Oxygen Detector-Transmitter
E2638-O2

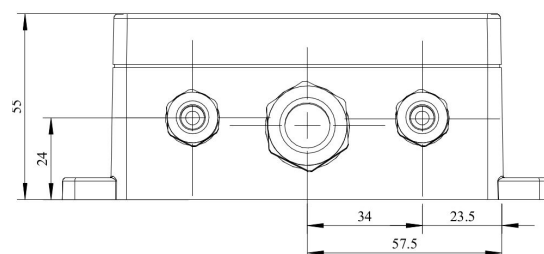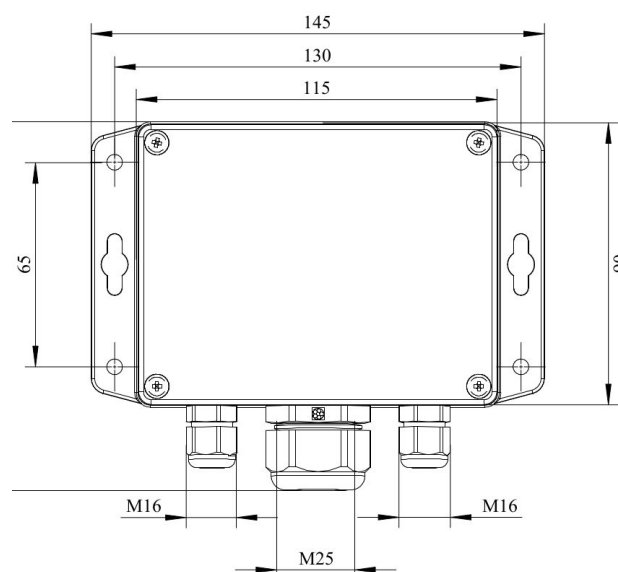IP65 | 4-20 mA 0-10 V | RS485 Modbus

CE

Features

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

Specifications

Calibration	Oxygen O_2
Sensor type	2-year Electrochemical
	3-year Electrochemical (order code O2-3Y)
	5-year Electrochemical (order code O2-5Y)
Sampling method	Diffusion
Detection range	0...25% vol.
Resolution	0.01 % vol.
Response time T90	< 10 s
	< 15 s (O2-3Y)
Signal update	Every 1 second
Sensor lifetime	> 2 years
	> 3 years (for O2-3Y)
	> 5 years (for O2-5Y)
Maintenance interval	6 months
Self-diagnostics	Full functionality check at start-up
Warm-up time	≤ 1 min
Power supply	12...36 VDC (default)
	24 VAC or 230 VAC as options
Power consumption	< 2 VA
Digital interface	RS485, Modbus RTU protocol
Analog outputs	2 × 4-20 mA / 0-10 V, user settable
Output scale width	Recommended: 20-100% of the range; > 10 × resolution in any case
Enclosure	Grey 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	15...90% RH; 5…95% RH (O2-3Y); Non-condensing;
	0,9...1,1 atm; Explosion-safe areas; Non-aggressive atmosphere
	-30...+50 °C -30…+55 °C (for O2-3Y) -40…+60 °C (for O2-5Y)

NOTE! We offer technical solutions for extreme humidity, please ask for more information.

Dimensions

Ask for other versions or custom designed products

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 (HIGH): set 19.5%, release 20.5% RE2 (LOW):set 18%, release 19%

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
Protection class	IP50 (both for built-in and remote LCD options)

NOTE! Only second analog output (OUT2) is available for a version with LCD.
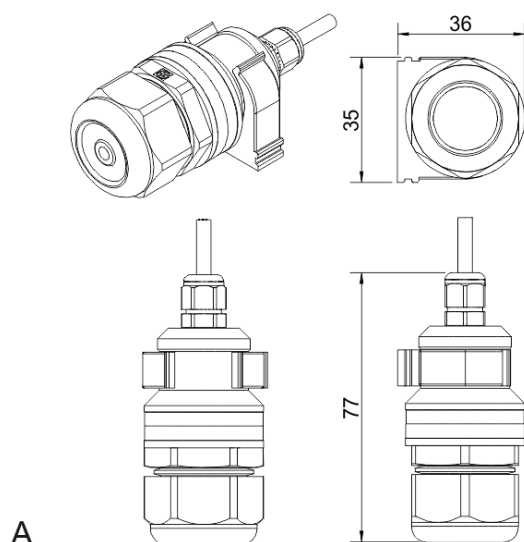**NOTE!** LCD and LEDs can not be chosen simultaneously.

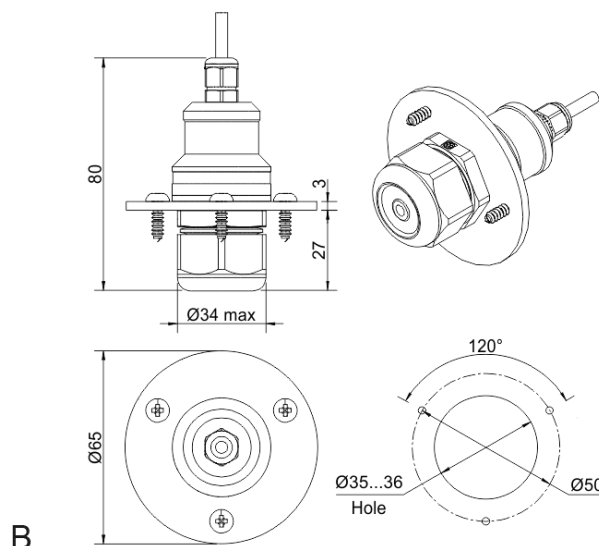### Version with built-in LCD indicator

Version with remote LCD indicator
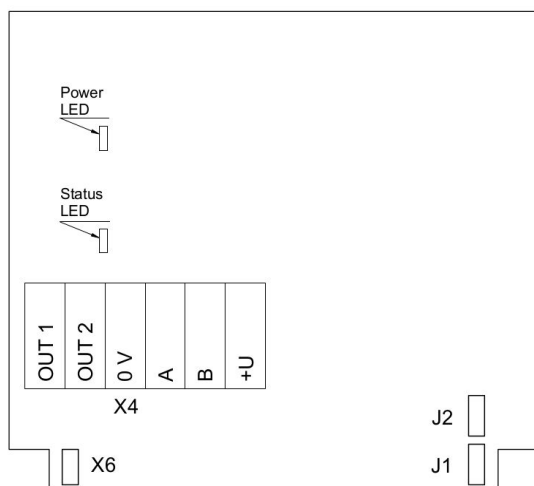

Remote probe

A

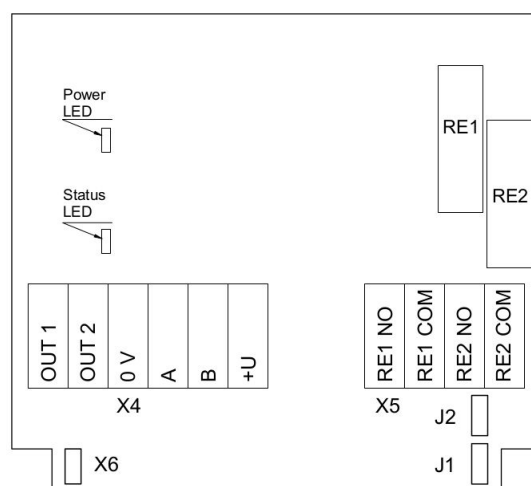Wall mount remote probe with fixing clamp (default version)

B

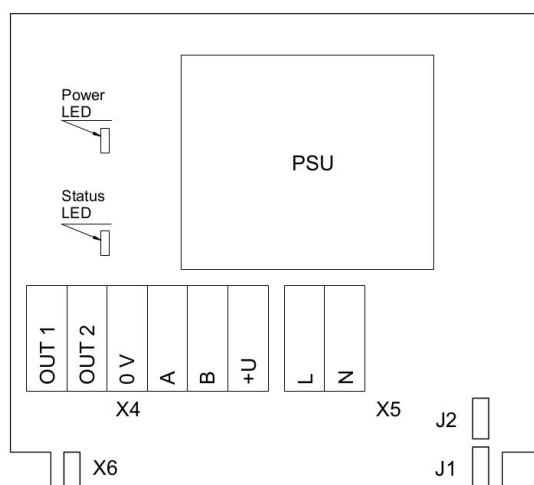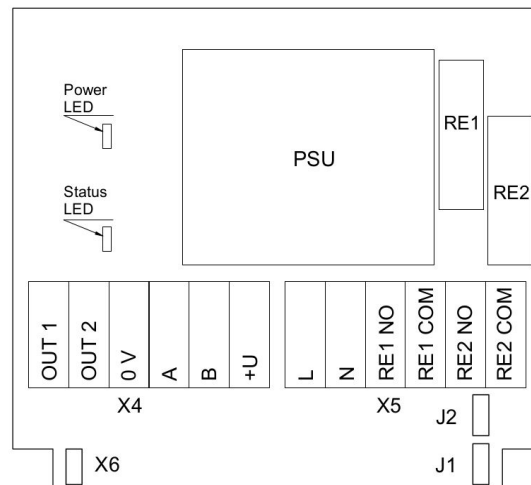Remote probe with rubber flange and three self-tapping screws (on request)

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