

Controller for controlling and regulating temperature, fan, light (1 zone) and blind (2 zones), room control unit with colour touch display, with Modbus or BACnet connection

The **RYMASKON® 500 / 600 / 700** series of room control units are designed for controlling the climatic zone in residential, hotel and office rooms and individually regulate the heating/cooling steps of the internal rooms. A colour touch display with modern icons is used for the visual display and operation at the location. The product range is characterised by the variety of combination options of the individual components.

The **RYMASKON® 600 Controller** series regulates through analogue outputs (0...10 V) up to two **heating or cooling valves** (6-way valves can also be controlled) and the **fan** (EC fan).

The **sun protection** (blinds, shutters) can be controlled in two zones via the bus.

Through the appropriate symbols, it is possible to control the **light** instead of the sun protection. In addition to the integrated temperature sensor, two external temperature sensors (NTC10K) or two analogue sensors (0...10 V) can also be connected. Measuring elements for relative humidity and CO2 are also available. The devices are used in room climate technology, including convector fans, cooling ceilings and heating / cooling systems. Wall mounting is performed on standard in-wall flush boxes. The devices are optionally available with a Modbus or BACnet communication interface and in various type versions (see number key).

The basic model **RYMASKON® 610 Controller** with colour touch display (3.5"), in a white housing, possesses an integrated temperature and humidity sensor (CO2 sensor optional), 2 analogue inputs for external sensors (0...10 V), 1 digital input, 3 analogue outputs (0...10 V), and optionally with Modbus or BACnet connection. The room control units are used for controlling temperature, fan, light (1 zone) and sun protection (2 zones) directly via the analogue outputs or via the bus.

TECHNICAL DATA (Basic model)

Device type:	room control unit with controller
Functions:	temperature, fan, light (1 zone), and sun protection (2 zones)
Communication:	Modbus RTU Slave address range can be configured between 1...247 or BACnet MS/TP device ID 65100 (default) and MAC address can be configured between 1...127 RS 485 interface, max. 63 devices, 9600 / 19200 / 38400 / 57500 / 76800 Baud, none / even / odd parity, 1 / 2 stop bits
Power supply:	24 V AC/DC (± 15%)
Power consumption:	max. 1.92 W
Inputs:	2 analogue inputs 0-10 V 1 digital input (potential-free), Impedance <1 kOhm
Outputs:	3 analogue outputs 0-10 V (heating, cooling, fan) input impedance > 100 kOhm
Operating mode:	Comfort, ECO, OFF, Boost, Frost Protection
Control element:	3.5" touch display with backlighting, cut-out approx. 50 x 75 mm, resolution 320 x 480 pixels, 255,000 colours

TEMPERATURE

Sensor:	integrated temperature sensor
Measuring range:	-40...+125 °C
Accuracy:	typically ±0.5 °C at +25 °C

HUMIDITY

Sensor:	integrated humidity sensor
Measuring range:	0...100% r.H.
Accuracy:	typically ±2 % r.H. (20...80 % r.H.) at +25 °C

CARBON DIOXIDE (CO2)

Sensor:	optical NDIR sensor (non-dispersive infrared technology), with automatic calibration
Measuring range:	0...5000 ppm
Accuracy:	typically ±50 ppm ±3% of the measured value at +25 °C
Electrical connection:	0.14-1.5 mm², via screw terminals
Housing:	plastic, polycarbonate material, self-extinguishing, white colour (optionally black or chrome), weight approx. 220 g
Housing dimensions:	approx. 88 x 112 x 14.5 mm (on-wall) approx. 88 x 112 x 20.5 mm (on-wall with CO2 sensor) approx. 52 x 53 x 28.5 mm (in-wall)
Mounting:	wall mounting on in-wall flush box, Ø 55 mm
Ambient temperature:	0...+50 °C (operation); -30...+70 °C (storage)
Permitted humidity:	0...95 % r. H., (non-precipitating air)
Protection type:	IP 20 (according to EN 60 529)
Standards:	CE conformity, according to EMC directive 2004/108/EU, Low-Voltage directive 2006/95/EU, according to EN 61000-6-1/3, EN 60730-1, EN 6100-4-2/4/5/11

ACCESSORIES

see table

RYMASKON® 600
Sensors



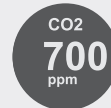
Room temperature
[°C / °F]



External temperature
[°C / °F]



Relative humidity
[%RH]



CO2 content
[ppm]
optional



Alarm levels 1/2
(incl. bell icon)
configurable

RYMASKON® 600
Functions



Fan
(blower speeds,
Automatic/Manual)



Sun protection
(max. 2 zones)



Light
(1 zone)



NEW

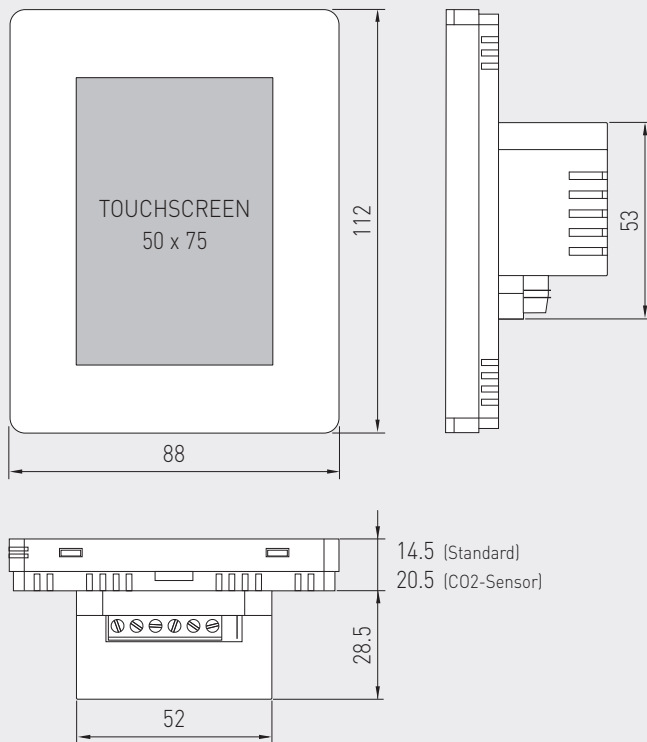
S+S REGELTECHNIK

RYMASKON® 600 Controller

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Dimensional drawing

RYMASKON® 600



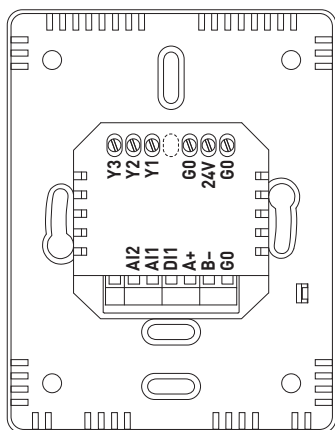
RYMASKON® 600
On-wall 14.5 mm



RYMASKON® 600
with CO2 sensor
On-wall 20.5 mm

Connecting diagram
Basic model

RYMASKON® 610



RYMASKON 610

- 0..10V DC Analogue Outputs
- Y1** A01 - default fan speed
- Y2** A02 - default heating stage 1
- Y3** A03 - default cooling stage 1
- 24V** 24V AC/DC Supply
- G0** GND
- 0-10V Analogue Inputs
- AI1** Analogue Input 1 (RI optional)
- AI2** Analogue Input 2 (RI optional)
- DI1** Digital Input (potential-free)
- Modbus / BACnet MS/TP
- A+** RS485 A+
- B-** RS485 B-

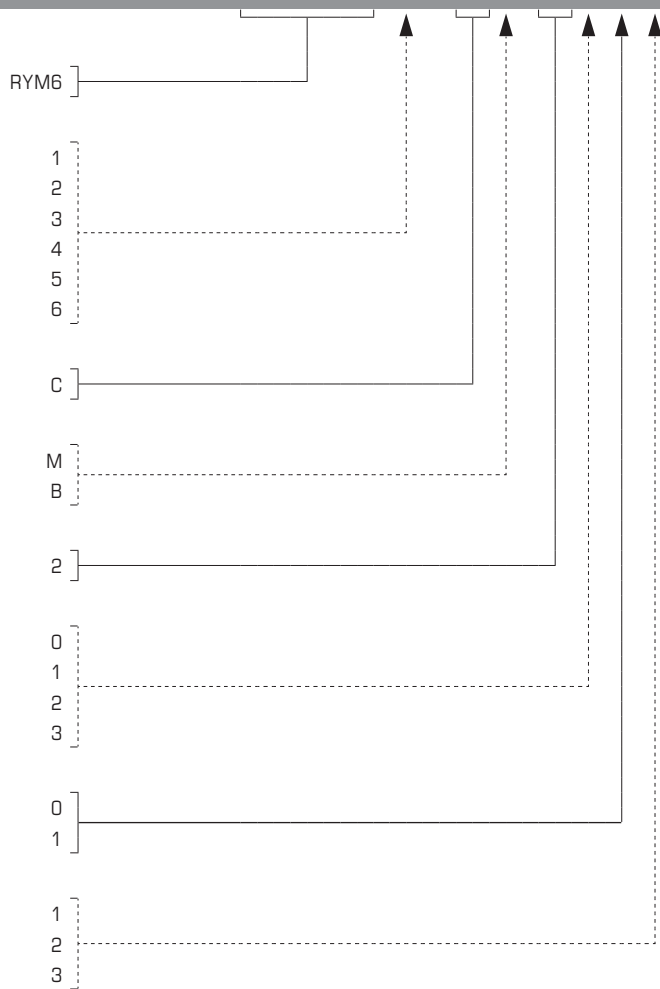


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RYMASKON® 600 Controller (series)
Number key for type versions

R Y M 6 - x 0 C x - 2 x x x - 0 0 0

- Pos. 1-4** Type name
RYMASKON 600
- Pos. 5** Channel configuration
Type 610 **2RI, 1DI, 3AO** (h,c,f)
Type 620 **1RI, 1DI, 2AO** (h,c), **3RO** (f) 0.5 A
Type 630 **1RI, 1DI, 2AO** (h,c), **3RO** (f) 7A
Type 640 **2RI, 1DI, 1AO** (f), **2DO** (h, c, PMW)
Type 650 **2RI, 1DI, 1AO** (EC-f), **4RO** (h,c,f) 0.5 A
Type 660 **2RI, 1DI, 2DO** (h, c, PMW), **3RO** (f) 7 A
- Pos. 7** Device type
Controller
- Pos. 8** Communication
Modbus
BACnet
- Pos. 9** Voltage supply
24 V AC/DC
- Pos. 10** Additional measuring elements
without *
RH (rel. humidity)
CO2 (carbon dioxide)
RH + CO2
- Pos. 11** Extra options
without
AI instead of **RI**
- Pos. 12** Housing colour
black
white
chrome



Pos. 5	RI Resistance input (NTC10K)	(h) Heating	Pos. 10 *	The temperature sensor forms part of the basic equipment and is included in the option "without" additional measuring elements.
	RO Relay output (0.5 A / 7 A)	(c) Cooling		
	AI Analogue input (0...10 V DC) instead of RI	(f) Fan		
	AO Analogue output (0...10 V DC)	(EC-f) EC fan		
	DI Digital input (potential-free)	(PMW) Pulse Width Modulation		
	DO Digital output (potential-free)			

Type 610 **Basic model** (see table on the right) available from stock – Freely configurable type versions available upon request!

RYMASKON® (basic model) Comparison table		Type 510 Thermostat	Type 610 Controller	Type 710 Interface
Outputs	Relay output for heating/cooling	1	–	Bus
	Analogue output (0–10 V) Heating/cooling 6-way valves, fans	–	3	Bus
Function	Sun protection (max. 2 zones)	●	●●	●●
	Light / room lighting (1 zone)	–	●	●
	Air Conditioning (1 zone)	●	–	●
Sensors	Temperature (°C)	●	●	●
	Humidity (% RH)	●	●	●
	CO2 (ppm)	–	○	○
Inputs	Digital input	1	1	1
	Analogue input (0–10 V)	–	2	–
	Resistance input (NTC10K)	2	–	2

○ = optional



NEW

S+S REGELTECHNIK

RYMASKON® 600 Controller

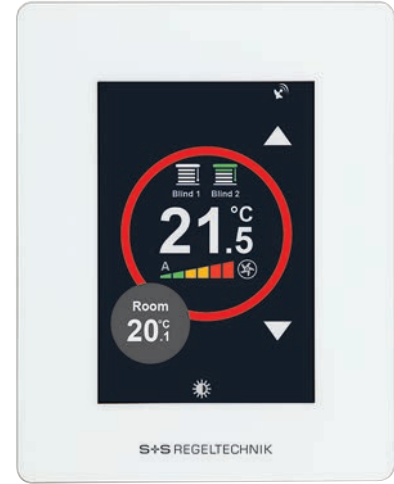
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KEY FEATURES

Basic model type 610

RYMASKON® 600
Home Screen

- 24 V AC/DC voltage supply
- 3.5 inch touch display with background lighting
- Modbus or BACnet
- Wall mounting on standard in-wall flush boxes
- Integrated temperature sensor (basic equipment)
- Integrated humidity sensor
- Integrated CO2 sensor (optional)
- Regulation of heating, cooling, fan directly through analogue outputs (0...10 V)
- Operation of temperature, fan, light (1 zone) and sun protection (2 zones) via touch display
- 3 analogue outputs (0...10 V) for controlling heating/cooling valves and EC motor
- 2 analogue inputs (0...10 V) for external sensors
- 1 digital input (potential-free)
- Operating modes Comfort (Normal), OFF, Party (Boost), ECO, Frost Protection



RYMASKON® 610		Controller (basic model), room control unit with touch display					
Type / WG02	Communication	Measuring element	Control system	Colour	Display	Item No.	Price
RYMASKON® 610-Modbus							
Rymaskon 612-MOD-RH-AI	Modbus	T RH	T V 2S L	white	■	RYM6-10CM-2112-000	376,92 €
Rymaskon 612-MOD-RH-CO2-AI	Modbus	T RH CO2	T V 2S L	white	■	RYM6-10CM-2312-000	538,92 €
RYMASKON® 610-BACnet							
Rymaskon 612-BAC-RH-AI	BACnet	T RH	T V 2S L	white	■	RYM6-10CB-2112-000	376,92 €
Rymaskon 612-BAC-RH-CO2-AI	BACnet	T RH CO2	T V 2S L	white	■	RYM6-10CB-2312-000	538,92 €
Measuring element / control system:	T = Temperature sensor (basic equipment) RH = Humidity sensor CO2 = Carbon dioxide sensor		T = Temperature V = Fan S = Sun protection (2 zones) L = Light				
Channel configuration:	2AI 2 analogue inputs (0–10 V DC) instead of 2RI 1DI 1 digital input (potential-free) 3AO 3 analogue outputs (0–10 V DC) for heating, cooling, fan						
Optional:	More type versions available upon request! For configuration options, see number key (left).						
ACCESSORIES							
RYMASKON® USB Configuration Tool							
RYMASKON USB_CT	For quick transfer of the device configuration from the PC to all devices in the building					1901-51Z3-0002-000	139,32 €

