NB III

Fixed gas detector for safe areas

Technical specifications

Detected gases: Alcohol, Br2, C2H2, C2H4, C2H4O, C2H5OH, C2H6, C3H6, C4H10, C5H12, CH2O, CH4, Cl2, ClO2, CO, CO2, H2, H2O2, H2S, HBr, HCl, HCN, HF, Hydrocarbons, N2O, NH3, NO, NO2, O2, O3, Organic acids, PH3, R1234yf, R401A, R404A, R407C, R32, R410A, R12, R22, SiH4, SO2, VOC.

Sensor technology: catalytic, electrochemical, infrared, semiconductor or photoionization (PID) version

Supply voltage: 8-30 Vcc / 24 Vcc nominal

Output: 4-20 mA, RS485 (DEGA protocol) and Modbus (option)

Connections:
- 4-20 mA: shielded cable 3 x 1 mm (max. 1200 m)
- RS485: shielded cable 4 x 0.8 mm (max. 1200 m)

Protection index: IP 54

Dimensions (WxHxD): 100 x 110 x 40 mm

Weight: 0.3 kg

Operating temperature:
- Electrochemical, semiconductor and catalytic sensors: -20 °C to + 60 °C
- Infrared and PID sensors: -20 °C to + 50 °C

Relative humidity: 10 to 95% RH (non-condensing)

Environment: BE1 - zone without explosion danger

Options

Code	Equipement
20200009	Internal card Modbus
20300005	Circulation head (calibration adapter)

Product description

The **NB III gas transmitter** is a fixed gas detector with an analog linear output 4-20 mA or RS485 for the detection of explosive (hydrocarbons, solvents or alcohols), toxic, asphyxiating, refrigerant or volatile organic compounds gas leaks.

With a very large number of interchangeable sensors (**88 available**), the **NB III** gas transmitter covers most tertiary or industrial applications in safe areas, not ATEX classified. Many options are available such as a digital measurement display and a relay output card.

The NB III version without display

In its basic version without display, the **NB III** is a rudimentary transmitter and less expensive than buying the **NB III LCD**. Equipped with 3 colored LEDs, it indicates 3 states: Operating (green), error (yellow), alarm (red). 12 months after the last calibration, the yellow "error" LED starts flashing to indicate an immediate calibration need.

The NB III with LCD display

The **NB III LCD version** is equipped with a screen that displays for example errors, alarm states, measured value, measurement unit, or time. It is set with a magnet for configuration and consultation of the alarm history, next calibration date, etc. It can therefore be perfectly suited for local applications of fixed gas detection with servo-controls.

Advantages of the NB III fixed gas detector

- Exellent value for money
- Analog gas transmitter with 4-20 mA or RS485 output
- 88 pre-calibrated interchangeable sensors available
- 2 models available:
  - Economic basic version without display and without options
  - LCD screen version with the possibility of receiving an internal 3 relay card
- Reduced maintenance: interchangeable factory precalibrated sensor
- High resistance to environmental constraints, embeded sensor for better protection
- Available in catalytic, electrochemical, infrared, semiconductor

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Detected gas	Mesure range	NB III	NB III LCD
Catalytic sensor transmitter			
Butane (C4H10) Propane-Butane LPG	0-100 % LEL	20100076	20100170
Hydrogen (H2)	0-100 % LEL	20100077	20100171
Methane (CH4) Natural gas CNG	0-100 % LEL	20100075	20100169
Other flammable gases and vapors	0-100 % LEL	20100074	20100168
Electrochemical sensor transmitter			
Alcohol	0-200 ppm	20100008	20100102
Ammonia (NH3)	0-100 ppm	20100045	20100139
Ammonia (NH3)	0-500 ppm	20100046	20100140
Ammonia (NH3)	0-1000 ppm	20100047	20100141
Ammonia (NH3)	0-2000 ppm	20100048	20100142
Ammonia (NH3)	0-5000 ppm	20100049	20100143
Ammonia (NH3)	0-10000 ppm	20100050	20100144
Bromine (Br2)	0-20 ppm	20100009	20100103
Bromine (Br2)	0-200 ppm	20100010	20100104
Carbon monoxide (CO)	0-200 ppm	20100025	20100119
Carbon monoxide (CO)	0-500 ppm	20100026	20100120
Carbon monoxide - highly selective	0-500 ppm	20100027	20100121
Carbon monoxide (CO)	0-1000 ppm	20100028	20100122
Carbon monoxide (CO)	0-2000 ppm	20100029	20100123
Chlorine (Cl2)	0-20 ppm	20100022	20100116
Chlorine (Cl2)	0-200 ppm	20100023	20100117
Chlorine dioxide (ClO2)	0-5 ppm	20100024	20100118
Ethylene (C2H4)	0-10 ppm	20100014	20100108
Ethylene (C2H4)	0-200 ppm	20100016	20100110
Ethylene (C2H4)	0-1500 ppm	20100015	20100109
Ethylene oxide (C2H4O)	0-10 ppm	20100017	20100111
Ethylene oxide (C2H4O)	0-100 ppm	20100018	20100112
Ethylene oxide (C2H4O)	0-500 ppm	20100020	20100114
Ethylene oxide (C2H4O)	0-1000 ppm	20100019	20100113
Formaldehyde (CH2O)	0-10 ppm	20100011	20100105
Formaldehyde (CH2O)	0-50 ppm	20100012	20100106
Formaldehyde (CH2O)	0-1000 ppm	20100013	20100107
Hydrogen (H2)	0-1000 ppm	20100030	20100124
Hydrogen (H2)	0-4000 ppm	20100031	20100125
Hydrogen (H2)	0-400000 ppm	20100032	20100126
Hydrogen bromide (HBr)	0-20 ppm	20100039	20100133
Hydrogen bromide (HBr)	0-200 ppm	20100040	20100134
Hydrogen chloride (HCl)	0-20 ppm	20100041	20100135
Hydrogen chloride (HCl)	0-200 ppm	20100042	20100136
Hydrogen cyanide (HCN)	0-50 ppm	20100043	20100137
Hydrogen fluoride (HF)	0-10 ppm	20100044	20100138
Hydrogen sulfide (H2S)	0-50 ppm	20100038	20100132
Hydrogen sulfide (H2S)	0-100 ppm	20100035	20100129
Hydrogen sulfide (H2S)	0-500 ppm	20100036	20100130
Hydrogen sulfide (H2S)	0-2000 ppm	20100037	20100131
Hydrogen peroxide (H2O2)	0-100 ppm	20100033	20100127
Hydrogen peroxide (H2O2)	0-500 ppm	20100034	20100128
Nitric oxide (NO)	0-25 ppm	20100051	20100145
Nitric oxide (NO)	0-250 ppm	20100052	20100146
Nitric oxide (NO)	0-1000 ppm	20100053	20100147
Nitrogen dioxide (NO2)	0-20 ppm	20100054	20100148
Nitrogen dioxide (NO2)	0-100 ppm	20100055	20100149
Nitrogen dioxide (NO2)	0-500 ppm	20100056	20100150
Organic acids	0-100 ppm	20100021	20100115
Oxygen (O2)	0-1 %	20100057	20100151
Oxygen (O2)	0-30 %	20100058	20100152
Oxygen (O2) High humidity	0-30 %	20100059	20100153
Ozone (O3)	0-5 ppm	20100061	20100155
Ozone (O3)	0-100 ppm	20100060	20100154
Phosphine (PH3)	0-5 ppm	20100065	20100159
Phosphine (PH3)	0-20 ppm	20100062	20100156
Phosphine (PH3)	0-200 ppm	20100063	20100157
Phosphine (PH3)	0-2000 ppm	20100064	20100158
Silane (SiH4)	0-50 ppm	20100066	20100160
Sulfur dioxide (SO2)	0-20 ppm	20100070	20100164
Sulfur dioxide (SO2)	0-100 ppm	20100067	20100161
Sulfur dioxide (SO2)	0-200 ppm	20100071	20100165
Sulfur dioxide (SO2)	0-1000 ppm	20100068	20100162
Sulfur dioxide (SO2)	0-2000 ppm	20100072	20100166
Sulfur dioxide (SO2)	0-10000 ppm	20100069	20100163
VOC - high sensitivity	0-20 ppm	20100073	20100167
Infrared sensor transmitter			
Butane / LPG / Propane-Butane	0-100 % LEL	20100086	20100180
Carbon dioxide (CO2)	0-5 % vol.	20100081	20100175
Carbon dioxide (CO2)	0-100 % vol.	20100082	20100176
Carbon dioxide (CO2)	0-500 ppm	20100083	20100177
Ethane (C2H6)	0-100 % LEL	20100090	20100184
Ethanol (C2H5OH)	0-100 % LEL	20100088	20100182
Ethylene (C2H4)	0-100 % LEL	20100089	20100183
Ethylene oxide (C2H4O)	0-100 % LEL	20100087	20100181
Hexane (essence)	0-100 % LEL	20100093	20100187
Methane, CNG, Coal gas	0-100 % LEL	20100085	20100179
Nitrous oxide (N2O)	0-1 % LEL	20100094	20100188
Pentane (C5H12)	0-100 % LEL	20100092	20100186
Propylene (C3H6)	0-100 % LEL	20100091	20100185
Other flammable gases and vapors	0-100 % LEL	20100084	20100178
Semiconductor sensor transmitter			
Acetylene (C2H2)	0-100 % LEL	20100080	20100174
Refrigerant: R401A, R404A, R407C, R32, R410A, R12, R22	0-2000 ppm	20100079	20100173
Refrigerant: R1234yf	0-2000 ppm	20100078	20100172
PID sensor transmitter			
VOC	0-4000 ppm	20100095	20100189

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