PRODUCT DATASHEET
Supplier-provided technical data

Atmospheric Temperature and Humidity Pressure Sensor



Supplier: NiuBoL
Manufacturer model: NBL-W-LBTH
Archive SKU: NBL-W-LBTH
Price, availability, delivery and warranty: confirmed by quotation.

Integrated atmospheric temperature, relative humidity and pressure sensor in a louvered radiation shield, with RS485 Modbus-RTU communication.

Select the required configuration for your intended monitoring task. Supplier-stated ranges and performance figures are reproduced below. Source differences require confirmation of the supplied version; no retail price, stock, warranty duration or delivery commitment is inferred.

Configuration and measurement limitations

• Main catalogue table mislabels the supply-voltage row as Measuring range. Instruction manual is available separately; do not reinterpret the row as a sensor measuring range.

• Operating-temperature limits differ: catalogue -40 to 70 °C versus instruction manual -40 to 80 °C. Confirm the supplied configuration.

• RS485 and 4-20 mA are output options in the manual; the provided protocol details apply to the RS485 configuration. Select the output when requesting a quotation.

Source documents

2026 Product Quotations from NiuBoL-Michelle.pdf — PDF page(s) 3.

Weather Stations and Agriculture Sensors Catalog-NiuBoL.pdf — PDF page(s) 7.

NBL-W-LBTH Atmosphere temperature, humidity and pressure sensor instruction manual V4.0.pdf — PDF page(s) [1, 2, 3].

Supplier technical description

Technical specifications and configuration — supplier wording

Temperature Measuring range: -40 to 80 .
°C
Resolution: 0.1 .
°C
Accuracy:±0.5
°C
Humidity Measuring range: 0~100%RH.
Resolution:0.1%RH.
Accuracy:±5%RH
Air pressure Range:10~1200hPa.
Resolution: 0.1 hPa.
Accuracy:±1.5 hPa
Power: DC12-24V
Output: RS485

Catalogue page 7 — technical data

Parameter	Supplier-stated value / source wording
Options	Temperature | Humidity | Air pressure
Measuring range	-40~80°C | 0~100%RH | 10~1200hPa
Accuracy	±0.5 | ±5%RH | ±1.5hPa
Resolution	0.1°C | 0.1%RH | 0.1hPa
Measuring range	DC 12V-24V
Output signal	Rs485
Protocol	MODBUS
Materials	ABS
Average power consumption	0.3W
Baud Rate	9600
Operating temperature	-40-70°C
Operating humidity	≤100%RH
Protection class	Lp65

Catalogue page 7 — selection / wiring table

Parameter	Supplier-stated value / source wording
Model	P | ower supply | output meth | od | Description
NBL-W-LBTH	temperature and humidity Air pressure sensor
12V-24V	12V-24V power supply
NBL-W-LBTH — W2	Rs485
Supplier statement	For example: 12V-W2: Sensor 12V power supply, RS485 output

Instruction-manual data — source-specific

Parameter	Supplier-stated value / source wording
Temperature range	-40 to 80 °C
Temperature accuracy	±0.5 °C
Temperature resolution	0.1 °C
Humidity range	0-100% RH
Humidity accuracy	±5% RH
Humidity resolution	0.1% RH
Pressure range	10-1200 hPa
Pressure accuracy	±1.5 hPa
Pressure resolution	0.1 hPa
Supply voltage	DC 12-24 V (other option shown without values)
Outputs shown	RS485 and 4-20 mA options; selection table defines W2 = RS485
Operating temperature	-40 to 80 °C
Operating relative humidity	0-100%
Serial format	8 data bits, 1 or 2 stop bits, no parity, 9600 baud; interval between communications at least 1000 ms
Communication	Modbus-RTU read function 0x03; read 3 registers from 0x0000; each returned value scaled by 0.1
Registers	0x0000: Temperature (0.1 °C); 0x0001: Humidity (0.1% RH); 0x0002: Air pressure (0.1 hPa)
Wiring	Red: power +; black: power -; yellow: RS485 +; blue: RS485 -
Installation	Bracket mounting shown (manual p3); mount sensor using supplied diagram and bracket.