Gas Sensor with Modbus output MBRTU-G4-NH3

SKU: MBRTU-G4-NH3

Doc No: MBRTU-G4-NH3-DS-EN-10

Introduction

MBRTU-G4-NH3 is an electrochemical-type gas sensor with a high sensitivity to low concentrations of NH3 gas, high selectivity, and a stable baseline. It is powered by a wide range of power supplies 7..48VDC and gives output via RS485 ModbusRTU.

- High accuracy and stability;
- Wide range of Power Supply;
- Filter & Protector;
- Standard ModbusRTU output;
- Plug & Play.

Typical Applications

Ambient Gas Monitoring in Facilities, Farm, Building, Factory, City...

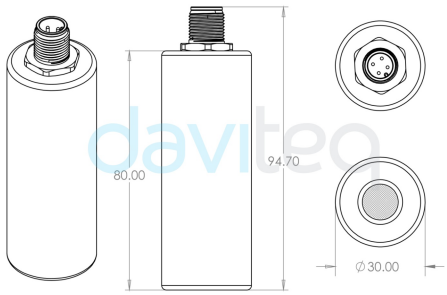
- Indoor Air Quality monitoring;
- HVAC Control;
- Greenhouse;
- Smart Agriculture.

NH3 SENSOR WITH MODBUS OUTPUT
MBRTU-NH3



MBRTU-NH3-H1.JPG

DIMENSION DRAWING OF CO2 SENSOR
(Unit: mm)



MBRTU-CO2-H2.PNG

Specification

SENSOR SPECIFICATION	
Sensor type	Daviteq Seri-4 electrochemical gas sensor
Nominal range	0-100 ppm
Maximum overload	200 ppm
Resolution	0.1 ppm
T90 response time	< 35 s
Typical Baseline Range (pure air, 20°C)	-3.0 ppm .. + 3.0 ppm
Repeatability	< 3% of reading
Linearity	5% of full scale
Temperature compensation	Yes

Relative humidity range	15 % to 90 % RH non-condensing
Temperature range	-10 °C to 50 °C
Pressure range	Atmospheric ± 10%
Humidity effect (Abrupt changes in rel. humidity causes a short-term transient signal)	< 4 ppm
Expected Operation Life	2 years in the air
Expected Long-Term Output Drift in air	< 5 % of reading loss per 6 months
Filter & Protector	Nylon filter
Sensor housing / Rating	Plastic / IP67
OTHER SPECIFICATION	
Communication Port	RS485, ModbusRTU protocol, max 19200 baud
Power supply	9..36VDC, avg. < 200mA
Connector	M12-male 4-pin Code A
Working temperature	0 .. 50 oC
Working humidity	15 .. 90% RH
Housing	Thermal Plastic
Housing Rating	IP67
Dimension	H150xD30
Net weight	<200 grams

CROSS SENSITIVITY DATA

The table below does not claim to be complete. Interfering gases should not be used for calibration.

Interfering Gas	Concentration (ppm)	Reading (ppm)
Cl2	20	-55
CO	300	0
CO2	20000	0
H2	200	0
H2S	20	7
NO	20	-1
NO2	20	-20
SiH4	10	0
SO2	20	-7

ORDERING CODE

Item code	Descriptions
MBRTU-G4-NH3-100-01	MODBUSRTU OUTPUT AMMONIA GAS NH3, 0-100PPM, RS485/MODBUSRTU, 7..48VDC SUPPLY, M12-M CONNECTOR
MBRTU-G4-H2S-50-01	MODBUSRTU OUTPUT H2S GAS, 0-50PPM, RS485/MODBUSRTU, 7..48VDC SUPPLY, M12-M CONNECTOR
Please select below M12 cable with different lengths	
2M-FM12CAB4X0.25	M12 4PIN FEMALE ASSEMBLY CONNECTOR WITH SOLDERING TERMINALS AND CODING A AND CONTROL CABLE CU/PVC/OS/PVC 4X0.25MM2, L=2M, ROHS, SHIELD 80%
5M-FM12CAB4X0.25	M12 4PIN FEMALE ASSEMBLY CONNECTOR WITH SOLDERING TERMINALS AND CODING A AND CONTROL CABLE CU/PVC/OS/PVC 4X0.25MM2, L=5M, ROHS, SHIELD 80%

10M-FM12CAB4X0.25	M12 4PIN FEMALE ASSEMBLY CONNECTOR WITH SOLDERING TERMINALS AND CODING A AND CONTROL CABLE CU/PVC/OS/PVC 4X0.25MM2, L=10M, ROHS, SHIELD 80%

⚠ Link for full datasheet:

⚠ Link for manual:

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