




# AutomatikCentret TTH-6040-O Modbus Based Temperature Sensor Instructions

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**AutomatikCentret TTH-6040-O Modbus Based Temperature Sensor**



TTH-6040-O is a Modbus based temperature sensor for outdoor mounting, supplied with a junction box for conversion from 4-core cable to modular Modbus cable. TTH-6040-O is used to measure outdoor temperature for use by ventilation systems.

## PRODUCT PROGRAMME

Type	Product
TTH-6040-O	Temperature sensor with Modbus for outdoor mounting

## CONTENTS

The box contains the following:

- 1 x Temperature sensor for outdoor mounting
- 1 x Junction box with modular connector
- 3 m QuickPlug™ cable
- 1 x Adhesive pad 50×50 mm

## FUNCTION

TTH-6040-O is an outdoor temperature sensor with Modbus communication for use with an air handling unit equipped with an OJ Air2 Master (rotary selector switch in position 0). The sensor can also be used with other controllers that support the Modbus protocol.

TTH-6040-O measures outdoor temperature and communicates the result via Modbus. The temperature sensor should be mounted on a flat surface at a representative measuring point. Do not mount the sensor in direct sunlight or where draughts occur. Connect the sensor to the junction box using a 4-core cable (not supplied); see Figure 6.

Connect the junction box to the OJ Air2 Master using RJ12 cable. As long as the total cable length is less than 50 metres, no special demands are made on cable type or shielding. The cable should be connected to Modbus port A of the OJ Air2 Master.

## MODBUS

TTH-6040-O uses Modbus RTU, 38400 baud, 1 start bit, 8 data bits, 2 stop bits and no parity.

### Modbus addresses

See Table 1 on page 4.

## TECHNICAL DATA

- Supply voltage: 17-28 VDC via bus and terminals
- Power consumption: 0.24 W @ 24 VDC
- Temp. measuring accuracy:  $\pm 0.5K$  @ 25°C
- Ambient temperature: -30/+50°C
- Dimensions: 120 x 64 x 34 mm
- Enclosure rating: IP 65
- Weight: 130 g

## FIGURES

- Fig. 1: Opening the temperature sensor
- Fig. 2: Temperature sensor dimensions
- Fig. 3: Opening the junction box
- Fig. 4: Junction box dimensions
- Fig. 5: Rotary selector
- Fig. 6: Wiring diagram

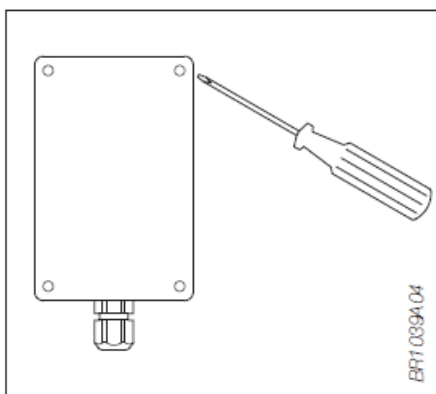


Fig. 1 - Disassemble temperature sensor

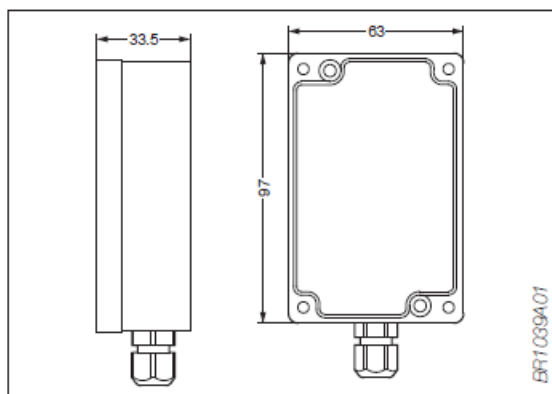


Fig. 2 - Dimensions temperature sensor

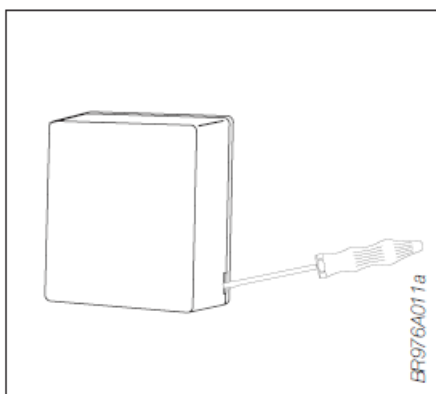


Fig. 3 - Disassembly connection box

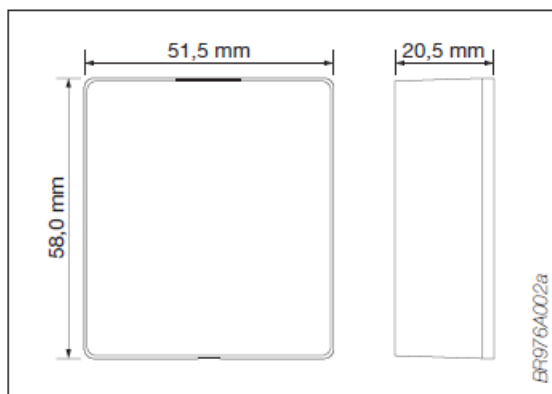
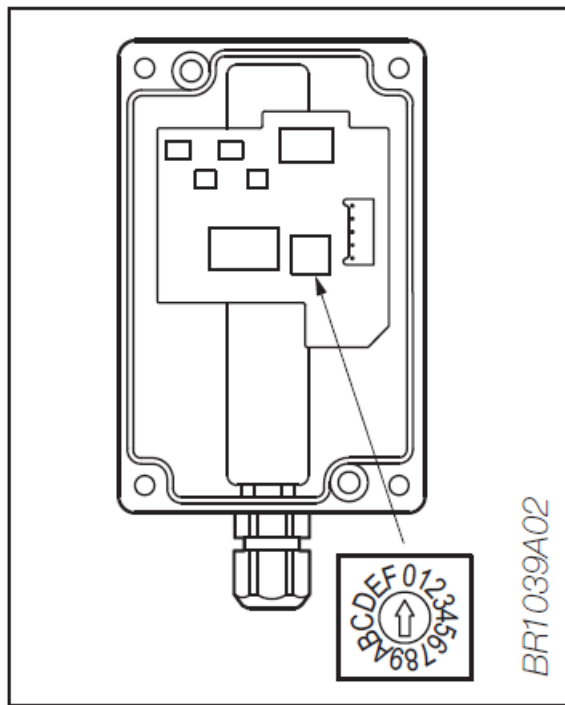


Fig. 4 - Dimensions connection box

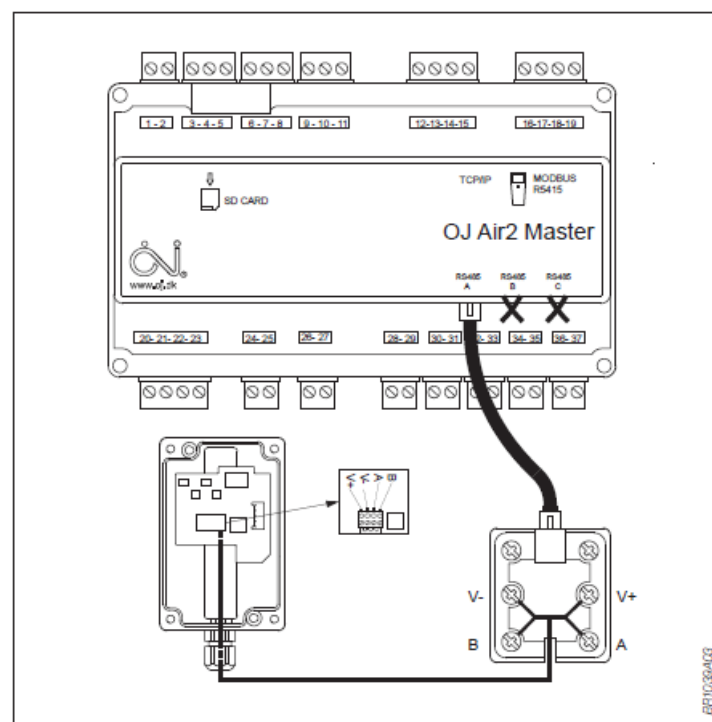


*Fig. 5 - Rotary selector*

Position	Modbus adr.
0	0x10 (hex) / 16 (dec.)
1	0x11 (hex) / 17 (dec.)
2	0x12 (hex) / 18 (dec.)
3	0x13 (hex) / 19 (dec.)
4	0x14 (hex) / 20 (dec.)
5	0x15 (hex) / 21 (dec.)
6	0x16 (hex) / 22 (dec.)
7	0x17 (hex) / 23 (dec.)
8	0x18 (hex) / 24 (dec.)

9	0x19 (hex) / 25 (dec.)
A	0x1A (hex) / 26 (dec.)
B	0x1B (hex) / 27 (dec.)
C	0x1C (hex) / 28 (dec.)
D	0x1D (hex) / 29 (dec.)
E	0x1E (hex) / 30 (dec.)
F	0x1F (hex) / 31 (dec.)

Tabel 1. Modbus addresses



## SERVICE AND MAINTENANCE

TTH-6040-O contains no components which require service or maintenance.

## DISPOSAL AND ENVIRONMENTAL PROTECTION

Help protect the environment by disposing of the packaging and redundant products in an environmentally responsible manner.

## Product disposal

Products marked with this symbol must not be disposed of together with household refuse but must be delivered to a waste collection centre in accordance with local regulations.

## CE MARKING

OJ Electronics A/S hereby declares that the product is manufactured in accordance with the EMC directive 2014/30/EU.

## Applied standards

- **EN 61000-6-2**

Electromagnetic compatibility (EMC) – Part 6-2: Generic standards – Immunity for industrial environments

- **EN 61000-6-3**

Electromagnetic compatibility (EMC) – Part 6-3: Generic standards – Emission standard for residential, commercial and light-industrial environments

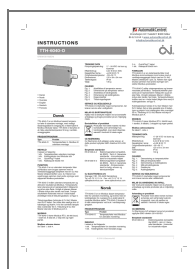
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## Documents / Resources



[AutomatikCentret TTH-6040-O Modbus Based Temperature Sensor](#) [pdf] Instructions  
TTH-6040-O, Modbus Based Temperature Sensor, TTH-6040-O Modbus Based Temperature S  
ensor, Temperature Sensor, Sensor

## References

- [OJ Electronics – Know-how Creates Strong Partnerships](#)