



Combustible Gases Detector-Transmitter E2608-LEL



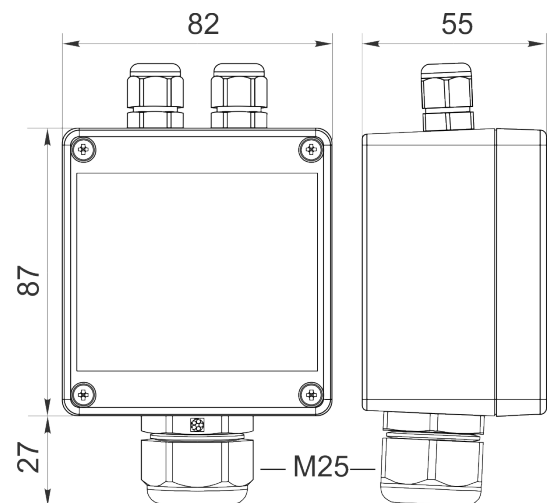
Features

- Wall-mount or duct-mount version
- Industrial IP65 housing
- Two analog outputs settable to 4-20 mA or 0-10 V
- RS485 Modbus RTU digital interface
- Two relays for alarm / ventilation control
- Attached or remote sensor

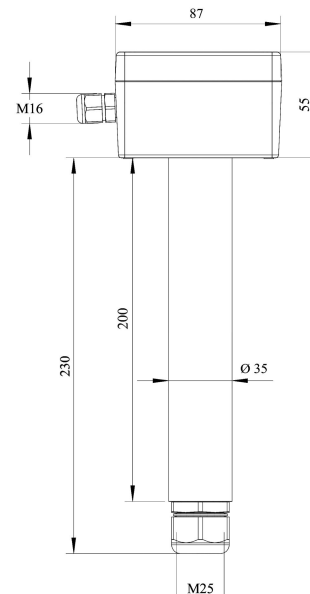
Specifications

Detected gases	Hydrogen, methane, acetylene, propane, butane, hexane, octane	
Default calibration	Methane CH ₄	
Sensor type	Metal-oxide semiconductor Pellistor (catalytic bead) on demand	
Sampling method	Diffusion	
Sensor	MOS	Pellistor
Typical detection range	0...100% LEL	0...100% LEL
Resolution	0.1% LEL	1% LEL
Response time T90	ca. 60 s	≤10 s
Sensor lifetime	> 5 years	> 5 years
Calibration interval	12 months	6 months
Signal update	Every 1 second	
Self-diagnostics	Full functionality check at start-up	
Warm-up time	≤ 1 min	
Power supply	11...30 VDC (default), 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: 20-100% of the range; > 10 × resolution in any case	
Output relays	2 × SPST relays (closing contact), 250 VAC / 30 VDC, 5 A max	
Default alarm setpoints	LOW: set 20 %LEL, release 16% LEL; HIGH:set 50%LEL, release 40% LEL	
Enclosure	Light beige ABS plastic, wall mount, protection class IP65	
Dimensions	H87 × W82 × D55 mm	
Remote sensor probe	Protection IP65, shielded cable default cable length 3.0 m	
Operating environment	Industrial indoor and outdoor locations	
Operating conditions	-40...+70 °C -40...+70°C 95% RH non-condensing; 0.9...1,1 atm Explosion-safe areas Normal ambient oxygen level No strong mechanical shock, vibrations or EMI; Avoid exposure to corrosive gases or silicone containing products.	

Wall mount version



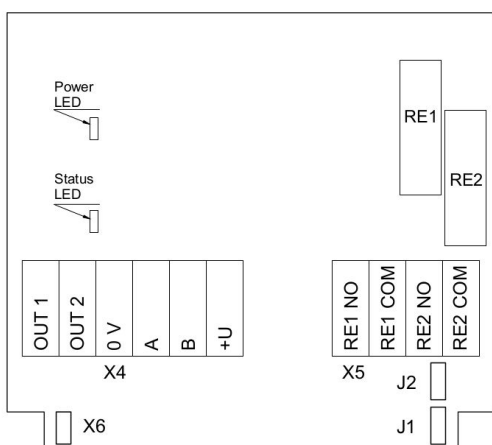
Duct mount version



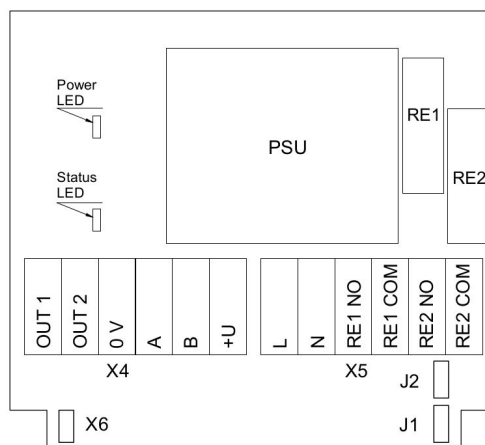
Ask for other versions or custom designed products



Connection diagrams



Version without PSU



Version with PSU

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

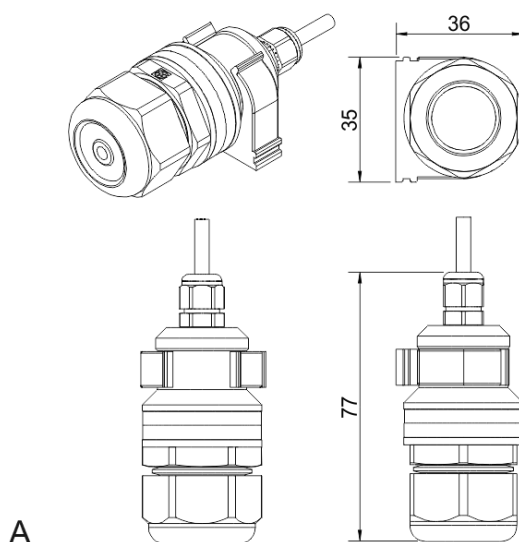
RE2 NO

Relay 2, normally open terminal

RE2 COM

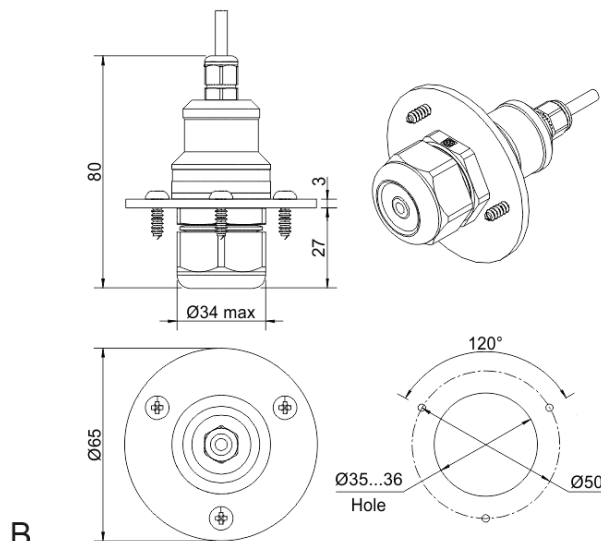
Relay 2, common terminal

Remote probe



A

Wall mount remote probe with fixing clamp (default version)



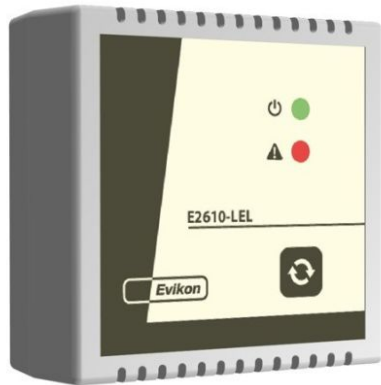
B

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





Combustible Gas Detector E2610-LEL



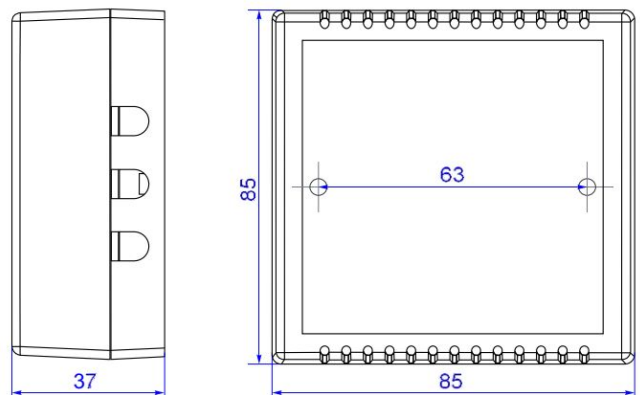
Features

- Methane, LPG, Hydrogen, Acetylene
- Compact housing providing optimal airflow
- Visual and acoustic alarms
- Two output relays for alarm / ventilation control

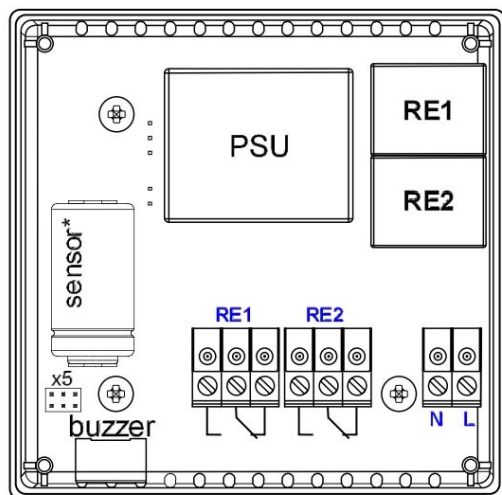
Specifications

Detected gas	Acetylene, Butane, Hydrogen, Methane, Propane
Sensor type	Metal Oxide Semiconductor
Sampling method	Diffusion
Typical detection range	0...100% LEL
Response time	ca. 60 s
Signal update	Every 1 second
Sensor lifetime	> 5 years
Maintenance interval	12 months
Self-diagnostics	Full functionality check at start-up
Warm-up time	≤ 1 min
Power supply	24 VAC/DC or 90...265 VAC
Power consumption	< 2 VA
Digital interface	UART
Output relays	2 relays with switch-over contact (SPDT), 250 VAC / 30 VDC, 5 A max
Default alarm set-points	Release - LOW - HIGH 7 - 10 - 25% LEL
Alarms	Blinking LED, buzzer 85 dB
Enclosure	ABS plastic with ventilation slots, protection class IP20
Dimensions	H 85 × W 85 × D 37 mm
Operating conditions	-40...+70 °C <95 %RH, non-condensing pressure 0,9...1,1 atm Non-ATEX rated spaces Normal ambient oxygen level Avoid strong mechanical shock, vibrations or EMI; Avoid exposure to corrosive gases or silicone containing products.

Dimensions



Connection diagram



*Sensors may have different shape and/or size

Terminals

RE1 NO	Relay 1, normally open terminal
RE1 COM	Relay 1, common terminal
RE1 NC	Relay 1, normally closed terminal
RE2 NO	Relay 2, normally open terminal
RE2 COM	Relay 2, common terminal
RE2 NC	Relay 2, normally closed terminal
L	90...265 VAC Phase (optional 24 VAC / VDC)
N	90...265 VAC Neutral (optional 24 VAC / VDC)



Combustible Gases Detector-Transmitter E2611-LEL



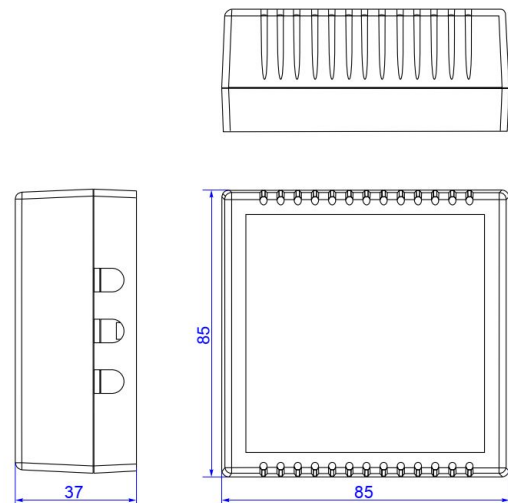
Features

- Accurate and stable measurement
- Compact housing providing optimal airflow
- Two analog outputs settable to 4-20 mA or 0-10 V
- Two relays for alarm / ventilation control
- Acoustic alarm
- RS485 Modbus RTU digital interface

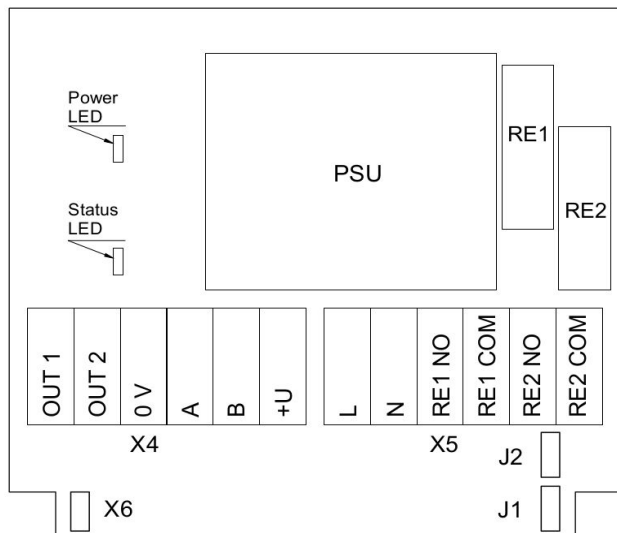
Specifications

Detected gases	Acetylene, Butane, Hydrogen, Methane, Propane
Calibration	Methane CH ₄
Sensor type	Metal oxide semiconductor
Sampling method	Diffusion
Typical detection range	0...100%LEL
Resolution/digital unit	0,1 %LEL
Response time	> 60 s
Signal update	Every 1 second
Sensor lifetime	> 5 years
Maintenance interval	12 months
Self-diagnostics	Full functionality check at start-up
Warm-up time	≤ 1 min
Power supply	11...30 VDC/VAC or 90...265 VAC
Power consumption	< 2 VA
Digital interface	RS485, Modbus RTU protocol
Output relays	2 × SPST relays (closing contact), 250 VAC / 30 VDC, 5 A max
Default alarm set-points	LOW set 20, release 16% LEL HIGH set 50, release 40%LEL
Alarms	Buzzer 85 dB
Analog outputs	2 × 4-20 mA / 0-10 V, user settable
Enclosure	ABS plastic with ventilation slots, wall mount, protection class IP20
Dimensions	H85 × W85 × D37 mm
Operating conditions	-40...+70 °C, <95 %RH, without condensation Normal ambient O ₂ concentration Non-ATEX areas No corrosive gases or silicon containing volatile products in the atmosphere

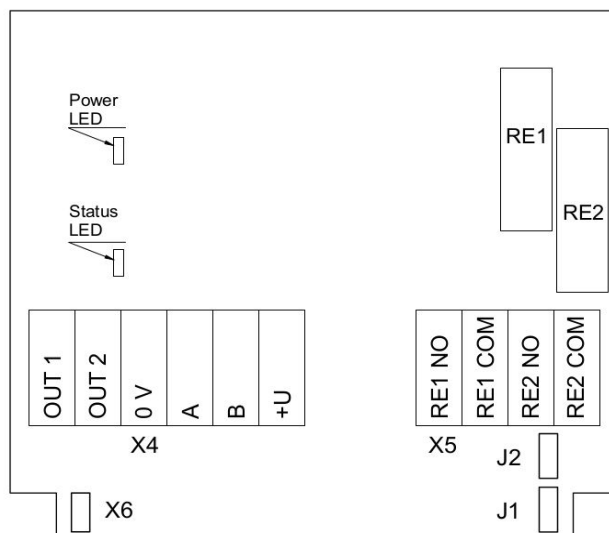
Dimensions



Connection diagrams



Version with PSU



Version without PSU

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





Combustible Gas Transmitter E2615-LEL



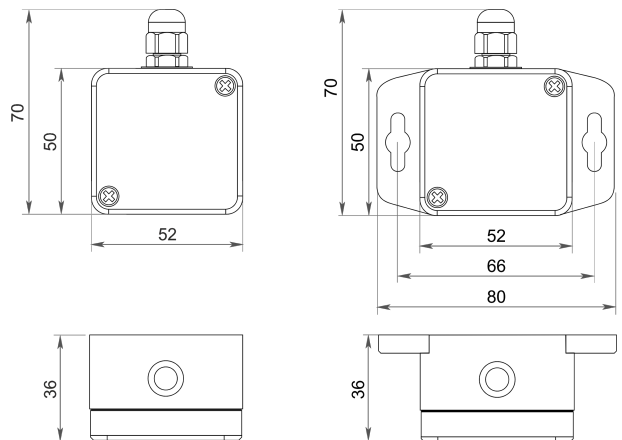
Features

- Maintenance free sensor
- User selectable output 4-20 mA / 0-10 V
- Range of compact wall mount enclosures
- Low cost for volume HVAC applications

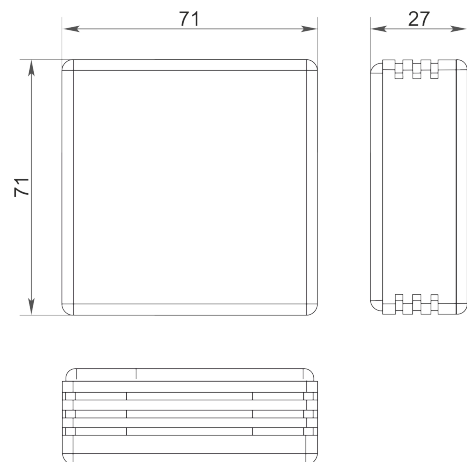
Specifications

Calibration	Methane
Sensor type	Pellistor
Sampling method	Diffusion
Detection range	0-100% LEL
Response time T90	< 10 s
Sensor protection	Microporous PTFE dust filter
Warm-up time	≤ 1 min
Analog output	4-20 mA / 0-10 V, user settable
Power supply	24 VDC ± 20%
Power consumption	< 1 W
Sensor lifetime	≥ 10 years
Sensitivity drift	< ± 20% in 5 years
Indoors enclosure	White, ivory or black ABS plastic, wall mount, protection class IP20
Weatherproof enclosure	Light or dark grey ABS plastic, wall mount, protection class IP65
Operating conditions	-20...+40 °C recommended -20...+50 °C intermittently 10...95 %RH non-condensing, pressure 0,9...1,1 atm
EMC Emissions	To EN 61000-6-3, EN 61326-1
EMC Immunity	To EN 61000-6-1, EN 61000-6-2

IP65 Enclosures

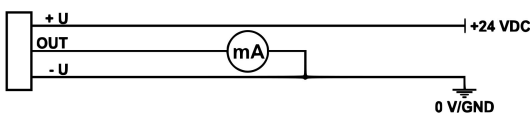


IP20 Enclosures

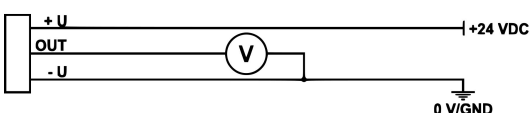


Connection diagrams

3-wire 4-20 mA output

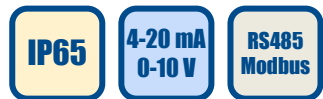


3-wire 0-10 V output



Ask for other versions or custom designed products





Combustible Gases Transmitter E2618-LEL



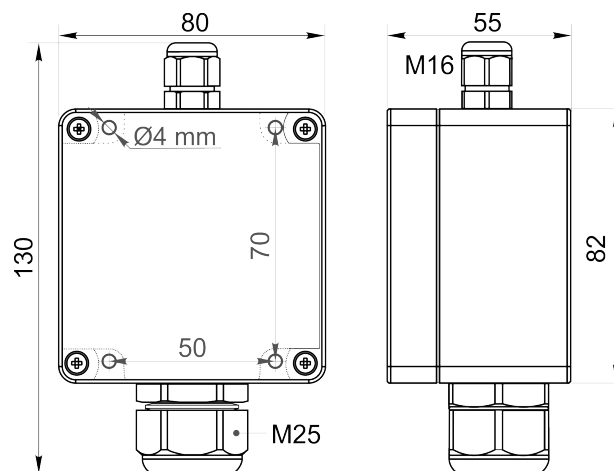
Features

- Wall-mount or duct-mount version
- Industrial IP65 housing
- Two analog outputs settable to 4-20 mA or 0-10 V
- RS485 Modbus RTU digital interface
- Attached or remote sensor

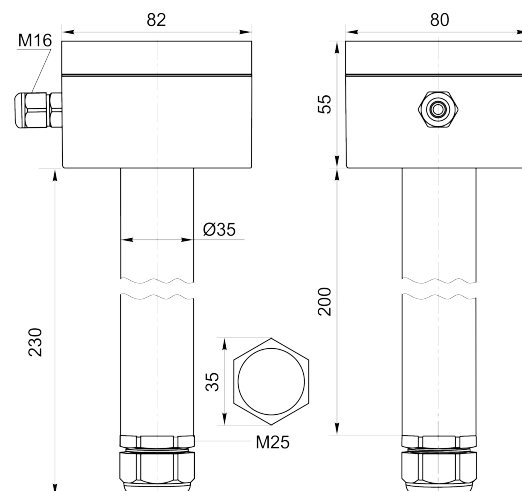
Specifications

Detected gases	Hydrogen, methane, acetylene, propane, butane, hexane, octane	
Default calibration	Methane CH ₄	
Sensor type	Metal-oxide semiconductor Pellistor (catalytic bead) on demand	
Sampling method	Diffusion	
Sensor	MOS	Pellistor
Typical detection range	0...100% LEL	0...100% LEL
Resolution	0.1% LEL	1% LEL
Response time T90	ca. 60 s	≤10 s
Sensor lifetime	> 5 years	> 5 years
Maintenance interval	12 months	6 months
Operating temperature	-40...+70 °C	-40...+70°C
Signal update	Every 1 second	
Self-diagnostics	Full functionality check at start-up	
Warm-up time	≤ 1 min	
Power supply	11...30 VDC or 24 VAC	
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 ABS plastic, wall mount, protection class IP65	
Dimensions	H82 × W80 × D55 mm	
Remote sensor probe	Protection IP65, shielded cable default cable length 3.0 m	
Operating environment	Industrial indoor and outdoor locations	
Operating conditions	(operating temperature is specified above) ≤ 95% RH non condensing; 0.9...1,1 atm Explosion-safe areas; Normal ambient O ₂ level; Avoid exposure to corrosive gases or silicone containing products.	

Wall mount version



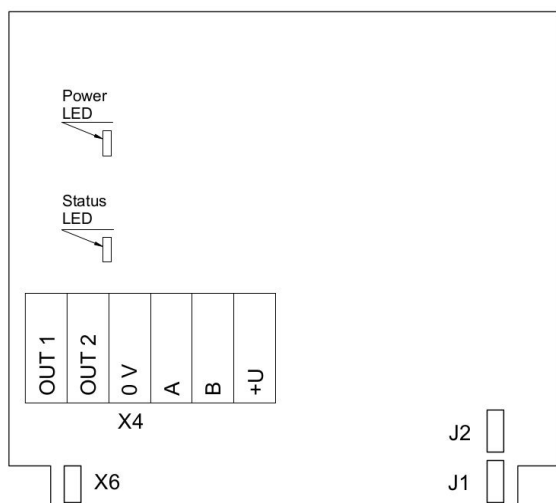
Duct mount version



Ask for other versions or custom designed products



Connection diagram



PCB without PSU and relays

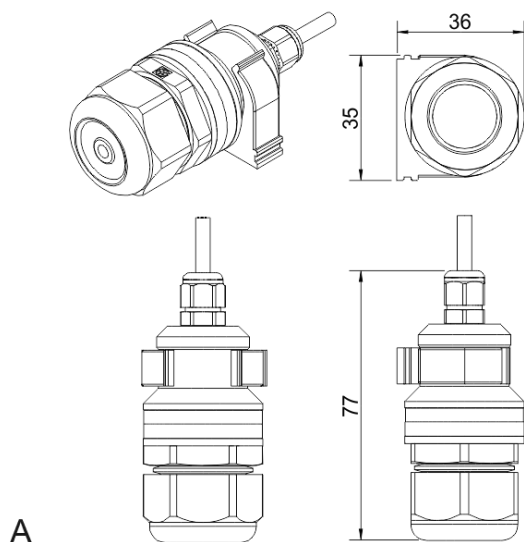
Jumpers

- 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

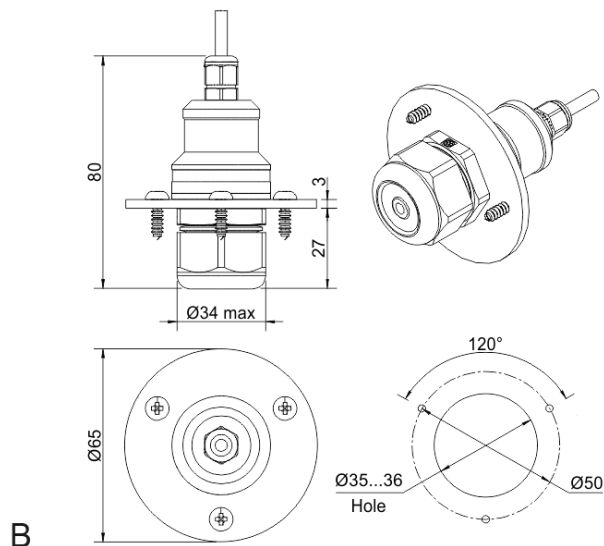
X4 terminals

- 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)

Remote probe



Wall mount remote probe with fixing clamp (default version)



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





Combustible Gases Detector-Transmitter E2638-LEL



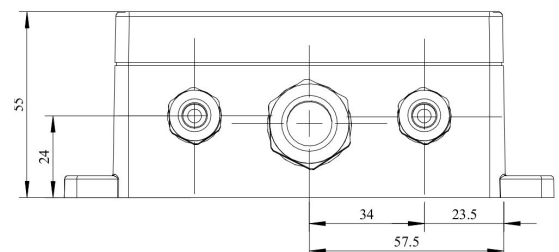
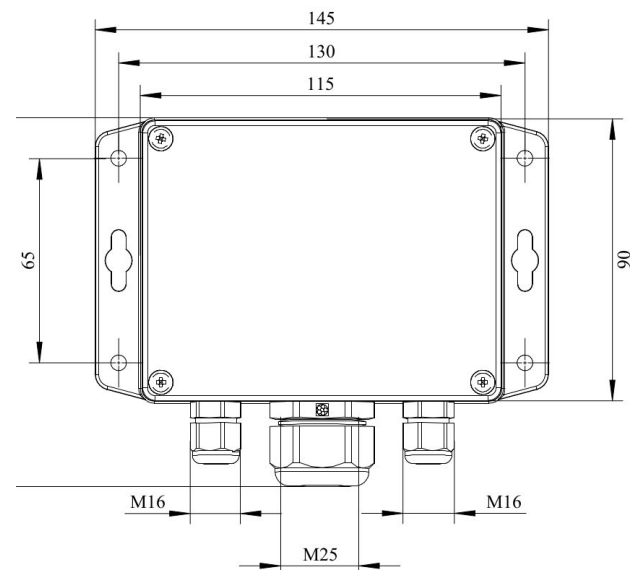
Features

- 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

Detected gases	Hydrogen, methane, acetylene, propane, butane, hexane, octane	
Default calibration	Methane CH ₄	
Sensor type	Metal-oxide semiconductor Pellistor (catalytic bead) on demand	
Sampling method	Diffusion	
Sensor	MOS	Pellistor
Typical detection range	0...100% LEL	0...100% LEL
Resolution	0.1% LEL	1% LEL
Response time T90	ca. 60 s	≤10 s
Sensor lifetime	> 5 years	> 5 years
Maintenance interval	12 months	6 months
Operating temperature	-40...+70 °C	-40...+70 °C
Signal update	Every 1 second	
Self-diagnostics	Full functionality check at start-up	
Warm-up time	≤ 1 min	
Power supply options	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: 20-100% 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	
Operating environment	Industrial indoor and outdoor locations	
Operating conditions	(operating temperature is specified above) ≤ 95% RH non condensing; 0.9...1,1 atm Explosion-safe areas Normal ambient oxygen level Avoid strong mechanical shock, vibrations or EMI; Avoid exposure to corrosive gases or silicone containing products.	

Dimensions



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	LOW: set 20 , release 16 %LEL HIGH: set 50, release 40 %LEL (for flammability range)

Alarm signalling

Visual	Red and green LEDs
Acoustic	Buzzer 85 dB

LCD indicator

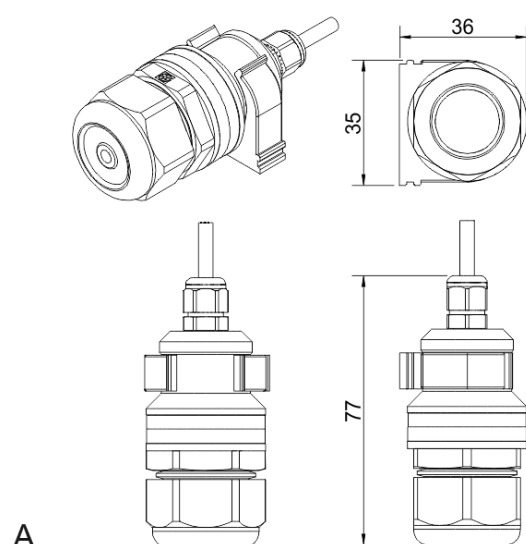
Operating temperature	0...+50 °C
Display dimensions	72 × 36 mm
Number of digits	3.5 7-segment
Character height	14 mm
Other features	Backlight

NOTE! Only one analog output is available for a version with LCD.
NOTE! LCD and LEDs can not be chosen simultaneously.

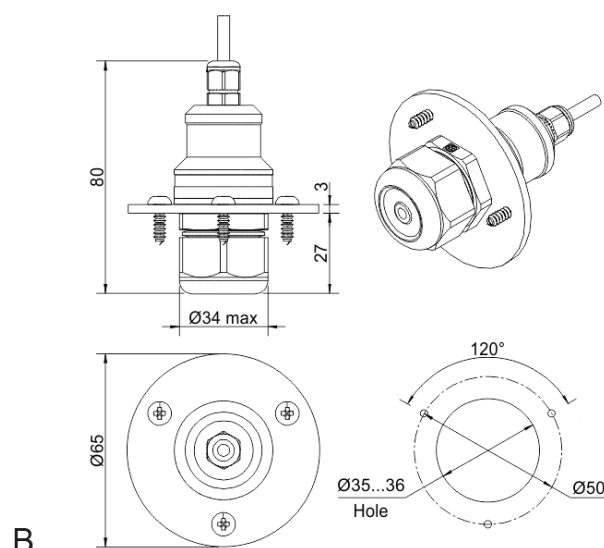
Version with LCD indicator



Remote probe



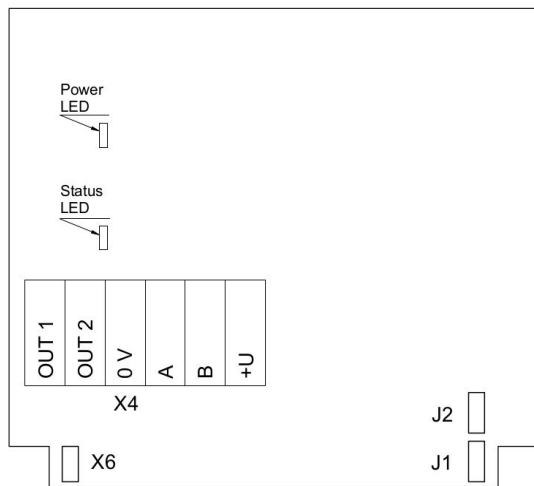
Wall mount remote probe with fixing clamp (default version)



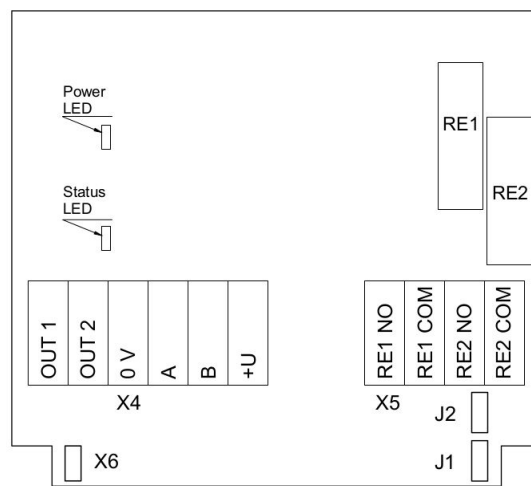
Remote probe with rubber flange and three self-tapping screws (on request)



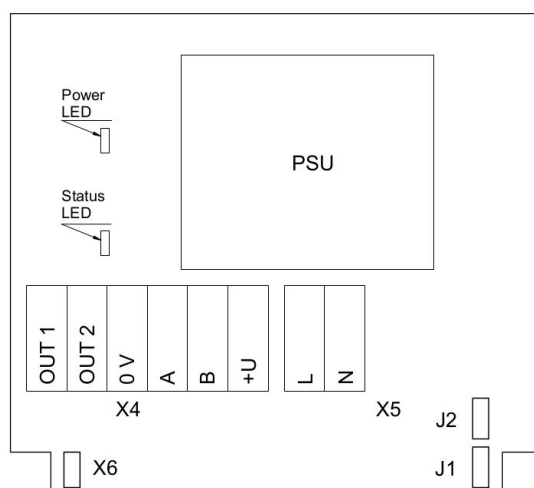
Connection diagrams



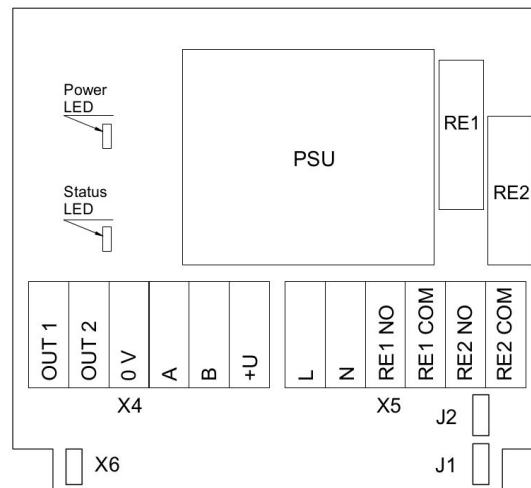
Version without PSU and relays



Version without PSU and with relays



Version with PSU and without relays



Version with PSU and relays

Jumpers

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





Combustible Gases Detector-Transmitter E2648-LEL



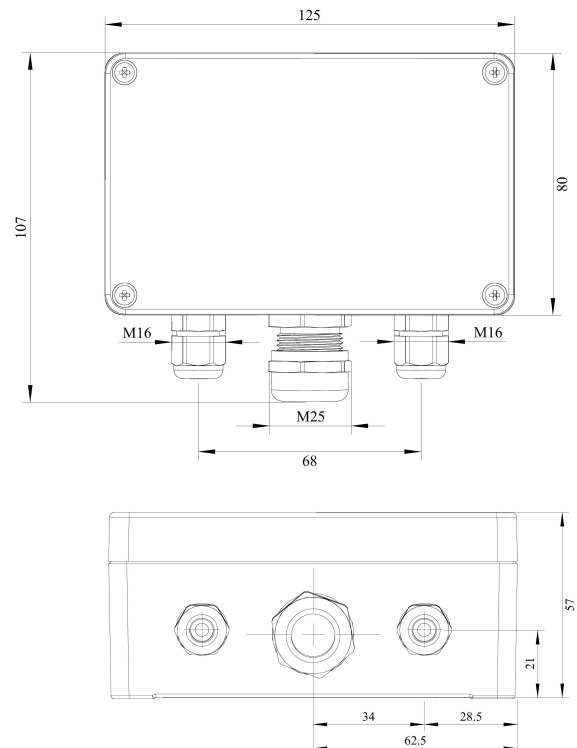
Features

- Accurate and stable measurement
- Industrial IP66 wall mount housing
- Two analog outputs settable to 4-20 mA or 0-10 V
- RS485 Modbus RTU digital interface
- Two relays for alarm / ventilation control (option)
- Attached or remote sensor

Specifications

Detected gases	Hydrogen, methane, acetylene, propane, butane, hexane, octane	
Default calibration	Methane CH ₄	
Sensor type	Metal-oxide semiconductor pellistor (catalytic bead) on demand	
Sampling method	Diffusion	
Sensor	MOS	pellistor
Typical detection range	0...100% LEL	0...100% LEL
Resolution	0.1% LEL	1% LEL
Response time T90	ca. 60 s	≤10 s
Sensor lifetime	> 5 years	> 5 years
Maintenance interval	12 months	6 months
Operating temperature	-40...+70 °C	-40...+70°C
Signal update	Every 1 second	
Self-diagnostics	Full functionality check at start-up	
Warm-up time	≤ 1 min	
Power supply options	11...30 VDC, 24 VAC or 90...265 VAC	
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	Die-cast aluminium, wall mount, protection class IP66	
Dimensions	H120 × W125 × D57 mm	
Operating environment	Industrial indoor and outdoor locations	
Operating conditions	(operating temperature is specified above) <95% RH non condensing; 0.9...1,1 atm Explosion-safe areas; normal ambient O ₂ level Avoid exposure to corrosive gases or silicone containing products	

Dimensions



Relay option (ordering code R)

Output relays	2 × SPST relays (closing contact), 250 VAC / 30 VDC, 5 A max
Default alarm setpoints	LOW: set 20 %LEL, release 16% LEL; HIGH:set 50%LEL, release 40% LEL

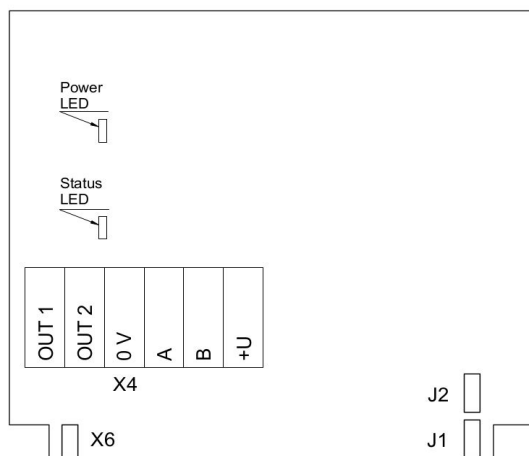
Other options

Remote sensor probe	Protection IP65, shielded cable default cable length 3.0 m
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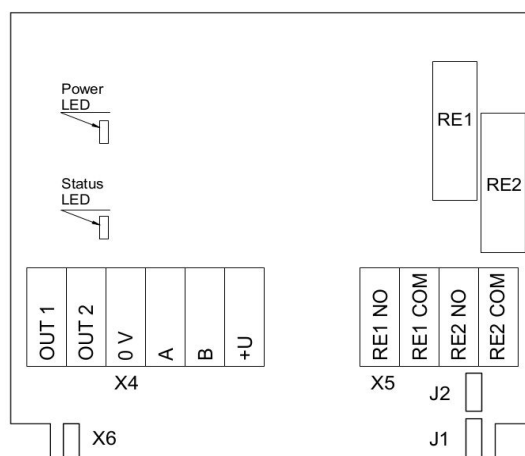
Ask for other versions or custom designed products



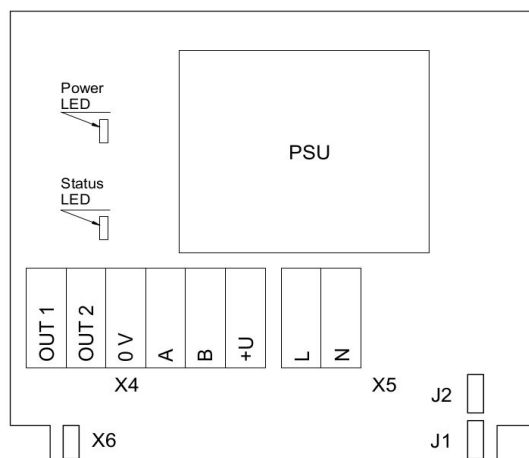
Connection diagrams



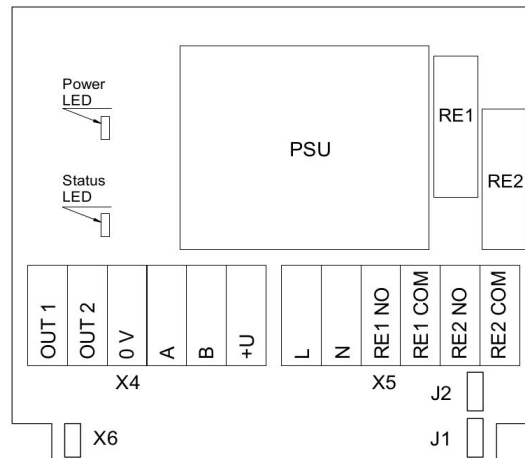
Version without PSU and relays



Version without PSU and with relays



Version with PSU and without relays



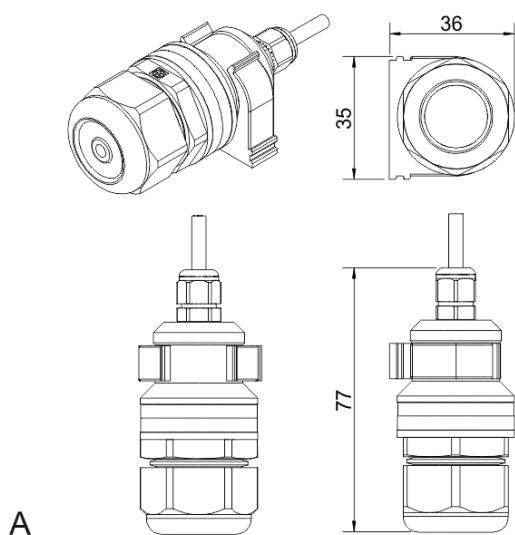
Version with PSU and relays

Jumpers

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

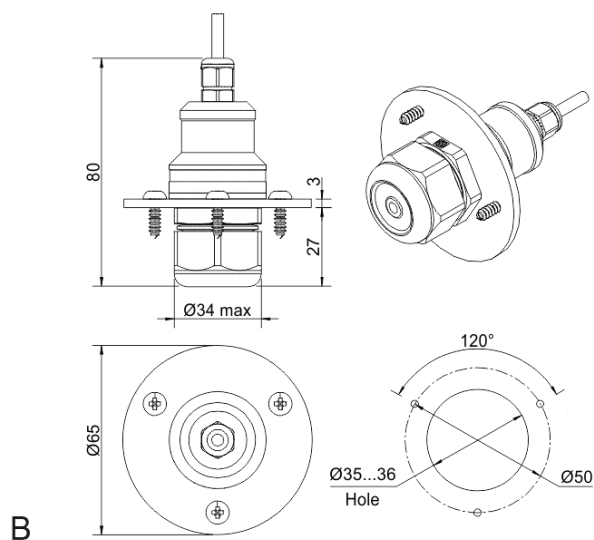


Remote probe



A

Wall mount remote probe with fixing clamp (default version)



B

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



Flameproof Combustible Gases Detector-Transmitter E2658-LEL



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

Detected gases	Hydrogen, methane, acetylene, propane, butane, hexane, octane	
Default calibration	Methane CH ₄	
Sensor type	Metal-oxide semiconductor Pellistor (catalytic bead) on demand	
Sampling method	Diffusion	
Sensor	MOS	Pellistor
Typical detection range	0...100% LEL	0...100% LEL
Resolution	0.1% LEL	1% LEL
Response time T90	ca. 60 s	≤10 s
Sensor lifetime	> 5 years	> 5 years
Calibration interval	12 months	6 months
Operating temperature	-40...+70 °C	-40...+70°C
Signal update	Every 1 second	
Self-diagnostics	Full functionality check at start-up	
Warm-up time	≤ 1 min	
Power supply	11...30 VDC (default), 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: 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	(operating temperature is specified above) ≤ 95% RH non condensing; 0.9...1,1 atm Explosion-safe areas; Normal ambient oxygen level; Avoid exposure to corrosive gases or silicone containing products.	

Relay option (ordering code R)

Output relays	2 × SPST relays (closing contact), 250 VAC / 30 VDC, 5 A max
Default alarm setpoints	LOW: set 20 %LEL, release 16% LEL; HIGH:set 50%LEL, release 40% LEL

Ask for other versions or custom designed products

Approvals

Enclosure:

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

Glands:

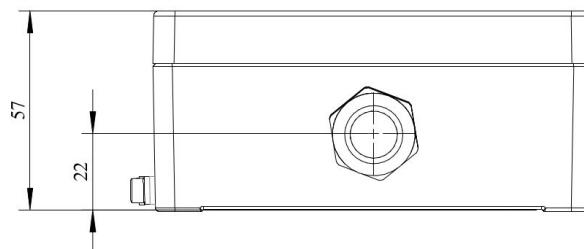
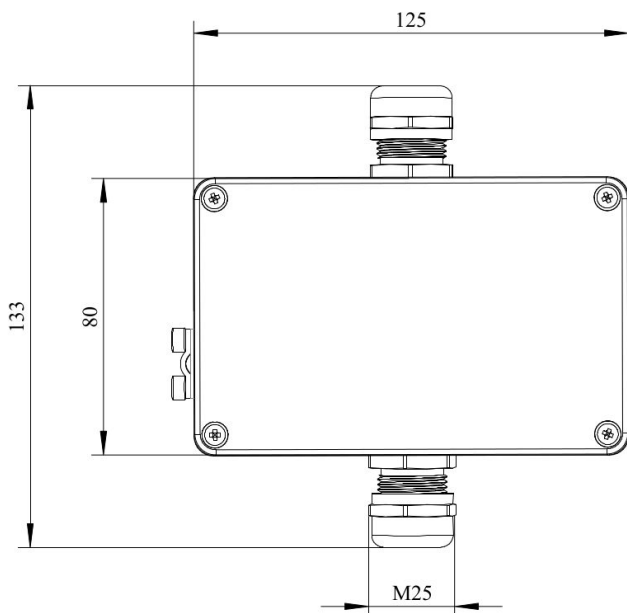
ATEX / IECEx
EESF 19 ATEX 023X
 II 2G Ex db IIC Gb
 II 2D Ex tb IIIC Db IP66

CE conformity

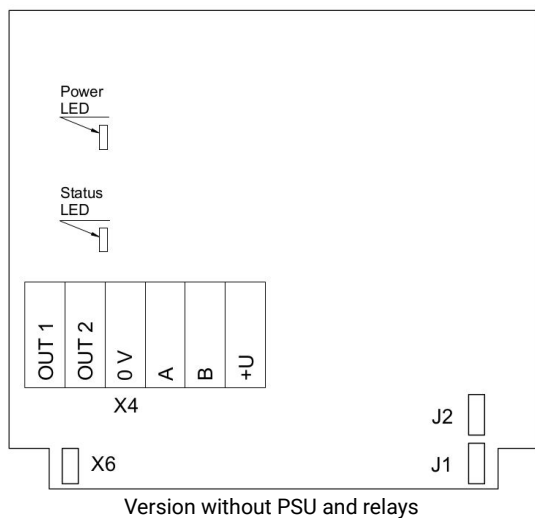
Flameproof to IEC EN 60079-1
Increased safety to IEC EN 60079-7
EMC Emissions to EN 61000-6-3, EN 61326-1
EMC Immunity to EN 61000-6-1, EN 61000-6-2



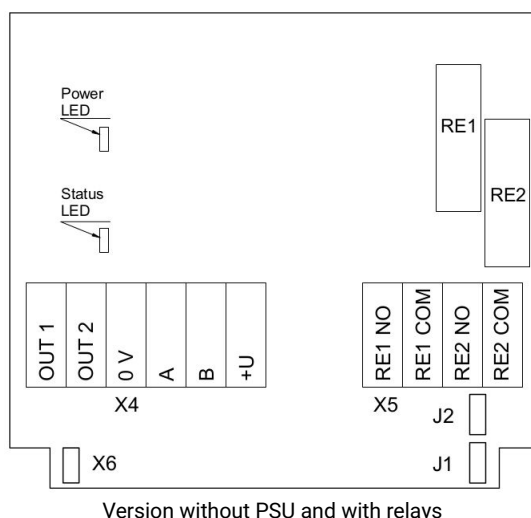
Dimensions



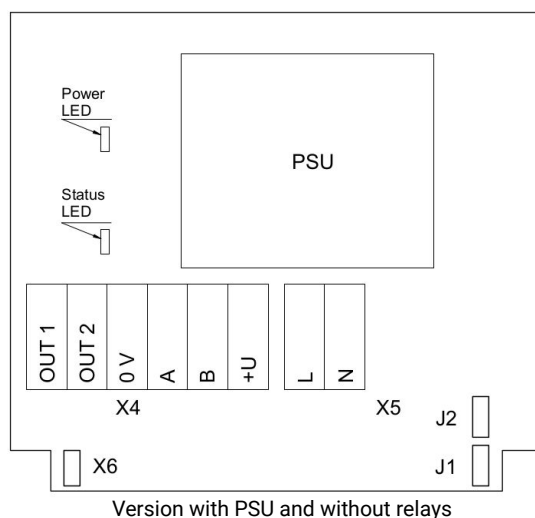
Connection diagrams



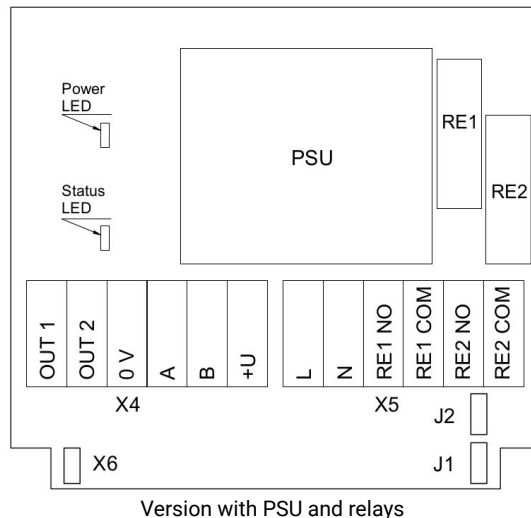
Version without PSU and relays



Version without PSU and with relays



Version with PSU and without relays



Version with PSU and relays



Jumpers

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

