

# Flameproof Carbon Dioxide Detector-Transmitter E2658-CO2



## Features

- Wall mount robust flameproof metal enclosure
- Suitable for ATEX Zones 2 and 22
- Two analog outputs settable to 4-20 mA or 0-10 V
- RS485 Modbus RTU digital interface
- Relay option

## Specifications

Calibration	Carbon dioxide CO <sub>2</sub>
Sensor type	Photoacoustic
Sampling method	Diffusion
Typical detection range	0...10 000 ppm (ordering code 10K) 0...40 000 ppm (ordering code 40K) Up to 100% CO <sub>2</sub> on request
Resolution / digital unit	1 ppm for 10K range 10 ppm for 40K range
Response time T60	≤ 60 s
Signal update	Every 5 seconds
Maintenance interval	No field recalibration if ABC algorithm is enabled for 10K/40K
Sensor lifetime	~ 10 years
Self-diagnostics	Full functionality check at start-up
Warm-up time	≤ 1 min
Power supply	12...36 VDC (default), 24 VAC or 230 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: 20-100% of the range; > 10 × resolution in any case
Enclosure	Grey die-cast aluminium, protection class IP66
Dimensions	H80 × W125 × D57 / H80 × W175 × D80 mm
Operating environment	Industrial indoor and outdoor locations
Operating conditions	-40...+60 °C, 0...100 %RH; 0,9...1,1 atm; Safe areas and ATEX Zones 2 and 22 Non-aggressive atmosphere
<b>Relay option (ordering code R)</b>	
Output relays	2 × SPST relays (closing contact), 250 VAC / 30 VDC, 5 A max
Default alarm setpoints	Determined by user within 5-95% of the range
<b>Other options</b>	
Ambient pressure compensation	In the range 0,5...2 bar of absolute pressure

## Approvals

### Enclosure:

ATEX / IECEx  
DEMKO 13 ATEX 1327771U  
 II 2 G Ex e IIC Gb  
 II 2 D Ex tb IIIC Db IP66

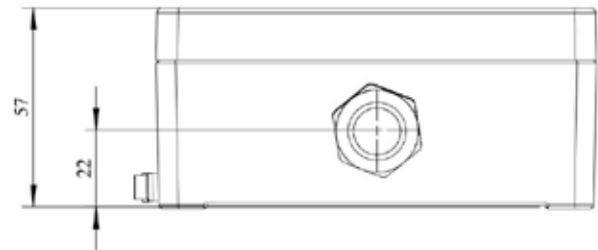
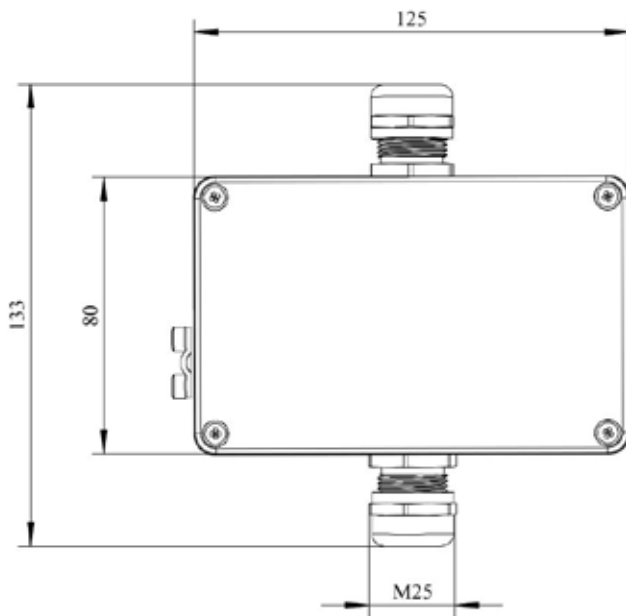
### Glands:

ATEX / IECEx  
EESF 19 ATEX 023X  
 II 2 G Ex db IIC Gb  
 II 2 D Ex tb IIIC Db IP66

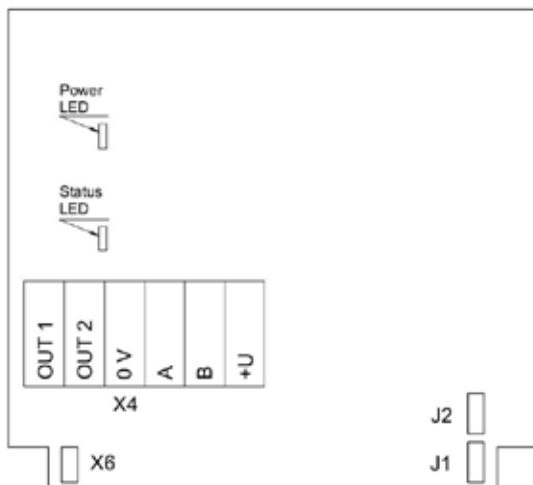
### CE conformity

Flameproof to IEC EN 60079-1  
Increased safety to IEC EN 60079-7  
EMC Emissions to EN 61000-6-3, EN 61326-1  
EMC Immunity to EN 61000-6-1, EN 61000-6-2

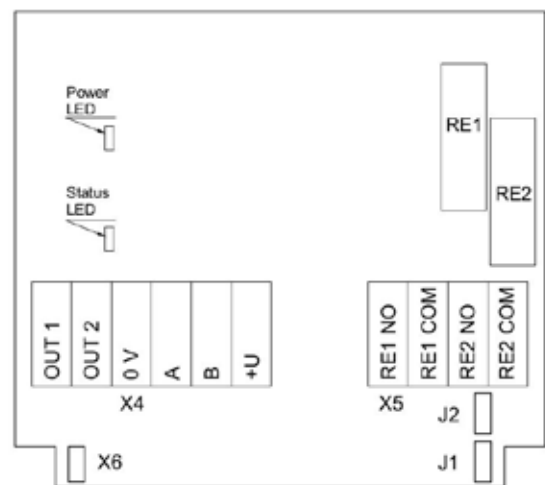
## Dimensions



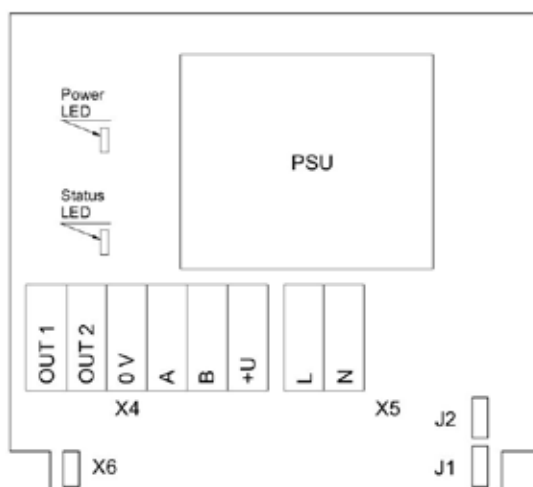
## Connection diagrams



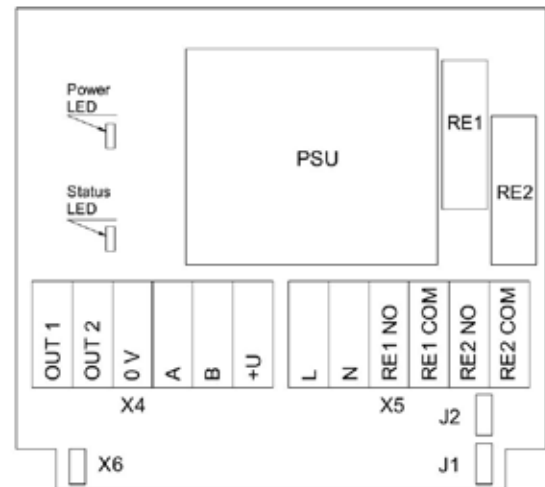
Version without PSU and relays



Version without PSU and with relays



Version with PSU and without relays



Version with PSU and relays

**Jumpers**

<b>J1</b>	OUT1 type (open: 4-20 mA; closed 0-10 V)
<b>J2</b>	OUT2 type (open: 4-20 mA; closed 0-10 V)
<b>X6</b>	Reset Modbus network parameters to default
<b>X4 terminals</b>	
<b>OUT1</b>	4-20 mA / 0-10 V output
<b>OUT2</b>	4-20 mA / 0-10 V output
<b>0V</b>	0 V / 24 VAC Neutral (optional)
<b>A</b>	RS485 A / Data +
<b>B</b>	RS485 B / Data -
<b>+U</b>	+24 VDC / 24 VAC Phase (optional)
<b>X5 terminals (optional)</b>	
<b>L</b>	90...265 VAC Phase
<b>N</b>	90...265 VAC Neutral
<b>RE1 NO</b>	Relay 1, normally open terminal
<b>RE1 COM</b>	Relay 1, common terminal
<b>RE2 NO</b>	Relay 2, normally open terminal
<b>RE2 COM</b>	Relay 2, common terminal