



Nitrous Oxide Detector-Transmitter E2638-N2O



Features

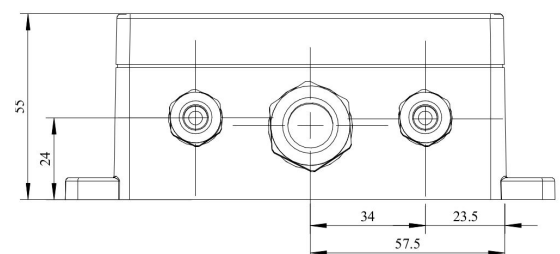
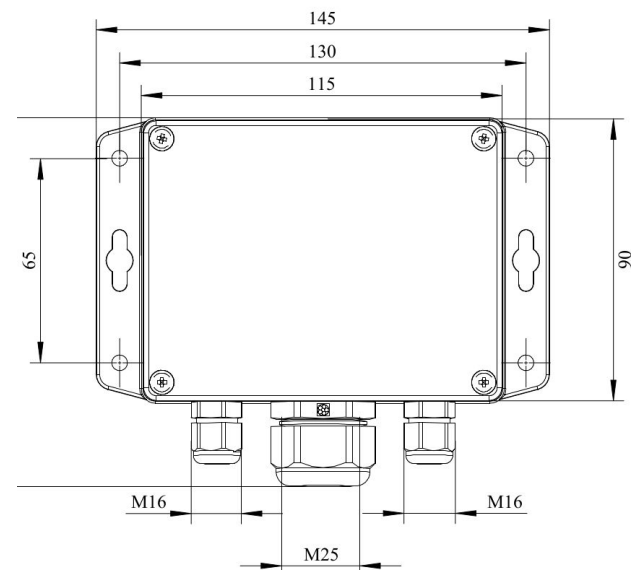
- Accurate and stable measurement
- Easy to install robust enclosure
- Two analog outputs settable to 4-20 mA or 0-10 V
- RS485 Modbus RTU digital interface
- Relay option
- Attached or remote sensor
- LCD indicator option

Specifications

| | |
|-------------------------|--|
| Calibration | Nitrous oxide N ₂ O |
| Sensor type | Optical (NDIR) |
| Sampling method | Diffusion |
| Typical detection range | 0...1000 ppm |
| Maximum overload | 2000 ppm |
| Resolution | 1 ppm |
| Response time T90 | < 30s |
| Operating temperature | -20 °C to +50 °C |
| Signal update | Every 1 second |
| Maintenance interval | 12 months |
| Sensor lifetime | > 5 years |
| Self-diagnostics | Full functionality check at start-up |
| Warm-up time | ≤ 1 min |
| Power supply | 12...36 VDC (default) 24 VAC or 230 VAC as options |
| Power consumption | < 2 VA |
| Digital interface | RS485, Modbus RTU protocol |
| Analog outputs | 2 × 4-20 mA / 0-10 V, user settable |
| Output scale width | Recommended: 20-100% of the range; > 10 × resolution in any case |
| Enclosure | Grey 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) 0 to 95% RH non-condensing; 0,9...1,1 atm; Explosion-safe areas Non-aggressive atmosphere |

NOTE: Cross-sensitivity to CO₂, ask from manufacturer details

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 | Determined by user within 5-95% of the 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 digit 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.

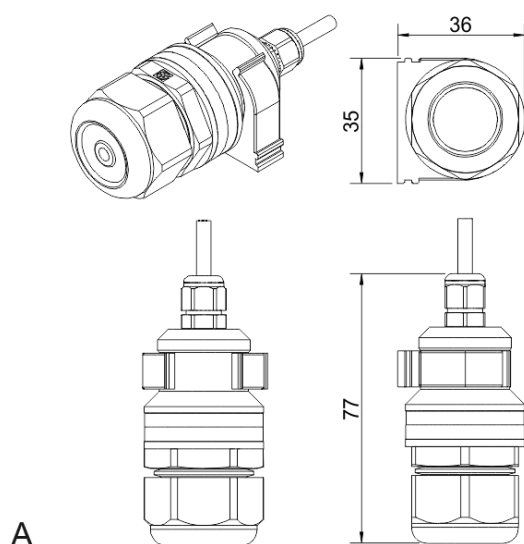
Version with built-in LCD indicator



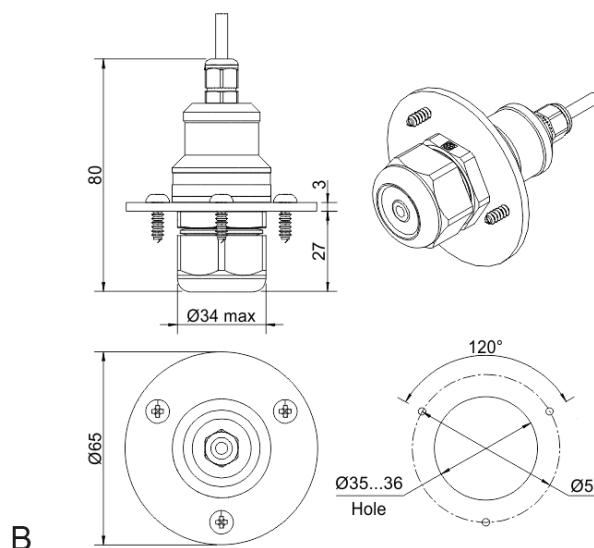
Version with remote LCD indicator



Remote probe



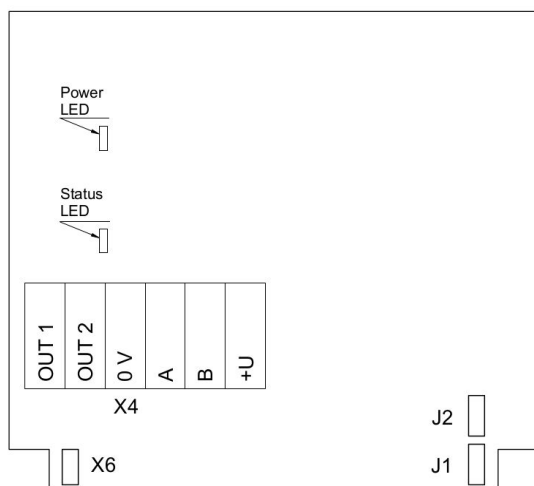
Wall mount remote probe with fixing clamp (default version)



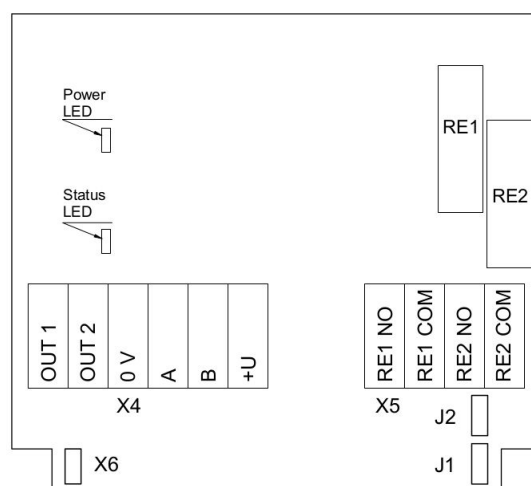
Remote probe with rubber flange and three self-tapping screws (on request)



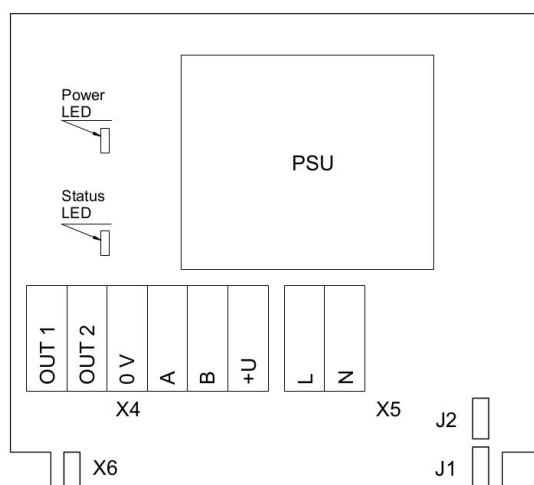
Connection diagrams



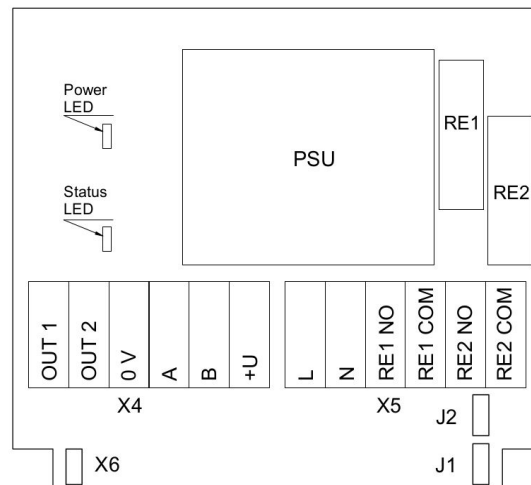
Version without PSU and relays



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 |

