

Air Pressure Sensor Thies

S33100A

1. Wrap the nose clamp around the tower (under the shelter box), insert the BP65 sensor and continue to tighten with nut driver until the sensor is secure. Do not over-tighten.
2. Trim the end of the hose clamp, or secure it in place so it does not move freely.
3. Wire the sensor cable into the cable gland.
4. Program the sensor using the LOGR-S.

- Piezo-electric barometric pressure sensor
- High accuracy 0.3 hPa @ 25 °C
- Scalable measurement range 600 ... 1060 hPa
- Quick responding behaviour
- Long-term sturdiness

Description

The sensor measures barometric air pressure. The instrument is designed for application in the field of meteorology and environmental protection, where high accuracy, quick responding behaviour, long-term sturdiness and reliability are required. The barometric pressure sensor measures the „ABSOLUTE AIR PRESSURE“.

The measuring results are available in 3 different forms

1. Analog voltage output: 0 V ... 5 V (Standard/default configuration)

only on request, special configuration necessary

2. Frequency output: 300 Hz ... 1100 Hz
3. Digital output RS485

The sensor is a tempered, piezo-electric absolute-pressure sensor, which shows excellent thermal and mechanical stability.

Mechanical mounting

The housing of the sensor is suited for wall mounting or installation on other plane surfaces. For mounting, remove the cover. The housing lower part can be mounted by appropriate screws through the now visible and accessible fixing borings (Ø 4mm).

Note: The cable gland and the hose connection must point downwards.

In case there is no sufficient pressure balance for the barometric pressure sensor at an installation site, a hose can be plugged on via the 1/8"-hose connection. The open side of the hose is to be placed in an area where a pressure balance is prevailing.

Maintenance

With proper mounting the instrument operates maintenance-free. The measuring results are effective at the moment of factory-calibration. The user is responsible for repeating the calibration and determination of the date.

4 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 BP65 Baro" from the sensor selection drop down menu.
2. Enter the sensor's serial number (found on the sensor body).
3. Enter the height (elevation) of the sensors from the ground.
4. Enter the direction (azimuth) the sensor is installed on the tower.
5. For BP65C only: Enter the sensor's unique slope and offset, found on the sensor's calibration report.



Sensor Wire

- Red + Excitation
- Blk - Ground
- Wht □ Signal
- Grn □ Sense

LOGR-S

SymPRO

Description	NRG BP65 Baro	1
Serial Number	9453000046	2
Height	2.2	3 Meters
Boom Bearing	0.0	4 Degrees
Scale Factor	243.89925	5 hPa per V
Offset	494.73295	hPa
Units	hPa	

Enable Configuration		Units		Slope		Offset	
☒ Enabled		hPa		243.89925		494.73295	
Sensor Type	Description	Units	Slope	Offset	IP Address		
NRG BP65	NRG BP65	hPa	243.89925	494.73295			
9453000046	2.2	0.0	0.0	10036			

For more information:

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support@nrgsystems.com
nrgsystems.com



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2. Trim the end of the hose clamp or secure it in place so it does not move freely.
3. Wire the sensor to the data logger.
4. Program the data logger.

Specifications

Characteristic	Value
Measuring range	600 hPa ... 1060 hPa
Resolution	0.001 hPa
Accuracy	± 0.25 hPa
Quick responding behaviour	± 0.3 hPa @ 25°C
Long term stability	± 1 hPa @ -20°C to 65°C
	± 0.1 hPa/year

Description

Pressure sensor heating control temperature

The sensor measures barometric air pressure. The instrument is used for meteorology and environmental protection, where high accuracy, quick responding behaviour and long-term stability are required. The sensor measures the "ABSOLUTE AIR PRESSURE".

Electrical Outputs

Frequency output

Open collector with internal pull up resistor

Frequency output: 0 V ... 5 V (Standard/default configuration)

Frequency output: 260 ... 1260 Hz (corresponding to 260 ... 1260 hPa)

Serial interface RS485

Half duplex (two wire)

Thies ASCII

1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200

Recommended baudrate for Meteo-40 plus

38400

Data format

8N1

Temperature range

-40 ... +65 °C

Storage temperature

-30 ... +70 °C

The housing of the sensor is suited for wall mounting on installation on other plane surfaces. For mounting, remove the cover. The housing lower part can be mounted by appropriate screws through the now visible and accessible fixing

Dimensions

Weight

approx. 150 g

Connection

Screwed cable gland M16 x 1.5 and 8-pole terminal strip

Housing

Polycarbonat

In case the pressure is not sufficient for the sensor, a hose can be plugged on via the 1/8" hose connection. The open side of the hose is to be placed in an area where a pressure balance is prevailing.

Manufacturer

Thies Clima

0.0

0.0

10036

Units

hPa

Pa per V

Pa

hPa

hPa

hPa

hPa

hPa

hPa

hPa

hPa

hPa

hPa

hPa

Maintenance

Dimensional drawing (in mm)

With proper mounting the instrument operates maintenance free. The measuring results are effective at the moment

of the measurement. For the determination of the date of the measurement, the data logger's IP address in a web

tab or web page (depending on the logger type) to

sensor selection drop down menu.

und on the sensor body).

sensors from the ground.

sensor is installed on the tower.

unique slope and offset, found on the sensor's

Data Logger Programming

For SymphoniePRO, use the NRG SymphoniePRO Desktop Application.

File

Navigation

Configuration

1. Ch

2. Er

3. Er

4. En

5. Fo

ca

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Specifications

Sensor connection to Ammonit Meteo-40 data logger

Sensor	Plug Pin No.	Ammonit Cable Wire Colour	Meteo-40	Supply Sensor
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- Quick responding behaviour
- Long term sturdiness

Ground	5: AGND	blue
Supply voltage		red
Pressure sensor heating control temperature		black

Description

The sensor measures barometric air pressure. The instrument is suited to applications in the field of meteorology and environmental monitoring.

Electrical Outputs

The sensor measures the "ABSOLUTE AIR PRESSURE".

The pins GND and AGND are connected to the same electrical potential.

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± 0.25 hPa

± 0.3 hPa @ 25°C

± 1 hPa @ 20°C to 65°C

± 0.1 hPa/year

50°C ± 1°C

Counter: GND

Excitation: 5V DC

Ground: GND

Signal: CN

B+ (RS485-M)

AV (RS485-M)

Open collector with internal pull up resistor

Flow: 0 V, high: 3 V

260 ... 1260 Hz (corresponding to 260 ... 1260 hPa)

Half duplex (two wire)

Thies ASCII

1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200

38400

8N1

8N1

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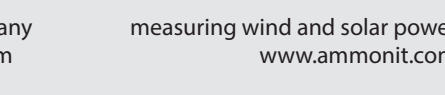
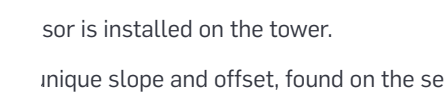
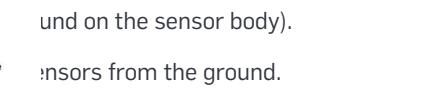
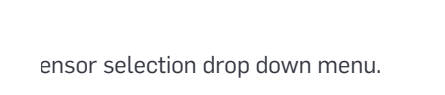
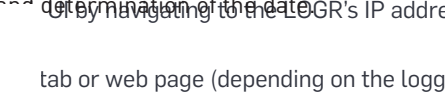
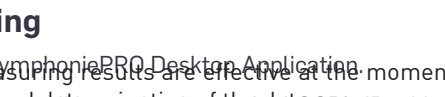
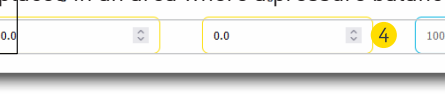
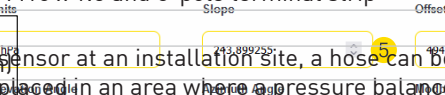
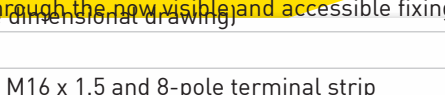
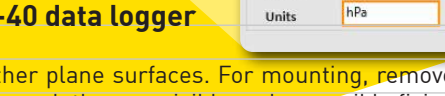
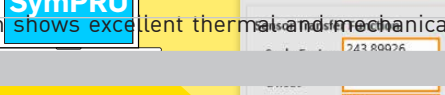
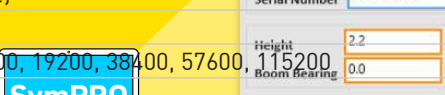
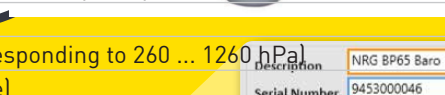
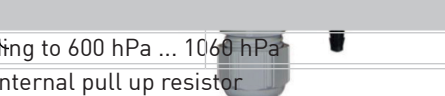
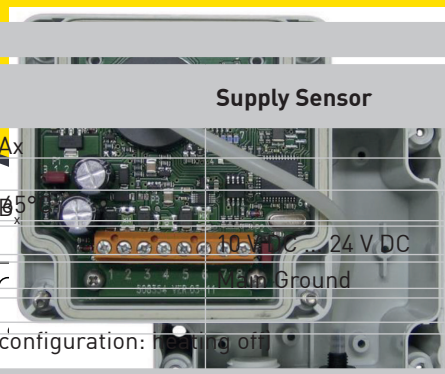
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Mechanical mounting diagrams: connection to Ammonit Meteo-40 data logger

The sensor is connected to the data logger via a cable. The cable is connected to the data logger via a cable.

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