1 rECO-S-RLT

Retrofit solution for enabling ventilation plants

1.1 Front view

Fig. 1: Front view

1.2 Features

- Demand-based enabling of existing ventilation plants based on the room temperature, air quality and opening time
- Room temperature recording
- Air quality recording by means of a CO_2 air quality sensor
- Plain text designation for each parameter on the display, language selectable
- Unique parameter identification with Quicklinks
- 1-finger operation
- Real-time clock with power reserve
- Switchover between day and night setpoint by means of integrated weekly timer with holiday calendar
- Support for higher baud rates on the C-BUS
- Can be locked to prevent unwanted parameter adjustment (SAC - Security Access Control)
- Plug-in screw terminals
- Internal data memory for recording operating data
- Direct connection of a CAN-USB to the service socket
- Connection to the Wurm system via Wurm CAN communication bus (C-BUS) and FRIGODATA XP

1.3 Safety instructions

Writing conventions

WARNING

- Avoid the described hazard: otherwise, **electric voltage** represents a danger that could lead to **fatal** or **serious** bodily injury.

CAUTION

- Avoid the described hazard: otherwise **minor** or **medium** bodily injury or damage to property will result.

For your safety

For safe operation and to avoid personal injury and equipment damage through operator error, always read these instructions, become familiar with the device, and follow all safety instructions on the product and in this document, as well as the safety guidelines of Wurm GmbH & Co. KG Elektronische Systeme. Keep these instructions ready to hand for quick reference and pass them on with the device if the product is sold.

Wurm GmbH & Co. KG Elektronische Systeme accepts no liability in case of improper use or use for other than the intended purpose.

Target group	This manual is intended for "service technician" personnel.
Intended use	rECO-S-RLT is a controller from the FRIGOENTRY BLUELINE series and is a retrofit solution for enabling ventilation plants.

WARNING

DANGER TO LIFE FROM ELECTRIC SHOCK AND/OR FIRE!

- Switch off the power to the entire plant when carrying out installation, wiring or removal work. Otherwise a mains voltage and/or external voltage may still be present even if the control voltage is switched off. Always remove both power plugs (L and N).
- The wiring of the device must be carried out only by qualified electricians.
- Use only the correct tools for all work.
- Check all wiring after connection.
- Take note of the maximum loads on all connections.
- Never expose the device to moisture, for example due to condensation or cleaning agents.
- Take the device out of operation if it is faulty or damaged and is therefore compromising safe operation.
- Do not open the device.
- Do not repair the device yourself. If the device requires repairs, send it in with an exact description of the fault.

CAUTION

ELECTROMAGNETIC INTERFERENCE CAN CAUSE FAULTS!

- Always use shielded data cables and place them far away from power lines.

Wurm Infocenter

paperless info

Version and validity of the documentation

Version	Date	
V1.1.2 and higher	2020-10	Documentation status

Any versions not listed are special solutions for individual projects and are not described in detail in this document.
This document automatically ceases to be valid if a new technical description is issued.
Manufacturer: Wurm GmbH & Co. KG Elektronische Systeme, Morsbachtalstraße 30, D-42857 Remscheid
You can find more information on our website at www.wurm.de.

1.4 Connection diagram

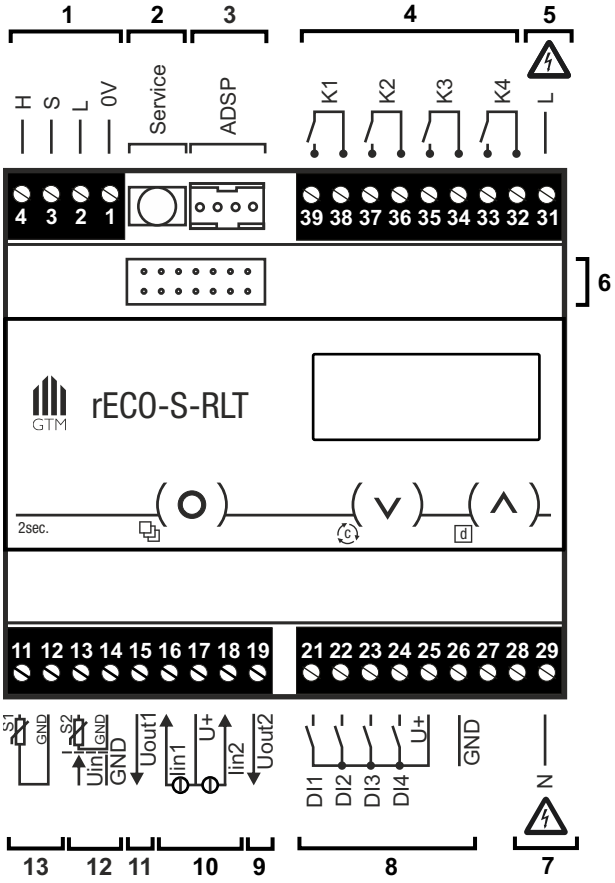

Fig. 2: Connection diagram

Pos.	Designation	Function
1	C-BUS interface	Data communication (H = CAN high, S = shield, L = CAN low)
2	Service socket	For connecting a CAN USB adapter
3	ADSP	No function yet
4	Output relays K1...K4	Floating contact, 230V~, 4(2)A
5	Power supply L	230V~/50Hz
6	X-tra interface	Expansion module connection
7	Power supply N	Neutral conductor
8	Digital inputs DI1...DI4	Inputs for voltage-free contacts
9	Analogue output Uout2	0...10V
10	Analogue inputs Iin1...Iin2	Current inputs 4...20mA
11	Analogue output Uout1	0...10V
12	Sensor input S2 or 0...10V input	Temperature sensor
13	Sensor input S1	Temperature sensor

1.5 Installing the device

This device is designed for top-hat rail installation. The housing has standard DIN 43880 dimensions and is also suitable for operation in fuse boxes and distribution cabinets.

The device can be positioned immediately adjacent to another device without gaps.

WARNING

DANGER TO LIFE FROM ELECTRIC SHOCK AND/OR FIRE!

- Switch off the power to the entire plant before installing. Otherwise, mains voltage and/or external voltage may still be present, even if the control voltage is switched off. Always remove both power plugs (L and N).

✓ The entire plant must be free of voltage.

1. **(A)** Place the device with the leading edge at an acute angle to the top-hat rail.
2. **(B)** Push the device downwards onto the top-hat rail.
   ▶ The device snaps into place with the fastening safety catch **(a)** on the top-hat rail.
   ▶ You can now connect the device.

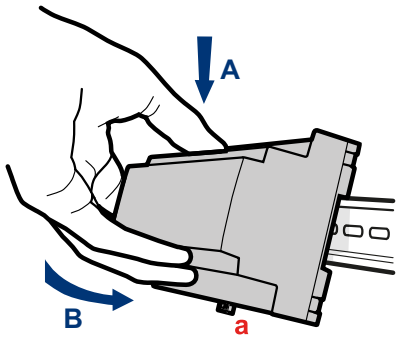

Fig. 3: Top-hat rail installation

1.6 Technical data

Power supply	230V~, +10% / -15%, max. 9VA
Display	1 x display with plain text display 2 x green LED, C-BUS data traffic (CAN Tx, CAN Rx)
C-BUS communication	3-wire CAN bus interface with integrated power supply, galvanically isolated, separate service socket
Expansion module communication	Interface for connecting X-tra module
Analogue inputs	2 x 4...20mA
Temperature sensor	2 x TRK
Control input	0...10V= or an NTC temperature sensor
Digital inputs	4 x floating
Output relay	4 x normally open contact 230V~, 4(2)A, rated voltage 230V~
Analogue outputs	2 x 0...10V=, non-floating, max. load 10mA
Real-time clock	Power reserve
Monitoring system	Monitoring of data memory and connected sensors
Dimensions	(W x H x D) 106mm x 90mm x 58mm (DIN 43880)
Fastening	Top-hat rail TH 35-15 or TH 35-7.5 (DIN EN 60715)
Ambient temperature	Operation: 0...+55°C, storage: -25...+70°C
Weight	About 320g
CE conformity	- 2014/30/EU (EMC Directive) - 2014/35/EU (Low Voltage Directive) CE
	RoHS II
Valid from	Version 1.1.2