EasyNO$_X$ – NO$_X$ Monitoring

P/N 63.05.001-01/-02, P/N 63.05.002-01/-02

EasyNO$_X$ Control Unit

Dimensions

• Length x width x height	305.6 mm x 230 mm x 86 mm (12.04" x 9.06" x 3.39")

Mechanical Data

• Weight	3.5 kg (7.8 lbs)
• IP protection rating	IP 66

Climatic Environmental Conditions

• Permissible temperature range during operation	0 °C to +50 °C (+32 °F to +122 °F)
• Permissible temperature range for storage	–20 °C to +70 °C (–4 °F to +158 °F)
• Permissible relative humidity during operation	5 % to 90 % without condensation with closed housing

Electrical Data

• Power consumption in measuring operation	Max. 100 W
• Power supply	16 V DC to 32 V DC
• Nominal voltage	24 V DC
• Required current in measuring operation	Max. 4.7 A

Display

• Screen diagonal	178 mm (7")
• Resolution	800 x 480 pixels

Communication

• Interfaces	USB, 2x CAN (1x CANopen®, 1x J1939)

CAN Bus/NO$_X$ Sensor Module P/N 63.05.015

Dimensions

• Length x width mounting plate	206.5 mm x 150 mm (8.13" x 5.91")
• Height mounting plate with CAN bus module	82 mm (3.23")

Mechanical Data

• Weight	1.52 kg (3.4 lbs)
• IP protection rating	IP 66 with mating plug connected to evaluation unit of NO$_X$ sensor and sensing element mounted in suitable welding boss from MOTORTECH

Climatic Environmental Conditions

• Permissible temperature range during operation	–40 °C to +85 °C (–40 °F to +185 °F)
• Permissible temperature range for storage	–40 °C to +75 °C (–40 °F to +167 °F)
• Permissible relative humidity during operation	5 % to 90 % without condensation with closed housing

CAN Bus Module

Thermocouple Inputs

- Quantity: 2
- Supported thermocouple type: Type K, Class 1 (IEC 584)
With cold junction compensation
- Measuring range: –200 °C to +1,200 °C
(–328 °F to +2,192 °F)
- Measurement resolution: 0.1 K
- Measuring accuracy: ± 0.1 K

Analog Inputs

- Quantity: 2 (0–22 mA)
- Current range for measured values: 4 mA to 20 mA
- Measurement resolution: 0.001 mA
- Measuring accuracy: 0.01 % FS

NO_X Sensor P/N 56.03.003

Dimensions

- Length of probe: 24 mm (0.95")
- Length of sensing element: 83.3 mm (3.28")
- Length of connection cable: 980 mm (38.58")

Climatic Environmental Conditions

- Exhaust gas temperature range: –40 °C to +850 °C
(–40 °F to +1,562 °F)
- Operating pressure range: 600 mbar abs to 1,500 mbar abs

Measuring Ranges

- Nitrogen oxide (NO_X): 0 ppm to 3,012 ppm
- Measuring accuracy nitric oxide (NO)

Measurement	Accuracy new at O_2 ≥ 1 vol%	Accuracy aged at O_2 ≥ 1 vol%
0 ppm	± 8 ppm abs	± 10 ppm abs
90 ppm	± 10 ppm abs	± 12 ppm abs
1,500 ppm	± 8 % rel	± 10 % rel

- Cross sensitivity NO_X measurement: Ammonia (NH_3) typ. 110 %
- Sensitivity NO_X measurement: Nitrogen dioxide (NO_2) typ. 85 %
- Oxygen (O_2): 0 % to 20.95 %
- Measuring accuracy oxygen (O_2)

Measurement	Composition	Accuracy new	Accuracy aged
0 %	N_2 with 1 % H_2O	± 0.2 % abs	± 0.3 % abs
8.29 %	N_2 with 0 % H_2O	± 6 % rel	± 8 % rel
12 %	N_2 with 0 % H_2O	± 6 % rel	± 8 % rel
20.95 %	N_2 with 0 % H_2O	± 6 % rel	± 8 % rel

- Exhaust gas velocity: 10 m/s to 100 m/s
- NO_2 correction factor: 0.85 (set ex works)

Mechanical Data

• IP protection rating	IP 6K9K with mating plug connected to evaluation unit and sensing element mounted in suitable welding boss from MOTORTECH
• Service life	8,000 operating hours with ambient temperature max. +90 °C (+194 °F) at evaluation unit

I/O Communication Module BPlus (EXTENDED Package)

Dimensions

• Length x width x height	100 mm x 97 mm x 48 mm (3.94" x 3.82" x 1.89")

Mechanical Data

• Weight without harnesses	320 g (0.71 lbs)
• IP protection rating	IP 20

Climatic Environmental Conditions

• Permissible temperature range	–40 °C to +85 °C (–40 °F to +185 °F)
• Permissible relative humidity	Max. 85 % without condensation

Electrical Data

• Power consumption	0.72 W (outputs unloaded)
• Power supply	8 V DC to 32 V DC
• Nominal voltage	24 V DC
• Required current	30 mA at 24 V (outputs unloaded)

Inputs and Outputs

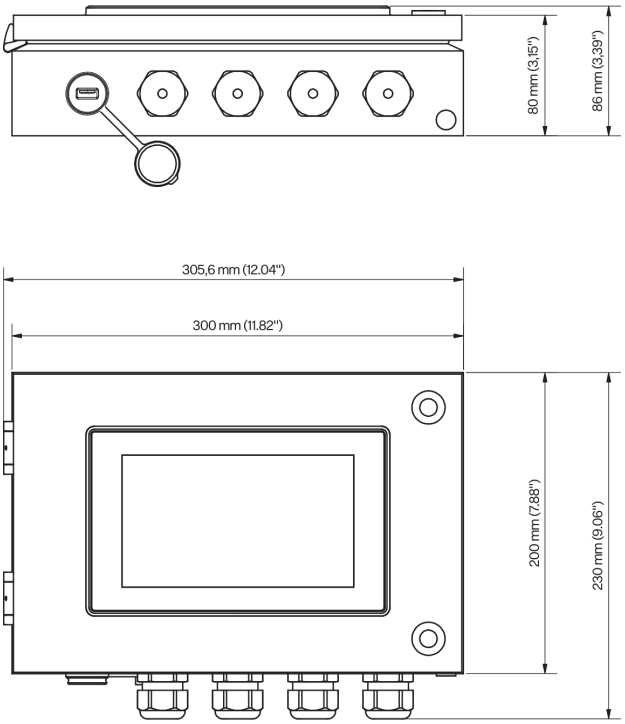
• Binary inputs	1
• Binary outputs	3
• Analog inputs	1 (4–20 mA)
• Analog outputs	1 (4–20 mA)

Communication

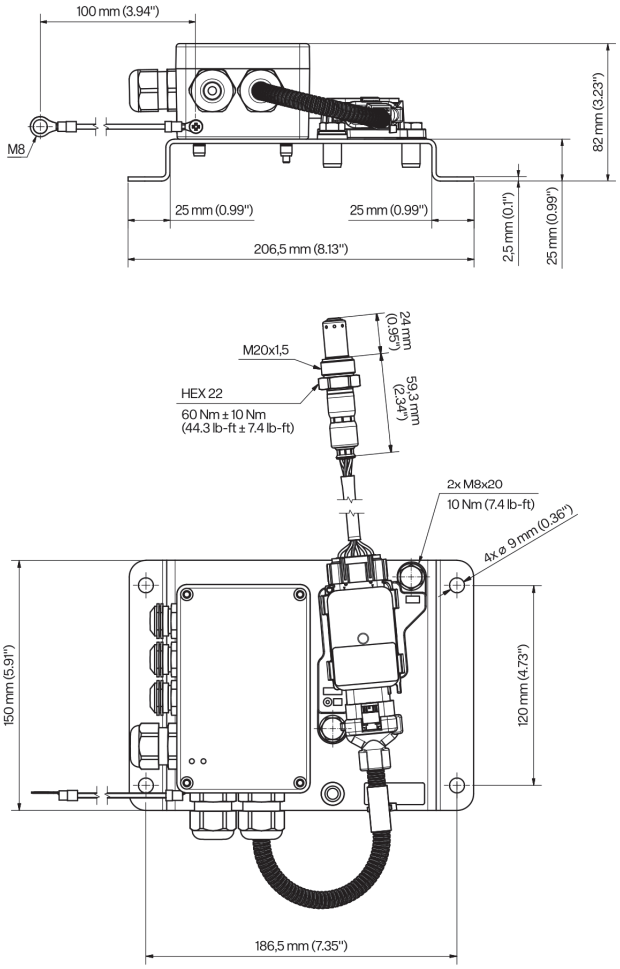
• Interface	CAN (CANopen®)

Overview Drawings

EasyNO$_X$ Control Unit



CAN Bus/NO$_X$ Sensor Module P/N 63.05.015



I/O Communication Module BPlus (EXTENDED Package)