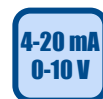


Halocarbon Refrigerants Detector-Transmitter E2608-HFC



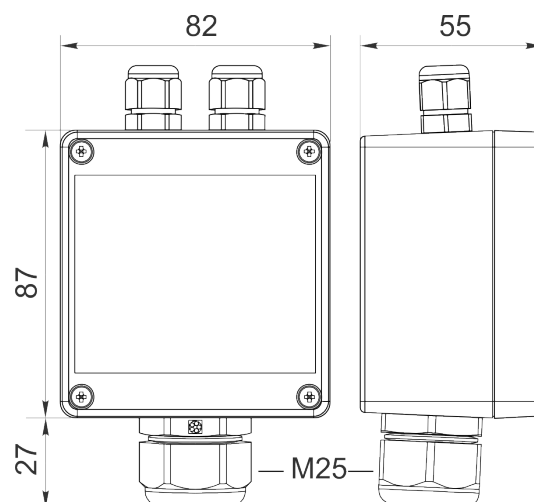
Features

- 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

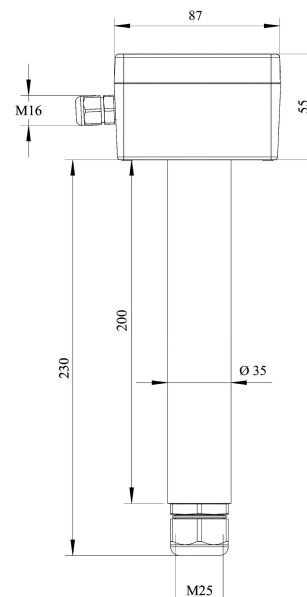
Specifications

Detected gases	R-12, R-123, R-125, R-134a, R-143, R-22, R-404a, R-407c, R-410a etc
Sensor type	Metal-oxide semiconductor
Sampling method	Diffusion
Typical detection range	0...1000 ppm
Resolution	1 ppm
Response time T90	<120 s
Sensor lifetime	> 5 years
Calibration interval	12 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	RE1 (LOW): set 100; release 80 ppm RE2 (HIGH): set 500; release 400 ppm
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 (MOS)	-30...+60 °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



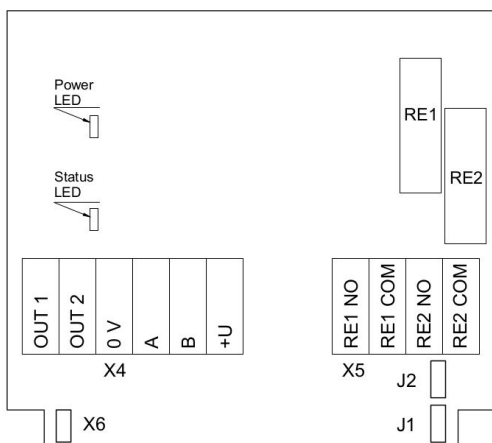
Duct mount version



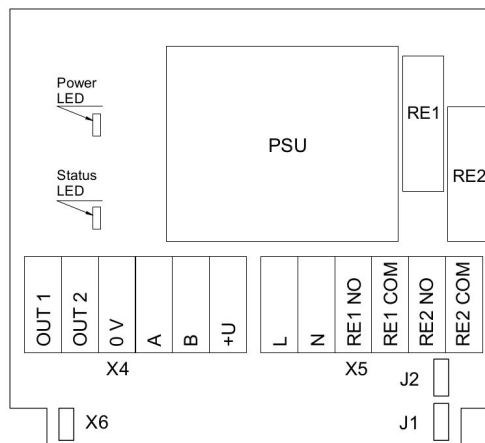
Ask for other versions or custom designed products



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

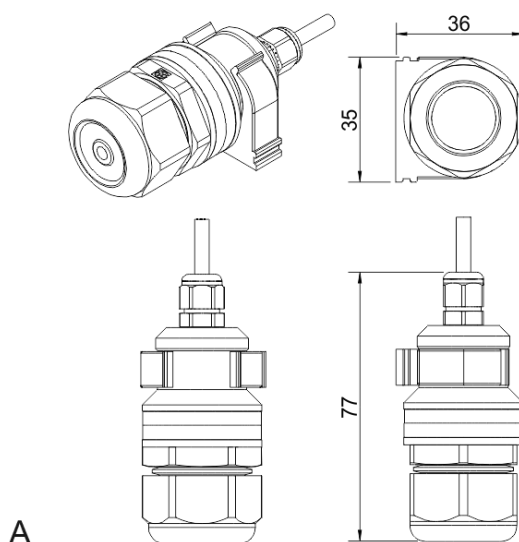
X4 terminals

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)

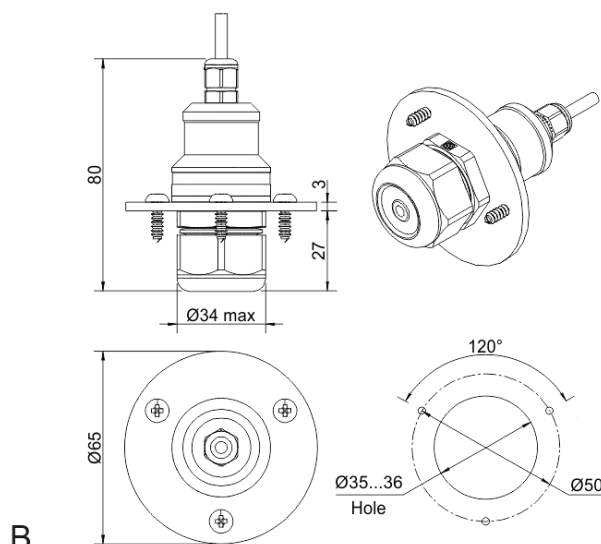
L	90...265 VAC Phase
N	90...265 VAC Neutral
RE1 NO	Relay 1, normally open terminal
RE1 COM	Relay 1, common terminal
RE2 NO	Relay 2, normally open terminal
RE2 COM	Relay 2, common terminal

Remote probe



A

Wall mount remote probe with fixing clamp (default version)



B

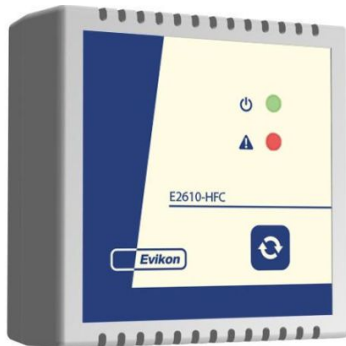
Remote probe with rubber flange and three self-tapping screws (on request)





Refrigerant Detector

E2610-HFC



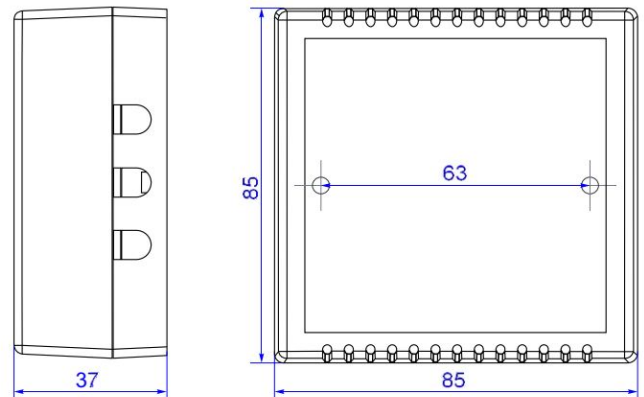
Features

- Accurate and stable measurement
- Compact housing providing optimal airflow
- Visual and acoustic alarms
- Two output relays for alarm / ventilation control

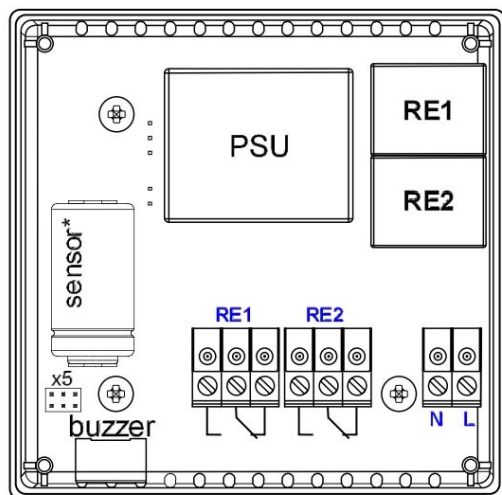
Specifications

Calibration	Refrigerant gas
Sensor type	Metal oxide semiconductor
Sampling method	Diffusion
Typical detection range	0-500 ppm
Response time T90	<120 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 70-100-300 ppm
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	-30...60°C, <95% RH without condensation, 0,9...1,1 atm; Non-ATEX-rated areas Avoid strong mechanical shock, vibrations or EMI Avoid exposure to corrosive gases

Dimensions



Connection diagram



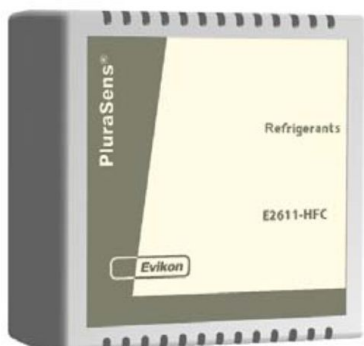
*Sensors may have different shape and/or size

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)



Refrigerants Detector-Transmitter E2611-HFC



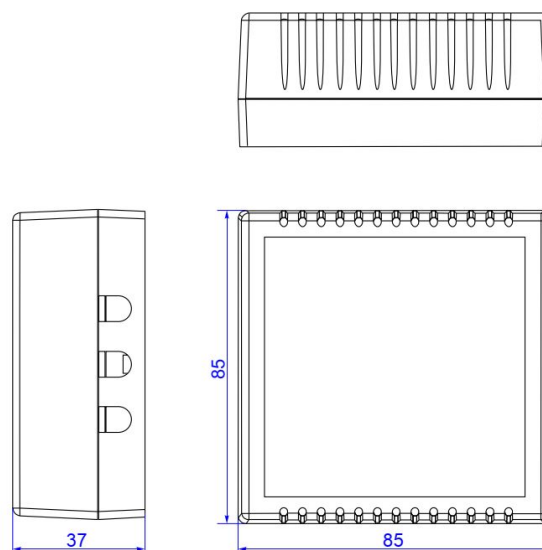
Features

- 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

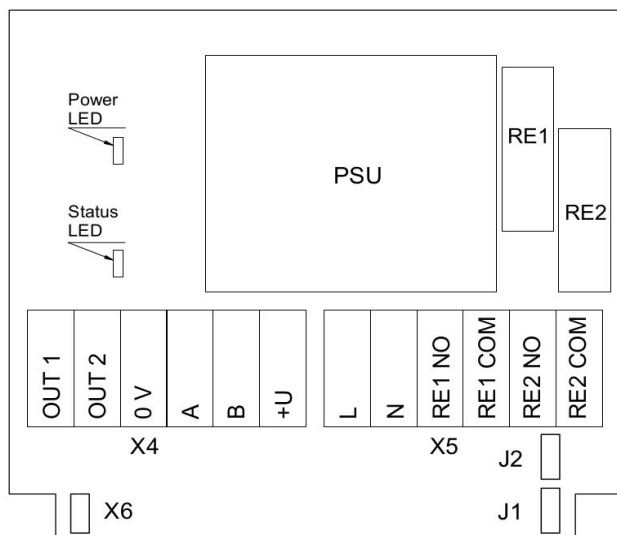
Specifications

Detected gases	R-12, R-123, R-125, R-134a, R-143, R-22, R-404a, R-407c, R-410a etc
Default calibration	R404a
Sensor type	Long-life metal-oxide gas
Sampling method	Diffusion
Typical detection range	0...1000 ppm
Resolution/digital unit	1 ppm
Response time T90	<120 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 100 , release 80 ppm; HIGH: set 500, release 400 ppm
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	-30...+60 °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.

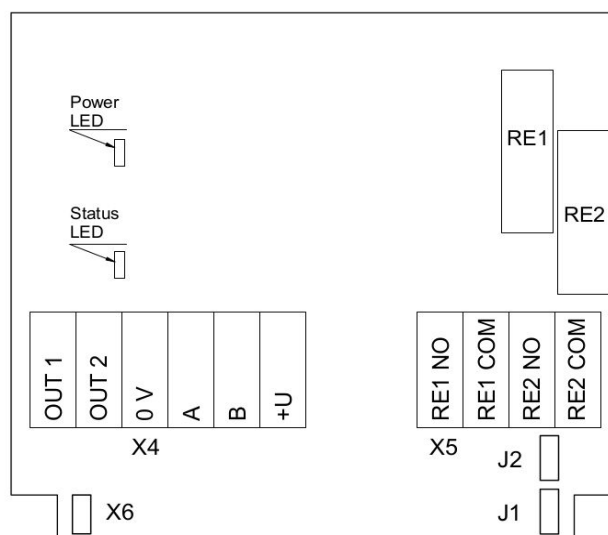
Dimensions



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

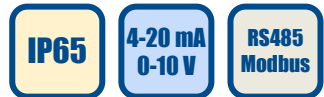
X4 terminals

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





Refrigerant Transmitter E2618-HFC



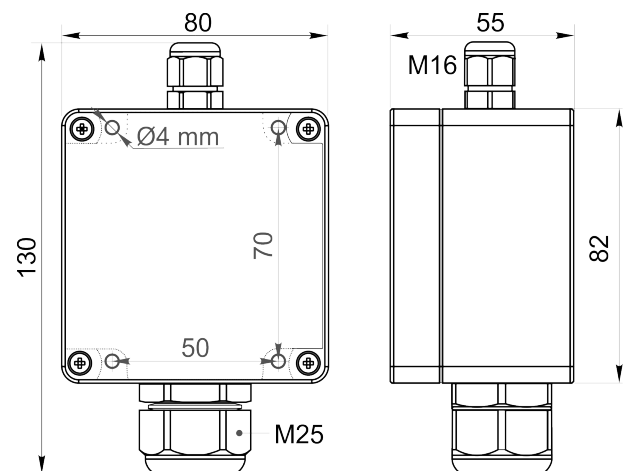
Features

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

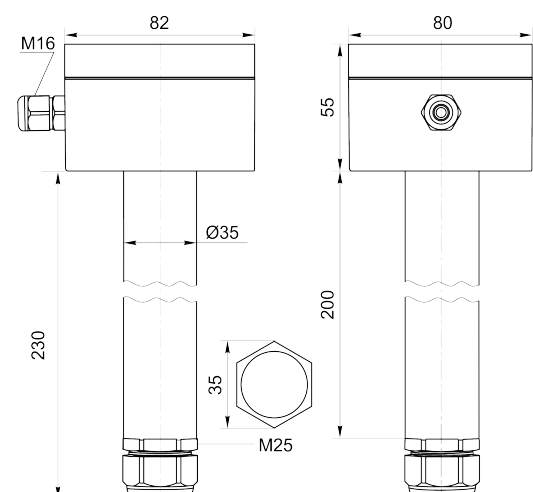
Specifications

Calibration	Refrigerant gas
Default calibration	R-404a
Sensor type	Metal-oxide semiconductor
Sampling method	Diffusion
Detection range	0...1000 ppm
Resolution / digital unit	1 ppm
Response time T80	<120 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 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	-30...+60 °C, <95 %RH; Atmospheric pressure ±10%; Non-atex rated spaces; Normal ambient oxygen level;

Wall mount version



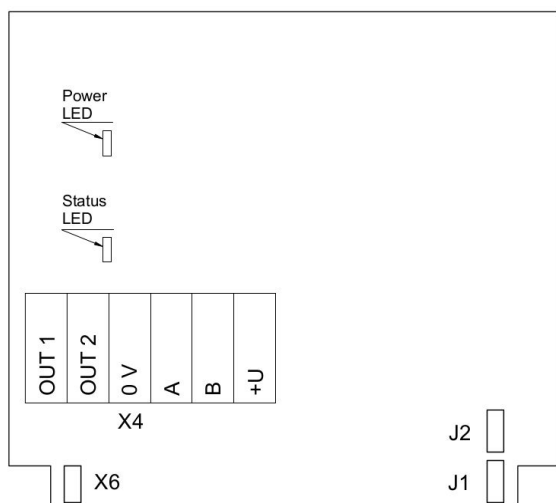
Duct mount version



Ask for other versions or custom designed products



Connection diagram



PCB without PSU and relays

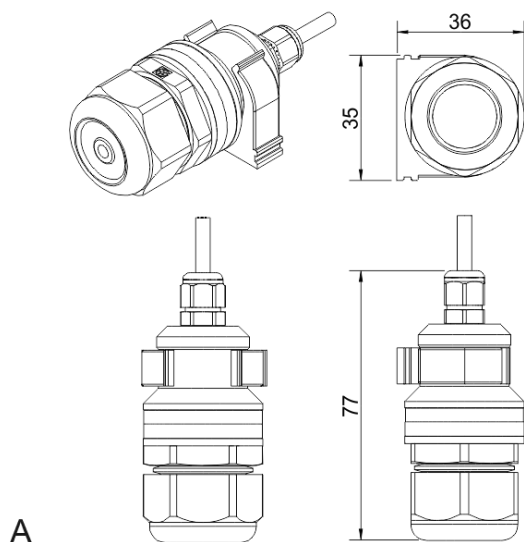
Jumpers

- 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

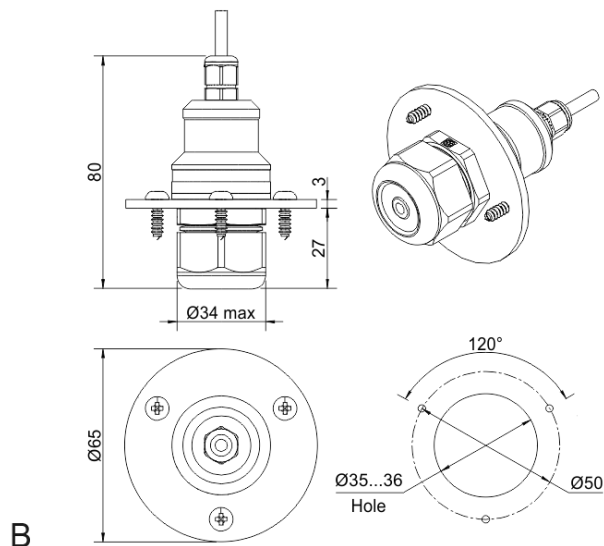
X4 terminals

- 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)





Refrigerant Gas Detector E2630-HFC



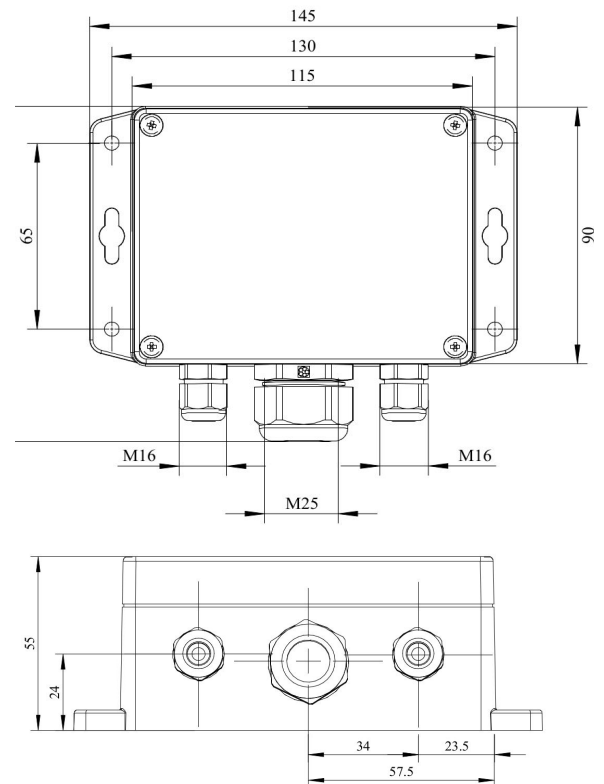
Features

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

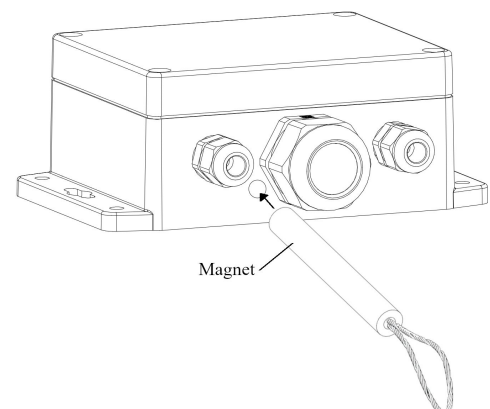
Specifications

Calibration	Refrigerant gas
Sensor type	Metal Oxide Semiconductor
Sampling method	Diffusion
Typical detection range	0-500 ppm
Resolution	1 ppm
Response time T90	<120 s
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 70-100-300 ppm
Alarms	Blinking LED, buzzer 85 dB
Enclosure	Grey ABS plastic, wall mount, protection class IP65
Dimensions	H140 × W145 × D55 mm
Operating conditions	-30...+60 °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



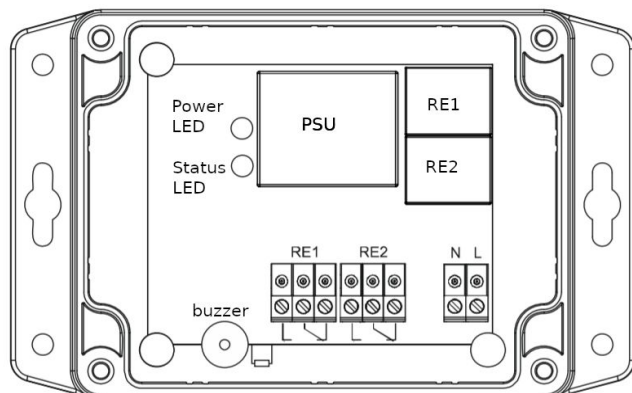
Magnet key



Ask for other versions or custom designed products



Connection diagram

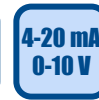


Terminals

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)



Halocarbon Refrigerants Detector-Transmitter E2638-HFC



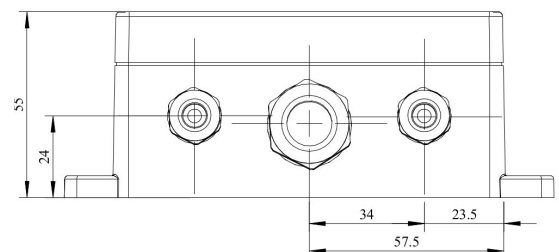
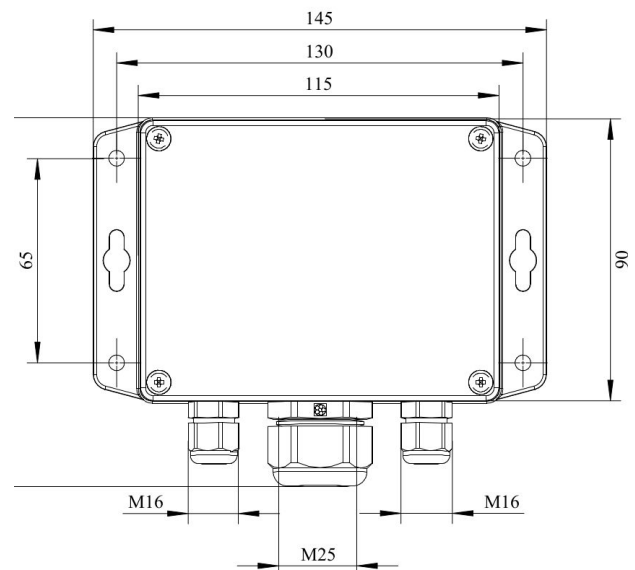
Features

- 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	R-12, R-123, R-125, R-134a, R-143, R-22, R-404a, R-407c, R-410a etc
Sensor type	Metal-oxide semiconductor Optical (NDIR) on demand
Sampling method	Diffusion
Typical detection range	0...1000 ppm
Resolution	1 ppm
Response time T90	<120 s (MOS sensor)
Sensor lifetime	> 5 years (MOS sensor)
Maintenance interval	12 months (MOS sensor)
Signal update	Every 1 second
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: 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 (MOS)	-30...+60 °C ≤ 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	RE1 (LOW): set 100; release 80 ppm RE2 (HIGH): set 500; release 400 ppm

Alarm signalling

Visual	Red and green LEDs
Acoustic	Buzzer 85 dB

LCD indicator

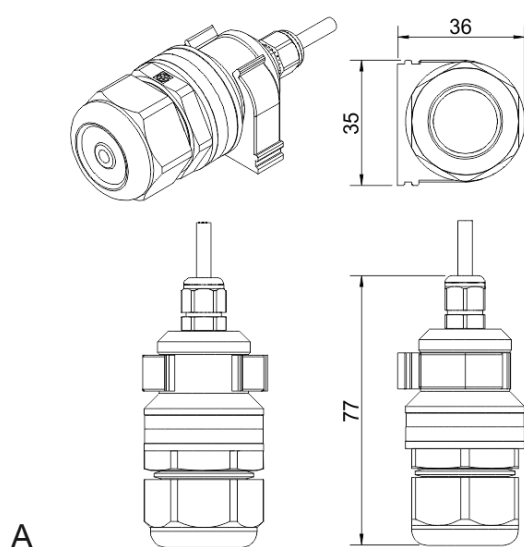
Operating temperature	0...+50 °C
Display dimensions	72 × 36 mm
Number of digits	3.5 7-segment
Character height	14 mm
Other features	Backlight

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

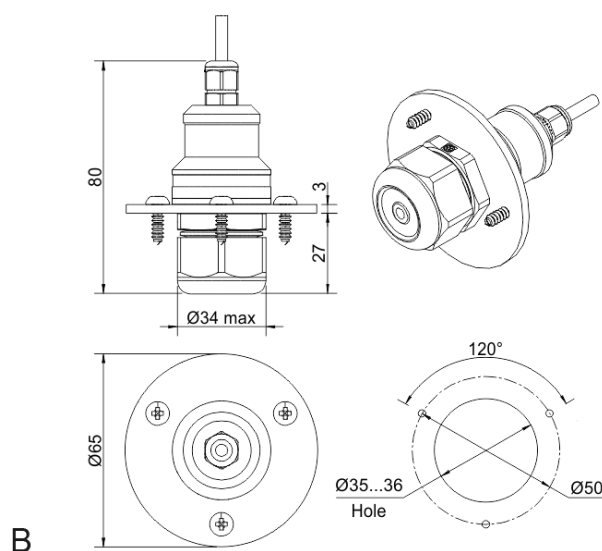
Version with LCD indicator



Remote probe



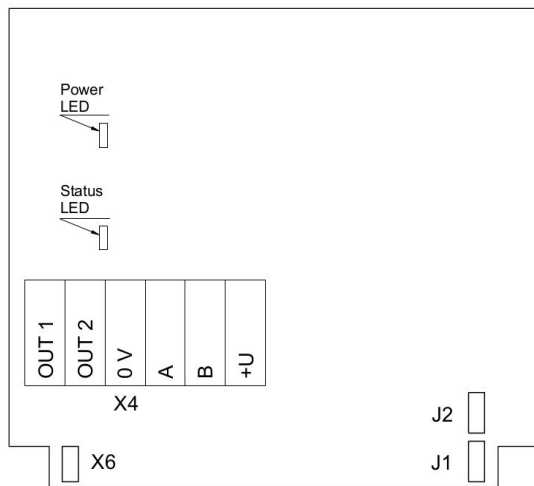
Wall mount remote probe with fixing clamp (default version)



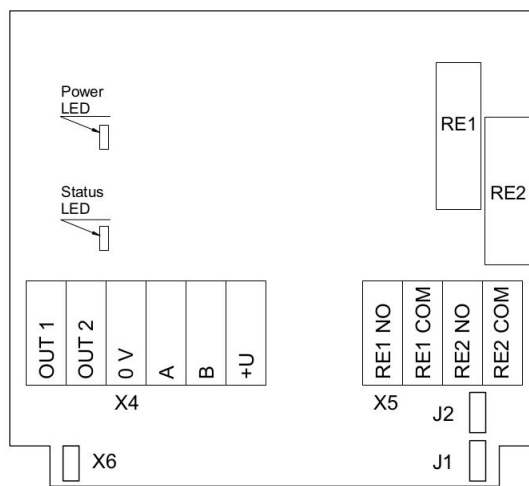
Remote probe with rubber flange and three self-tapping screws (on request)



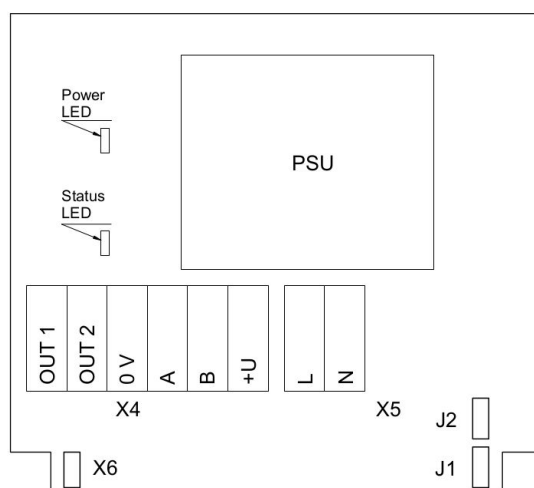
Connection diagrams



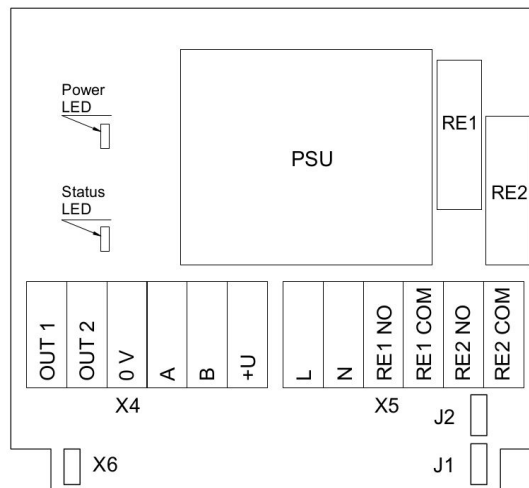
Version without PSU and relays



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

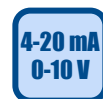
OUT1	4-20 mA / 0-10 V output
OUT2	4-20 mA / 0-10 V output
0V	0 V / 24 VAC Neutral (optional)
A	RS485 A / Data +
B	RS485 B / Data -
+U	+24 VDC / 24 VAC Phase (optional)

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



Halocarbon Refrigerants Detector-Transmitter E2648-HFC



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	R-12, R-123, R-125, R-134a, R-143, R-22, R-404a, R-407c, R-410a etc
Sensor type	Metal-oxide semiconductor optical (NDIR) on demand
Sampling method	Diffusion
Typical detection range	0...1000 ppm
Resolution	1 ppm
Response time T90	<120 s (MOS sensor)
Sensor lifetime	5 years (MOS sensor)
Maintenance interval	12 months (MOS sensor)
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 (MOS)	-30...+60 °C >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

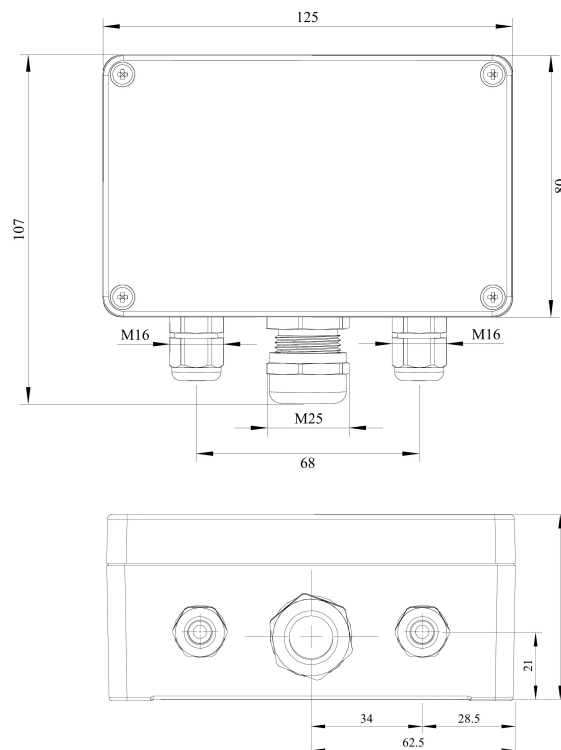
Relay option (ordering code R)

Output relays	2 × SPST relays (closing contact), 250 VAC / 30 VDC, 5 A max
Default alarm setpoints	RE1 (LOW): set 100; release 80 ppm RE2 (HIGH): set 500; release 400 ppm

Other options

Remote sensor probe	Protection IP65, shielded cable default cable length 3.0 m
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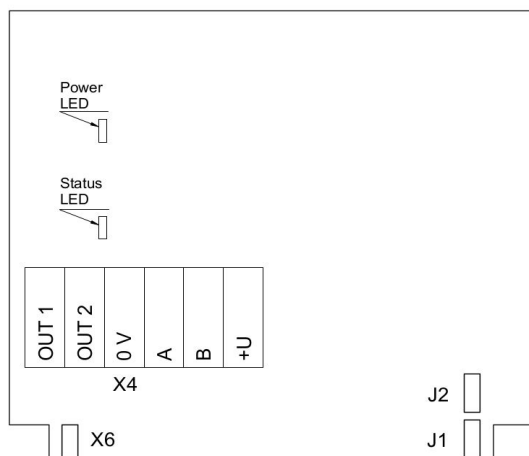
Dimensions



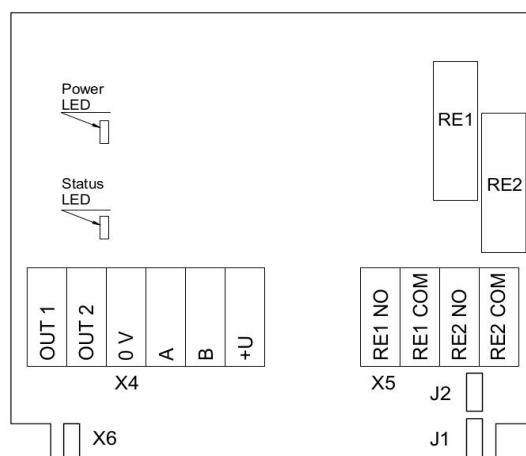
Ask for other versions or custom designed products



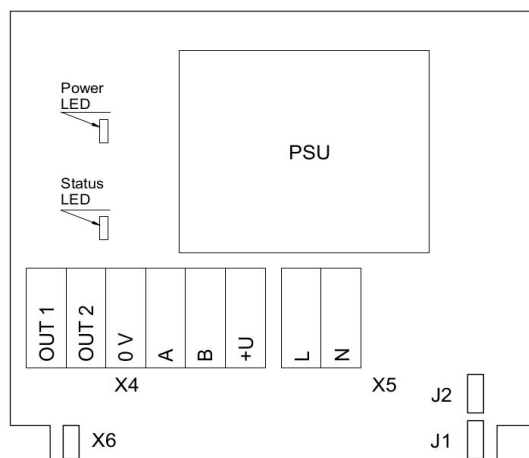
Connection diagrams



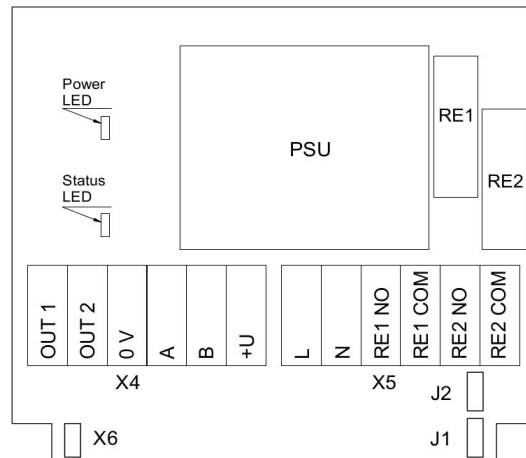
Version without PSU and relays



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

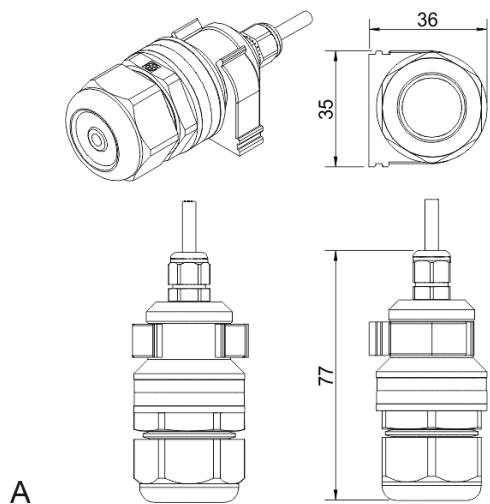
OUT1	4-20 mA / 0-10 V output
OUT2	4-20 mA / 0-10 V output
0V	0 V / 24 VAC Neutral (optional)
A	RS485 A / Data +
B	RS485 B / Data -
+U	+24 VDC / 24 VAC Phase (optional)

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

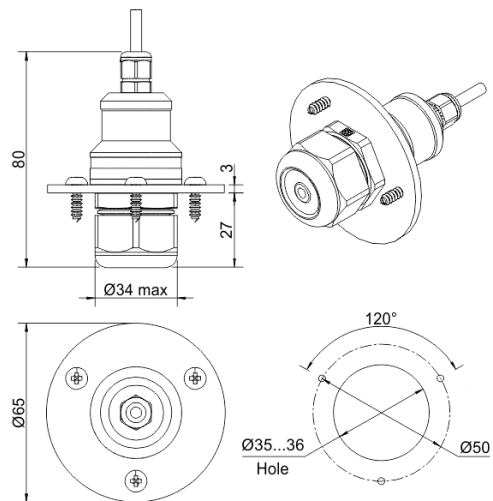


Remote probe



A

Wall mount remote probe with fixing clamp (default version)

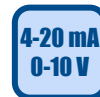


B

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



Flameproof Halocarbon Refrigerants Detector-Transmitter E2658-HFC



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	R-12, R-123, R-125, R-134a, R-143, R-22, R-404a, R-407c, R-410a etc
Sensor type	Metal-oxide semiconductor
Sampling method	Diffusion
Typical detection range	0...1000 ppm
Resolution	1 ppm
Response time T90	<120 s
Sensor lifetime	> 5 years
Calibration interval	12 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
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	30...+60 °C <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.

Relay option (ordering code R)

Output relays	2 × SPST relays (closing contact), 250 VAC / 30 VDC, 5 A max
Default alarm setpoints	RE1 (LOW): set 100; release 80 ppm RE2 (HIGH): set 500; release 400 ppm

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

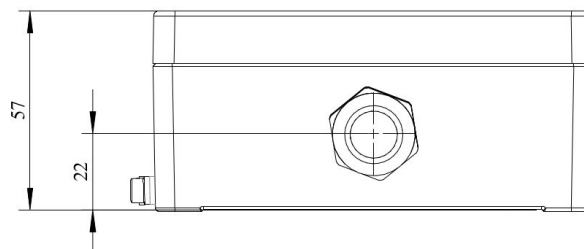
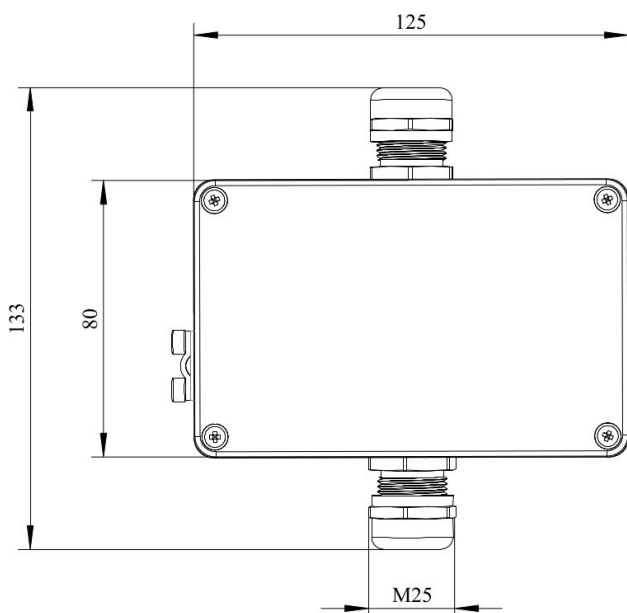
CE conformity

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

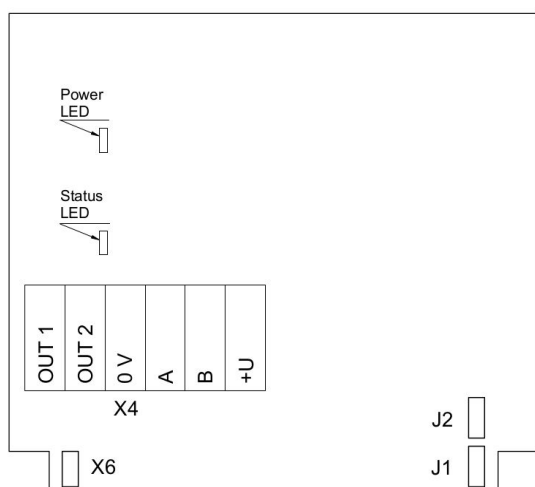
Ask for other versions or custom designed products



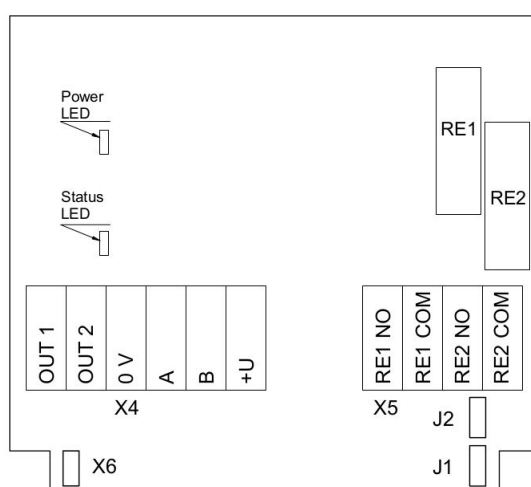
Dimensions



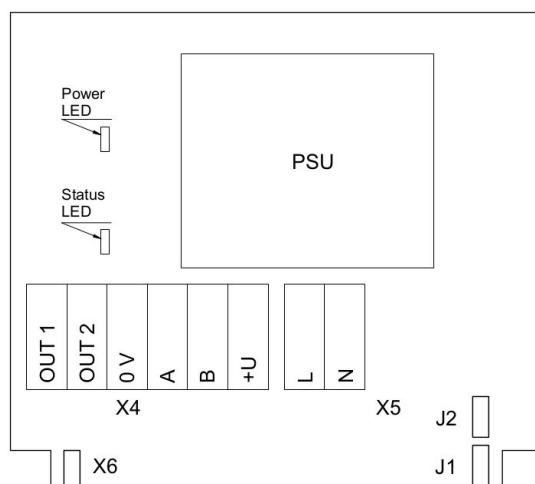
Connection diagrams



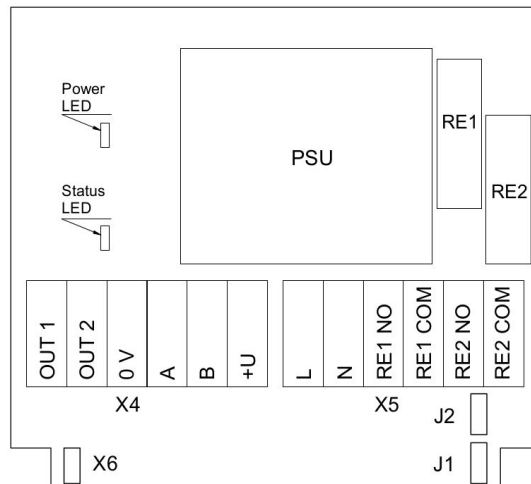
Version without PSU and relays



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

