



Carbon Dioxide Detector-Transmitter E2638-CO2



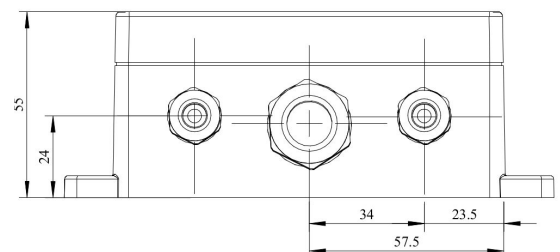
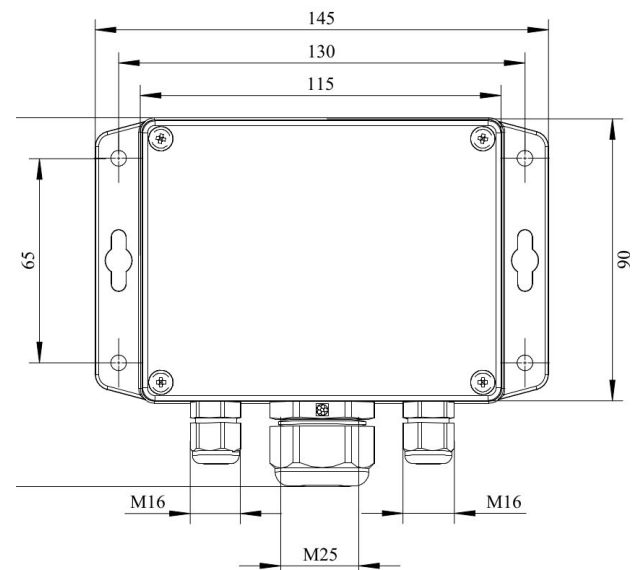
Features

- Accurate and stable measurement
- Easy to install robust enclosure
- Two analog outputs settable to 4-20 mA or 0-10 V
- RS485 Modbus RTU digital interface
- Relay option
- Attached or remote sensor
- LCD indicator option

Specifications

Calibration	Carbon dioxide CO ₂
Sensor type	Optical (NDIR) Dual beam NDIR (optional)
Sampling method	Diffusion
Typical detection ranges	0...10 000 ppm (ordering code 10K) 0...5 %vol. (ordering code 50K) up to 100% CO ₂ on request 0...50000 ppm (0...5% vol) (50KN)
Resolution	1 ppm for 10K range 0.01 %vol. for 50K range 0.2% FS (50KN)
Accuracy	± (50 ppm + 3% of reading) in the range 300...5000 ppm for 10K range ± (70 ppm + 5% of reading) for 50K range ±1% of FS range below 25% of range ±2% of detection range for readings between 25% and 50% of range ±5% of FS range above 50% of range (50KN)
Response time T90	~ 2 minutes for 10K range up to 3 minutes for 50K range T50 ≤ 20 s; T90 ≤ 60 s (50KN)
Signal update	Every 1 second
Sensor lifetime	~ 10 years ~ 5 years (for 50KN)
Maintenance interval	Up to 5 years No field recalibration (for 50KN)
Self-diagnostics	Full functionality check at start-up
Warm-up time	≤ 1 min
Power supply	11...30 VDC 24 VAC or 90...265 VAC as options
Power consumption	< 2 VA
Digital interface	RS485, Modbus RTU protocol
Analog outputs	2 × 4-20 mA / 0-10 V, user settable
Output scale width	Recommended: 5-100% of the range; > 10 × resolution in any case
Enclosure	Grey ABS plastic, wall mount, protection class IP65
Dimensions	H90 × W145 × D50 mm (housing only) H140 with cable glands

Dimensions



Operating environment	Industrial indoor and outdoor locations
Operating conditions	Explosion-safe areas; Non-aggressive atmosphere without condensation; 0,9...1,1 atm; For 10K range: 0...+50 °C, 0...85 %RH For 50K range: -25...+50 °C, 0...95 %RH For 50KN: -40 to +60 °C, 0...95% RH NOTE! We offer technical solutions for extreme humidity, please ask for more information.

Version with LCD indicator



Additional options

Remote sensor probe	Protection IP65, shielded cable default cable length 3.0 m
Self-test button	Triggers both relays simultaneously; push-button switch

Relay outputs

Output relays	2 × SPST relays (closing contact), 250 VAC / 30 VDC, 5 A max
Default alarm set-points	Determined by user within 5-95% of the range

Alarm signalling

Visual	Red and green LEDs
Acoustic	Buzzer 85 dB

LCD indicator

Operating temperature	0...+50 °C
Display dimensions	72 × 36 mm
Number of digits	3.5 7-segment
Character height	14 mm
Other features	Backlight

NOTE! Only one analog output is available for a version with LCD.

NOTE! LCD and LEDs can not be chosen simultaneously.

Connections table

Jumpers

J1	OUT1 type (open: 4-20 mA; closed 0-10 V)
J2	OUT2 type (open: 4-20 mA; closed 0-10 V)
X6	Reset Modbus network parameters to default

X4 terminals

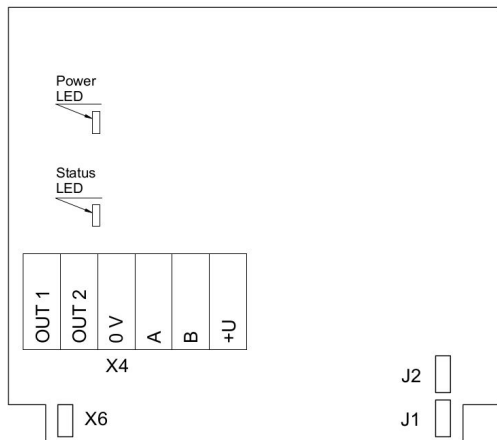
OUT1	4-20 mA / 0-10 V output
OUT2	4-20 mA / 0-10 V output
0V	0 V / 24 VAC Neutral (optional)
A	RS485 A / Data +
B	RS485 B / Data -
+U	+24 VDC / 24 VAC Phase (optional)

X5 terminals (optional)

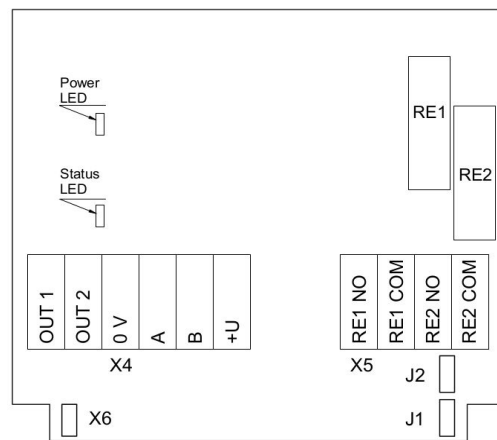
L	90...265 VAC Phase
N	90...265 VAC Neutral
RE1 NO	Relay 1, normally open terminal
RE1 COM	Relay 1, common terminal
RE2 NO	Relay 2, normally open terminal
RE2 COM	Relay 2, common terminal



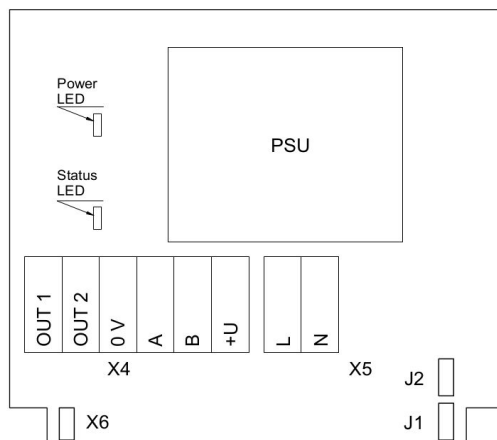
Connection diagrams



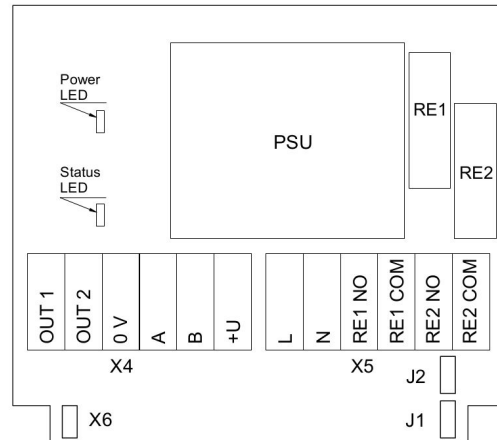
Version without PSU and relays



Version without PSU and with relays

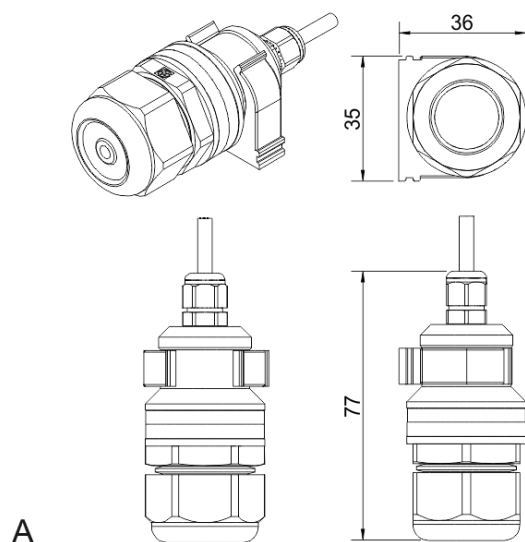


Version with PSU and without relays



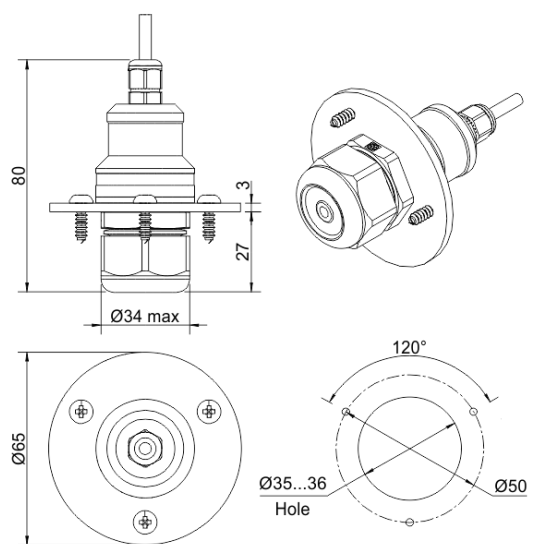
Version with PSU and relays

Remote probe



A

Wall mount remote probe with fixing clamp (default version)

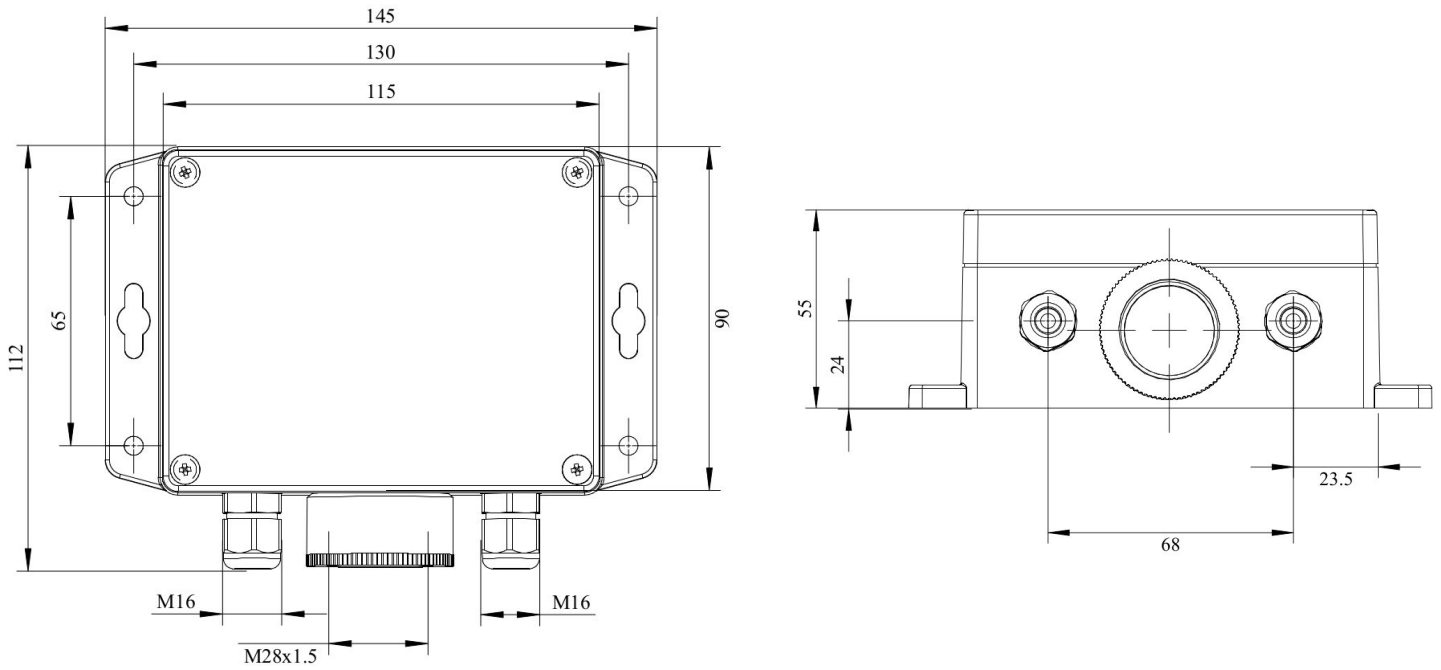


B

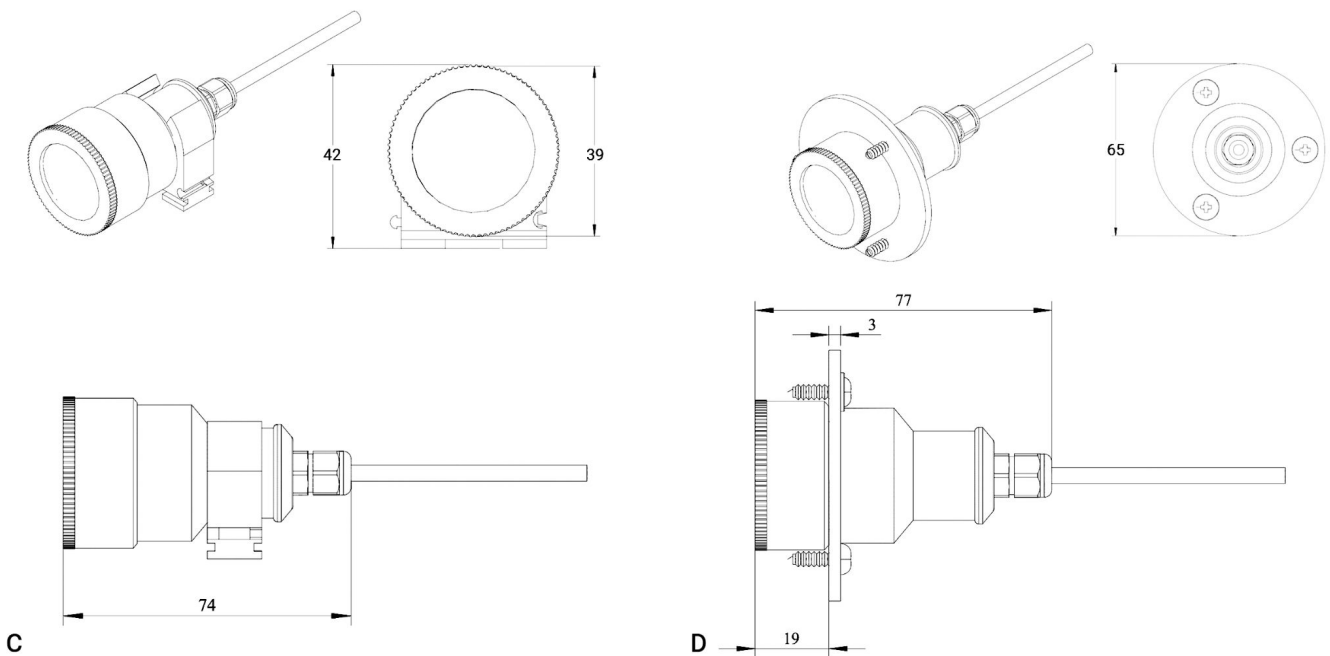
Remote probe with rubber flange and three self-tapping screws (on request)



With 50KN sensor dimensions



50KN sensor Remote probe



Wall mount remote probe with fixing clamp (default version)

Remote probe with rubber flange and three self-tapping screws (on request)

