



# Combustible Gases Detector-Transmitter E2608-LEL



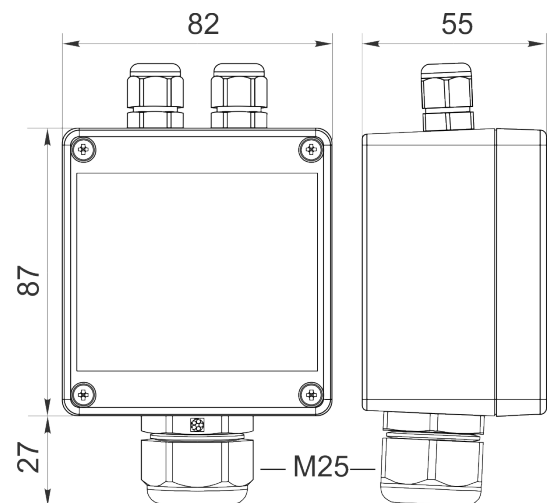
## Features

- 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

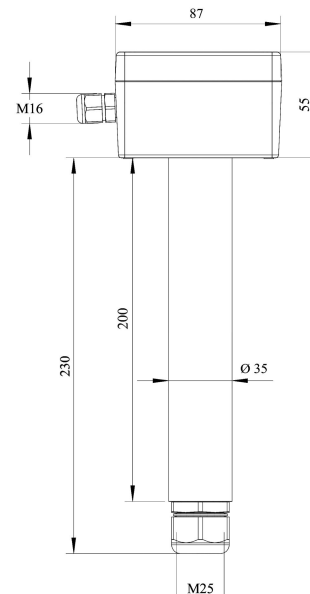
## Specifications

Detected gases	Hydrogen, methane, acetylene, propane, butane, hexane, octane	
Default calibration	Methane CH <sub>4</sub>	
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



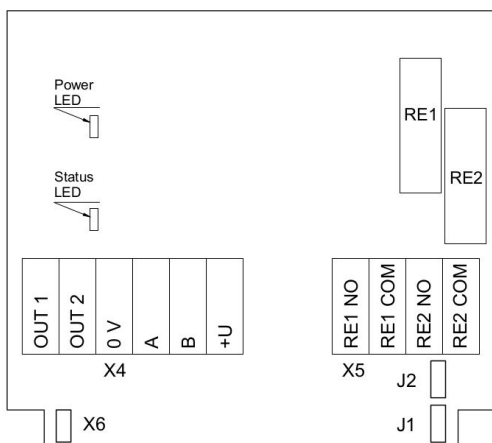
### Duct mount version



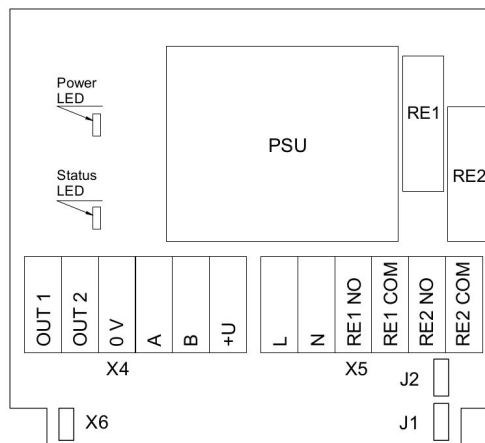
Ask for other versions or custom designed products



## 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

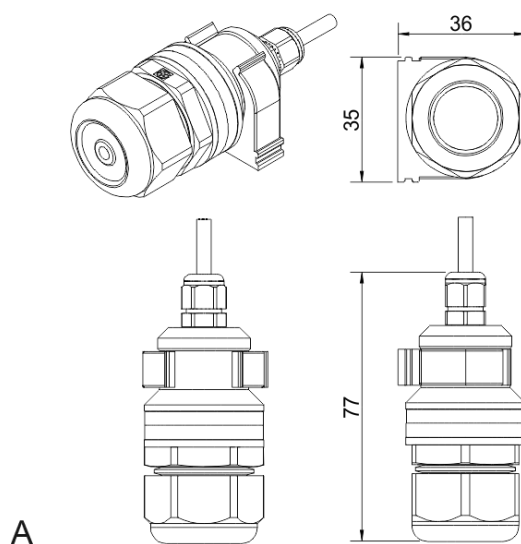
RE2 NO

Relay 2, normally open terminal

RE2 COM

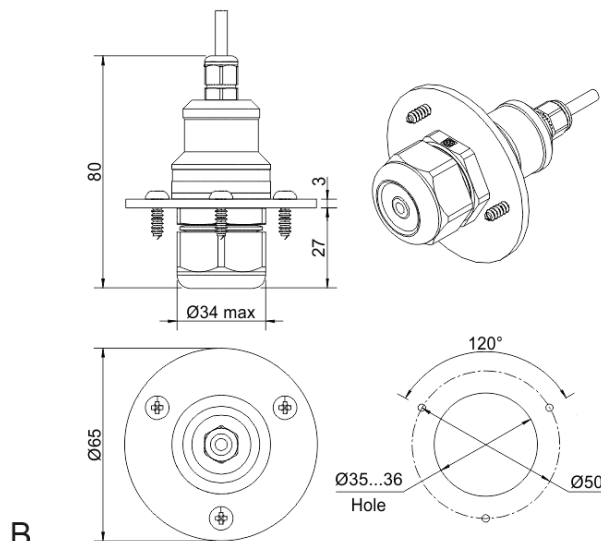
Relay 2, common terminal

## Remote probe



A

Wall mount remote probe with fixing clamp (default version)



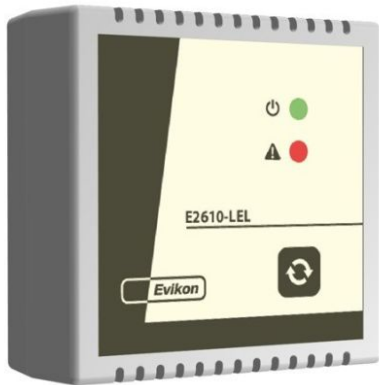
B

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





# Combustible Gas Detector E2610-LEL



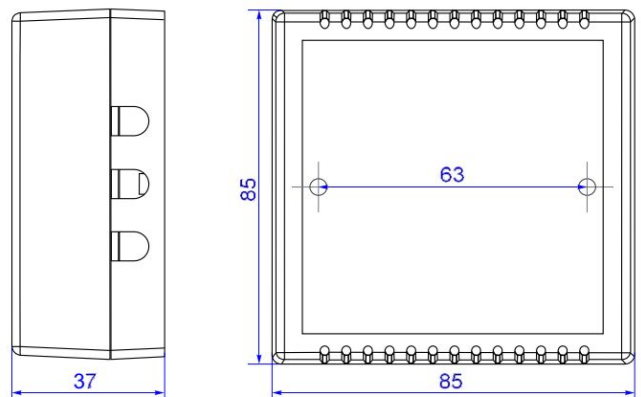
## Features

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

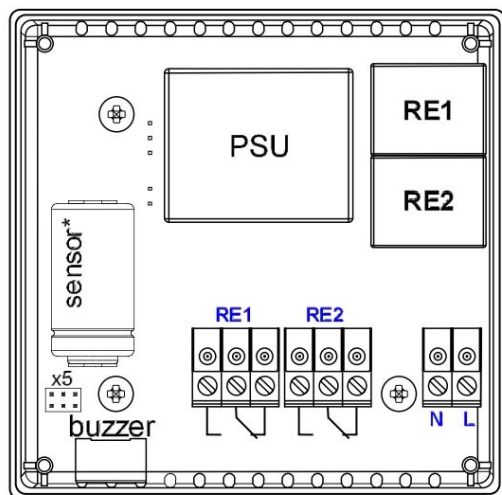
## Specifications

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

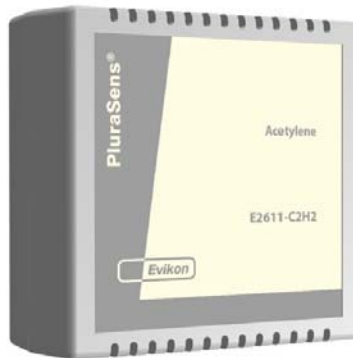
### Terminals

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



# Acetylene Detector-Transmitter E2611-C2H2


 4-20mA  
 0-10V

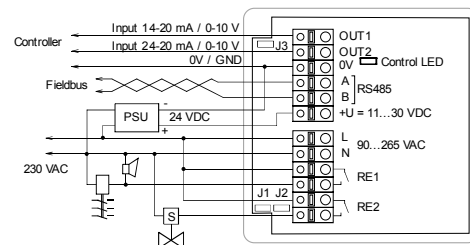
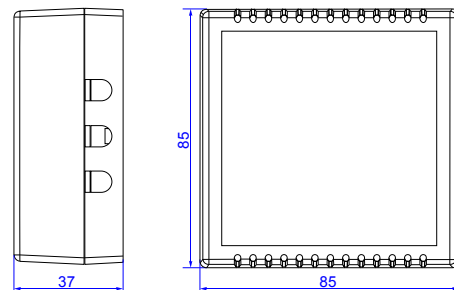
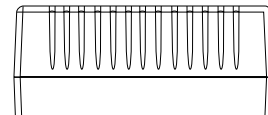
 RS485  
 Modbus


## 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

Calibration	Acetylene C <sub>2</sub> H <sub>2</sub>
Sensor type	Metal-oxide semiconductor option: pellistor (catalytic bead)
Sampling method	Diffusions
Detection range	up to 0...100% LEL (0...2,5 %vol) <sub>4</sub>
Resolution	0,1 %LEL (1%LEL for pellistor)
Signal update	every 1 second
Response time	~ 60 seconds (8...10s for pellistor)
Sensor lifetime	> 5 years (up to 3 years for pellistor)
Maintenance interval	12 months (3.6 months for pelistor)
Self-diagnostics	full functionality check at start-up
Warm-up time	≤ 1 min
Power supply	11...30 VDC or 90...265 VAC
Power consumption	< 2 VA
Digital interface	RS485, Modbus RTU protocol
Alarms	buzzer 85 dB
Analog outputs	2 × 4-20 mA / 0-10 V, user settable
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 48%LEL
Enclosure	ABS plastic with ventilation slots, wall mount, protection class IP20
Dimensions	H85 × W85 × D37 mm
Operating environment	residential, business and industrial indoor spaces
Operating conditions	-40...+70 °C (-20...+60°C for pellistor), <95 %RH, without condensation normal ambient O <sub>2</sub> concentration explosion safe (non-ATEX) areas no corrosive gases or silicon containing volatile products in the atmosphere



Ask for other versions or custom designed products



# Combustible Gases Detector-Transmitter E2611-LEL



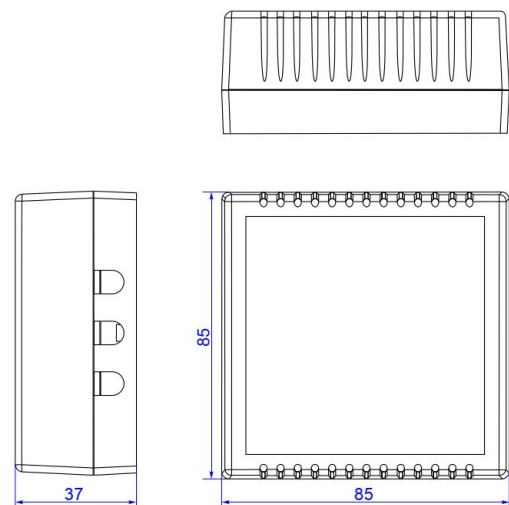
## Features

- 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

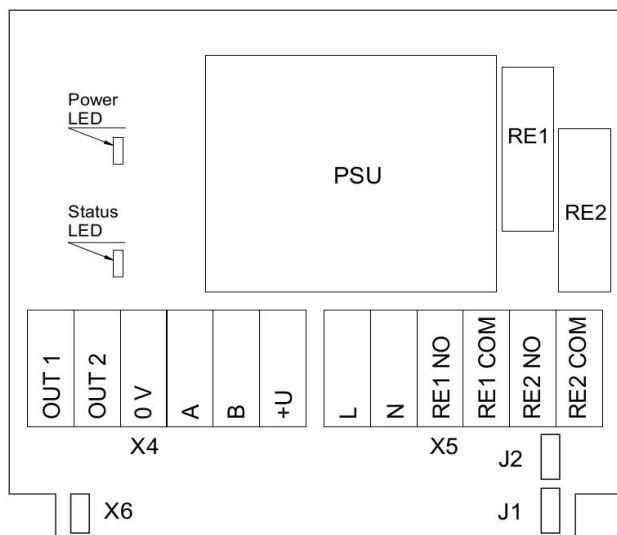
## Specifications

Detected gases	Acetylene, Butane, Hydrogen, Methane, Propane
Calibration	Methane CH <sub>4</sub>
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 <sub>2</sub> concentration Non-ATEX areas No corrosive gases or silicon containing volatile products in the atmosphere

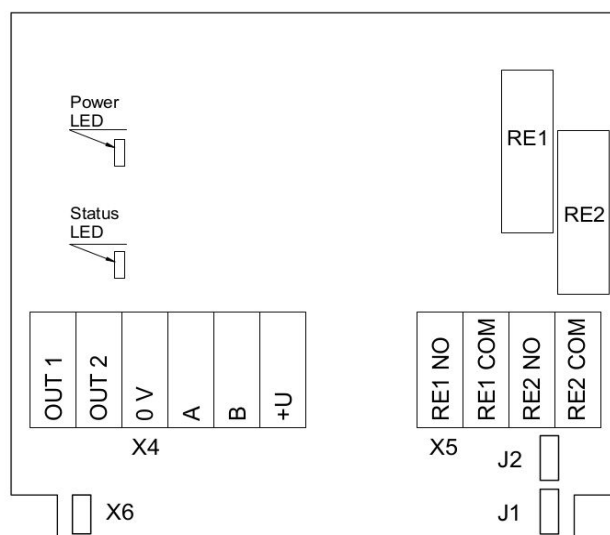
## Dimensions



## Connection diagrams



Version with PSU



Version without PSU

### Jumpers

<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

### X4 terminals

<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)

### X5 terminals (optional)

<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





# Combustible Gas Transmitter E2615-LEL



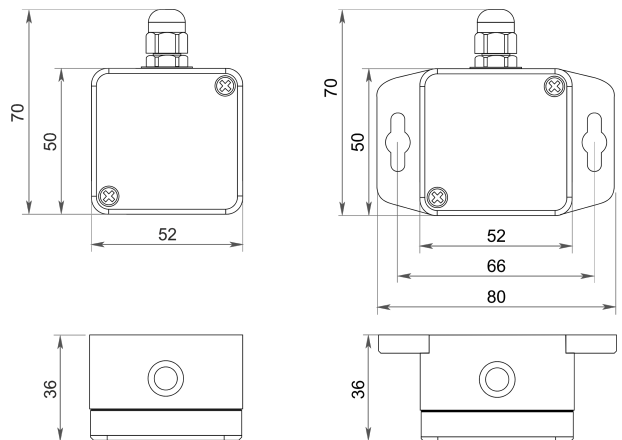
## Features

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

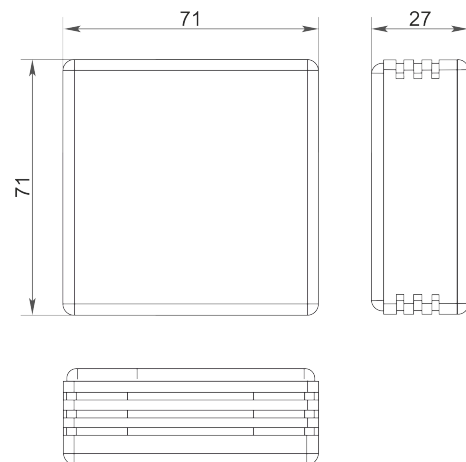
## Specifications

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

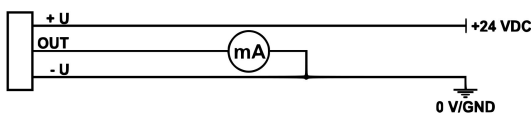


## IP20 Enclosures

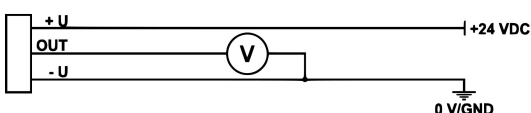


## Connection diagrams

### 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



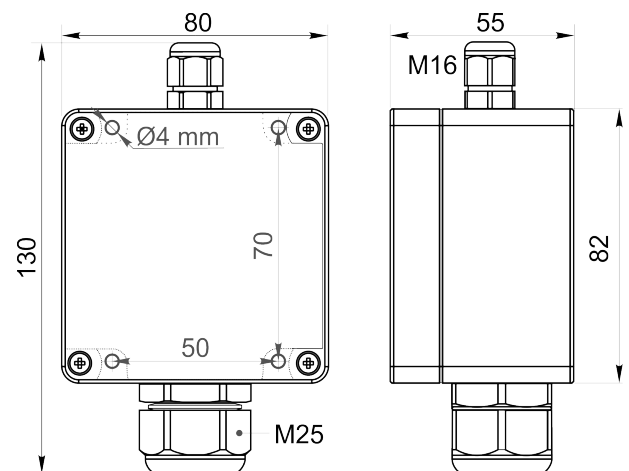
## Features

- 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

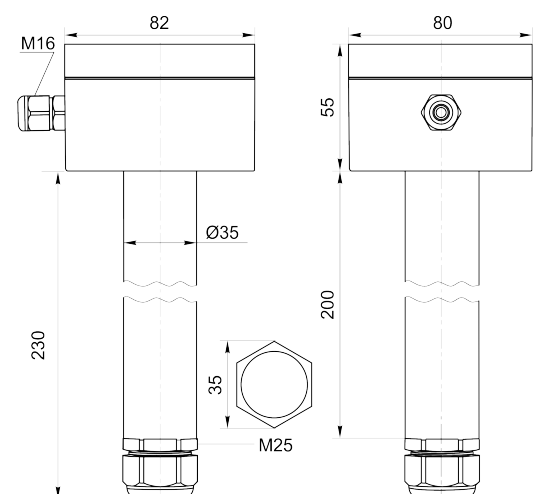
## Specifications

Detected gases	Hydrogen, methane, acetylene, propane, butane, hexane, octane	
Default calibration	Methane CH <sub>4</sub>	
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 <sub>2</sub> level; Avoid exposure to corrosive gases or silicone containing products.	

### Wall mount version



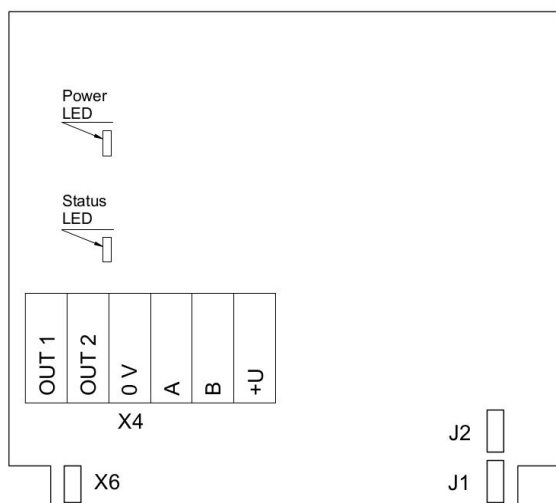
### Duct mount version



Ask for other versions or custom designed products



## Connection diagram



PCB without PSU and relays

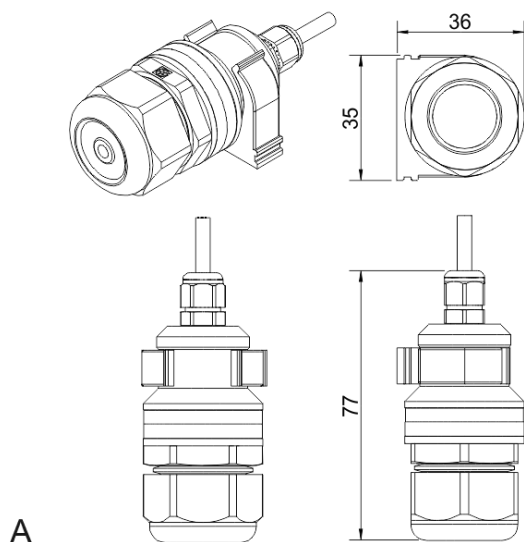
### Jumpers

- 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

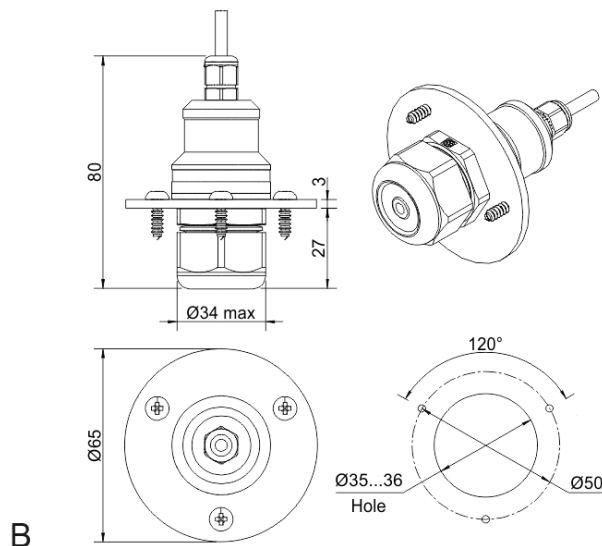
- OUT1** 4-20 mA / 0-10 V output
- OUT2** 4-20 mA / 0-10 V output
- 0V** 0 V / 24 VAC Neutral (optional)
- A** RS485 A / Data +
- B** RS485 B / Data -
- +U** +24 VDC / 24 VAC Phase (optional)

## Remote probe



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 E2630-LEL



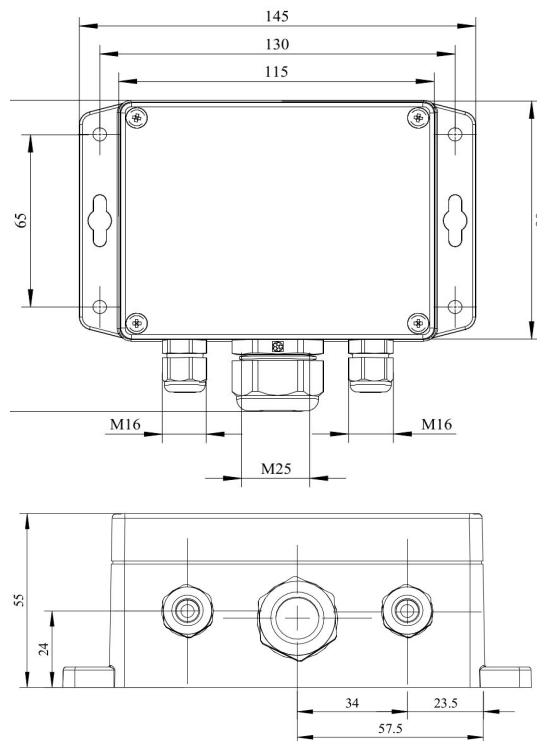
## Features

- Methane, LPG, Hydrogen, Acetylene
- Accurate and stable measurement
- Wall-mount IP65 protected housing
- Visual and acoustic alarms
- Two output relays for alarm / ventilation control

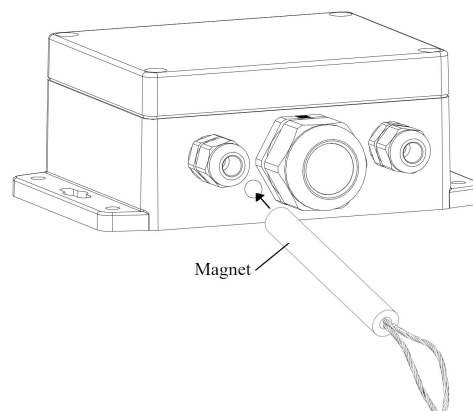
## Specifications

Calibration	Methane, Butane, Propane, Acetylene, Hydrogen
Sensor type	Metal Oxide Semiconductor
Sampling method	Diffusion
Typical detection range	0...100% LEL
Response time T90	~60 seconds
Signal update	Every 1 second
Sensor lifetime	> 5 years
Maintenance interval	12 months
Self-diagnostics	Full functionality check at start-up, testing by magnetic switch
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	Grey ABS plastic, wall mount, protection class IP65
Dimensions	H140 × W145 × D55 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



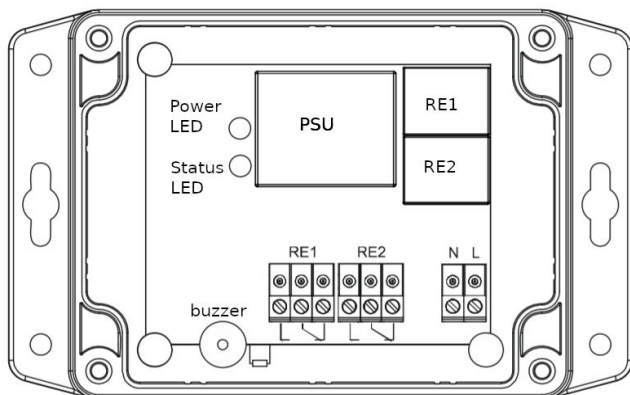
## Magnet key



Ask for other versions or custom designed products



## Connection diagram



### Terminals

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





# Combustible Gases Detector-Transmitter E2638-LEL



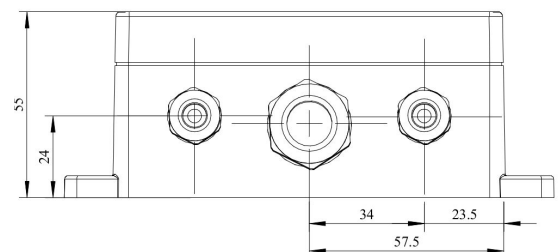
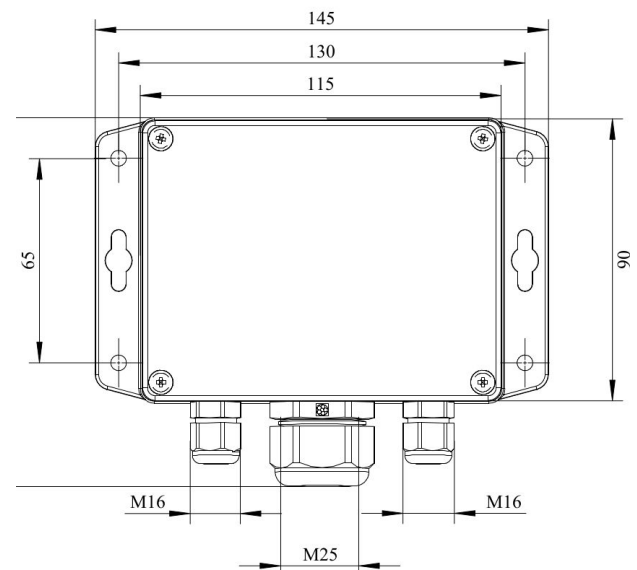
## Features

- 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 <sub>4</sub>	
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

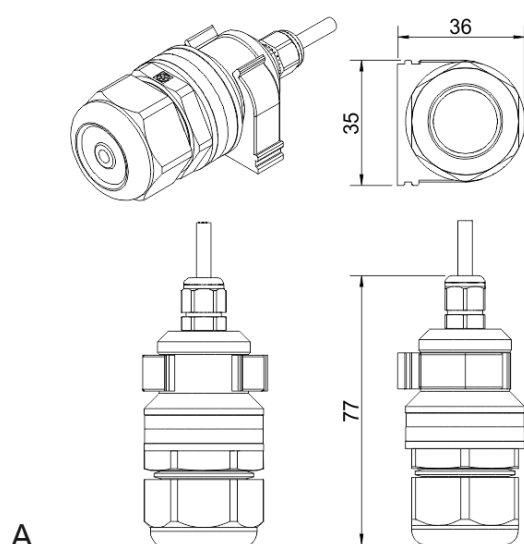
Operating temperature	0...+50 °C
Display dimensions	72 × 36 mm
Number of digits	3.5 7-segment
Character height	14 mm
Other features	Backlight

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

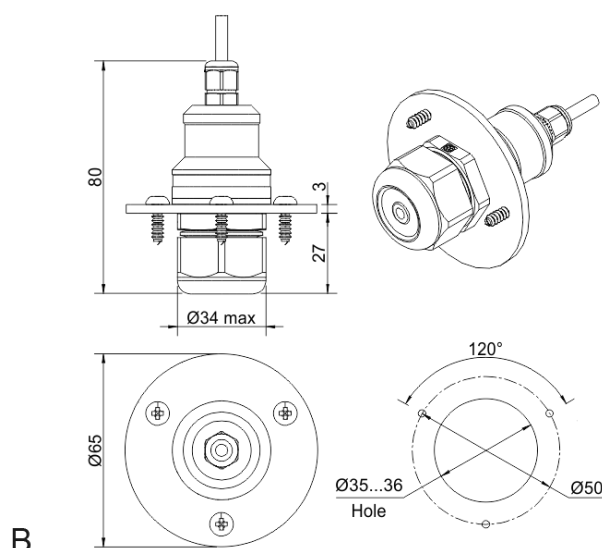
## Version with LCD indicator



## Remote probe



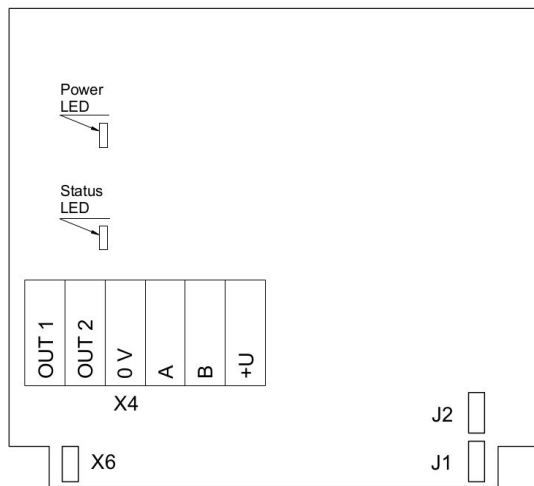
Wall mount remote probe with fixing clamp (default version)



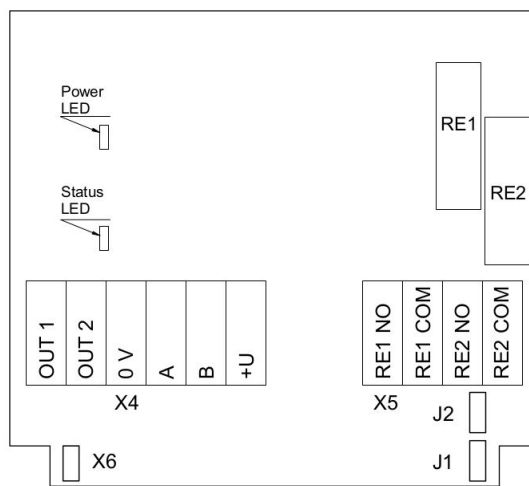
Remote probe with rubber flange and three self-tapping screws (on request)



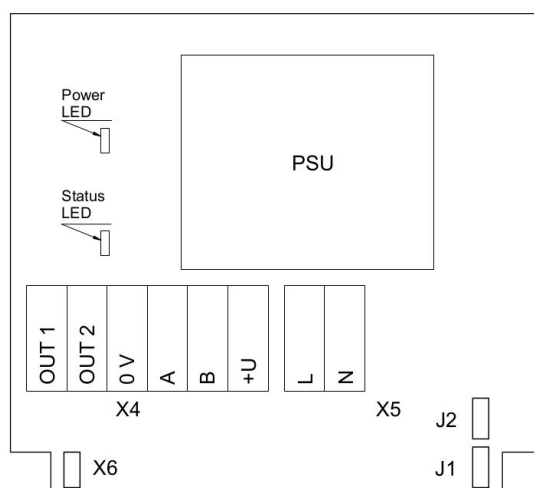
## Connection diagrams



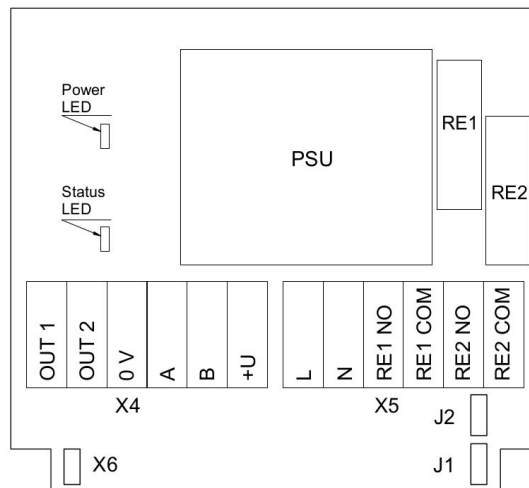
Version without PSU and relays



Version without PSU and with relays



Version with PSU and without relays



Version with PSU and relays

### Jumpers

<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





# Combustible Gases Detector-Transmitter E2648-LEL



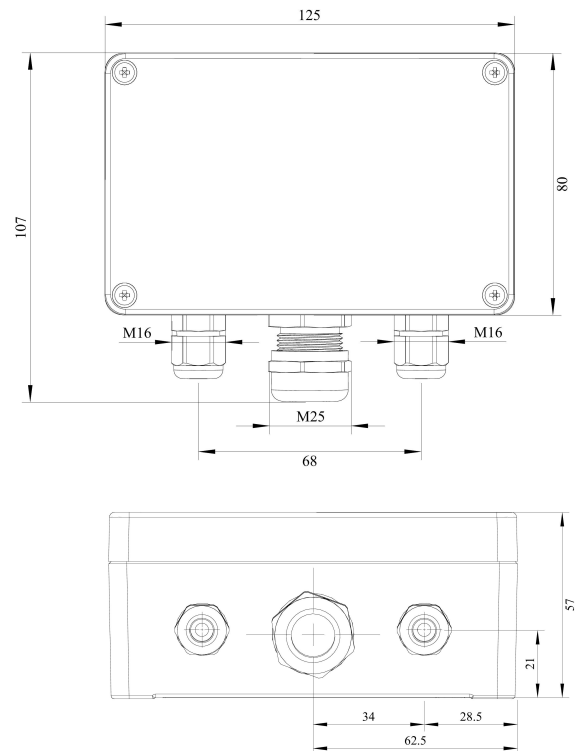
## Features

- 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 <sub>4</sub>	
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	
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 <sub>2</sub> 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

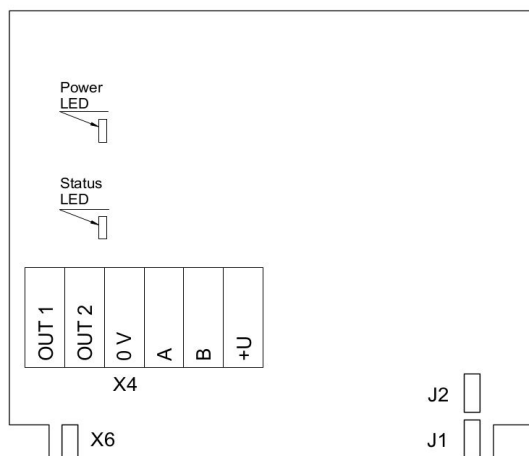
Remote sensor probe	Protection IP65, shielded cable default cable length 3.0 m
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Ask for other versions or custom designed products

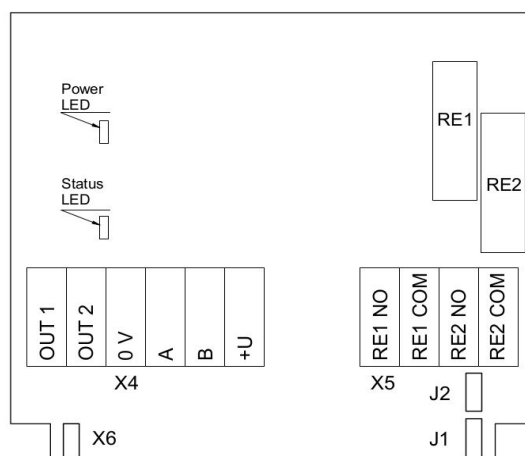




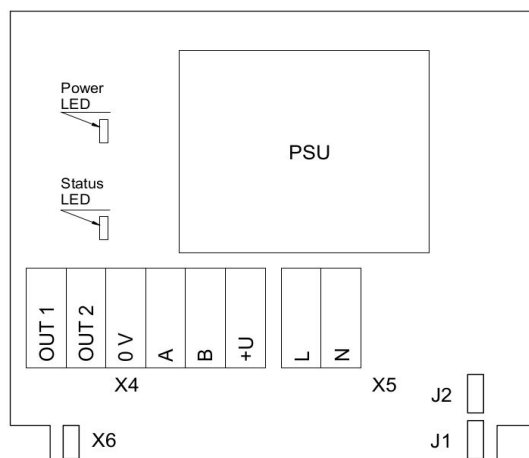
## Connection diagrams



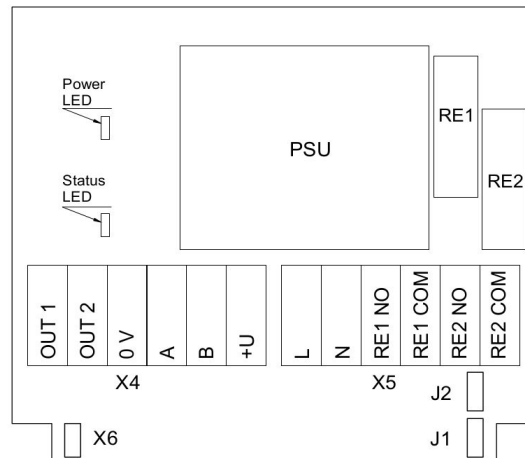
Version without PSU and relays



Version without PSU and with relays



Version with PSU and without relays



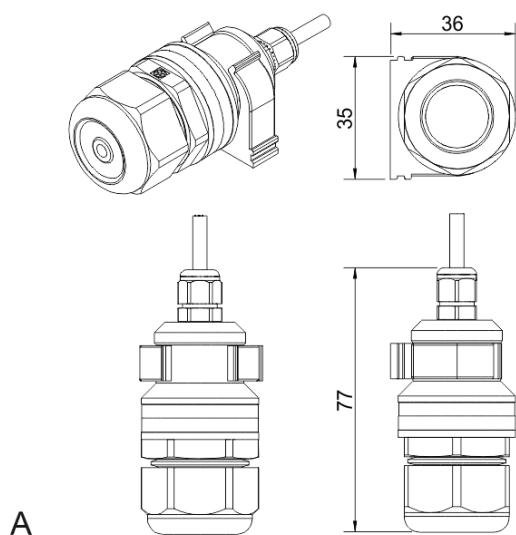
Version with PSU and relays

### Jumpers

<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

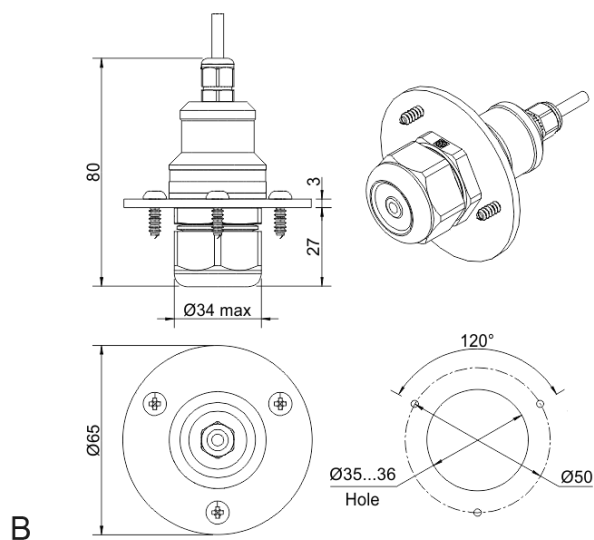


## Remote probe



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 <sub>4</sub>	
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:

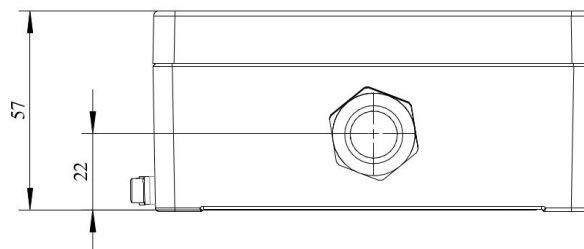
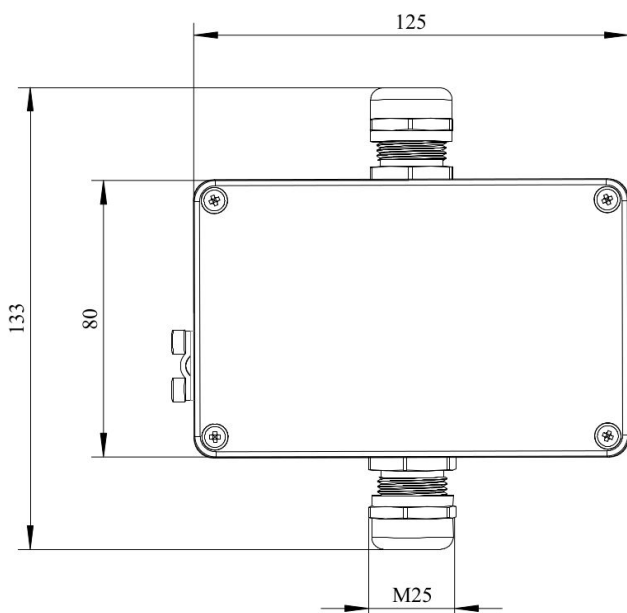
ATEX / IECEx  
EESF 19 ATEX 023X  
 II 2G Ex db IIC Gb  
 II 2D Ex tb IIIC Db IP66

### CE conformity

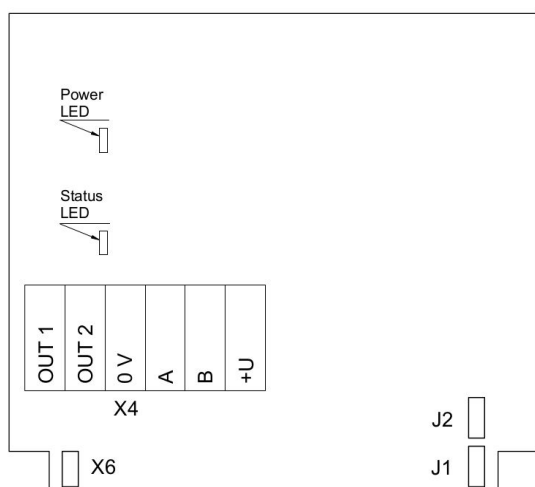
Flameproof to IEC EN 60079-1  
Increased safety to IEC EN 60079-7  
EMC Emissions to EN 61000-6-3, EN 61326-1  
EMC Immunity to EN 61000-6-1, EN 61000-6-2



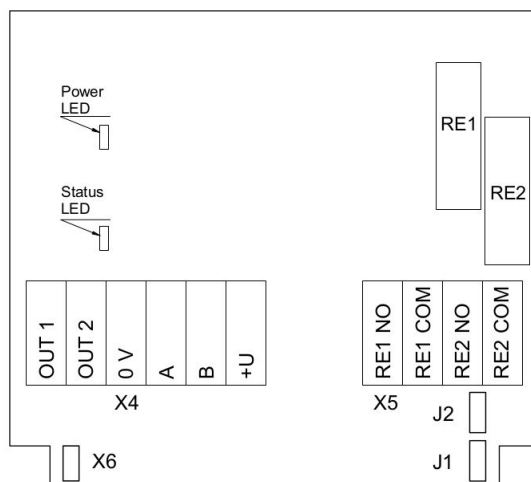
### Dimensions



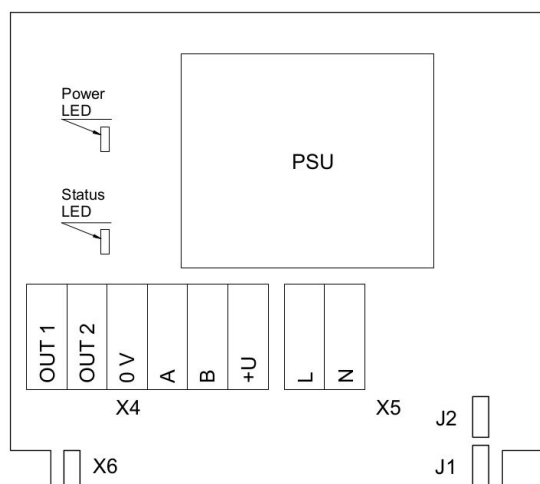
### Connection diagrams



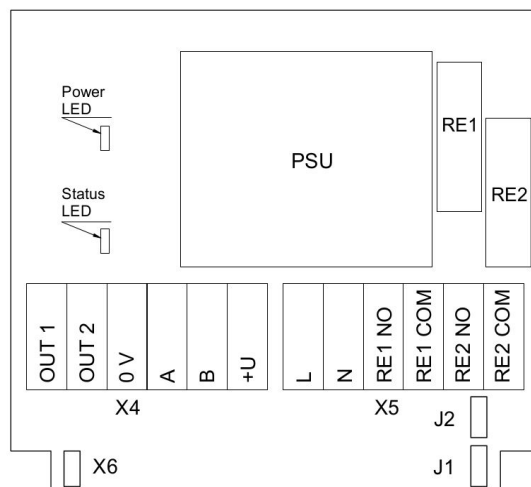
Version without PSU and relays



Version without PSU and with relays



Version with PSU and without relays



Version with PSU and relays



**Jumpers**

<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

