Dräger Polytron IR N₂O is a gas detector for continuous monitoring of nitrous oxide (dinitrogen monoxide) in the ambient air. It offers all benefits of fail-safe IR measurement technology for applications in rough environments. The transmitter uses microprocessor technology to convert the signal to a 4 to 20-mA analog output.

The unit is designed for one-man calibration and offers a variety of diagnostics and self test features. The configuration and calibration of the transmitter is menu guided and easy to perform, using the built-in push buttons.

**FEATURES AND BENEFITS**
- Minimum maintenance required
- Fast and accurate response
- Linear output signal nearly independent of temperature and humidity
- Adjustable measurement ranges between 0 to 300 ppm and 0 to 1000 ppm
- Robust splash-water proof housing

**DIFFERENT VERSIONS**
The transmitter is available in two versions: Either the standard version with LC display and keypad, or without LC-display and keypad and providing a plug connector for hand-held terminal. With this maintenance and calibration can easily be performed even if the transmitter is hard to access.

**NO CROSS-SENSITIVITIES**
The infrared measuring principle is based on a N₂O-characteristic measuring wavelength so that the transmitter has very low cross-sensitivities to other gases such as NO, NO₂, SO₂, CO or water vapor. Especially CO₂-concentrations up to 1 % by vol will increase zero-reading not more than 30 ppm.

**PREVENTIVE MAINTENANCE**
Without loss of measuring quality the Dräger Polytron IR N₂O transmits a warning signal if the optical system is prone to get dirty and thus potentially will lose sensitivity. The warning signal is configurable and enables the user promptly to start counter measures to keep the system’s availability high.

**SYSTEMS SOLUTIONS**
The shock-resistant enclosure is made of conductive, glass fibre reinforced polyester. Combined with a suitable 4 to 20 mA controller the Dräger Polytron IR N₂O transmitter satisfies the customers’ needs for maximum safety and system availability.
TECHNICAL DATA

**Type**
Transmitter with infrared sensor technology

**Gases**
Nitrous oxide (Dinitrogen monoxide, N₂O) in ambient air

**Measuring range (full scale value)**
Configurable between 300 ppm and 1000 ppm

**Power supply**
13 to 30 V DC (nominal 24 V DC), < 4 W

**Output signals**
- Operation: 4 to 20 mA
- Maintenance signal: 2/5 mA, 1 Hz modulation, or 3 mA constant, configurable
- Warning signal: 2/5 mA, 1 Hz modulation, or 2 mA every 10 s, or 2 mA constant, configurable
- Fault signal: < 3 mA or 1 mA, configurable

**Measuring line**
3-core, shielded, core cross section 0.5 to 1.5 mm², outer diameter 6 to 12 mm

**Maximum cable length (at 24 V)**
- 2000 m for 3 x 1.5 mm²; 1500 m for 3 x 1.0 mm²; 1000 m for 3 x 0.75 mm²

**Response time t₉₀ at 25 °C**
- < 10 s w/o dust-filter, 55 s with dust-filter

**Ambient conditions**
- Temperature: – 20 to + 65 °C / – 4 to + 150 °F
- Pressure: 700 to 1300 hPa / 23.6 to 32.5 inch Hg
- Humidity: 0 to 95 % R.H.

**Enclosure**
IP 65, glass fibre reinforced polyester (GRP)

**Size (W x H x D)**
145 x 225 x 90 mm / 5.7” x 6.4” x 3.6” (incl. sensor and cable gland)

**Weight**
Approx. 1.9 kg

**Approvals**
- CE-marking
- Electromagnetic compatibility (directive 89/336/EEC)

ORDER INFORMATION

Dräger Polytron IR N₂O, with display and keypad 83 16 044
Dräger Polytron IR N₂O NDH, w/o display and keypad, with plug connector for hand-held terminal 83 16 045
Hand-held terminal 83 12 580

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