SENTERA
C O N T R O L S

RXT
Room temperature transmitter / switch

The RXT series are combined room temperature transmitters / switches. Four pre-defined ranges provide ideal measurement windows with one user-definable range. These units are equipped with Modbus RTU (RS485) communication and have an analog output and a relay output.

Key features

- Integrated sensor
- 1 analog and 1 relay output
- Modbus RTU (RS485) communication
- Multiple ranges as measurement windows available
- Selectable switching point by trimmer or via Modbus
- Selectable Hysteresis by jumpers or via Modbus
- Long-term stability and accuracy
- Blue LED operating indication

Technical specifications

Outputs		1 analog output (0—10 VDC / 0—20 mA) 1 C/O relay output (230 VAC / 2 A)
Power consumption		No load: maximum 25 mA Full load: maximum 45 mA
Load resistance		0—10 VDC mode > 500 Ω 0—20 mA mode < 500 Ω
Sensor temperature ranges (jumper selection)		0—30 °C 10—40 °C 20—50 °C 0—50 °C
Sensor temperature range (Modbus selection)		0—50 °C, free selectable
Hysteresis (jumper selection)		1 / 2 / 3 / 4 °C
Hysteresis (Modbus selection)		1 / 2 / 3 / 4 / 5 °C
Switching point		Selectable by trimmer or via Modbus RTU
Protection standard		IP30 (according to EN 60529)
Ambient conditions	Temperature	0—50 °C
	Rel. humidity	< 95 % rH (non-condensing)

Modbus registers

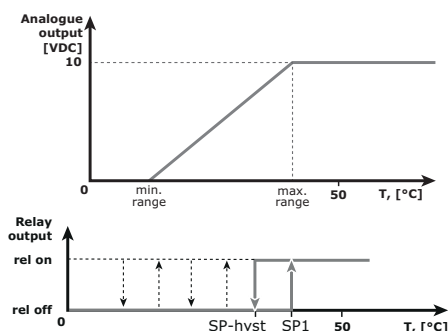The Sensistant Modbus configurator allows you to easily monitor and/or configure Modbus parameters.

The parameters of the unit can be monitored / configured through the 3SModbus software platform. You can download it from the following link: https://www.sentera.eu/en/3SMCenter

For more information about the Modbus registers, please refer to the product Modbus Register Map.

Operational diagram(s)

Article codes

	Supply	Connection
RXT-G	15—24 VAC ±10 % 18—34 VDC	3 – wire
RXT-F	18—34 VDC	4 – wire

Area of use

- Temperature control in HVAC applications

- For indoor use only

Wiring and connections

Vin	Positive DC voltage / AC ~
GND	Ground / AC ~
A	Modbus RTU (RS485) signal A
/B	Modbus RTU (RS485) signal /B
Ao1	Analog output (0—10 VAC / 0—20 mA)
GND	Ground
NO1	Normally open contact
COM1	Common contact
NC1	Normally closed contact
Connections	Cable cross section: max. 1,5 mm²

Caution: If a G-type article is using the same AC power supply source (transformer) as F-type article, a SHORT CIRCUIT may result when the power supply and analog signal terminals are connected to the same common ground! In this case always connect different article types to separate AC transformers or use the same article version.

If an AC power supply is used with any of the units in a Modbus network, the GND terminal should NOT BE CONNECTED to other units on the network or via the CNVT-USB-RS485 converter. This may cause permanent damage to the communication semiconductors and / or the computer!

Standards

- Low Voltage Directive 2006/95/EC

- EMC Directive 2004/108/EC: EN 61326
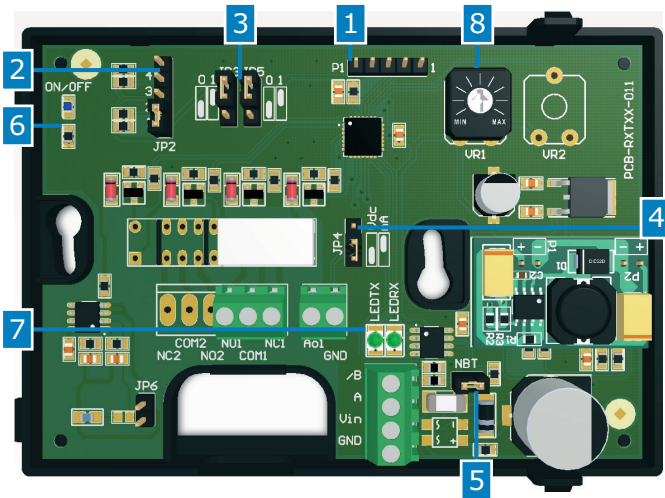
- WEEE Directive 2012/19/EU
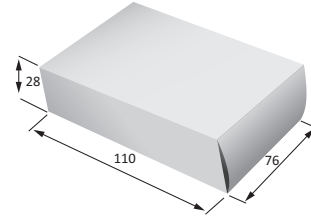
- RoHs Directive 2011/65/EU

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Settings

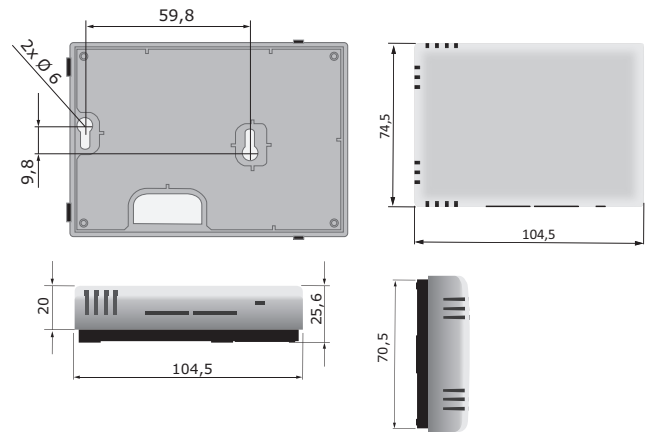| Setting		
1 – Modbus settings reset jumper JP1	5 4 3 2 1	Put and hold for 20 seconds
2 – Sensor range setting JP2	1 2 3 4 5	0—30 °C
	1 2 3 4 5	10—40 °C
	1 2 3 4 5	20—50 °C
	1 2 3 4 5	0—50 °C
3 – Hysteresis selection JP3 & JP5	JP3 JP5	1 °C
	JP3 JP5	2 °C
	JP3 JP5	3 °C
	JP3 JP5	4 °C
4 – Analog output selection JP4		0—10 VDC
		0—20 mA
5 – Network bus resistor jumper NBT		The RXT is the first or last unit
6 – Operating indication	Blinking blue	Initialization (30 s) / error
	Cont. blue	Normal operation
7 – Modbus communication indication	Blinking green	Transmitting
	Blinking green	Receiving
8 – Setpoint trimmer	VR1	VR1 - switching point for the relay

(▭▭ indicates ON position of the jumper.)

Packaging

Article	Packaging	Length [mm]	Width [mm]	Height [mm]	Net weight	Gross weight
RXT-F RXT-G	Unit (1 pc.)	110	76	28	0,10 kg	0,11 kg
	Carton (24 pcs.)	485	175	77	2,30 kg	2,77 kg
	Box (144 pcs.)	500	400	260	13,82 kg	17,59 kg

Fixing and dimensions

Global trade item numbers (GTIN)

Packaging	RXT-F	RXT-G
Unit	05401003011638	05401003011645
Carton	05401003301968	05401003301975
Box	05401003502785	05401003502792