 cm

Back
5.5 in 14 cm

Side
1.9 in 5 cm

Type	Weight
22G14-5A	0.95 lb [0.43 kg]

Type	Weight
22G14-5B	0.95 lb [0.43 kg]
22G14-5C	0.95 lb [0.43 kg]

Further documentation

• Installation instructions
• Operating instructions