

TB01/TB08 – Wireless transmission of a relay command

The system consists of at least two modules: a transmitter (**TB01.TX.1**), receiver **TBH08-RO.1** and optional remote output **TB01-RO.1**

TRANSMITTER – TB01.TX.1:

The transmitter (**TB01.TX.1**) monitors its SW1 input for an open/closed circuit (Diagram 1).

The SW1 input state is transmitted wirelessly to the receiver module.

Indicator **Status**:

- on: SW1 circuit closed
- off: SW1 circuit open

Diagram 1

Indicator **Link**:

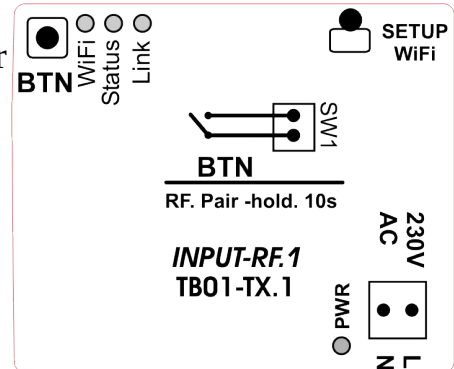
- on: radio connection to “**TBH08-RO.1**” present
- off with brief flashes: no connection to “**TBH08-RO.1**”

Warning!

Connect a potential-free relay output / dry contact to SW1:

do not apply voltage.

For a 230V control signal, SW1 may be permanently bridged (closed circuit), with the control signal supplying power to the module's L terminal.



RECEIVER – TBH08-RO.1:

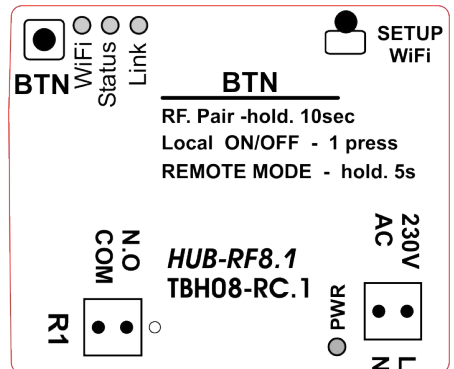
The receiver (**TBH08-RO.1**) receives status from the “**TB01.TX1** transmitter” and activates/deactivates its R1 output accordingly.

Manual (local) and remote operating modes:

- Manual:

A single press of **BTN** switches output R1 on or off. Each subsequent press of **BTN** alternates the output state.

Diagram



2

Indicator **Link** flashes steadily.

- Remote:

Output R1 is controlled by the transmitter states.

With transmitters permanently powered, their SW1 open/closed circuit state is monitored.

Receiving an SW1 closed-circuit signal from at least one transmitter activates output R1.

If a transmitter signal is lost (power disconnected), after a delay it is treated as off.

Changing the operating mode:

- Manual to remote: hold **BTN** for 5 sec.
- Remote to manual: press **BTN** once.

Indicator **Link**:

- Steady on: radio connection to a transmitter present
- Brief flashes every few seconds: no radio connection to **TB01-TX.1** or **TB01-RO.1**.

Indicator **Status**:

- R1 contact closed: indicator on
- R1 contact open: indicator off

Up to 8 separate “TB01.TX1 transmitter” or “TB01-R0.1 remote output” modules can connect to the TBH08-RO.1 receiver.

The receiver **TBH08-RO.1** acts as a signal hub.

REMOTE OUTPUT – TB01-RO.1:

The receiver (**TB01-RO.1**) receives the R1 output state from the “TBH08-R0.1 receiver” and mirrors it at its own R1 output.

Manual (local) and remote operating modes:

- Manual:

A single press of **BTN** switches output R1 on or off. Each subsequent press of **BTN** alternates

Diagram 3

the output state.

In manual mode, indicator **Link** flashes steadily.

- Remote:

Mirrors the received R1 output state from the “TBH08-R0.1 receiver”.

If the receiver signal is lost, the output is treated as off.

Changing the operating mode:

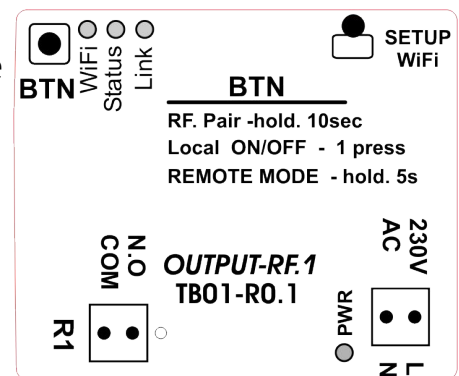
- Manual to remote: hold **BTN** for 5 sec.
- Remote to manual: press **BTN** once.

Indicator **Status**:

- R1 contact closed: indicator on
- R1 contact open: indicator off

Indicator **Link**:

- on: radio connection to receiver “**TBH08-RO.1**” present
- off with brief flashes: no connection to receiver “**TBH08-RO.1**”



RADIO PAIRING:

Power all modules.

1. Hold BTN on receiver **TBH08-RO.1**

The “Link” indicator starts flashing rapidly.

2. Hold BTN on the selected transmitter for 10 sec,

TB01.TX.1, or remote output **TB01-RO.1**

The selected module's green “Link” indicator starts flashing rapidly.

Once paired, its “Link” indicator goes out.

3. Repeat step 2 until all required modules are paired. The pairing order of **TB01.TX.1** and **TB01-RO.1** does not matter.

4. Press BTN on receiver **TBH08-RO.1** once to finish radio pairing.

Each new radio pairing procedure changes the communication channel between modules and erases the previous pairing.

After successful pairing, “Link” indicators on all paired modules should stay on. Brief flashes indicate periodic communication.

COMPLIANCE

This product is declared to comply with European directives on electromagnetic compatibility 2004/108/EC, low-voltage equipment 2006/95/EEC, RoHS 2011/65/EU and marking 93/68/EEC.

SAFETY

These instructions apply only to the “ThermoB.TB01.TX1/TBH08-R01/TB01.RO.1” radio modules described and illustrated above.

Installation must be carried out by a competent installer in accordance with local electrical and general safety requirements. The installer is responsible for installing the device and connecting it to the rest of the system.



Warning: risk of electric shock.

Life-threatening voltage is present inside the modules!

Disconnect both the receiver and the connected equipment from their power supplies before opening the enclosure, making electrical connections, installing, removing or moving the device. Keep the supplies disconnected while the enclosure is open.

Keep children and people with reduced sensory or mental capabilities away from the device to prevent electric shock.

Installation must not be entrusted to anyone without the necessary qualifications.

	Hazardous environments Do not use the device in an explosive atmosphere. Do not use it near fuels or easily flammable materials. Do not use it where the air may contain conductive or explosive mixtures of dust or gas.
	Protect the device from water and moisture. If you suspect a fault, immediately disconnect the device and the equipment it controls from the mains supply.

Technical data

TB01.TX.1	TBH08-R01 & TB01.RX.1
1 potential-free input for open/closed circuit detection (5VDC)	1 potential-free relay output: max 5A/230VAC max
General:	
Supply SELV: 230V AC / 50Hz	Power supply between terminals L and N
Dimensions: 90 x 90 x 23mm	Power consumption: <2VA
RF frequency: 866MHz	Operating conditions: -5T45, RH80%
RF range: 80-100m outdoors	Protection rating: IP20
WiFi: 2.4GHz / 802.11b/g/n, WEP/WPA-PSK/WPA2-PSK	
Contains TX FCC ID: 2ADUIESP-1215	

Ordering information

Base product code: TB01/TB08.

WiFi: a WiFi system version is available; specify the required configuration when ordering.

Housing: standard modules for installation in a protected electrical installation.

Display: no user display; indicator lights are provided.

RF: radio communication between modules included.

Specify the number and type of modules. The system supports up to 8 modules in total; the standard transmitter/receiver pair is covered in separate instructions.