

Room control unit for room automation, configurable, with multifunctional display and Modbus connection

**RYMASKON®** stands for a series of multifunctional room control units.

The individually configurable **RYMASKON® 400 - Modbus** enables automated monitoring and control of the indoor climate and illumination in a Modbus network. It has two digital inputs and two digital/analogue outputs. Room climate control and regulation can be accessed from a central point on a higher-level Modbus master and on-site operation can be selectively or completely disabled. Thanks to its internal outputs, the inputs and settings on the device do not necessarily have to be processed by the master. This means that it is also possible to have decentralised individual room control at any time. An internal sensor detects the room temperature.

Six freely assignable function buttons on the front panel of the unit can be used for on-site operation and configuration. An integrated rotary encoder with a central input button enables manual adjustment of settings and parameter assignment on location. Desired functions (such as "Light ON") and display values can be activated by triggering an approximation sensor when entering the room.

The dimmable multifunctional display is designed specifically for room operation and uses intuitive symbols for a clear view of all available spatial data. Besides the time, weekday and climate parameters (temperature, humidity, dew point, CO<sub>2</sub> content), it can also display additional features, such as heating/cooling and fan modes, window open, lighting, alarm, key lock or room occupancy.

**RYMASKON® 412-Modbus**  
**RYMASKON® 422-Modbus**

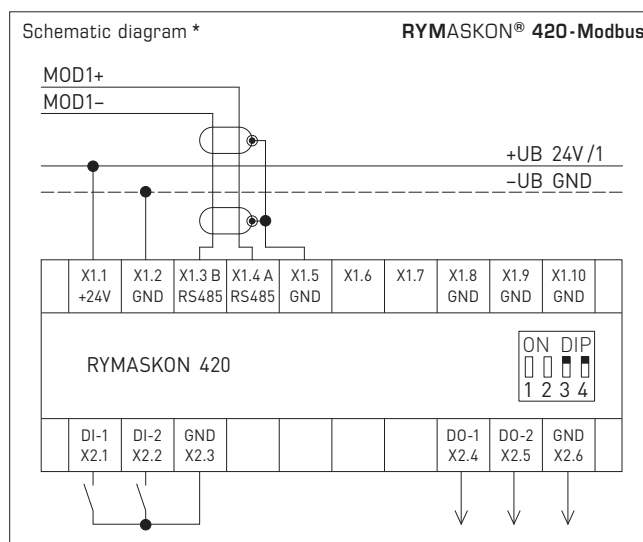
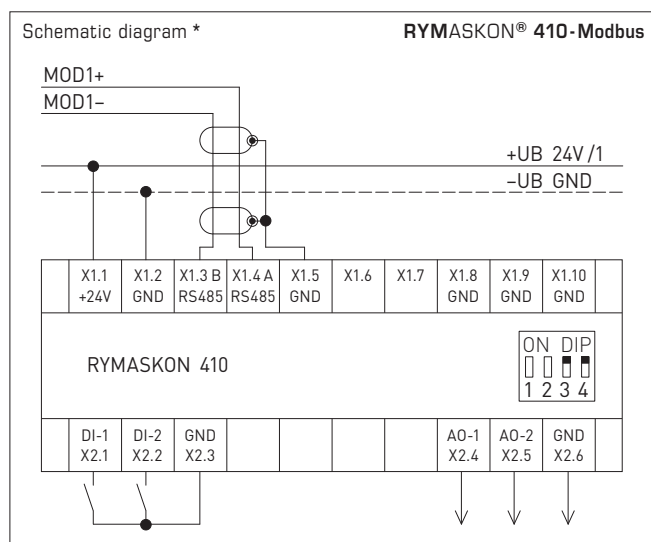


### TECHNICAL DATA

Power supply:	24 V DC (± 10%)
Power consumption:	1.08 W at 100% backlighting 0.94 W at 15% backlighting 0.89 W without backlighting (without load at the actuator outputs)
Inputs:	2 digital inputs without additional 0 V output signal *
Outputs:	Type 410: 2 analogue outputs (0-10 V DC) rated current max. 4 mA Type 420: 2 digital outputs or PWM rated current 400 mA (short circuit max. 1.2 A)
Interface:	RS485 Modbus RTU Slave (57600, 38400, 19200, 9600 Baud), bus termination can be set via DIP switch
Sensor:	NTC 10 kΩ, 0...+70 °C, precision ±0.4 K
Operating elements:	multifunctional display, 6 touch buttons, 1 rotary encoder, 1 approximation sensor (IR)
Electrical connection:	0.14 - 1.5 mm <sup>2</sup> , via plug-in screw terminals
Housing:	plastic, glass front panel, black or white colour
Dimensions:	88 x 173 x 30 mm (incl. connection terminals)
Mounting:	using a plastic mounting plate (see dimensional drawing), wall mounting or on in-wall flush double switch box
Ambient temperature:	+5...+40 °C (operation); -10...+50 °C (storage)
Permitted humidity:	0...85% RH (without dew formation)
Protection type:	<b>IP 20</b> (according to EN 60 529)
Standards:	CE-conformity, electromagnetic compatibility according to EN 61 326, EMC Directive 2014 / 30 / EU

#### \* digital inputs (DI1 / DI2)

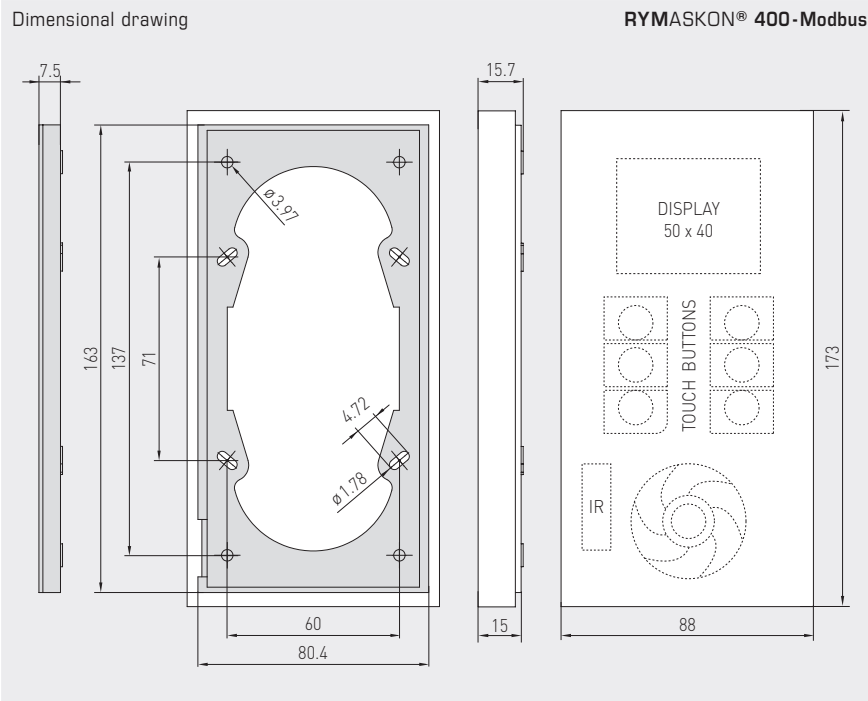
In order to connect potential-free contacts, a GND signal (e.g. terminal X2.3) should be routed to the desired input via the contact.





S+S REGELTECHNIK

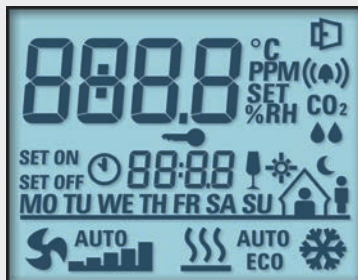
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**RYMASKON® 411-Modbus**  
**RYMASKON® 421-Modbus**



Display symbols **RYMASKON® 400-Modbus**



DIP Switch	<b>RYMASKON® 400-Modbus</b>	
<b>RS485 bus termination</b>	<b>DIP 3</b>	<b>DIP 4</b>
activated (default)	<b>ON</b>	<b>ON</b>
deactivated	OFF	OFF

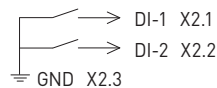
**Note:**  
Always configure the bus termination of the RS 485 interface (DIP 3 and DIP 4) in pairs!

Connecting diagram **RYMASKON® 410-Modbus**

	X2	
Input 1	1	DI-1 (digital) 0 V
Input 2	2	DI-2 (digital) 0 V
	3	GND
Output 1	4	AO-1 (analogue) 0-10 V DC
Output 2	5	AO-2 (analogue) 0-10 V DC
	6	GND

	X1	
	1	+UB 24 V DC
	2	-UB GND
	3	RS485 - B (Modbus RTU)
	4	RS485 - A (Modbus RTU)
	5	GND
	6	GND
	7	GND
	8	GND
	9	GND
	10	GND

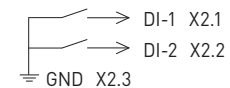


Connecting diagram **RYMASKON® 420-Modbus**

	X2	
Input 1	1	DI-1 (digital) 0 V
Input 2	2	DI-2 (digital) 0 V
	3	GND
Output 1	4	DO-1 (digital / PWM)
Output 2	5	DO-2 (digital / PWM)
	6	GND

	X1	
	1	+UB 24 V DC
	2	-UB GND
	3	RS485 - B (Modbus RTU)
	4	RS485 - A (Modbus RTU)
	5	GND
	6	GND
	7	GND
	8	GND
	9	GND
	10	GND



**RYMASKON® 400-Modbus** Room control unit for room automation

Type / WG02	Communication	Output	Colour	Display	Item No.	Price
<b>RYMASKON® 410-Modbus</b>						
RYMASKON 411	RS485	2x (analog) 0-10V	black	■	1901-5121-2101-000	<b>539,46 €</b>
RYMASKON 412	RS485	2x (analog) 0-10V	white	■	1901-5121-2102-000	<b>539,46 €</b>
<b>RYMASKON® 420-Modbus</b>						
RYMASKON 421	RS485	2x (digital / PWM)	black	■	1901-5121-2201-000	<b>539,46 €</b>
RYMASKON 422	RS485	2x (digital / PWM)	white	■	1901-5121-2202-000	<b>539,46 €</b>

PWM = pulse-width modulation

**ACCESSORIES**

<b>KA2-Modbus</b>	Communication adapter (USB/RS485) for system connection	1906-1200-0000-100	<b>213,99 €</b>
<b>LA-Modbus</b>	Line termination device (with terminating resistor) as an active bus termination	1906-1300-0000-100	<b>79,81 €</b>