

BACnet Objects

RYMASKON[®] 1000 Interface & Controller

Interface/Room Controller for controlling temperature, fans, light and sun protection (2 zones)

Room control unit with colour TFT display and capacitive keys (touch keys), RS485 interface, galvanically isolated, BACnet (MS/TP) or W-BACnet (Wireless)



BACnet Protocol Implementation Conformance Statement

Date	12.06.2026
Vendor Name	S+S Regeltechnik GmbH, Vendor ID 1454
Product Name	Rymaskon 1000
Product Model Number	RYM1xx (various article numbers)
Application Software Version	2.00.1
Firmware Revision	2.00.1
BACnet Protocol Revision	24



Product Description

The RYMASKON® series room control units were developed for controlling temperature, fans, sun protection and lighting including dimming function - i.e. for room automation. Whether office, doctor's office, gastronomy, hotel or private rooms - building automation with Rymaskon® is versatile and smart.

BACnet Standardized Device Profiles Supported (Annex L)

BACnet Application Specific Controller (B-ASC)

BACnet Interoperability Building Blocks Supported (Annex K)

DS-RP-B	Data Sharing-ReadProperty-B
DS-RPM-B	Data Sharing-ReadPropertyMultiple-B
DS-WP-B	Data Sharing-WriteProperty-B
DS-COV-B	Data Sharing-Change Of Value-B
DM-DDB-B	Device Management-Dynamic Device Binding-B
DM-DOB-B	Device Management-Dynamic Object Binding-B
DM-DCC-B	Device Management-DeviceCommunicationControl-B
DM-RD-B	Device Management ReinitializeDevice-B

Segmentation Capability

Device is not able to transmit segmented messages.
Device is not able to receive segmented messages.

Standard Object Types Supported

Device

Dynamically creatable using the CreateObject service	No
Dynamically deletable using the DeleteObject service	
Supported optional properties	Location Description Max_Master Max_Info_Frames Active_COV_Subscriptions Last_Restart_Reason Time_Of_Device_Restart
Writeable properties not otherwise required by this standard	not available
Conditionally writable properties not otherwise required by this standard	
Proprietary properties	
Property range restrictions	

Analog Input

Dynamically creatable using the CreateObject service	No
Dynamically deletable using the DeleteObject service	
Supported optional properties	Description Min_Pres_Value Max_Pres_Value Resolution COV_Increment
Writeable properties not otherwise required by this standard	not available
Conditionally writable properties not otherwise required by this standard	
Proprietary properties	
Property range restrictions	see Annex Object Table AI

Analog Value

Dynamically creatable using the CreateObject service	No
Dynamically deletable using the DeleteObject service	
Supported optional properties	Description Min_Pres_Value Max_Pres_Value Resolution
Writeable properties not otherwise required by this standard	not available
Conditionally writable properties not otherwise required by this standard	
Proprietary properties	
Property range restrictions	see Annex Object Table AV

Binary Input

Dynamically creatable using the CreateObject service	No
Dynamically deletable using the DeleteObject service	
Supported optional properties	Description
Writeable properties not otherwise required by this standard	not available
Conditionally writable properties not otherwise required by this standard	
Proprietary properties	
Property range restrictions	

Binary Value

Dynamically creatable using the CreateObject service	No
Dynamically deletable using the DeleteObject service	
Supported optional properties	Description
Writeable properties not otherwise required by this standard	not available
Conditionally writable properties not otherwise required by this standard	
Proprietary properties	
Property range restrictions	

CharacterString Value

Dynamically creatable using the CreateObject service	No
Dynamically deletable using the DeleteObject service	
Supported optional properties	Description
Writeable properties not otherwise required by this standard	not available
Conditionally writable properties not otherwise required by this standard	
Proprietary properties	
Property range restrictions	

Datetime Value

Dynamically creatable using the CreateObject service	No
Dynamically deletable using the DeleteObject service	
Supported optional properties	Description
Writeable properties not otherwise required by this standard	not available
Conditionally writable properties not otherwise required by this standard	
Proprietary properties	
Property range restrictions	

Integer Value

Dynamically creatable using the CreateObject service	No
Dynamically deletable using the DeleteObject service	
Supported optional properties	Description Min_Pres_Value Max_Pres_Value Resolution
Writeable properties not otherwise required by this standard	not available
Conditionally writable properties not otherwise required by this standard	
Proprietary properties	
Property range restrictions	see Annex Object Table IV

Time Value

Dynamically creatable using the CreateObject service	No
Dynamically deletable using the DeleteObject service	
Supported optional properties	Description
Writeable properties not otherwise required by this standard	not available
Conditionally writable properties not otherwise required by this standard	
Proprietary properties	
Property range restrictions	

Network Port

Dynamically creatable using the CreateObject service	No
Dynamically deletable using the DeleteObject service	
Supported optional properties	Description Link_Speeds MAC_Address Network Number Max_Info_Frames Max_Master
Writeable properties not otherwise required by this standard	not available
Conditionally writable properties not otherwise required by this standard	
Proprietary properties	
Property range restrictions	

BACnet Data Link Layer Options

MS/TP master (Clause 9)	
	Master
	isolated transceiver
	No internal bias resistors or termination
	Transceiver unit loading: 1/8
	Data rates: 9600, 19200, 38400 (default) , 57600, 76800, 115200

Device Address Binding

Static device binding is not supported

Networking Options

N/A

Character Sets Supported

ISO 10646 (UTF-8)

Gateway Options

N/A

Annex:

Annex Object Table AI

Analog Input Data Values

Supports COV

ID	Name	Description	r/w	Range of Present Value
Sensor input				
1	AI:TempS1Int_Value_1	Temp Sensor 1 int. value	r	-20...50°C (0...122,0 °F)
2	AI:HumS1Int_Value_2	Humidity Sensor 1 int. Value	r	0 to 100.0 % RH
3	AI:CO2S1Int_Value_3	CO2 Sensor 1 int. value	r	0...2000 ppm
4	AI:VOCS1Int_ppb_Value_4	VOC Sensor 1 int. value ppb	r	0...30000 ppb
5	AI:VOCS1Int_%_Value_5	VOC Sensor 1 int.value %	r	0...100 %
7	AI:TempS2Ext_Value_7	Temp Sensor 2 ext. value	r	-20...50°C (0...122,0 °F)
11	AI:D1Input_Status_11	D1 Input Status	r	0 = D11 open (default) 1 = D11 closed
12	AI:D2Input_Status_12	D2 Input Status	r	0 = D12 open (default) 1 = D12 closed
Room climate input				
8	AI:Setpoint_Temp_Absolut_8	Temp Setpoint Absolute	r	-18...60°C (0...140°F)
9	AI:OpMode_Status_9	OpMode Status	r	0 = Off (default) 1 = Cooling 2 = Heating
10	AI:Setpoint_Fan_Level_10	Fan Level	r	0 = Off 1 = Level 1 (Default) 2 = Level 2 3 = Level 3 4 = Level 4 5 = Level 5
Sun protection input				
13	AI:SP1_KeyStatus_13	Sun protect 1 key status	r	0 = Button not pressed (default) 1 = DOWN button pressed briefly 2 = DOWN button pressed and held down 3 = UP button pressed briefly 4 = UP button pressed and held down 5 = DOWN button pressed (only mode hold key) 6 = UP button pressed (only mode hold key)
14	AI:SP1_Position_Value_14	Sun protect 1 position value	r	0.0...100.0 % (default 0%)
15	AI:SP1_Angle_Value_15	Sun protect 1 angle value	r	-180°...180° (default 0°)
16	AI:SP2_KeyStatus_16	Sun Protest 2 key status	r	0 = Button not pressed (default) 1 = DOWN button pressed briefly 2 = DOWN button pressed and held down 3 = UP button pressed briefly 4 = UP button pressed and held down 5 = DOWN button pressed (only mode hold key) 6 = UP button pressed (only mode hold key)
17	AI:SP2_Position_Value_17	Sun protect 2 position value	r	0.0...100.0 % (default 0%)
18	AI:SP1_Angle_Value_15	Sun protect 2 angle value	r	-180°...180° (default 0°)

Analog Input Data Values

Supports COV

ID	Name	Description	r/w	Range of Present Value
Light input				
73	Al:L1_KeyStatus_73	Light 1 key status	r	0 = Button not pressed (default) 1 = DOWN button pressed briefly 2 = DOWN button pressed and held down 3 = UP button pressed briefly 4 = UP button pressed and held down 5 = DOWN button pressed (only mode hold key) 6 = UP button pressed (only mode hold key)
74	Al:L1_DimmValue_74	Light 1 dimm value	r	0...100 % (default 0%)
79	Al:L2_KeyStatus_79	Light 2 key status	r	0 = Button not pressed (default) 1 = DOWN button pressed briefly 2 = DOWN button pressed and held down 3 = UP button pressed briefly 4 = UP button pressed and held down 5 = DOWN button pressed (only mode hold key) 6 = UP button pressed (only mode hold key)
80	Al:L2_DimmValue_80	Light 2 dimm value	r	0...100 % (default 0%)
Input Controller				
193	Al:ChangeOver_Status_193	Change-Over Status The Change-Over status indicates whether the controllers are in the externally enforced heating or cooling mode or whether this mode is inactive.	r	0 = Change-Over inactive (default) 1 = Cooling Mode (Heating blocked) 2 = Heating Mode (Cooling blocked)
198	Al:ContrOpMode_Setpoint_198	Controller OpMode The Controller OpMode parameter is used to set how the outputs are controlled by the internal controller.	r	0 = OFF 1 = Cooling Auto (Heating blocked) 2 = Heating Auto (Cooling deaktiviert) 3 = Cooling and Heating Auto
199	Al:AO_OutHeat_BMSContr_199	AO Output Heating BMS Contr. With this register value, the BMS can define the output value itself.	r	0...10V -1 = internal controller active (default)
200	Al:AO_OutCool_BMSContr_200	AO Output Cooling BMS Contr. With this register value, the BMS can define the output value itself.	r	0...10V -1 = internal controller active (default)
201	Al:AO_Out6WayValve_BMSContr_201	AO Output 6-Way-Valve BMS Contr With this register value, the BMS can define the output value itself.	r	0...10V -1 = internal controller active (default)
202	Al:RODO_OutHeat_BMSContr_202	RO/DO Output Heating BMS Contr. With this register value, the BMS can define the output value itself.	r	0 = RO / DO Heating open 1 = RO / DO Heating closed -1 = internal controller active (default)
203	Al:RODO_OutCool_BMSContr_203	RO/DO Output Cooling BMS Contr. With this register value, the BMS can define the output value itself.	r	0 = RO / DO Cooling open 1 = RO / DO Cooling closed -1 = internal controller active (default)
204	Al:AO_OutFan_BMSContr_204	AO Output Fan BMS Contr. With this register value, the BMS can define the output value itself.	r	0...10V -1 = internal controller active (default)

Analog Input Data Values

Supports COV

ID	Name	Description	r/w	Range of Present Value
205	AI:RODO_OutFan_BMSContr_205	RO/DO Output Fan BMS Contr. With this register value, the BMS can define the output value itself.	r	0 = OFF 1 = Level 1 2 = Level 2 3 = Level 3 -1 = internal controller active (default)
206	AI:Controller_Setpoint_Temp_206	Controller Setpoint Temp The active control setpoint from the active controller is written here.	r	0...122,0 °C/°F
207	AI:AO_Heat_Value_207	AO Heating	r	0...10V
208	AI:AO_Cool_Value_208	AO Cooling	r	0...10V
209	AI:AO_6WayValve_Value_209	AO 6-Way-Valve	r	0...10V
210	AI:RODO_Heat_Value_210	RO/DO Heating	r	0 = open 1 = closed
211	AI:RODO_Cool_Value_211	RO/DO Cooling	r	0 = open 1 = closed
212	AI:AO_Fan_Value_212	AO Fan	r	0...10V
213	AI:RODO_Fan_Level_212	RODO Fan	r	0 = all Relays open (fan off) 1 = Relay 1 closed (fan level 1) 2 = Relay 2 closed (fan level 2) 3 = Relay 3 closed (fan level 3)

Annex Object Table AV

Analog Value Data values

ID	Name	Description	r/w	Range of Present Value
Sensor data				
100	AV:TempS1Int_Value_100	Temp Sensor 1 int. value	r	-20.0...50.0°C (0.0...122.0 °F)
101	AV:HumS1Int_Value_101	Humidity Sensor 1 int. Value	r	0.0...100.0 % RH
102	AV:CO2S1Int_Value_102	CO2 Sensor 1 int. value	r	0...2000 ppm
103	AV:VOCS1Int_ppb_Value_103	VOC Sensor 1 int. value ppb	r	0...2383 ppb
104	AV:VOCS1Int_%_Value_104	VOC Sensor 1 int.value %	r	0...100 %
106	AV:TempS2Ext_Value_106	Temp Sensor 2 ext. value	r	-20.0...50.0°C (0.0...122.0 °F)
120	AV:TempS3Bus_Value_120	Temp Sensor 3 bus value	r/w	-20.0...50.0°C (0.0...122.0 °F)
121	AV:HumS3Bus_Value_121	Humidity Sensor 2 bus value	r/w	0.0...100.0 % RH
122	AV:CO2S2Bus_Value_122	CO2 Sensor 2 bus value	r/w	0...5000 ppm
123	AV:VOCS2Bus_Value_123	VOC Sensor 2 bus value	r/w	0...60000 ppb
124	AV:PMS2Bus_Value_124	PM Sensor 2 bus value	r/w	0...1000 µg/m³
125	AV:PressureS2Bus_Value_125	Pressure Sensor 2 bus value Unit is set via address 2816	r/w	mbar, hPa und Pa 0...10000 inWC 0...500
Room climate data				
400	AV:Setpoint_Temp_400	Temp Setpoint (Default changes automatically when the temperature unit is set in address 2010)	r/w	-20.0...50.0°C (0.0...122.0 °F) default 21.0°C (70.0°F)
401	AV:Setpoint_Temp_Offset_401	Temp Setpoint Offset	r/w	-18.0...18.0 °C/°F (default 0 °C/°F)
402	AV:Setpoint_Temp_Absolut_402	Temp Setpoint Absolute (Temp Setpoint + Temp Setpoint Offset)	r	-18.0...140.0 °C/°F
403	AV:Setpoint_Temp_Offset_MinMax_403	Temp Setpoint Offset Min-Max (Default changes automatically when the temperature unit is set in address 2010) The set value applies in both positive and negative directions.	r/w	0.0...18.0 °C/°F (default 3°C / 6°F)
Sun protection data				
721	AV:SP1_Position_Value_721	Sun protect 1 position value	r/w	0.0...100.0 % (default 0%)
722	AV:SP1_Angle_Value_722	Sun protect 1 angle value	r/w	-180°...180° (default 0°)
731	AV:SP2_Position_Value_731	Sun protect 2 position value	r/w	0.0...100.0 % (default 0%)
732	AV:SP2_Angle_Value_732	Sun protect 2 angle value	r/w	-180°...180° (default 0°)

Light data				
1121	AV:L1_Dimm_Value_1121	Light 1 dimm value	r/w	0...100 % (default 0%)
1131	AV:L2_Dimm_Value_1131	Light 2 dimm value	r/w	0...100 % (default 0%)
Data control - Controller variants only (RYM 13xxC and RYM 14xxC)				
1608	AV:AO_OutHeat_BMSContr_1608	AO Output Heating BMS Contr. Controller with 0-10V outputs for heating/cooling If the BMS takes over the AO Heating output, the operating mode (heating/cooling) for the display must be specified in address 404.	r/w	0...10V -1 = internal controller active (default)
1609	AV:AO_OutCool_BMSContr_1609	AO Output Cooling BMS Contr. Controller with 0-10V outputs for heating/cooling If the BMS takes over the AO cooling output, the operating mode (heating/cooling) for the display must be specified in address 404.	r/w	0...10V -1 = internal controller active (default)
1610	AV:AO_Out6WayValve_BMSContr_1610	AO Output 6-Way-Valve BMS Contr. Controller with 0-10V outputs for 6-way valve. If the BMS takes over the AO 6-way valve output, the operating mode (heating/cooling) for the display must be specified in address 404.	r/w	0...10V -1 = internal controller active (default)
1613	AV:AO_OutFan_BMSContr_1613	AO Output Fan BMS Contr. Controller with 0-10V outputs for fans If the BMS takes over the AO fan output, the fan operating mode and fan speed for the display must be specified in addresses 406 and 407. The fan buttons on the device remain active. Pressing the buttons causes a change in 406 and 407, but no change to the fan outputs.	r/w	0...10V -1 = internal controller active (default)
1616	AV:Controller_Setpoint_Temp_1616	Controller Setpoint Temp (TSetpoint Contr) The controller setpoint is written here from the active controller.	r	0...122,0 °C/°F (default 21°C / 70°F)
1617	AV:AO_Heat_Value_1617	AO Heating	r	0...10V
1618	AV:AO_Cool_Value_1618	AO Cooling	r	0...10V
1619	AV:AO_6WayValve_Value_1619	AO 6-Way-Valve	r	0...10V
1622	AV:AO_Fan_Value_1622	AO Fan	r	0...10V

Analog Value Configuration values

Parameters of the configuration values are stored in the non-volatile memory (EEPROM).
These parameters may only be changed while the device is being configured and not during operation.
These values are retained after the unit is restarted.

ID	Name	Description	r/w	Range of Present Value
Sensor configuration				
2312	AV:TempS1Int_Offset_2312	Temp Sensor 1 int. Offset	r/w	-20°...+20° (default 0)
2314	AV:TempS1Int_ColourScale_Start_2314	Temp Sensor 1 int. Colour Scale Start (Default changes automatically when the temperature unit is set in address 2010)	r/w	0...122,0 °C/°F (default 16°C / 61°F)
2315	AV:TempS1Int_ColourScale_End_2315	Temp Sensor 1 int. Colour Scale End (Default changes automatically when the temperature unit is set in address 2010)	r/w	0...122,0 °C/°F (default 24°C / 82°F)
2412	AV:HumS1Int_Offset_2412	Humidity Sensor 1 int. Offset	r/w	-20...+20 % (default 0)
2414	AV:HumS1Int_ColourScale_Start_2414	Humidity Sensor 1 int. Colour Scale Start	r/w	0...100.0 % RH (default 0)
2415	AV:HumS1Int_ColourScale_End_2415	Humidity Sensor 1 int. Colour Scale End	r/w	0...100.0 % RH (default 100)
2512	AV:CO2S1Int_Offset_2512	CO2 Sensor 1 int. Offset	r/w	-500...+500 ppm (default 0)
2514	AV:CO2S1Int_ColourScale_Start_2514	CO2 Sensor 1 int. Colour Scale Start	r/w	0...2000 ppm (default 0)
2515	AV:CO2S1Int_ColourScale_End_2515	CO2 Sensor 1 int. Colour Scale End	r/w	0...2000 ppm (default 2000)
2614	AV:VOCS1Int_ColourScale_Start_2614	VOC Sensor 1 int. Colour Scale Start	r/w	0...100 % (default 0%)
2615	AV:VOCS1Int_ColourScale_End_2615	VOC Sensor 1 int. Colour Scale End	r/w	0...100 % (default 100%)
2912	AV:TempS2Ext_Offset_2912	Temp Sensor 2 ext. Offset	r/w	-20°...+20° (default 0)
2914	AV:TempS2Ext_ColourScale_Start_2914	Temp Sensor 2 ext. Colour Scale Start (Default changes automatically when the temperature unit is set in address 2010)	r/w	0...122,0 °C/°F (default 16°C / 61°F)
2915	AV:TempS2Ext_ColourScale_End_2915	Temp Sensor 2 ext. Colour Scale End (Default changes automatically when the temperature unit is set in address 2010)	r/w	0...122,0 °C/°F (default 24°C / 82°F)
3014	AV:TempS3Bus_ColourScale_Start_3014	Temp Sensor 3 bus Colour Scale Start (Default changes automatically when the temperature unit is set in address 2010)	r/w	0...122,0 °C/°F (default 16°C / 61°F)
3015	AV:TempS3Bus_ColourScale_End_3015	Temp Sensor 3 bus Colour Scale End (Default changes automatically when the temperature unit is set in address 2010)	r/w	0...122,0 °C/°F (default 24°C / 82°F)
3114	AV:HumS2Bus_ColourScale_Start_3114	Humidity Sensor 2 bus Colour Scale Start	r/w	0...100.0 % RH (default 0)
3115	AV:HumS2Bus_ColourScale_End_3115	Humidity Sensor 2 bus Colour Scale End	r/w	0...100.0 % RH (default 100)
3214	AV:CO2S2Bus_ColourScale_Start_3214	CO2 Sensor 2 bus Colour Scale Start	r/w	0...5000 ppm (default 0)
3215	AV:CO2S2Bus_ColourScale_End_3215	CO2 Sensor 2 bus Colour Scale End	r/w	0...5000 ppm (default 2000)
3314	AV:VOCS2Bus_ColourScale_Start_3314	VOC Sensor 2 bus Colour Scale Start	r/w	0...60000 (default 0)
3315	AV:VOCS2Bus_ColourScale_End_3315	VOC Sensor 2 bus Colour Scale End	r/w	0...60000 (default 100)

Analog Value Configuration values

Parameters of the configuration values are stored in the non-volatile memory (EEPROM).
These parameters may only be changed while the device is being configured and not during operation.
These values are retained after the unit is restarted.

ID	Name	Description	r/w	Range of Present Value
3414	AV:PMS2Bus_ColourScale_Start_3414	PM Sensor 2 bus Colour Scale Start	r/w	0...1000 µg/m³ (default 0)
3415	AV:PMS2Bus_ColourScale_End_3415	PM Sensor 2 bus Colour Scale End	r/w	0...1000 µg/m³ (default 1000)
3514	AV:PressureS2Bus_ColourScale_Start_3514	Pressure 2 bus Colour Scale Start	r/w	0...10000 (default = 1000 hPa)
3515	AV:PressureS2Bus_ColourScale_End_3515	Pressure 2 bus Colour Scale End	r/w	0...10000 (default = 1050 hPa)
Room climate configuration				
3603	AV:Setpoint_Temp_AfterReboot_3603	Temp Setpoint After Reboot (Default changes automatically when the temperature unit is set in address 2010) The configuration selected here specifies the Temp Setpoint in address 400 after the unit is restarted.	r/w	0...122,0 °C/°F (default 21°C / 70°F)
3604	AV:Setpoint_Temp_Offset_MinMax_AfterReboot_3604	Temp Setpoint Offset Min-Max After Reboot (Default changes automatically when the temperature unit is set in address 2010) Set value applies in both positive and negative directions The configuration selected here specifies the Temp Setpoint in address 403 after the unit is restarted.	r/w	0...18,0 °C/°F (default 3°C / 6°F)
Sun protection configuration				
4265	AV:SP1_PositionStepSize_4265	Sun Protect 1 Position Step Size	r/w	0.1... 100% (default 0.5%)
4266	AV:SP1_AngleStepSize_4266	Sun Protect 1 Angle Step Size	r/w	1... 90° (default 10°)
4267	AV:SP1_PositionMin_4267	Sun Protect 1 Position Min	r/w	0...100 % (default 0%)
4268	AV:SP1_PositionMax_4268	Sun Protect 1 Position Max	r/w	0...100 % (default 100%)
4269	AV:SP1_AngleMin_4269	Sun Protect 1 Angle Min	r/w	-90°...90° (default 0°)
4270	AV:SP1_AngleMax_4270	Sun Protect 1 Angle max	r/w	-90°...90° (default 80°)
4315	AV:SP2_PositionStepSize_4315	Sun Protect 2 Position Step Size	r/w	0.1... 100% (default 0.5%)
4316	AV:SP2_AngleStepSize_4316	Sun Protect 2 Angle Step Size	r/w	1... 90° (default 10°)
4317	AV:SP2_PositionMin_4317	Sun Protect 2 Position Min	r/w	0...100 % (default 0%)
4318	AV:SP2_PositionMax_4318	Sun Protect 2 Position Max	r/w	0...100 % (default 100%)
4319	AV:SP2_AngleMin_4319	Sun Protect 2 Angle Min	r/w	-90°...90° (default 0°)
4320	AV:SP2_AngleMax_4320	Sun Protect 2 Angle Max	r/w	-90°...90° (default 80°)
Light configuration				
5368	AV:L1_DimmStepSize_5368	Light 1 Dimm Step Size	r/w	1... 100% (default 10%)

Analog Value Configuration values

Parameters of the configuration values are stored in the non-volatile memory (EEPROM).
These parameters may only be changed while the device is being configured and not during operation.
These values are retained after the unit is restarted.

ID	Name	Description	r/w	Range of Present Value
5418	AV:L2_DimmStepSize_5418	Light 2 Dimm Step Size	r/w	1... 100% (default 10%)
Controller configuration				
8000	AV:Setpoint_TempShift_Unocc_8000	Setpoint_TempShift_Unocc_8000 When the Presence Status is unoccupied, the setpoint temperature (address 400) is increased (cooling mode, address 1600=1 or 1607=1) or decreased (heating mode, address 1600=2 or 1607=2) by this value. If the device is set to heating/cooling mode (1600 = 0 and 1607 = 3) and the presence status is set to unoccupied, the dead zone is set to twice this value. After returning to the presence status occupied, the original values for the setpoint temperature and dead zone are reactivated.	r/w	0...18 °C/F° (default 0°C / 0°F)
8006	AV:DeadBand_Comfort_8006	Dead Band Comfort (PI Temp Control Loop) Note: The dead zone only affects the control when the device is set to heating/cooling mode (1600 = 0 and 1607 = 3). (Default changes automatically when the temperature unit is set in address 2010).	r/w	0...27,0 °C/F° (default 1°C / 2°F)
8007	AV:DeadBand_ECO_8007	Dead Band ECO (PI Temp Control Loop) Note: The dead zone only affects the control when the device is set to heating/cooling mode (1600 = 0 and 1607 = 3). If ECO mode is activated, the dead zone of the controller is set to the value configured here. The setpoint offset remains unchanged as long as presence detection is not activated. (Default changes automatically when the temperature unit is set in address 2010).	r/w	0...27,0 °C/F° (default 4°C / 7°F)
8008	AV:Hyst_TempContr_8008	Hysteresis Temp Control (ON/OFF Temp Control Loop) (Default changes automatically when the temperature unit is set in address 2010)	r/w	0...27,0 °C/F° (default 1°C / 2°F)
8009	AV:PropBand_XpCool_8009	Proportional Band Xp Cooling (Default changes automatically when the temperature unit is set in address 2010)	r/w	0,1...27,0 °C/F° (default 2°C / 4°F)
8010	AV:ResetTime_Ti_Cool_8010	Reset Time Ti Cooling If the reset time is set to 0, the PI controller becomes a P controller.	r/w	0...1200 minutes (default 20 minutes)
8011	AV:ManipVarMin_Cool_8011	Manipulated Variable Min. Cooling	r/w	0...100% (default 0%)
8012	AV:ManipVarMax_Cool_8012	Manipulated Variable Max. Cooling	r/w	0...100% (default 100%)

8013	AV:PropBand_XpHeat_8013	Proportional Band Xp Heating (Default changes automatically when the temperature unit is set in address 2010)	r/w	0,1...27,0 °C/F° (default 2°C / 4 °F)
8014	AV:ResetTime_Ti_Heat_8014	Reset Time Ti Heating If the reset time is set to 0, the PI controller becomes a P controller.	r/w	0...1200 minutes (default 20 minutes)
8015	AV:ManipVarMin_Heat_8015	Manipulated Variable Min. Heating	r/w	0...100% (default 0%)
8016	AV:ManipVarMax_Heat_8016	Manipulated Variable Max. Heating	r/w	0...100% (default 100%)
8018	AV:Y_MinDev_PIContolLoop_8018	Y Min Deviation PI Temp Contol Loop Min. control variable change for PI in temperature control If the control variable change defined here between two control loops is not exceeded, the analogue output remains at the previous value. 0=inactive Note: Only applies to PI controllers	r/w	0...10 % (default 0,2 %)
8021	AV:6WayValveGen_Cool100%_8021	6-Way-Valve Generic Cooling 100%	r/w	0...10,0V (default 2,0 V)
8022	AV:6WayValveGen_Cool0%_8022	6-Way-Valve Generic Cooling 0%	r/w	0...10,0V (default 5,0 V)
8023	AV:6WayValveGen_Heat100%_8023	6-Way-Valve Generic Heating 100%	r/w	0...10,0V (default 7,0 V)
8024	AV:6WayValveGen_Heat0%_8024	6-Way-Valve Generic Heating 0 %	r/w	0...10,0V (default 10,0 V)
8029	AV:RODO_MinRuntime_HeatCool_8029	RODO Min. Runtime Heat/Cool (Heat pump function) This parameter only applies in ON/OFF control. The digital heating or cooling output RO/DO remains in the ON state for the minimum running time after switching on, regardless of the heating or cooling output of the controller. If a switchover between heating and cooling occurs during active monitoring of the minimum running time, the outputs are switched over immediately and monitoring of the running time is restarted. 0 = Function deactivated	r/w	0...120 minutes (default 0 minutes)
8030	AV:DelaySwitch_Heat/Cool_8030	Delay Switch Heat/Cool (Heat pump function) The switch between the two control sequences, heating and cooling, is delayed. The heating or cooling output is only enabled after the time has elapsed. 0 = Function deactivated	r/w	0...900 s (default 0s)
8032	AV:AO_FanMin_8032	AO Fan Min. Note: If a value > 0 is selected, the fan will blow even without a heating/cooling or RCV request.	r/w	0...10V (default 0V)
8033	AV:AO_FanMax_8033	AO Fan Max.	r/w	0...10V (default 10V)

8034	AV:Fan_ManipVar_Start_8034	Fan Manipulated Variable Start Heating/cooling or RCV output at which the fan should start.	r/w	0-30 % (default 0%)
8035	AV:Fan_StartUpTime_8035	Fan StartUp Time For safe fan start-up. The fan runs at 100% from standstill for the duration of the start-up time. After that, the fan is controlled via the controller or via the Modbus specification. Note: The function is deactivated with 0s.	r/w	0...25s (default 1s)
8036	AV:Fan_FollwUpTime_8036	Fan FollwUp Time When the controller switches from an active controller state (heating/cooling) to standby mode, or when a user or the BMS switches off the fan, the fan continues to run for the set follow-up time. Note: The function is deactivated with 0s.	r/w	0...500s (default 1s)
8037	AV:FanGradient_AO_8037	Fan Gradient AO Only applies to ON/OFF control of heating and cooling output. (Default changes automatically when the temperature unit is set in address 2010) When the ON/OFF controller is active, the value parameterised here is the deviation of the setpoint from the actual value at which the fan output reaches 100%. Below this value, the fan output is calculated linearly to the deviation.	r/w	0...36 °C/°F (default 4°C / 7°F)
8038	AV:DeltaT_FanLevel1RO_8038	Delta T Fan Level 1 RO (Difference between setpoint and current temperature) Please note: - If the value is set to 0, the fan starts running as soon as a heating or cooling request is made. - If the value is set to > 0, the fan does not start when a heating or cooling request occurs, but only when the difference between the setpoint and current temperature configured here is reached (+0.3° hysteresis). Only applies to controllers with relays for fans Address 2000 = 1004 (if the temperature unit is set to °F, the limit may need to be adjusted here)	r/w	0...36 °C/°F (default 0°C / 0°F)
8039	AV:DeltaT_FanLevel2RO_8039	Delta T Fan Level 2 RO (Difference between setpoint and current temperature) Only applies to controllers with relays for fans Address 2000 = 1004 (Default changes automatically when temperature unit is set to °F – deviating entries must be re-entered after C/F change)	r/w	0...36 °C/°F (default 2°C / 4°F)

8040	AV:DeltaT_FanLevel3RO_8040	Delta T Fan Level 3 RO (Difference between setpoint and current temperature) Only applies to controllers with relays for fans Address 2000 = 1004 (Default changes automatically when temperature unit is set to °F – deviating entries must be re-entered after C/F change)	r/w	0...36 °C/°F (default 4°C / 7°F)
8041	AV:Frost_Protection_8041	Frost Protection (Default changes automatically when temperature unit is set to °F – deviating entries must be re-entered after C/F change)	r/w	0...60,0 °C/°F (default 8°C / 46°F)
8042	AV:Heat_Protection_8042	Heat Protection (Default changes automatically when temperature unit is set to °F – deviating entries must be re-entered after C/F change)	r/w	0...140,0 °C/°F (default 35°C / 95°F)
8045	AV:2.ContrLoop_PropBandXp_8045	2. Control Loop Proportional Band Xp (Default changes automatically when the temperature unit is set in address 2010)	r/w	0,1...27,0 °C/°F° (default 2°C / 4°F)
8046	AV:2.ContrLoop_ResTimeTi_8046	2. Control Loop Reset Time Ti If the reset time is set to 0, the PI controller becomes a P controller.	r/w	0...1200 minutes (default 20 minutes)
8047	AV:2.ContrLoop_ManipVariableMin_8047	2. Control Loop Manipulated Variable Min	r/w	0...100% (default 0%)
8048	AV:2.ContrLoop_ManipVariableMax_8048	2. Control Loop Manipulated Variable Max	r/w	0...100% (default 100%)
8049	AV:2.ContrLoop_SetTempOffset_8049	2. Control Loop Setpoint Temp Offset Defines the setpoint temperature of the second control loop from the setpoint temperature of the first control loop using this offset.	r/w	-25,0...25,0 °C/°F (default 0°C / 0°F)
8051	AV:UnderfloorHeatProtection_Limit_8051	Underfloor Heat Protection Limit Limit value for switching off the heating output (Default changes automatically when the temperature unit is set in address 2010)	r/w	0...122,0 °C/°F (default 34°C / 93°F)
8052	AV:Anti-Jam_8052	Anti-Jam (Valve Protection) If the heating/cooling valves are not activated during the set time, the device briefly activates the valves to prevent them from sticking. The heating and cooling output is activated for 5 minutes (valve open). The 6-way valve is set to 10V for 5 minutes and then to 0V for 5 minutes (0=deactivated).	r/w	0... 60 days (default 3 days)

8055	AV:CangeOver_TempCooling_8055	Cange-Over Temp Cooling Note: The Change-Over DI / Temp parameter (address 8054) must be configured to external temperature sensor or bus temperature. At the value set here (or lower), the device automatically switches the change-over to cooling mode (address 1600 = 1). (Default changes automatically when the temperature unit is set in address 2010)	r/w	0...122,0 °C/°F (default 22°C / 72°F)
8056	AV:CangeOver_TempHeating_8056	Change-Over Temp Heating Note: The Change-Over DI / Temp parameter (address 8054) must be configured to external temperature sensor or bus temperature. At the value set here (or higher), the device automatically switches the change-over to heating mode (address 1600 = 2). (Default changes automatically when the temperature unit is set in address 2010)	r/w	0...122,0 °C/°F (default 25°C / 77°F)
8200	AV:Setpoint_RCV_8200	Setpoint RCV	r/w	0...30.000 (default 1000)
8202	AV:PropBand_XpRCV_8202	Proportional Band Xp RCV	r/w	1...10.000 (default 100)
8203	AV:ResetTime_Ti_RCV_8203	Reset Time Ti RCV If the reset time is set to 0, the PI controller becomes a P controller.	r/w	0...60.000 s (default 420 s)
8204	AV:Hyst_RCVContr_8204	Hysteresis RCV Control	r/w	0...30.000 (default 50)
8205	AV:DeltaRCV_FanLevel1RO_8205	Delta RCV Fan Level 1 RO (Difference between setpoint and current RCV) 0: Fan stage 1 is switched on as soon as (setpoint - current) > 0 Only applies to controllers with RO/DO outputs for fans	r/w	0...30.000 (default 0)
8206	AV:DeltaRCV_FanLevel2RO_8206	Delta RCV Fan Level 2 RO (Difference between setpoint and current RCV) Only applies to controllers with RO/DO outputs for fans	r/w	0...30.000 (default 100)
8207	AV:DeltaRCV_FanLevel3RO_8207	Delta RCV Fan Level 3 RO (Difference between setpoint and current RCV) Only applies to controllers with RO/DO outputs for fans	r/w	0...30.000 (default 200)
8209	AV:YRCV_MinDev_PIControlLoop_8209	Y_RCV Min Deviation PI Control Loop Min. control variable change PI for RCV control loop If the control variable change defined here between two control loops is not exceeded, the analogue output remains at the previous value. 0=inactive Note: Only applies to PI controllers	r/w	0...50 % (default 5 %)

Annex Object Table BI

Binary Input Object Data values				
Supports COV				
ID	Name	Description	r/w	Range of Present Value
Room climate coils				
1	BI:Presence_Status_1	Presence Status	r	0 = unoccupied 1 = occupied (default)
2	BI:HeaderIconStatus_FrostProtection_2	Header Icon Frost Protection	r	0 = inactive (default) 1 = active
3	BI:HeaderIconStatus_WindowContact_3	Header Icon Window Contact	r	0 = inactive (default) 1 = active
4	BI:HeaderIconStatus_DewPoint_4	Header Icon Dew Point (condensation)	r	0 = inactive (default) 1 = active
5	BI:HeaderIconStatus_ECO_5	Header Icon ECO	r	0 = inactive (default) 1 = active
6	BI:HeaderIconStatus_Error_6	Header Icon Error	r	0 = inactive (default) 1 = active
7	BI:HeaderIconStatus_ConfigMode_7	Header Icon Config Mode	r	0 = inactive (default) 1 = active

Annex Object Table BV

Binary value Object Data values				
ID	Name	Description	r/w	Range of Present Value
Room climate coils				
12	BV:RCBBMS_Temp_Lock_12	Temp Lock (active Temp Lock deactivated touch keys)	r/w	0 = inactive (default) 1 = active
13	BV:RCBBMS_Fan_Lock_13	Fan Lock (active Fan Lock deactivated touch keys)	r/w	0 = inactive (default) 1 = active
14	BV:RCBBMS_Presence_Lock_14	Presence Lock (active Presence Lock deactivated touch keys)	r/w	0 = inactive (default) 1 = active
196	BV:Fan_AutoMode_196	Fan Auto Mode Manual/Auto activation through: a) touch keys on unit (Manual = off or 1-5 , Auto = A) b) BMS	r/w	0 = Manual 1 = Auto (default)
199	BV:Enable_PresenceDI_199	Presence Enable DI (Default is set via 3801)	r/w	0 = disable 1 = enable
200	BV:HeaderIconModbus_FrostProtection_200	Icon Modbus frost protection	r/w	0 = inactive (default) 1 = active
201	BV:HeaderIconModbus_WindowContact_201	Icon Modbus window contact	r/w	0 = inactive (default) 1 = active
202	BV:HeaderIconModbus_DewPoint_202	Icon Modbus dew point (condensation)	r/w	0 = inactive (default) 1 = active
203	BV:HeaderIconModbus_ECO_203	Icon Modbus ECO	r/w	0 = inactive (default) 1 = active
204	BV:HeaderIconModbus_Error_204	Icon Modbus Error	r/w	0 = inactive (default) 1 = active
205	BV:HeaderIconModbus_ConfigMode_205	Icon Modbus Config Mode	r/w	0 = inactive (default) 1 = active
210	BV:Enable_FrostProtectionDI_210	Icon DI frost protection (Default is set via 3802)	r/w	0 = disable 1 = enable
211	BV:Enable_WindowContactDI_211	Icon DI window contact (Default is set via 3802)	r/w	0 = disable 1 = enable
212	BV:Enable_DewPointDI_212	Icon DI dew point (Default is set via 3802)	r/w	0 = disable 1 = enable
213	BV:Enable_ECODI_213	Icon DI ECO (Default is set via 3802)	r/w	0 = disable 1 = enable
214	BV:Enable_ErrorDI_214	Icon DI Error (Default is set via 3802)	r/w	0 = disable 1 = enable
Sun protection coils				
96	BV:SP1_AutoMode_96	Sun Protect 1 automatic (touch keys deactivated when automatic is active)	r/w	0 = automatic inactive (default) 1 = automatic active
97	BV:SP2_AutoMode_97	Sun Protect 2 automatic (touch keys deactivated when automatic is active)	r/w	0 = automatic inactive (default) 1 = automatic active
Light coils				
116	BV:L1_AutoMode_116	Light 1 automatic (touch keys deactivated when automatic is active)	r/w	0 = automatic inactive (default) 1 = automatic active
117	BV:L2_AutoMode_117	Light 2 automatic (touch keys deactivated when automatic is active)	r/w	0 = automatic inactive (default) 1 = automatic active
136	BV:L1_LightStatus_136	Light 1 status	r/w	0 = Light off (default) 1 = Light on
137	BV:L2_LightStatus_137	Light 2 status	r/w	0 = Light off (default) 1 = Light on

Annex Object Table CSV

Character String Value Object Configuration values

Parameters of the configuration register are stored in the non-volatile memory (EEPROM).
 These parameters may only be changed while the device is being configured and not during operation.
 These values are retained after the unit is restarted.

ID	Name	Description	r/w	Range of Present Value
Sensor configuration				
2300	CSV:TempS1Int_Label_2300	Temp Sensor 1 int. Label	r/w	Max. 12 characters. One register in UTF16 format, Latin and Cyrillic alphabet per character Default: German: Raum English: Room Spanish: Habitación French: Locaux Italian: Camera Russian: комната
2400	CSV:HumS1Int_Label_2400	Humidity Sensor 1 int. Label	r/w	Max. 12 characters. One register in UTF16 format, Latin and Cyrillic alphabet per character Default: German: Raum English: Room Spanish: Habitación French: Locaux Italian: Camera Russian: комната
2500	CSV:CO2S1Int_Label_2500	CO2 Sensor 1 int. Label	r/w	Max. 12 characters. One register in UTF16 format, Latin and Cyrillic alphabet per character Default: German: Raum English: Room Spanish: Habitación French: Locaux Italian: Camera Russian: комната
2600	CSV:VOCS1Int_Label_2600	VOC Sensor 1 int. Label	r/w	Max. 12 characters. One register in UTF16 format, Latin and Cyrillic alphabet per character Default: German: Raum English: Room Spanish: Habitación French: Locaux Italian: Camera Russian: комната
2900	CSV:TempS2Ext_Label_2900	Temp Sensor 2 ext. Label	r/w	Max. 12 characters. One register in UTF16 format, Latin and Cyrillic alphabet per character Default: German: Aussen English: Outdoor Spanish: Exterior French: extérieure Italian: esterna Russian: снаружи
3000	CSV:TempS3Bus_Label_3000	Temp Sensor 3 bus Label	r/w	Max. 12 characters. One register in UTF16 format, Latin and Cyrillic alphabet per character Default: German: Aussen English: Outdoor Spanish: Exterior French: extérieure Italian: esterna Russian: снаружи

Character String Value Object Configuration values

Parameters of the configuration register are stored in the non-volatile memory (EEPROM).
 These parameters may only be changed while the device is being configured and not during operation.
 These values are retained after the unit is restarted.

ID	Name	Description	r/w	Range of Present Value
3100	CSV:HumS2Bus_Label_3100	Humidity Sensor 2 bus Label	r/w	Max. 12 characters. One register in UTF16 format, Latin and Cyrillic alphabet per character Default: German: Aussen English: Outdoor Spanish: Exterior French: extérieure Italian: esterna Russian: снару́жи
3200	CSV:CO2S2Bus_Label_3200	CO2 Sensor 2 bus Label	r/w	Max. 12 characters. One register in UTF16 format, Latin and Cyrillic alphabet per character Default: German: Aussen English: Outdoor Spanish: Exterior French: extérieure Italian: esterna Russian: снару́жи
3300	CSV:VOCS2Bus_Label_3300	VOC Sensor 2 bus Label	r/w	Max. 12 characters. One register in UTF16 format, Latin and Cyrillic alphabet per character Default: German: Aussen English: Outdoor Spanish: Exterior French: extérieure Italian: esterna Russian: снару́жи
3400	CSV:PMS2Bus_Label_3400	PM Sensor 2 bus Label	r/w	Max. 12 characters. One register in UTF16 format, Latin and Cyrillic alphabet per character Default: German: Aussen English: Outdoor Spanish: Exterior French: extérieure Italian: esterna Russian: снару́жи
3500	CSV:PressureS2Bus_Label_3500	Pressure 2 bus Label	r/w	Max. 12 characters. One register in UTF16 format, Latin and Cyrillic alphabet per character Default: German: Aussen English: Outdoor Spanish: Exterior French: extérieure Italian: esterna Russian: снару́жи
Room climate configuration				
3750	CSV:Fan_Label_3750	Fan Label	r/w	Max. 12 characters. One register in UTF16 format, Latin and Cyrillic alphabet per character Default: German: Raum English: Room Spanish: Habitación French: Locaux Italian: Camera Russian: ко́мната

Sun protection configuration				
4250	CSV:SP1_Label_4250	Sun Protect 1 Label	r/w	Max. 12 characters. One register in UTF16 format, Latin and Cyrillic alphabet per character Default: German: Blind English: Blind Spanish: Persiana French: Store Italian: Persiana Russian: жалюзи
4300	CSV:SP2_Label_4300	Sun Protect 2 Label	r/w	Max. 12 characters. One register in UTF16 format, Latin and Cyrillic alphabet per character Default: German: Blind English: Blind Spanish: Persiana French: Store Italian: Persiana Russian: жалюзи
Light configuration				
5350	CSV:L1_Label_5350-5361	Light 1 Label	r/w	Max. 12 characters. One register in UTF16 format, Latin and Cyrillic alphabet per character Default: German: Licht English: Light Spanish: Luz French: Éclairage Italian: Luce Russian: свет
5400	CSV:L2_Label_5400	Light 2 Label	r/w	Max. 12 characters. One register in UTF16 format, Latin and Cyrillic alphabet per character Default: German: Licht English: Light Spanish: Luz French: Éclairage Italian: Luce Russian: свет

Annex Object Table DTV

Date time value objects

Data register parameters are stored in the volatile memory (RAM).

The values are reset to their default after the unit is restarted.

Some parameters can have values saved in the configuration register for restore after the unit is restarted (e.g. setpoint temperature)

ID	Name	Description	r/w	Range of Present Value
Date / time data				
2018	DTV:Date_Time_2018	Date Time (winter time)	r/w	n/a

Annex Object Table IV

Integer value object Information values				
ID	Name	Description	r/w	Range
Device information				
2000	IV:Device_Type_2000	Device Type	r	0..2 = internally assigned 3 = RYMASKON 130x interface, no control outputs 4 = RYMASKON 140x interface, no control outputs 1000 = RYMASKON 131xC, 230V Controller, 1AO 2R0, Temp-Control 1001 = RYMASKON 132xC, 24V Controller, 3AO, Temp-Control 1002 = RYMASKON 136xC, 24V Controller, 2AO 2DO, Temp-Control 1003 = RYMASKON 143xC, 24V Controller, 3AO, Temp- and Fan-Control 1004 = RYMASKON 144xC, 230V Controller, 5RO, Temp- and Fan-Control 1005 = RYMASKON 145xC, 230V Controller, 1AO 2RO, Temp- and Fan-Control 1006 = RYMASKON 146xC, 24V Controller, 2AO 2DO, Temp- and Fan-Control
2001	IV:Firmware_2001	Firmware	r	1011...9999
2002	IV:ProdDate_2002	Prod. Date (month/year) e.g. 1024 = October 24	r	123...1260
2003	IV:OperationDays_2003	Operation Days (in days)	r	0...15000 days
2004	IV:BusAddress_2004	Bus Address	r	0...127 (default 0)
2005	IV:Baudrate_2005	Baudrate	r	0 = 9600 Bd 1 = 19200 Bd 2 = 38400 Bd (default) 3 = 57600 Bd 4 = 115200 Bd
2006	IV:Parity_StopBits_2006	Parity / Stop Bits	r	0 = None (none, 1 stop bit, default) 1 = EVEN (even) 2 = ODD (odd) 3 = None (none, 2 stop bits)
3749	IV:Fan_Control_3749	Fan Control	r	0 = no fan control 1 = with fan control
4200	IV:SP_NumOfCircuits_4200	Sun Protect circuits	r	0 = no sun protect adjustment 1 = 1 sun protect circuit 2 = 2 sun protect circuits
5300	IV:L_NumOfCircuits_5300	Light Circuits	r	0 = no light adjustment 1 = 1 light circuit 2 = 2 light circuits
2025	IV:InternalError_2025_bitField InternalError_TempS2Ext_2025_bit0 InternalError_I2CCommun_2025_bit1	Internal Error bit 0= external temperature sensor error (NTC10K) bit 1= I2C communication error	r	0 = no error (default) 1 = error

Integer value object Data values

ID	Name	Description	r/w	Range of Present Value
Sensor data				
126	IV:D1Input_Status_126	D1 Input Status	r	0 = DI1 open (default) 1 = DI1 closed
127	IV:D2Input_Status_127	D2 Input Status	r	0 = DI2 open (default) 1 = DI2 closed
300	IV:CO2S1Int_ResetAutozero_300	CO2 Sensor 1 int. reset auto zero After ON, the unit switches back to OFF automatically	r/w	0 = OFF 1 = ON
302	IV:CO2S1Int_AutoCalibr_302	CO2 Sensor 1 int. auto calibration	r/w	0 = OFF 1 = ON (default)
Room climate data				
404	IV:OpMode_Status_404	OpMode Status Feedback from the BMS for display The icon turns blue when cooling The icon turns red when heating The icon turns grey when off Controller: For controller devices, switching between operating modes is linked to the controllers. As soon as the BMS takes over control of the outputs (addresses 1608-1612), the 404 is decoupled from the internal controllers and the BMS must write the operating mode status (404) itself.	r/w	0 = Off (default) 1 = Cooling 2 = Heating
405	IV:Presence_Status_405	Presence Status Controller: When presence status changes from 1 to 0, the setpoint temp offset is reset to 0° (401 = 0). See also description address 8001.	r	0 = unoccupied 1 = occupied (default)
406	IV:Fan_AutoMode_406	Fan Auto Mode Manual/Auto activation through: a) touch keys on unit (Manual = off or 1-5, Auto = A) b) BMS Controller with fan control (RYM 14xxC): If the BMS takes over the outputs for the fan (1613, 1615), the fan buttons on the device remain active. Pressing the buttons causes a change in 406 and 407, but no change to the fan outputs.	r/w	0 = Manual 1 = Auto (default)

Integer value object Data values

ID	Name	Description	r/w	Range of Present Value
407	IV:Setpoint_Fan_Level_407	Fan Level The value must be specified by the BMS in Auto mode (address 406 = 1) Controller with fan control (RYM 14xxC): a) If address 8031=1 (factory setting), the fan output follows the heating and cooling output (e.g.: 50% heating output --> 50% fan output). If fan level OFF is selected in manual mode, the controller switches off the heating and cooling outputs. b) In automatic mode (address 406 = 1), the fan level (address 407) is specified by the controller. c) If the BMS wants to take over control of the fan outputs, this is done in address 1613 or 1615. The internal controller for the fan outputs is switched off and the display (address 406 + 407) is separated from the outputs and the internal controller. When taking over the fan outputs (1613, 1615), the BMS must also write to addresses 406 and 407. The fan buttons on the device remain active. Pressing the buttons causes a change in 406 and 407, but no change to the fan outputs.	r/w	0 = Off 1 = Level 1 (Default) 2 = Level 2 3 = Level 3 4 = Level 4 5 = Level 5
408	IV:HeaderIconStatus_408_bitField	Header Icon/Status	r	
409	IV:RCBBMS_409_bitField	Room Climate Controlled By BMS Through activation, the user cannot use the buttons to adjust the setpoint temperature, fan and presence.	r/w	
410	IV:Presence_Mod_410	Presence Modbus	r/w	0 = unoccupied 1 = occupied 2 = occupied via unit (default)
411	IV:HeaderIconModbus_411_bitField	Header Icon Modbus		
412	IV:Enable_PresenceDI_412	Enable Presence DI (Default is set via 3801)	r/w	0 = disable 1 = enable (default)
413	IV:Enable_IconDI_413_bitField	Enable Icons DI (Default is set via 3802)		
Sun protection data				
700	IV:SP_AutoMode_700_bitField	Sun protect auto mode Auto mode: Keys/buttons are deactivated. Sun protection is exclusively adjusted via the BMS		
720	IV:SP1_KeyStatus_720	Sun protect 1 key status	r/w	0 = no key pressed (default) 1 = down short press 2 = down long press 3 = up short press 4 = up long press 5 = down pressed (only mode hold key) 6 = up pressed (only mode hold key)

730	IV:SP2_KeyStatus_730	Sun protect 2 key status	r/w	0 = no key pressed (default) 1 = down short press 2 = down long press 3 = up short press 4 = up long press 5 = down pressed (only mode hold key) 6 = up pressed (only mode hold key)
Light data				
1100	IV:L_AutoMode_1100_bitField	Light auto mode Auto mode: Keys/buttons are deactivated, buttons are greyed out. Light is exclusively adjusted via the BMS		
1102	IV:L_LightStatus_1102_bitField	Light status		
1120	IV:L1_KeyStatus_1120	Light 1 key status	r/w	0 = no key pressed (default) 1 = down short press 2 = down long press 3 = up short press 4 = up long press 5 = down pressed (only mode hold key) 6 = up pressed (only mode hold key)
1130	IV:L2_KeyStatus_1130	Light 2 key status	r/w	0 = no key pressed (default) 1 = down short press 2 = down long press 3 = up short press 4 = up long press 5 = down pressed (only mode hold key) 6 = up pressed (only mode hold key)
Data control - Controller variants only (RYM 13xxC and RYM 14xxC)				
1600	IV:ChangeOver_Status_1600	Change-Over Status The Change-Over status is specified via a switching contact at the DI input, via an external or bus temperature sensor. Configuration takes place at address 8054. With the Change-Over Modbus parameter (address 1602), the BMS can revoke the authorisation to change the Change-Over status via DI / Temp and specify the cooling or heating mode itself. When using the Change-Over function, the heating and cooling outputs are controlled in parallel with the same heating or cooling output, with the exception of when using the secondary control loop (see address 8044).	r	0 = Change-Over inactive (default) 1 = Cooling Mode (Heating blocked) 2 = Heating Mode (Cooling blocked)
1602	IV:ChangeOver_Modbus_1602	Change-Over Modbus Change-Over setting via the bus. 0...2: DI cooling/heating is suppressed 3: DI cooling/heating takes over again Note: Note address 8054 (if Change-Over via DI/Temp is set here)	r/w	0 = Change-Over inactive 1 = Cooling Mode (Heating blocked) 2 = Heating Mode (Cooling blocked) 3 = Change-Over by DI/Temp (default)

1607	IV:ContrOpMode_Setpoint_1607	Controller OpMode Note: The parameter Controller OpMode is used to set how the outputs are controlled by the internal controller. The BMS can override each output individually using the Output...Controlled By BMS parameters (addresses 1608-1612). If the parameter =0 (Off), frost and heat protection remain active. The value after device restart (default) is specified via address 8053.	r/w	0 = OFF 1 = Cooling Auto (Heating blocked) 2 = Heating Auto (Cooling deaktiviert) 3 = Cooling and Heating Auto
1611	IV:RODO_OutHeat_BMSContr_1611	RO/DO Output Heating BMS Contr. Controller with RO or DO outputs for heating/cooling If the BMS takes over the RO or DO heating output, the operating mode (heating/cooling) for the display must be specified in address 404.	r/w	0 = RO / DO Heating open 1 = RO / DO Heating closed -1 = internal controller active (default)
1612	IV:RO/DO_OutCool_BMSContr_1612	RO/DO Output Cooling BMS Contr. Controller with RO or DO outputs for heating/cooling If the DMS takes over the RO or DO cooling output, the operating mode (heating/cooling) for the display must be specified in address 404.	r/w	0 = RO / DO Cooling open 1 = RO / DO Cooling closed -1 = internal controller active (default)
1615	IV:RO/DO_OutFan_BMSContr_1615	RO/DO Output Fan BMS Contr. Controller with RO or DO outputs for fans If the BMS takes over the RO fan outputs, the fan operating mode and fan speed for the display must be specified in addresses 406 and 407. The fan buttons on the device remain active. Pressing the buttons causes a change in 406 and 407, but no change to the fan outputs.	r/w	0 = OFF 1 = Level 1 2 = Level 2 3 = Level 3 -1 = internal controller active (default)
1620	IV:RODO_Heat_Value_1620	RO/DO Heating	r	0 = open 1 = closed
1621	IV:RODO_Cool_Value_1621	RO/DO Cooling	r	0 = open 1 = closed
1623	IV:RODO_Fan_Level_1623	RODO Fan	r	0 = all Relays open (fan off) 1 = Relay 1 closed (fan level 1) 2 = Relay 2 closed (fan level 2) 3 = Relay 3 closed (fan level 3)

Integer value object configuration values

Parameters of the configuration values are stored in the non-volatile memory (EEPROM).
These parameters may only be changed while the device is being configured and not during operation.
These values are retained after the unit is restarted.

ID	Name	Description	r/w	Range of Present Value
General configuration				
2008	IV:PIN_2008	PIN for the display menu (with 0000, no PIN is necessary)	r/w	0000...9999 (default 1111)
2009	IV:Language_2009	Language	r/w	0 = German 1 = English (default) 2 = Spanish 3 = French 4 = Italian 5 = Russian
2010	IV:Temp_Unit_2010	Temp Unit When changing to °F, note/check/change the following addresses: 2314, 2315, 2914, 2915, 3014, 3015, 3600, 3603, 3604, Additionally for controller: 8000, 8006, 8007, 8008, 8009, 8013, 8045, 8051, 8055, 8056	r/w	0 = °F 1 = °C (default)
2011	IV:Display_Brightness_2011	Display Brightness (when active)	r/w	0 = auto (default) 1...100 %
2012	IV:ScreenSaver_Timeout_2012	Screen Saver Timeout Time after which the screen saver is activated (If deactivated, the service life of the display is shortened)	r/w	0 = deactivated 1...60 = 1...60s (default 20s)
2013	IV:SaveToEEPROM_2013	Save To NVRAM (EEPROM) Must be carried out after configuration is complete. Unit performs a restart.	r/w	0 = normal (default) 1 = save
2015	IV:Time_Format_2015	Time Format	r/w	0 = 12h (am/pm) 1 = 24h (default) 2 = nothing displayed
2016	IV:Date_Format_2016	Date Format	r/w	0 = week day DD.MM. (default) 1 = week day MM.DD 2 = nothing displayed
2017	IV:Time_SetSummerWinter_2017	Summer Time Region (Summer / Winter) Information: In Europe, 1 hour ahead on the last Sunday in March and 1 hour back on the last Sunday in October, both at 2:00 a.m. In the USA, 1 hour ahead on the second Sunday in March and 1 hour back on the first Sunday in November, both at 2:00 a.m. Winter time is the leading variable	r/w	0 = Europe 1 = USA 2 = no time change (default, winter time)
2024	IV:Display_Darkmode_2024	Darkmode	r/w	0 = Light display mode (default) 1 = Dark display mode (darkmode)
Sensor configuration				
2313	IV:TempS1Int_AveragingTime_2313	Temp Sensor 1 int. Averaging Time	r/w	0 = 4s (default) 1 = 8s 2 = 16s 3 = 32s
2317	IV:TempS1Int_EnableInSensorMenu_2317	Temp Sensor 1 int. Enable in Sensor Menu	r/w	0 = disable (default) 1 = enable
2318	IV:TempS1Int_EnableColourScale_2318	Temp Sensor 1 int. Show Colour Scale	r/w	0 = disable 1 = enable (default)
2413	IV:HumS1Int_AveragingTime_2413	Humidity Sensor 1 int. Averaging Time	r/w	0 = 4s (default) 1 = 8s 2 = 16s 3 = 32s
2417	IV:HumS1Int_EnableInSensorMenu_2417	Humidity Sensor 1 int. Enable in Sensor Menu	r/w	0 = disable 1 = enable (default)
2418	IV:HumS1Int_EnableColourScale_2418	Humidity Sensor 1 int. Show Colour Scale	r/w	0 = disable 1 = enable (default)

Integer value object configuration values

Parameters of the configuration values are stored in the non-volatile memory (EEPROM).
These parameters may only be changed while the device is being configured and not during operation.
These values are retained after the unit is restarted.

ID	Name	Description	r/w	Range of Present Value
2513	IV:CO2S1Int_AveragingTime_2513	CO2 Sensor 1 int. Averaging Time	r/w	0 = 4s (default) 1 = 8s 2 = 16s 3 = 32s
2517	IV:CO2S1Int_EnableInSensorMenu_2517	CO2 Sensor 1 int. Enable in Sensor Menu	r/w	0 = disable 1 = enable (default)
2518	IV:CO2S1Int_EnableColourScale_2518	CO2 Sensor 1 int. Show Colour Scale	r/w	0 = disable 1 = enable (default)
2613	IV:VOCS1Int_AveragingTime_2613	VOC Sensor 1 int. Averaging Time	r/w	0 = 4s (default) 1 = 8s 2 = 16s 3 = 32s
2617	IV:VOCS1Int_EnableInSensorMenu_2617	VOC Sensor 1 int. Enable in Sensor Menu	r/w	0 = disable 1 = enable (default)
2618	IV:VOCS1Int_EnableColourScale_2618	VOC Sensor 1 int. Show Colour Scale	r/w	0 = disable 1 = enable (default)
2913	IV:TempS2Ext_AveragingTime_2913	Temp Sensor 2 ext. Averaging Time	r/w	0 = 4s (default) 1 = 8s 2 = 16s 3 = 32s
2917	IV:TempS2Ext_EnableInSensorMenu_2917	Temp Sensor 2 ext. Enable in Sensor Menu	r/w	0 = disable 1 = enable (default)
2918	IV:TempS2Ext_EnableColourScale_2918	Temp Sensor 2 ext. Show Colour Scale	r/w	0 = disable 1 = enable (default)
3017	IV:TempS3Bus_EnableInSensorMenu_3017	Temp Sensor 3 bus Enable in Sensor menu	r/w	0 = disable 1 = enable (default)
3018	IV:TempS3Bus_EnableColourScale_3018	Temp Sensor 3 bus Show Colour Scale	r/w	0 = disable 1 = enable (default)
3117	IV:HumS2Bus_EnableInSensorMenu_3117	Humidity Sensor 2 bus Enable in Sensor menu	r/w	0 = disable 1 = enable (default)
3118	IV:HumS2Bus_EnableColourScale_3118	Humidity Sensor 2 bus Show Colour Scale	r/w	0 = disable 1 = enable (default)
3217	IV:CO2S2Bus_EnableInSensorMenu_3217	CO2 Sensor 2 bus Enable in Sensor Menu	r/w	0 = disable 1 = enable (default)
3218	IV:CO2S2Bus_EnableColourScale_3218	CO2 Sensor 2 bus Enable in Sensor Menu	r/w	0 = disable 1 = enable (default)
3316	IV:VOCS2Bus_Unit_3316	VOC Sensor 2 bus unit	r/w	0 = ppb 1 = % (default)
3317	IV:VOCS2Bus_EnableInSensorMenu_3317	VOC Sensor 2 bus Enable in Sensor Menu	r/w	0 = disable 1 = enable (default)
3318	IV:VOCS2Bus_EnableColourScale_3318	VOC Sensor 2 bus Show Colour Scale	r/w	0 = disable 1 = enable (default)
3417	IV:PMS2Bus_EnableInSensorMenu_3417	PM Sensor 2 bus Enable in Sensor Menu	r/w	0 = disable 1 = enable (default)
3418	IV:PMS2Bus_EnableColourScale_3418	PM Sensor 2 bus Show Colour Scale	r/w	0 = disable 1 = enable (default)
3516	IV:PressureS2Bus_Unit_3516	Pressure 2 bus Unit	r/w	0 = Pa 1 = hPa (default) 2 = mbar 3 = inWC
3517	IV:PressureS2Bus_EnableInSensorMenu_3517	Pressure 2 bus Enable in Sensor Menu	r/w	0 = disable 1 = enable (default)
3518	IV:PressureS2Bus_EnableColourScale_3518	Pressure 2 bus Show Colour Scale	r/w	0 = disable 1 = enable (default)

Room climate configuration				
3600	IV:Setpoint_Temp_Offset_StepSize_3600	Temp Setpoint Offset Step Size (Default changes automatically when the temperature unit is set in address 2010)	r/w	0 = 0,1° 1 = 0,2° 2 = 0,5° (default, bei °C) 3 = 1° (default °F)
3601	IV:OpMode_Display_3601	Display OpMode	r/w	0 = disabled Icon 1 = enabled Icon with color change in red, blue, gray (default) 2 = enabled Icon without color change (gray only)
3602	IV:Setpoint_Temp_Display_3602	Display Temp Setpoint (default: Temp Setpoint Absolute = Temp Setpoint + Offset) If set to Alternative and the temperature value is adjusted by the user, the display switches to Temp Setpoint Absolute for a moment and then switches back to Alternative. With Alternative, even the red/blue/grey temperature ICON of the operating mode is hidden. It is displayed again when the setpoint temperature is adjusted.	r/w	0 = nothing displayed 1 = Temp Setpoint Absolute (default) 2 = Temp Setpoint Offset Alternative: 3 = Display Humidity Sensor 1 int 4 = Display CO2 Sensor 1 int 5 = Display VOC Sensor 1 int ppb 6 = Display VOC Sensor 1 int % 7 = reserved 8 = Display Temp Sensor 2 ext 9 = Display Temp Sensor 3 Bus 10 = Display Humidity Sensor 2 Bus 11 = Display CO2 Sensor 2 Bus 12 = Display VOC Sensor Bus ppb 13 = Display PM Sensor 2 Bus 14 = Display Pressure Sensor 2 Bus
3650	IV:CurrentTemp_Mapping_3650	Current Temp Mapping Note: If the external temperature sensor is selected here, 3900 is not automatically changed by the device. Address 3900 must also be set to external temperature sensor.	r/w	0 = internal temperature sensor (default) 1 = external temperature sensor (input must be configured accordingly) 2 = Bus
3651	IV:CurrentTemp_Display_3651	Display Current Temp	r/w	0 = nothing displayed 1 = Display Current Temp (default) 2 = Display Humidity Sensor 1 int 3 = Display CO2 Sensor 1 int 4 = reserved 5 = Display VOC Sensor 1 Int % 6 = reserved 7 = reserved 8 = reserved 9 = Display Humidity Sensor 2 Bus 10 = Display CO2 Sensor 2 Bus 11 = Display VOC Sensor Bus ppb 12 = Display PM Sensor 2 Bus 13 = Display Pressure Sensor 2 Bus
3762	IV:Fan_NumberOfSteps_3762	Number of Fan Steps	r/w	1 = 1 2 = 1 - 2 3 = 1 - 2 - 3 4 = 1 - 2 - 3 - 4 5 = 1 - 2 - 3 - 4 - 5 (Default)

3763	IV:Fan_EnableAutoOff_3763	Enable Fan Auto/Off	r/w	0 = disable 1 = OFF 2 = Auto 3 = Auto + OFF (Default)
3764	IV:Fan_DisplayInTempMenu_3764	Display Fan In Temp Menu Units with fan adjustment...Default = 1 Units without fan adjustment...Default = 0	r/w	0 = disabled (default) 1 = enabled
3800	IV:Presence_Function_3800	Presence Function	r/w	0 = (default) If Presence Status is "unoccupied", the touch keys for temperature, fan and light/sun protection are blocked for value change . Navigation through all menus and waking up from the screen saver are retained. Changing Presence Status to "occupied" and enabling all keys for value change is carried out by presence touch key, by bus or by configured DI input. 1 = If Presence Status is "unoccupied", all buttons remain active (value change and navigation through the menus). Pressing any touch key changes the status to "occupied". 2 = If Presence Status is "unoccupied", the touch keys for temperature, fan and light/sunshade as well as the sensor touch key remain full active (changing values and navigating through the menus). The Presence Status remains "unoccupied" until the presence button, bus or a configured DI input changes to "occupied".
3801	IV:Enable_PresenceDI_Reboot_3801	Presence Enable DI Reboot The configuration selected here specifies the status of the Presence Enable DI in address 412.	r/w	0 = disable 1 = enable (default)
3802	IV:Enable_IconDI_Reboot_3802_bitField	Icon Enable DI Reboot The configuration selected here specifies the status of the Icon Enable DI in address 413.		

3763	IV:Fan_EnableAutoOff_3763	Enable Fan Auto/Off	r/w	0 = disable 1 = OFF 2 = Auto 3 = Auto + OFF (Default)
3764	IV:Fan_DisplayInTempMenu_3764	Display Fan In Temp Menu Units with fan adjustment...Default = 1 Units without fan adjustment...Default = 0	r/w	0 = disabled (default) 1 = enabled
3800	IV:Presence_Function_3800	Presence Function	r/w	0 = (default) If Presence Status is "unoccupied", the touch keys for temperature, fan and light/sun protection are blocked for value change . Navigation through all menus and waking up from the screen saver are retained. Changing Presence Status to "occupied" and enabling all keys for value change is carried out by presence touch key, by bus or by configured DI input. 1 = If Presence Status is "unoccupied", all buttons remain active (value change and navigation through the menus). Pressing any touch key changes the status to "occupied". 2 = If Presence Status is "unoccupied", the touch keys for temperature, fan and light/sunshade as well as the sensor touch key remain full active (changing values and navigating through the menus). The Presence Status remains "unoccupied" until the presence button, bus or a configured DI input changes to "occupied".
3801	IV:Enable_PresenceDI_Reboot_3801	Presence Enable DI Reboot The configuration selected here specifies the status of the Presence Enable DI in address 412.	r/w	0 = disable 1 = enable (default)
3802	IV:Enable_IconDI_Reboot_3802_bitField	Icon Enable DI Reboot The configuration selected here specifies the status of the Icon Enable DI in address 413.		

4263	IV:SP1_OpMode_4263	Sun Protect 1 OpMode Short-long key press (for fast bus line) A short or long key press (long > 1s) is recorded in the "Key Status" data register. After reading, the BMS must write the value "not pressed" back to the "Key Status" data register. The BMS writes the position and angle back to the "Value" data register to be shown on the display. Hold key press (for fast bus line) The button press is recorded in the "Key Status" data register up until the user releases the button. After the button is released, RYMASKON resets the value back to "not pressed". The BMS writes the position and angle back to the "Value" data register to be shown on the display. Setpoint mode If the user presses one of the two buttons, the position and angle are written directly to the "Value" data register and shown on the display. The BMS receives the position as a setpoint value.	r/w	0 = short-long key (default) 1 = hold key 2 = setpoint mode
4264	IV:SP1_Type_4264	Sun Protect 1 Type	r/w	0 = Sun protection position 1 = Slat angle 2 = Sun protection position + slat angle (default)
4313	IV:SP2_OpMode_4313	Sun Protect 2 OpMode Short-long key press (for fast bus line) A short or long key press (long > 1s) is recorded in the "Key Status" data register. After reading, the BMS must write the value "not pressed" back to the "Key Status" data register. The BMS writes the position and angle back to the "Value" data register to be shown on the display. Hold key press (for fast bus line) The button press is recorded in the "Key Status" data register up until the user releases the button. After the button is released, RYMASKON resets the value back to "not pressed". The BMS writes the position and angle back to the "Value" data register to be shown on the display. Setpoint mode If the user presses one of the two buttons, the position and angle are written directly to the "Value" data register and shown on the display. The BMS receives the position as a setpoint value.	r/w	0 = short-long key (default) 1 = hold key 2 = setpoint mode
4314	IV:SP2_Type_4314	Sun Protect 2 Type	r/w	0 = Sun protection position 1 = Slat angle 2 = Sun protection position + slat angle (default)

Light configuration				
5301	IV:L_Display_5301	Light display If the display is deactivated, the user moves on sight (view of lamps)	r/w	0 = Display of the dimming value or ON/OFF on the display deactivated 1 = Display of the dimming value or ON/OFF on the display activated (default)
5363	IV:L1_Dimmable_5363	Light 1 Dimmable	r/w	0 = Light dimming deactivated 1 = Light dimming activated (default)
5364	IV:L1_OpMode_5364	Light 1 OpMode Short-long key press (for fast bus line) A short or long key press (long > 1s) is recorded in the "Key Status" data register. After reading, the BMS must write the value "not pressed" back to the "Key Status" data register. The BMS writes the dimming value to the "Value" data register to be shown on the display. Hold key press (for fast bus line) The button press is recorded in the "Key Status" data register up until the user releases the button. After the button is released, RYMASKON resets the value back to "not pressed". The BMS writes the dimming value to the "Value" data register to be shown on the display. Setpoint mode If the user presses one of the two buttons, the dimming value is written directly to the "Value" data register and shown on the display. The BMS receives the light intensity (dimming value) as a setpoint value.	r/w	0 = short-long key (default) 1 = hold key 2 = setpoint mode
5413	IV:L2_Dimmable_5413	Light 2 Dimmable	r/w	0 = Light dimming deactivated 1 = Light dimming activated (default)
5414	IV:L2_OpMode_5414	Light 2 OpMode Short-long key press (for fast bus line) A short or long key press (long > 1s) is recorded in the "Key Status" data register. After reading, the BMS must write the value "not pressed" back to the "Key Status" data register. The BMS writes the dimming value to the "Value" data register to be shown on the display. Hold key press (for fast bus line) The button press is recorded in the "Key Status" data register up until the user releases the button. After the button is released, RYMASKON resets the value back to "not pressed". The BMS writes the dimming value to the "Value" data register to be shown on the display. Setpoint mode If the user presses one of the two buttons, the dimming value is written directly to the "Value" data register and shown on the display. The BMS receives the light intensity (dimming value) as a setpoint value.	r/w	0 = short-long key (default) 1 = hold key 2 = Setpoint mode

Time programm				
7040	IV:TP1_Activate_7040	Time Programm 1 Activate	r/w	0 = disable (default) 1 = enable
7041	IV:TP1_EventDay_7041	Time Programm 1 Event Day	r/w	0...127, days are bit coded
7044	IV:TP1_RegisterAddress_7044	Time Programm 1 Register Address	r/w	n/a
7045	IV:TP1_RegisterNewValue_7045	Time Programm 1 Register New Value	r/w	n/a
There are 48 time programmes available				
7510	IV:TP1_Activate_7510	Time Programm 48 Activate	r/w	0 = disable (default) 1 = enable
7511	IV:TP1_EventDay_7511	Time Programm 48 Event Day	r/w	0...127, days are bit coded
7514	IV:TP1_RegisterAddress_7514	Time Programm 48 Register Address	r/w	n/a
7515	IV:TP1_RegisterNewValue_7515	Time Programm 48 Register New Value	r/w	n/a
Controller configuration				
8001	IV:Setpoint_Temp_Offs_PresChange_8001	Setpoint Temp Offset Presence Change When presence status is set to unoccupied, the controller sets the setpoint offset to 0 (401=0).	r/w	0 = Reset Setpoint Temp Offset (default) 1 = Reset Setpoint Temp Offset when unoccupied and restore when occupied
8002	IV:Occupied_OverrECO_8002	Setpoint Temp Offset Presence Change 0: If ECO is active (408 bit 3 = 1), the dead zone ECO is switched on. The presence status (405) has no influence on the dead zone. 1: If ECO is active (408 bit 3 = 1) and the presence status is occupied, the dead zone comfort is switched on. If the presence status is unoccupied again, the dead zone ECO is switched on again.	r/w	0 = Presence has no effect on ECO 1 = Presence (occupied) overrides ECO mode (default)
8003	IV:ContrTyp_Heating_8003	Controller Typ Heating	r/w	0 = PI controller (default) 1 = ON/OFF controller
8004	IV:ContrTyp_Cooling_8004	Controller Typ Cooling	r/w	0 = PI controller (default) 1 = ON/OFF controller
8005	IV:PWM_CycleTime_8005	PWM Cycle Time	r/w	5...60 minutes (default 30 minutes)
8019	IV:ManipVarMin_Behave_8019	Manipulated Variable Min. Behavior	r/w	0 = At least the set minimum value is applied as heating/cooling power to the output (default) 1 = Heating/cooling power is only applied to the output from the set minimum value.

8020	IV:Out6WayValve_8020	Output 6-Way-Valve Ranges 8, 9, 10 and 11 do not apply to RYMASKON 143xC.	r/w	0 = 6-way valve inactive (default) 1 = 6-way valve general 2 = cooling...heating = 2...10 V (e.g. Belimo) 3 = heating...cooling = 2...10 V (e.g. Belimo, inverted) 4 = cooling...heating = 0...10 V (DN15, e.g. Sauter) 5 = heating...cooling = 0...10 V (DN15, e.g. Sauter, inverted) 6 = cooling...heating = 0...10 V (DN20, e.g. Sauter) 7 = heating...cooling = 0...10 V (DN20, e.g. Sauter, inverted) 8 = 0...100% heating = 0...10 V 9 = 0...100% cooling = 0...10 V 10 = 0...100% heating = 10...0 V 11 = 0...100% cooling = 10...0 V
8025	IV:AODirection_Heating_8025	AO Direction Heating RYM 132xC / 136xC / 143xC	r/w	0 = 0...10 V (NC actuators, default) 1 = 10...0 V (NO actuators)
8026	IV:AODirection_Cooling_8026	AO Direction Cooling RYM 132xC / 136xC / 143xC	r/w	0 = 0...10 V (NC actuators, default) 1 = 10...0 V (NO actuators)
8027	IV:RODODirection_Heating_8027	Wirkrichtung RODO Heizen RYM 131xC / 144xC / 145xC / 146xC	r/w	0 = Normally open (NC actuators, default) 1 = Normally closed (NO actuators)
8028	IV:RODODirection_Cooling_8028	RODO Direction Heating RYM 131xC / 144xC / 145xC	r/w	0 = Normally open (NC actuators, default) 1 = Normally closed (NO actuators)
8031	IV:FanMapping_8031	Fan Mapping For 4...9, observe RCV regulation	r/w	0 = no assignment to a controller 1 = cooling and heating (default) 2 = cooling 3 = heating 4 = humidity (internal sensor) 5 = humidity (external sensor) 6 = CO2 (internal sensor) 7 = CO2 (external sensor) 8 = VOC % (internal sensor) 9 = VOC (external sensor)
8043	IV:2.ContrLoop_SensMapping_8043	2. Control Sensor Mapping Auxiliary control circuit for temperature control Note: If the external temperature sensor is selected here, 3900 is not automatically changed by the device. Address 3900 must also be set to external temperature sensor.	r/w	1 = external temperature sensor (default) 2 = bus temperature sensor
8044	IV:2.ContrLoopType_8044	2. Control Loop Type Only possible in Change-Over mode (address 1600 = 1 / 2) The second control circuit is controlled by the cooling output. For proper functioning, both control circuits must be 2-pipe systems with a common Change-Over. The setpoint is linked to the setpoint of the main control circuit, but can be shifted by a constant offset (address 8049).	r/w	0 = PI controller 1 = ON/OFF controller 2 = secondary control loop inactive (default)

8050	IV:UnderfloorHeatProtection_Sensor_8050	Underfloor Heat Protection Sensor If the limit value (address 8051) is exceeded, the device reduces the heating output to 0%. Note: If the external temperature sensor is selected here, 3900 is not automatically changed by the device. Address 3900 must also be set to external temperature sensor.	r/w	0 = none (Temp limit for underfloor heating inactive, default) 1 = external temperature sensor 2 = bus temperature sensor
8053	IV:ContrOpMode_AfterReboot_8053	Controller OpMode After Reboot The configuration selected here specifies the operating mode in address 1607 when the device is restarted. e.g.: If there is a power failure and the power is switched back on after a considerable period of time.	r/w	0 = OFF 1 = Cooling Auto (Heating blocked) 2 = Heating Auto (Cooling deaktiviert) 3 = Cooling and Heating Auto (default)
8054	IV:CangeOver_DITemp_8054	Cange-Over_DI-Temp If 8054 = 1, the device writes a 17 to 3900 (plausibility check with 3900). If 8054 = 2, the device writes an 18 to 3900 (plausibility check with 3900). If 8054 = 3, then the device writes a 17 to 3901 (plausibility check with 3901) If 8054 = 4, then the device writes an 18 to 3901 (plausibility check with 3901) If 8054 = 5, then the device writes a 1 to 3900 (plausibility check with 3900)	r/w	0 = Change-Over inactive (default) 1 = DI 1 - Cooling (Contact open), Heating (contact closed) 2 = DI 1 - Heating (Contact open), Cooling (contact closed) 3 = DI 2 - Cooling (Contact open), Heating (contact closed) 4 = DI 2 - Heating (Contact open), Cooling (contact closed) 5 = external temperature sensor 6 = bus temperature sensor
8201	IV:ContrTyp_RCV_8201	Control Type RCV Only applies to controllers with AO output for fans. Controllers with RO/DO outputs for fans are controlled using switching thresholds (address 8205 - 8207).	r/w	0 = PI controller (default) 1 = ON/OFF controller

Annex Object Table TV

Time Value objects configuration values

Parameters of the configuration values are stored in the non-volatile memory (EEPROM).
 These parameters may only be changed while the device is being configured and not during operation.
 These values are retained after the unit is restarted.

ID	Name	Description	r/w	Range of Present Value
Time programm				
7042	TV:TP1_EventHour_7042	Time Programm 1 Event Hour and Minute	r/w	00:00...23:59
There are 48 time programmes available				
7512	TV:TP48_EventHour_7042	Time Programm 48 Event Hour and Minute	r/w	00:00...23:59

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