RH5X RELATIVE HUMIDITY SENSOR
TECHNICAL PRODUCT SHEET

Overview

The RH5X features a polymer resistor sensor, which provides excellent linearity and sensitivity with fast response time and long-term stability. It mounts to the underside of a shelter box and includes 1.5 m (5') of cable, a mounting bracket, and one hose clamp.

Specifications

Measurement Range	0 to 100% relative humidity (non-condensing)
Signal Type	Linear analog voltage
Transfer Function	Default Slope: voltage x 20 Default Offset: 0
Output Signal	0 to 5V for 0 to 100% RH
Supply Voltage	10 V to 30 V DC
Supply Current	12 V at 2.6 mA typical
Mounting	Uses a sheet metal bracket with a hose clamp, to be mounted to the tower, under the shelter box

Tools Required

- 8 mm (5/16 inch) nut driver or wrench (electric nut driver preferred)
- Small NRG Screwdriver
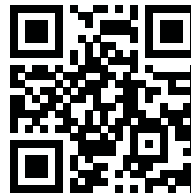- Sheet metal shears (for trimming hose clamps)

Recommended Maintenance

- Inspect the sensor body and cable for wear and tear (annual).
- Review data against a reference to verify accuracy (annual).

Scan for RH5X Video

NRGSystems®

RH5X Relative Humidity Sensor Installation Process

1. Thread the provided hose clamp through the holes in the center of the mounting bracket.

2. Wrap the hose clamp around the tower, placed under the shelter box. Make sure the sensor's protective cone is facing down. Tighten the hose clamp with nut driver until the sensor is secure. Do not over-tighten.

3. Trim the end of the hose clamp, or secure it in place so it does not move freely.

4. Wire the sensor cable into the data logger.

5. Program the data logger as outlined below.

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Sensor Wire   Logger

Red ➕ Excitation ----	EXC
Blk ➖ Ground ----	GND
Wht ☐ Signal ----	SIG
Shield ----	SHD

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SymPRO

LOGR-S

Description	NRG RH5X Humi	1
Serial Number		
Height		Meters	2
Boom Bearing		Degrees ⓘ	3

Sensor Transfer Function

Scale Factor	20	%RH per V
Offset	0	%RH
Units	%RH	

Enable Configuration

☑ Enabled

Sensor Type	1	Description	Units	Slope	Offset
NRG RH5X ▾		NRG RH5X	%	20.00000	0.00000

Serial Number	Height (m)	2	Elevation Angle	Azimuth Angle	3	Modbus Address
000000000	0.00		0.0	0.0		10036

5 Data Logger Programming

For SymphoniePRO, use the NRG SymphoniePRO Desktop Application.

For LOGR-S Data Loggers, use the web UI by navigating to the LOGR's IP address in a web browser.

Navigate to the Channel Configuration tab or web page (depending on the logger type) to configure the sensor.

1. Choose "NRG RH5X Humidity" from the sensor selection drop down menu.

2. Enter the height (elevation) of sensors from the ground.

3. Enter the direction(azimuth) the sensor is installed on the tower.

4. For the RH5XC only: Enter the sensor's unique slope and offset found on the sensor's calibration report.

5. Save the setting to the logger.

For more information:

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ISO 14001: 2015 Self-Certified

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