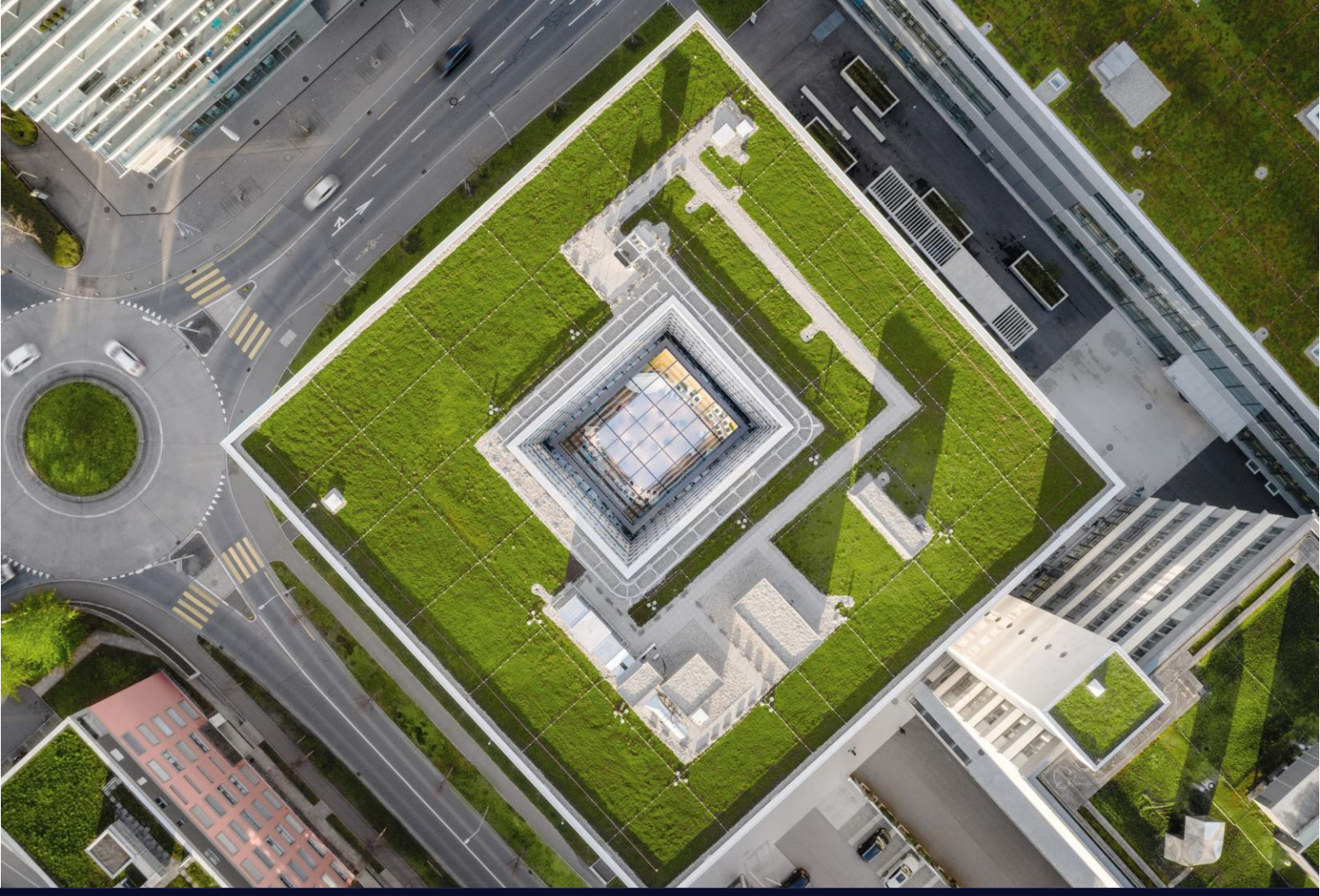

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SIEMENS

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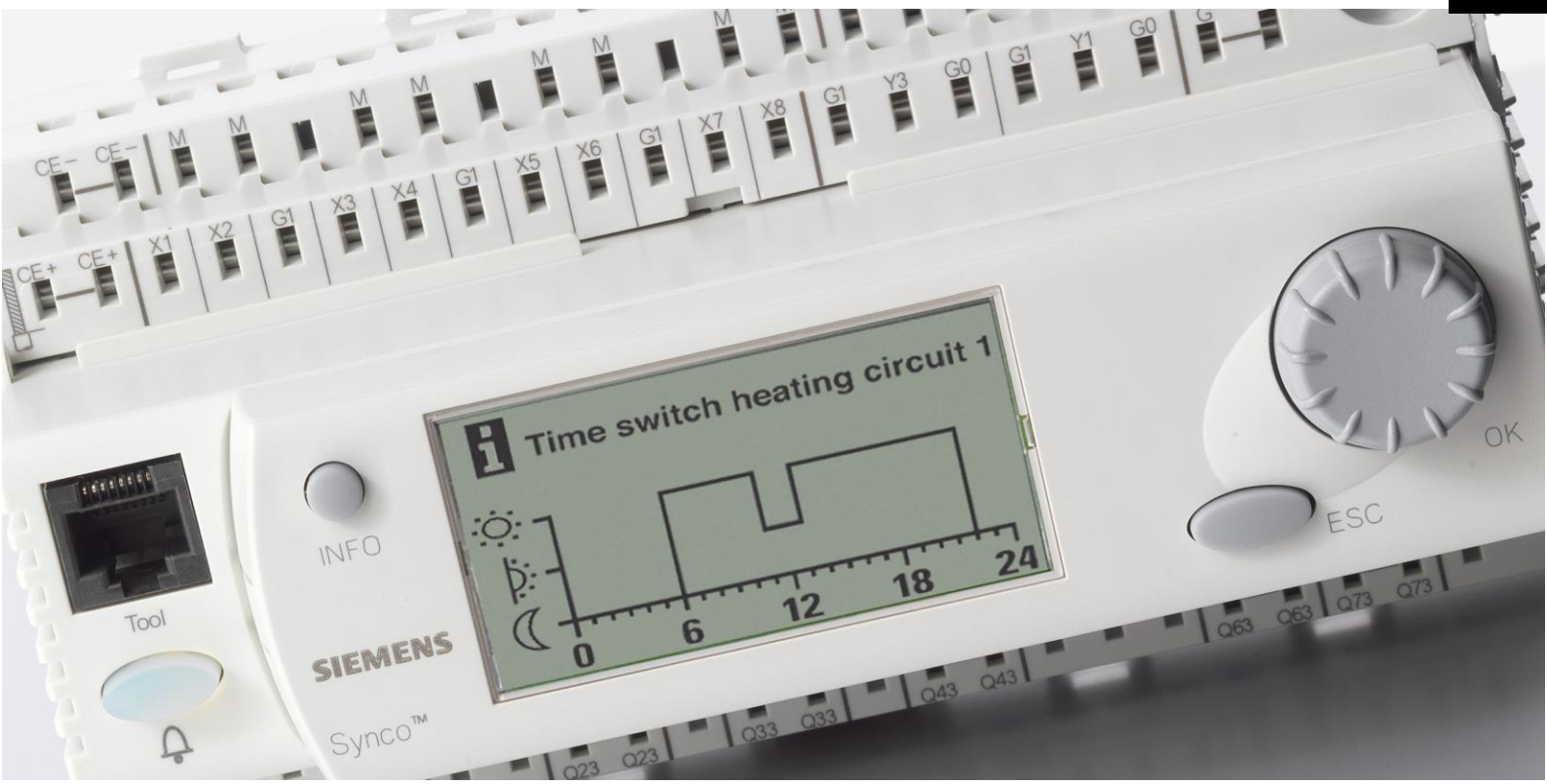
Standard controllers



Overview of heating controllers product details





Preferential applications	RLE..		RVP..		RVP..			RVL..				RMH..	RMK..
	132	162	201	211	340	350	360	479	480	481	482	760B	770
Heating group	■	■	■	■	■	■	■		■	■	■	■	■
Boiler control 1-stage			■	■									
Boiler control 2-stage						■	■		■	■	■	■	■
Multi-boiler system													■
Domestic hot water	■	■		■		■	■			■	■	■	
Domestic water solar						■	■			■	■	■	
2nd heating group							■	■				■	
3rd heating group												■	

Operation system	RLE..		RVP..		RVP..			RVL..				RMH..	RMK..
	132	162	201	211	340	350	360	479	480	481	482	760B	770
Type of operation analog	■	■	■	■									
Type of operation digital					■	■	■	■	■	■	■	■	■
Heating curve bar								■	■	■	■		
Time switch analog			■	■									
Time switch digital			[1]	[1]	■	■	■	■	■	■	■	■	■
Programmed plant types	6	3			2	3	6	1	6	29	21	41	18
Yearly clock					■	■	■	■	■	■	■	■	■

[1] Variant

Communication	RLE..		RVP..		RVP..			RVL..				RMH..	RMK..
	132	162	201	211	340	350	360	479	480	481	482	760B	770
Controller network					LPB	LPB	LPB	LPB	LPB	LPB	LPB	KNX	KNX
Web operation					OZW672..			OZW672..				OZW772..	

Sensors	RLE..		RVP..		RVP..			RVL..				RMH..	RMK..
	132	162	201	211	340	350	360	479	480	481	482	760B	770
Outside sensor QAC22	■	■	■	■	■	■	■	■	■	■	■	■	■
Outside sensor QAC32			■	■	■	■	■	■	■	■	■	■	
Strap-on temp. sensor QAD22			■	■	■	■	■	■	■	■	■	■	■
Immersion temp. sensor QAE2..			■	■	■	■	■	■	■	■	■	■	■
Cable temp. sensor QAP2..			■	■	■	■	■	■	■	■	■	■	■
Room temp. sensor QAA24					■	■	■	■	■	■	■	■	■
Room temp. AQR2531ANW sensor					■	■	■	■	■	■	■	■	■
Solar sensor QLS60											■	■	

Room units	RLE..		RVP..		RVP..			RVL..				RMH..	RMK..
	132	162	201	211	340	350	360	479	480	481	482	760B	770
Room unit QAA50.110/101 analog			■	■	■	■	■	■	■	■	■		
Room unit digital QAW70..			■	■	■	■	■	■	■	■	■		
Room unit digital QAW740												■	■

Overview of district heating controllers product details





Preferential applications	RVD120	RVD140	RVD250	RVD260	RVP340	RVL480	RVL481	RMH760B
Heating group	■	■	■	■	■	■	■	■
District heat exchanger	■	■	■	■	[1]	[1]	[1]	■
Domestic hot water	■	■	■	■			■	■
Domestic water solar		■	■	■			■	■
2nd heating group				■				■
3rd heating group								■

[1] Variant: For the description of the controllers see chapter 1 „Communicative heating controllers".

Operation system	RVD120	RVD140	RVD250	RVD260	RVP340	RVL480	RVL481	RMH760B
Type of operation analog / digital	■	■	■	■	■	■	■	■
Heating curve bar						■	■	
Time switch analog / digital	■	■	■	■	■	■	■	■
Programmed plant types	3	8	28	14	2	6	29	41
Yearly clock	■	■	■	■	■	■	■	■

Communication	RVD120	RVD140	RVD250	RVD260	RVP340	RVL480	RVL481	RMH760B
Controller network			LPB	LPB	LPB	LPB	LPB	KNX
M-bus slave			■	■				
Web operation	ext. Modbus-Interface	ext. Modbus-Interface	OZW672.. WTV676		OZW672..	OZW672..		OZW772..

Sensors		RVD120	RVD140	RVD250	RVD260	RVP340	RVL480	RVL481	RMH760B
Outside sensor	QAC22	■	■	■	■	■	■	■	■
Outside sensor	QAC32	■	■	■	■	■	■	■	■
Strap-on temp. sensor	QAD22	■	■	■	■	■	■	■	■
Immersion temp. sensor	QAE2..	■	■	■	■	■	■	■	■
Cable temp. sensor	QAP2..	■	■	■	■	■	■	■	■
Room temp. sensor	QAA24					■	■	■	■
Room temp. sensor	AQR2531ANW					■	■	■	■
Solar sensor	QLS60								■
Pressure sensor	QBE2002..		■	■	■				

Room units		RVD120	RVD140	RVD250	RVD260	RVP340	RVL480	RVL481	RMH760B
Room unit analog	QAA50.110/101	■	■	■	■	■	■	■	
Room unit digital	QAW70..	■	■	■	■	■	■	■	
Room unit digital	QAW740								■

Overview of HVAC controllers product details

	RLM..	RLA..	RWD..			RLU..					RMU..			RMS..		RMZ	
	162	162	82	62	68	202	220	222	232	236	710B	720B	730B	705B	785	787	788
	Air duct temperature controller	Room temperature controller	Universal controller, 1 control loop, 2DO	Universal controller, 1 control loop, 2AO	Universal controller, 1 control loop, 1AO, 1DO	Universal controller, 1 control loop, 2DO	Universal controller, 1 control loop, 2AO	Universal controller, 2 control loops, 2AO, 2DO	Universal controller, 2 control loops, 3AO, 2DO	Universal controller, 2 control loops, 3AO, 6DO	Modular universal controller, 1 control loop	Modular universal controller, 2 control loops	Modular universal controller, 3 control loops	Switching and Monitoring Device	Universal module, 8UI	Universal module, 4UI, 4DO	Universal module, 4UI, 2DO, 2AO
Option modules for RMU7..0B and RMS705B											4[2]	4[2]	4[2]	4[2]	1[2]	2[2]	2[2]
Operation	■	■	■	■	■	■	■	■	■	■	■[1]	■[1]	■[1]	■[1]			
KNX communication											■	■	■	■			
7-day time switch and holiday/ special day program											■	■	■	■			
Supervision											■	■	■	■			
Logic functions											■	■	■	■			
Outputs																	
Step switch						■		■	■	■	■	■	■	■			
Relay	1	1	2		1	2		2	2	6	2	4	6	6		4	2
3-position			1[3]			1[3]		1[3]									
DC 0...10 V	2	2		2	1		2	2	3	3	2	3	4	4			2
Universal inputs																	
T1						■	■	■	■	■	■	■	■	■	■	■	■
Pt1000			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
DC 0...10 V			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Digital						■	■	■	■	■	■	■	■	■	■	■	■
LG-Ni 1000			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Number of universal inputs	-	-	2	2	2	4	4	4	5	5	6	8	8	8	8	4	4
Fixed inputs																	
DC 0...10 V	1	1															
Digital	2	1	1	1	1	1	1	1	2	2							
LG-Ni 1000	1	1															
Integrated LG-Ni 1000 sensor	1	1															
Controlled variable																	
Universal			■	■	■	■	■	■	■	■	■	■	■	■			
Temperature °C	■	■	■	■	■	■	■	■	■	■	■	■	■	■			
Control mode																	
PID						■	■	■	■	■	■	■	■	■			
P/PI	■	■	■	■	■	■	■	■	■	■	■	■	■	■			
Control loops																	
Cascade			■	■	■	■	■	■	■	■	■	■	■				
Number	1	1	1	1	1	1	1	2	2	2	1	2	3	3			

■ [1] Optional operation:
RMZ790: Plug-in operator unit
RMZ791: Detached operator unit
RMZ792: Bus operator unit

[2] Maximum number of option modules RMZ78x per controller

[3] 2 Relays or one 3-position

AO Analog output
DO Digital output
UI Universal inputs

Immersion temperature controller, AC 230 V, 3-position output — RLE132

Compact electronic controller with immersion type temperature sensor and setting unit combined in one device. It is designed for installation directly onto the plant. Only the wires for mains connection and controller output need to be laid. Supplied with protection pocket for indirect temperature sensing.

Application:
Modulating temperature controller, with 3-position control signal and auxiliary relay. The RLE132 is ideally suited for control of the following heating plants:
- Domestic hot water temperature
- Flow temperature control
- Calorifiers or heat exchangers

Features:
- Values for both normal and reduced temperature can be set
- Setpoint changeover via external contact or time switch
- Optional legionella function
- Auxiliary digital output for heat demand
- Connection for remote setting unit
- Minimum limitation of boiler return temperature
- Minimum or maximum limitation of the return temperature
- PI control (selectable)
- Service mode

Data sheet	N3334
Operating voltage	AC 230 V
Frequency	50/60 Hz
Power consumption	4 VA
Setpoint setting range	0...130 °C
Setpoint readjustment range	0...50 K
Digital input, contact query	DC 3...6 mA DC 6...15 V
Digital outputs, number	3
Relay outputs	N.O. contact, potential-free
Relay output, switching voltage	AC 24...250 V
Relay output, switching current	2 A
PN class	PN 10
Immersion length	150 mm
Degree of protection	IP65
Dimensions (W x H x D)	125 x 152 x 78 mm

Stock no.	Product no.
BPZ:RLE132	**RLE132**

RLE162

Immersion temperature controller, AC 24 V, DC 0...10 V output

Compact electronic controller with immersion type temperature sensor and setting unit combined in one device. It is designed for installation directly onto the plant. Only the wires for power supply connection and controller output need to be laid. Threaded nipple (AQE2102) for direct temperature comes with the product RLE162.

Applications:
Modulating temperature controller, with 1 or 2 continuous DC 0...10 V output signals and auxiliary relay. The RLE162 is used for control and limiting of temperature in hot water, heating or cooling plants:
- Domestic hot water temperature
- Heating flow temperature
- Closed circuit heat exchangers
- Water-side control of HVAC units
- Chilled water temperature

Features:
- High or low temperature limitation
- Auxiliary digital output
- Compensation via outside sensor
- Connection for remote setting unit
- P or PI control (selectable)
- Service modes
- Heating and cooling modes available
- Setpoint changeover via external contact or time switch
- Optional legionella function

Data sheet	N3333
Operating voltage	AC 24 V
Frequency	50/60 Hz
Power consumption	2 VA
Setpoint readjustment range	0...60 K
Setpoint setting range	-10...130 °C
Analog output, signal	DC 0...10 V
Analog output, current	Max. 1 mA
Analog input, signal	LG-Ni1000 0...1000 Ohm DC 0...10 V
Analog outputs, number	2
Digital inputs	Potential-free input signal
Digital input, contact query	DC 3...6 mA DC 6...15 V
Digital outputs, number	1
Relay outputs	N.O. contact, potential-free
Relay output, switching voltage	AC 24...230 V
Relay output, switching current	2 A
Immersion length	130 mm
PN class	PN 10
Degree of protection	IP65
Dimensions (W x H x D)	125 × 152 × 78 mm

	Stock no.	Product no.
	BPZ:RLE162	**RLE162**

Accessories for RLE132 / RLE162

Product Title	Data sheet	Stock no.	Product no.
Protection pocket, 150 mm, MS63 nickel-plated, G½", PN10, LW7	N1194	BPZ:ALT-SB150	**ALT-SB150**
Outside sensor LG-Ni1000	N1811	BPZ:QAC22	**QAC22**

Application examples Synco™ 100

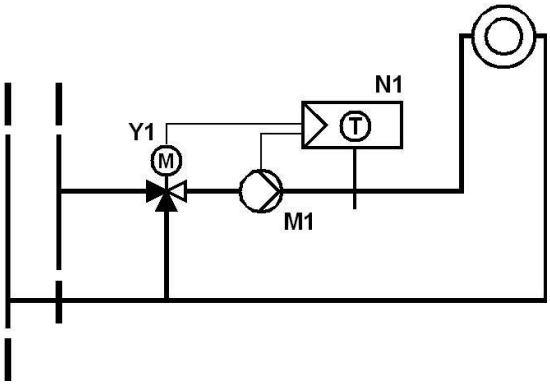
These are only a few examples of many applications that can be done with the with Synco™100 controllers: RLE..
More Synco™100 applications are described in "HIT" (the HVAC project engineering tool with a library of over 300 pre-configured HVAC-applications) and in the RLE.. data sheet.

Heating Plant, Flow Temperature Control - Flow temperature control in a common distribution circuit

RLE132

H0C003 LE1 HQ

- Controller (N1) with immersion built-in sensor to control the heating flow temperature via modulating control of the mixing valve (Y1)

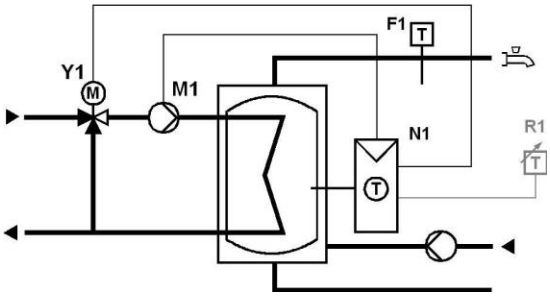


Domestic Hot Water Plant - Temperature control of domestic hot water storage via mixing valve and HWS circulation pump

RLE162

H00B01 LE1 HQ

- Controller (N1) with built-in immersion sensor to control the d.h.w. storage temperature via modulating control of the primary d.h.w. heating valve (Y1) and the circulating pump (M1).



RVP201..

Heating controller with analog operating elements

Heating controllers for use in residential or smaller commercial buildings that have their own heat generation. Easy-to-understand analog operating elements for the enduser.

Key functions
Weather-compensated flow or boiler temperature control, with or without room influence or room temperature control. Control of 3- or 2-position actuators or direct control of a burner.

Additional settings
- Control of the heating pump
- Quick setback and boost heating
- Heating curve
- Room temperature influence
- Frost protection for the plant and the room
- Automatic ECO function for switching the heating system on and off depending on demand
- Maximum limitation of the flow or boiler temperature
- Pump overrun and pump kick
- Remote switching of operating mode via room unit or external switch

Operating modes
The following operating modes can be selected with the slider: Automatic/Protection, Automatic/Reduced, Setback, Normal operation and Protection.

Data sheet	N2464
Operating voltage	AC 230 V
Frequency	50 Hz
Power consumption	7 VA
Analog input, signal	LG-Ni1000 NTC 575
Relay output, switching voltage	AC 24...230 V
Relay output, switching current	2 A
Degree of protection	IP40
Dimensions (W x H x D)	144 x 96 x 115 mm

Range overview RVP201..

Product Title	Stock no.	Product no.
Heating controller without time switch	BPZ:RVP201.0	**RVP201.0**

Heating controller incl. DHW heating

RVP211..

Heating controller for use in residential or smaller commercial buildings that have their own heat generation and own DHW heating. Easy-to-understand analog operating elements for the enduser.

Key functions (same as RVP201)
Other settings (same as RVP201)

DHW heating functions
- Storage tank charging by control of a charging pump:
  – Absolute priority: Heating circuit pump remains locked during DHW charging
  – No priority (parallel): Heating circuit pump and DHW charging pump operate parallel
- Storage tank charging by control of a diverting valve
- Frost protection for DHW
- DHW temperature can be acquired via a temperature sensor or thermostat

Operating modes
The following operating modes can be selected with the slider: Automatic/Protection, Automatic/Reduced, Setback, Normal operation, Protection, or DHW heating only.

Data sheet	N2464
Operating voltage	AC 230 V
Frequency	50 Hz
Power consumption	7 VA
Analog input, signal	LG-Ni1000 NTC 575
Relay output, switching voltage	AC 24...230 V
Relay output, switching current	2 A
Degree of protection	IP40
Dimensions (W x H x D)	144 x 96 x 115 mm

Range overview RVP211..

Product Title	Stock no.	Product no.
Heating controller without time switch, with d.h.w. heating	BPZ:RVP211.0	**RVP211.0**

Accessories for RVP2..

Product Title	Data sheet	Stock no.	Product no.
Analog 24-hour time switch	N2464	BPZ:AUZ3.1	**AUZ3.1**
Analog 7-day time switch	N2464	BPZ:AUZ3.7	**AUZ3.7**

Field devices for RVP2..

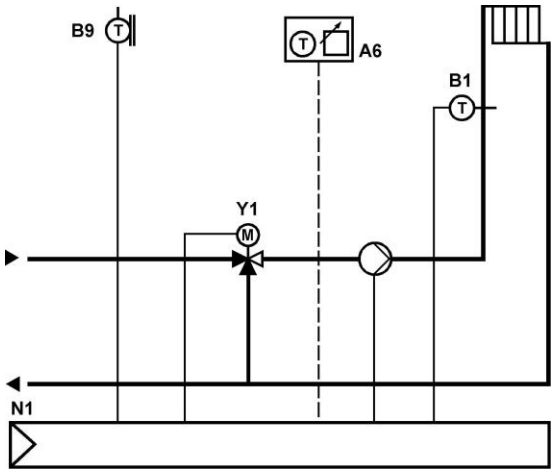
Product Title	Data sheet	Stock no.	Product no.
Immersion temperature sensor 100 mm LG-Ni1000, with protection pocket	N1781	S55720-S516	**QAE9120.010**
Multifunctional room operator unit	N1637	BPZ:QAW70..	**QAW70..**
Outside sensor LG-Ni1000	N1811	BPZ:QAC22	**QAC22**
Outside sensor NTC 575 Ohm	N1811	BPZ:QAC32	**QAC32**
Strap-on temperature sensor LG-Ni1000	N1801	BPZ:QAD22	**QAD22**
Immersion temperature sensor 100 mm LG-Ni1000, with protection pocket	N1781	BPZ:QAE2120.010	**QAE2120.010**
Cable temperature sensor silicone 1.5 m, LG-Ni1000	N1831	BPZ:QAP21.3	**QAP21.3**

Application example RVP2..

These are only a few examples of many applications that can be done with the family of controllers: RVP2...
More applications are described in "HIT" (the HVAC project engineering tool with a library of over 300 pre-configured HVAC-applications) and in the RVP2.. data sheet.

RVP201.1

H0C001 VP2 HQ b



Weather-compensated heating system, one heating circuit

- Weather-compensated flow temperature control with 3-position actuator acting on mixing valve
- Frost protection for building and plant
- Time program with analog 24-hour time switch
- ECO function switches off heating depending on outside temperature
- Room temperature-dependent boost heating and quick setback (with room unit only)
- Maximum limitation of flow temperature

RVP211.1

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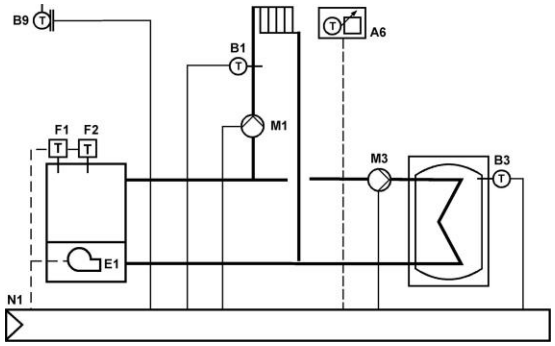


Weather-compensated heating system, heat generation, one heating circuit, d.h.w. - Weather-compensated flow temperature control acting on boiler

- Weather-compensated flow temperature control acting on boiler with single-stage burner
- Control of d.h.w. supply via pump-charged storage tank
- Frost protection for building and plant
- Time program with analog 24-hour time switch
- ECO function switches off heating depending on outside temperature

Heating controller for 1 heating circuit

RVP340

Weather-compensated flow temperature control of heating circuit with or without room influence.

Key functions:
- 2 preprogrammed plant types can be selected, with automatic assignment of the functions required for each plant type
- Weather-compensated flow temperature control through control of valve (mixing) in a heating circuit
- Weather-compensated flow temperature control through control of the 2-port valve in the primary return of a heating circuit with district heat connection (substation)

Additional functions
The RVP340 provides the following functions (no submodules or extra devices required):
- Optimum start/ stop
- Quick setback and boost heating
- Automatic ECO function, depending on the outside temperature and the type of building construction
- One 7-day program with 3 heating periods per day
- Yearly time program for holidays
- Digital setting of the heating curve
- Pump kick and pump overrun
- Minimum and maximum limitation of the flow temperature
- Multifunctional outputs
- Digital input for remote control of operating mode
- Communication with other controllers via LPB data bus (RVP3.., RVL4.. and RVD2..)

Data sheet	N2545
Operating voltage	AC 230 V
Frequency	50 Hz
Power consumption	6 VA
Analog input, signal	LG-Ni1000 NTC 575
Digital inputs	Status contact
Relay output, switching voltage	AC 24...230 V
Relay output, switching current	4 x 2(2) A
Degree of protection	IP40
Dimensions (W x H x D)	144 × 96 × 109 mm

Stock no.	Product no.
S55370-C136	**RVP340**

RVP350

Heating controller for 1 heating circuit and d.h.w.

Weather-compensated flow temperature control of heating circuit with or without room influence, d.h.w. heating and demand based boiler temperature control.

Key functions
In addition to the functions of the RVP340, the RVP350 provides the following:
- 3 preprogrammed plant types can be selected, with automatic assignment of the functions required for each plant type
- Weather-compensated flow temperature control through control of valve (mixing) in a heating circuit
- Demand based control of the boiler temperature through control of the burner
- D.h.w. heating with charging pump, electric immersion heater and solar collector

D.h.w. control
D.h.w. control independent of the heating circuit. Control can be enabled as follows:
- According to its own 7-day program
- According to the program of the heating circuit
- According to the programs of the zone controllers on the data bus
- Permanently (24 hours a day)

D.h.w. heating features a legionella function, which can be deactivated. Legionella protection is activated once a week. The d.h.w. temperature is acquired with sensors or thermostats.

Boiler temperature control
Boiler temperature control operates as demand-dependent 2-position control. The boiler temperature is controlled through cycling of a 1- or a 2-stage burner (direct burner control). When there is no heat request, the boiler will either be shut down or maintained at the minimum temperature (selectable). Both minimum and maximum limitation of the boiler temperature are adjustable.

Data sheet	N2545
Operating voltage	AC 230 V
Frequency	50 Hz
Power consumption	7 VA
Analog input, signal	LG-Ni1000 NTC 575
Digital inputs	Status contact
Relay output, switching voltage	AC 24...230 V
Relay output, switching current	2 x 2(2) A 7 x 1(1) A
Degree of protection	IP40
Dimensions (W x H x D)	144 × 96 × 109 mm

Stock no.	Product no.
S55370-C137	**RVP350**

Heating controller for 2 heating circuits and d.h.w.

RVP360

Weather-compensated flow temperature control of 2 independent heating circuits with or without room influence, d.h.w. heating and demand-dependent boiler control.

Key functions
In addition to the functions of the RVP350, the RVP360 provides the following:
- 6 preprogrammed plant types can be selected, with automatic assignment of the functions required for each plant type
- Control of 2 mixing heating circuits
- Control of 1 pump heating circuit and 1 mixing heating circuit

Data sheet	N2546
Operating voltage	AC 230 V
Frequency	50 Hz
Power consumption	8 VA
Analog input, signal	LG-Ni1000 NTC 575
Relay output, switching voltage	AC 24...230 V
Relay output, switching current	2 x 2(2) A 9 x 1(1) A
Degree of protection	IP40
Dimensions (W x H x D)	144 × 96 × 109 mm

	Stock no.	Product no.
	S55370-C139	**RVP360**

Accessories for RVP3..

Product Title	Data sheet	Stock no.	Product no.
Front module with passiv temperature measurement, LG-Ni1000	N1408	S55720-S133	**AQR2531ANW**
Immersion temperature sensor 100 mm LG-Ni1000, with protection pocket	N1781	S55720-S516	**QAE9120.010**
Multifunctional room operator unit	N1637	BPZ:QAW70..	**QAW70..**
Outside sensor LG-Ni1000	N1811	BPZ:QAC22	**QAC22**
Outside sensor NTC 575 Ohm	N1811	BPZ:QAC32	**QAC32**
Web Server for LPB devices	N5712	BPZ:OZW672..	**OZW672..**
Strap-on temperature sensor LG-Ni1000	N1801	BPZ:QAD22	**QAD22**
Room temperature sensor LG-Ni1000	N1721	BPZ:QAA24	**QAA24**
Immersion temperature sensor 100 mm LG-Ni1000, with protection pocket	N1781	BPZ:QAE2120.010	**QAE2120.010**
Cable temperature sensor for high-temperature applications (180°C)	N1833	BPZ:QAP21.2	**QAP21.2**
Cable temperature sensor silicone 1.5 m, LG-Ni1000	N1831	BPZ:QAP21.3	**QAP21.3**
Mounting plates for front modules with passiv temperature measurement	N1408	BPZ:AQR2500..	**AQR2500..**

Service tool

Product Title	Data sheet	Stock no.	Product no.
Commissioning and plant operating software	N5649	S55800-Y100	**ACS790**
Service tool for KNX / LPB	N5655	BPZ:OCI700.1	**OCI700.1**
Web Server for LPB devices	N5712	BPZ:OZW672..	**OZW672..**

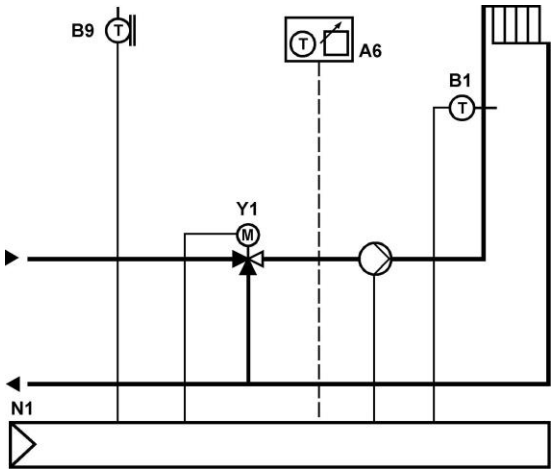
The software (ACS790) can be downloaded for free via http://www.siemens.com/acs790.

Application examples RVP3..

These are only a few examples of many applications that can be done with the family of controllers: RVP3...
More applications are described in "HIT" (the HVAC project engineering tool with a library of over 300 pre-configured HVAC-applications) and in the RVP3.. data sheet.

RVP340

H0C001 VP3 HQ

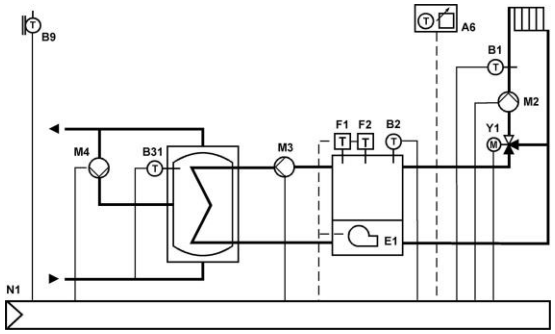


Weather-compensated heating system, one heating circuit

- Weather-compensated flow temperature control with 3-position actuator acting on mixing valve
- Frost protection for building and plant
- Digital yearly time switch
- Time switch program with 3 heating periods
- Flow temperature limit control
- ECO function switches off heating depending on outside temperature
- Room temperature-dependent boost heating and quick setback (with room unit only or with building model)

RVP350

HACA01 VP3 HQ

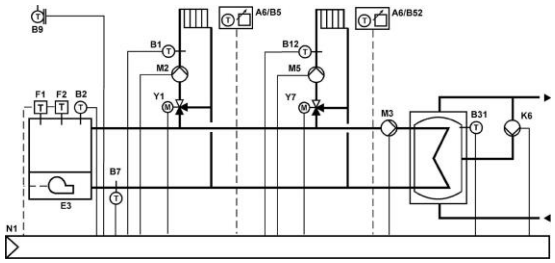


Weather-compensated heating system, heat generation, one heating circuit and d.h.w

- Weather-compensated flow temperature control with 3-point actuator acting on mixing valve
- Demand-dependend flow temperature control acting on boiler with single- or two-stage burner
- Frost protection for building and plant
- Digital yearly time switch
- 2 time switch programs, each with 3 heating periods
- Flow temperature limit control
- ECO function switches off heating depending on outside temperature
- Room temperature-dependent boost heating and quick setback (with room unit only or with building model)

RVP360

HBDA01 VP3 DE



Weather-compensated heating system, heat generation, two heating circuits and d.h.w.

- Weather-compensated flow temperature control with 3-point actuator acting on mixing valve
- Demand-dependend flow temperature control acting on boiler with single- or two-stage burner
- Frost protection for building and plant
- Digital yearly time switch
- 2 time switch programs, each with 3 heating periods
- Separate time switch program for d.h.w.
- Flow temperature limit control
- ECO function switches off heating depending on outside temperature
- Room temperature-dependent boost heating and quick setback (with room unit only or with building model)

Multifunctional Heating Controllers RVL4..

Multifunctional heating controller for use in all types of residential and nonresidential buildings, configured for all standard heating applications. The RVL controllers provide weather-compensated flow temperature control and preprogrammed plant types with automatic assignment of the functions required for each type of plant.
The RVL controllers are characterized by the easy-to-understand user interface, large display and setting features:

- Analog heating curve
- Room temperature setpoint knob
- Proven operating line principle
- Setting level fo the heating engineer
- Communication facilities
- Remote operation

Operating voltage	AC 230 V
Frequency	50 Hz
Relay output, switching voltage	AC 24...230 V
Relay output, switching current	2 A
Dimensions (W x H x D)	144 x 144 x 113 mm

Heating controller for 1 heating circuit or boiler temperature control RVL480

Key functions
Weather-compensated flow temperature control, with or without room influence
6 preprogrammed plant types are provided

Plant system

- Control of a mixing valve serving a heating zone (space heating)
- Control of a burner (1- or 2-stage)
- Control of a valve in the primary return of a heating zone with district heat connection
- Demand-dependent control (precontrol) of a mixing valve / of the boiler temperature / of a heat exchanger (heat demand signal via data bus)

Additional functions
The RVL480 offers the following functions (no submodules or extra devices required):

- Display of parameters, actual values, operating states and fault status signals
- 7-day program with 3 heating periods per day
- 2 additional programs, each with 3 switching periods per day
- Automatic summer/winter changeover
- Holiday program (up to 8 holiday periods per year)
- Optimum start/stop in accordance with the heating program (with or without room influence)
- Automatic ECO function, depending on the outside temperature and the type of building construction
- Optional remote selection of operating modes (via room unit or external switch)
- Scalable DC 0...10 V output for passing on the heat request to other devices
- Quick setback and boost heating
- Preselection of flow temperature setpoint via external contact
- Minimum and maximum limitation of the flow temperature
- Minimum and maximum limitation of the return temperature (shifting / constant)
- Maximum limitation of the room temperature
- Communication with other devices via the data bus
- Limitation of the return temperature differential (DRT) for district heat applications
- Frost protection and pump protection
- Flow temperature alarm

Data sheet	N2540
Power consumption	7 VA

Stock no.	Product no.
BPZ:RVL480	**RVL480**

RVL481

Heating controller for boiler temperature control and d.h.w. heating

Key functions
Weather-compensated flow temperature control, with or without room influence, with simultaneous demand-compensated boiler and DHW control.
29 preprogrammed plant types can be selected from a combination of 6 heating applications and 5 DHW applications.

Heating circuit plant types
- Control of a mixing valve serving a heating circuit (space heating)
- Control of a burner (1- or 2-stage)
- Control of a valve in the primary return of a heating zone with district heat connection
- Demand-dependent control (precontrol) of a mixing valve / of the boiler temperature / of a heat exchanger (heat demand signal via data bus)

DHW plant types
- Charging of DHW storage tank through control of a charging pump.
- Charging of DHW storage tank through control of a mixing valve
- Charging of DHW storage tank through control of a diverting valve
- DHW heating via heat exchanger through control of a 2-port valve in the primary return
- DHW heating with electric immersion heater only
- DHW heating with solar collector

Additional functions
In addition to the functions of the RVL480, the RVL481 offers the following functions (no submodules or extra devices required):
- 2 programs for heating and DHW, each with 3 heating periods per day
- 1 multifunctional relay for switching on/off the plant according to various parameters and functions

Data sheet	N2541
Power consumption	9 VA

Stock no.	Product no.
BPZ:RVL481	**RVL481**

Heating controller for boiler temperature control for modulating or 2-stage burners with d.h.w. heating

RVL482

Key functions
Weather-compensated flow temperature control, with or without room influence, with simultaneous demand-compensated boiler and DHW control.
21 preprogrammed plant types can be selected from a combination of 5 heating applications and 4 DHW applications.

Heating circuit plant types
- Control of space heating through control of a mixing valve in the heating circuit
- Control of space heating through control of a mixing valve with simultaneous demand-dependent control of the boiler temperature
- Control of space heating through control of mixing valve and boiler, plus minimum limitation of the boiler return temperature with own mixing valve
- Demand-dependent control (precontrol) of the boiler temperature (heat demand signal via bus)
- Demand-dependent control (precontrol) of the boiler temperature with minimum limitation of the boiler return temperature via mixing valve (heat demand signal via bus)

DHW plant types
- Charging of DHW storage tank through control of a charging pump.
- Charging of DHW storage tank through control of a mixing valve
- DHW heating via heat exchanger through control of a 2-port valve in the primary return
- DHW heating through electric immersion heater only
- DHW heating with solar collector

Additional functions
In addition to the functions of the RVL480 and RVL481, the RVL482 offers the following functions:
- 2 scalable DC 0...10 V inputs for heat demand signals from external consumers
- Connection facility for solar and wind sensor (refer to chapter "Sensors")
- Control of a boiler or circulating pump
- Optional selection of circulating pump/bypass pump
- Three 7-day programs, each with 3 heating periods per day

Data sheet	N2542
Power consumption	9 VA

Stock no.	Product no.
BPZ:RVL482	**RVL482**

RVL479

Heating controller for a second heating circuit

Application
Heating controller for use in all types of buildings that require specific control of a second heating zone at an attractive price.

Key functions
The RVL479 operates with a partner unit, for independent weather-compensated control of a second heating zone.
1 preprogrammed heating application: Space heating via control 3-position of a mixing valve.

Additional functions
- Dedicated control of the second heating zone makes it possible to use an independent user interface for diagnostics
- Separate 7-day program with 3 heating periods per day
- Separate holiday program
- Dedicated display of parameters for the second zone (operating state and fault status signals)
- Independent optimum start/stop for the second heating zone
- Minimum and maximum limitation of the flow temperature
- Minimum limitation of the return temperature
- Maximum limitation of the room temperature
- Communication with other devices via LPB data bus
- Transmission and common usage of data (outside temperature, heat demand, alarms, etc.)
- Frost protection and pump protection

Data sheet	N2543
Power consumption	7 VA

	Stock no.	Product no.
	BPZ:RVL479	**RVL479**

Suitable partner units for RVL479

Product Title	Data sheet	Stock no.	Product no.
Heating controller for 1 heating circuit or boiler temperature control	N2540	BPZ:RVL480	**RVL480**
Heating controller for boiler temperature control and d.h.w. heating	N2541	BPZ:RVL481	**RVL481**
Heating controller for boiler temperature control for modulating or 2-stage burners with d.h.w. heating	N2542	BPZ:RVL482	**RVL482**

Field devices for RVL4..

Product Title	Data sheet	Stock no.	Product no.
Front module with passiv temperature measurement, LG-Ni1000	N1408	S55720-S133	**AQR2531ANW**
Immersion temperature sensor 100 mm LG-Ni1000, with protection pocket	N1781	S55720-S516	**QAE9120.010**
Solar sensor	N1943	BPZ:QLS60	**QLS60**
Multifunctional room operator unit	N1637	BPZ:QAW70..	**QAW70..**
Outside sensor LG-Ni1000	N1811	BPZ:QAC22	**QAC22**
Outside sensor NTC 575 Ohm	N1811	BPZ:QAC32	**QAC32**
Web Server for LPB devices	N5712	BPZ:OZW672..	**OZW672..**
Strap-on temperature sensor LG-Ni1000	N1801	BPZ:QAD22	**QAD22**
Room temperature sensor LG-Ni1000	N1721	BPZ:QAA24	**QAA24**
Immersion temperature sensor 100 mm LG-Ni1000, with protection pocket	N1781	BPZ:QAE2120.010	**QAE2120.010**
Cable temperature sensor for high-temperature applications (180°C)	N1833	BPZ:QAP21.2	**QAP21.2**
Cable temperature sensor silicone 1.5 m, LG-Ni1000	N1831	BPZ:QAP21.3	**QAP21.3**
Mounting plates for front modules with passiv temperature measurement	N1408	BPZ:AQR2500..	**AQR2500..**

Service tool

Product Title	Data sheet	Stock no.	Product no.
Commissioning and plant operating software	N5649	S55800-Y100	**ACS790**
Service tool for KNX / LPB	N5655	BPZ:OCI700.1	**OCI700.1**
Web Server for LPB devices	N5712	BPZ:OZW672..	**OZW672..**

The software (ACS790) can be downloaded for free via http://www.siemens.com/acs790.

QAW70..

Multifunctional room operator unit

Programmable unit with display of date, time of day, room temperature, outside temperature, setting values and current 7-day program. With knob for manual setpoint readjustments and presence button for manually activating the savings program

Data sheet	N1637
Measuring range, temperature	0...32 °C
Setpoint readjustment range	±3 K
Communication	PPS
Connection cable	2-wire
Degree of protection	IP30
Dimensions (W x H x D)	97 x 143 x 41 mm

Range overview QAW70..

Product Title	Stock no.	Product no.
Multifunctional room unit, instructions in en, de, fr, it	BPZ:QAW70-A	**QAW70-A**
Multifunctional room unit, instructions in nl, sv, el, pl	BPZ:QAW70-B	**QAW70-B**

Application examples RVL4..

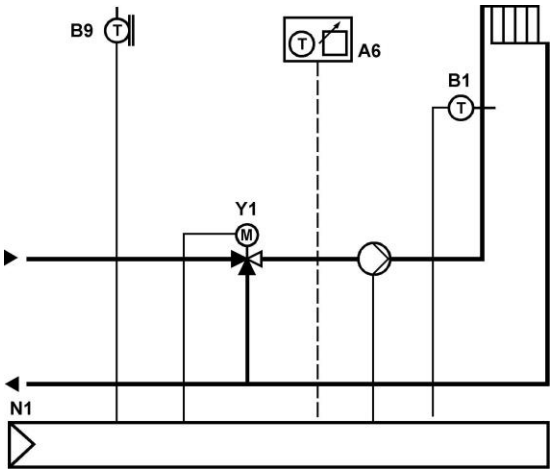
These are only a few examples of many applications that can be done with the family of controllers: RVL4...
More applications are described in "HIT" (the HVAC project engineering tool with a library of over 300 pre-configured HVAC-applications) and in the RVL4.. data sheet.

Weather-compensated heating system, one heating circuit

RVL480

H0C001 VL4 HQ

- Weather-compensated flow temperature control with 3-position actuator acting on mixing valve
- Frost protection for building and plant
- Digital yearly time switch
- Time switch program with 3 heating periods
- Flow temperature limit control
- ECO function switches off heating depending on outside temperature
- Room temperature-dependent boost heating and quick setback (with room unit only or with building model)
- Analog setting of heating curve

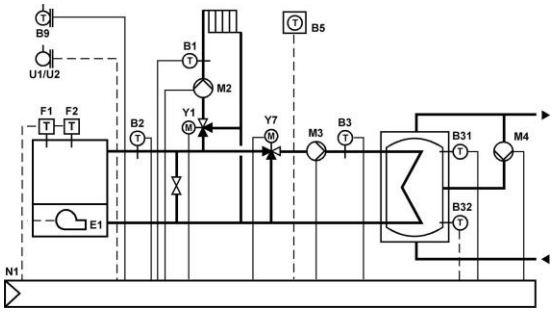


Weather-compensated heating system, heat generation, one heating circuit, d.h.w.

RVL482

HACB01 VL4 HQ

- Weather-compensated flow temperature control with 3-point actuator acting on mixing valve
- Demand-dependend flow temperature control acting on boiler with single- or two-stage burner
- Frost protection for building and plant
- Digital yearly time switch
- 3 time switch programs, each with 3 heating periods
- Flow temperature limit control
- ECO function switches off heating depending on outside temperature
- Room temperature-dependent boost heating and quick setback (with room unit only or with building model)
- Analog setting of heating curve and room temperature setpoint



RMH760B-1

Heating controller

- Heating controller as primary controller or main controller (district heat) or heating circuit controller
- Boiler temperature control
- Control of max. 3 heating circuits and DHW heating (7 variants available) with optional extension modules
- Tested, predefined applications (refer to Application Catalog)
- Flexible configuration
- Clear-text operation with separate operator unit (plug-in type or detached)
- Integrated KNX bus communication
- No commissioning tool required

The RMH760B-1 supports the languages: English, German, French, Italian, Spanish, Portuguese, Dutch, Danish, Finnish, Norwegian, Swedish, Polish, Czech, Hungarian, Russian, Slovak, Bulgarian, Greek, Romanian, Slovenian, Serbian, Croatian, Turkish.

Extension modules complement the heating controller and offer extra functions. They are attached to the controller via plug-in connectors. The extension modules do not operate autonomously.
The operation of the device from commissioning to enduser operation can be done via the operator unit.
Available extension modules:

- 2 heating circuit modules RMZ782B
- 1 DHW module RMZ783B
- 1 universal module RMZ787
- 2 universal modules RMZ789

A total of 4 extension modules can simultaneously be used with the heating controller.

Available operator units:

- Plug-in type operator unit RMZ790
- Detached operator unit RMZ791
- Bus operator unit RMZ792

Data sheet	N3133
Operating voltage	AC 24 V
Frequency	50/60 Hz
Power consumption	12 VA
Communication	KNX (KNX TP1)
Analog outputs, number	2
Analog output, signal	DC 0...10 V
Analog output, current	Max. 1 mA
Digital outputs, number	5
Universal inputs, number	6
Universal input, signal	T1 (PTC) Pt1000 Potential-free digital status contact NTC 575 LG-Ni1000 Digital pulse contact DC 0...10 V 2 x LG-Ni1000 1000...1175 Ohm 0...1000 Ohm
Relay outputs, number	5
Relay output, switching voltage	AC 19...250 V
Relay output, switching current	4 (3) A
Mounting	DIN rail
Degree of protection	IP20
Dimensions (W x H x D)	173 × 90 × 80 mm

Stock no.	Product no.
BPZ:RMH760B-1	**RMH760B-1**

Boiler sequence controller

RMK770-1

Modular heating controller with integrated control and supervisory functions for:
- Up to 6 boilers, multistage or modulating burners
- Precontrol, heating circuit
- Tested, predefined applications (refer to Application Catalog)
- Flexible configuration
- Clear-text operation with separate operator unit (plug-in type or detached)
- Integrated KNX bus communication
- No commissioning tool required

The RMK770-1 supports the languages: English, German, French, Italian, Spanish, Portuguese, Dutch, Danish, Finnish, Norwegian, Swedish, Polish, Czech, Hungarian, Russian, Slovak, Bulgarian, Greek, Romanian, Slovenian, Serbian, Croatian, Turkish.

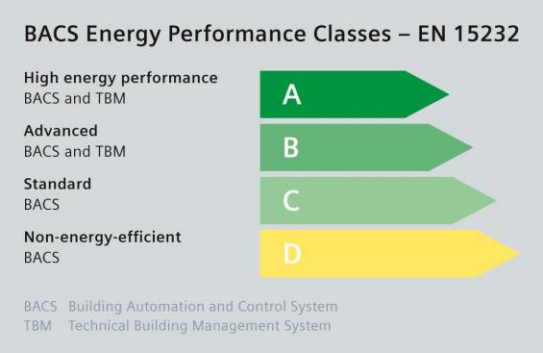
Extension modules complement the boiler sequence controller and offer extra functions. They are attached to the controller via plug-in connectors. The extension modules do not operate autonomously. The operation of the device from commissioning to enduser operation can be done via the operator unit.
Available extension modules:
- 3 universal modules RMZ785
- 3 universal modules RMZ787
- 3 universal modules RMZ788
- 3 universal modules RMZ789

A total of 3 extension modules can simultaneously be used with the boiler sequence controller.

Available operator units:
- Plug-in type operator unit RMZ790
- Detached operator unit RMZ791
- Bus operator unit RMZ792

Data sheet	N3132
Operating voltage	AC 24 V
Frequency	50/60 Hz
Power consumption	12 VA
Communication	KNX (KNX TP1)
Analog outputs, number	2
Analog output, signal	DC 0...10 V
Analog output, current	Max. 1 mA
Digital inputs, number	2
Digital inputs	Potential-free input signal
Digital input, contact query	5 mA DC 15 V
Digital outputs, number	7
Universal inputs, number	8
Universal input, signal	T1 (PTC) Pt1000 Potential-free digital status contact LG-Ni1000 DC 0...10 V 2 x LG-Ni1000 1000...1175 Ohm 0...1000 Ohm
Relay outputs, number	7
Relay output, switching voltage	AC 19...250 V
Relay output, switching current	4 (3) A
Mounting	DIN rail
Degree of protection	IP20
Dimensions (W x H x D)	173 × 90 × 80 mm

Stock no.	Product no.
BPZ:RMK770-1	**RMK770-1**



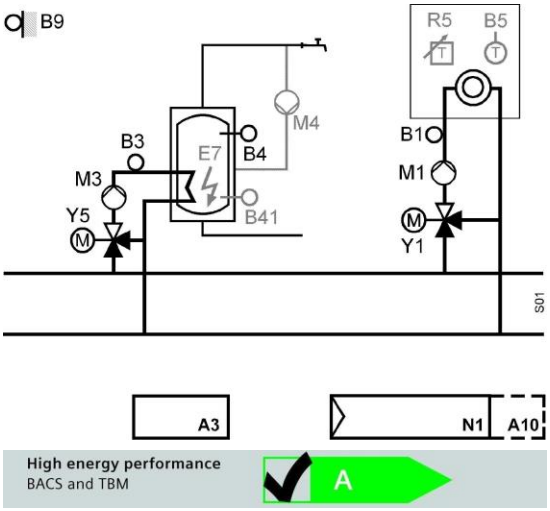
Application examples RMH760B.. and RMK770..

These are only a few examples of many applications that can be done with the with Synco™700 controllers: RMH760B.. / RMK770..
More Synco™700 applications are described in "HIT" (the HVAC project engineering tool with a library of over 300 pre-configured HVAC-applications) and in the RMH760B.. / RMK770.. data sheet.

The evaluation of the energy efficiency classification is based on EN15232:2012. For a determination of the energy efficiency classification of the application, please use the "HIT Tool".
Further details are available in the manual "Building automation - impact on energy efficiency" in our HIT Online.
www.siemens.com/hit

RMH760B..

H0CB02 H6B HQ



To fulfill the classification, the plant must be equipped with all indicated functions.

Weather-compensated heating control, one heating circuit, d.h.w.

- Weather-compensated flow temperature control with adjustable setpoints for Comfort, Precomfort, Econo-my and Protective Mode
- Frost protection for the building and the plant
- Changeover between 3 room temperature setpoints according to the time switch program
- Yearly clock
- Holiday and special day program with up to 16 periods
- 7-day program (maximum six switching points per day)
- Time switch program for the heating circuit
- Limitation of the flow temperature
- Automatic heating limit with adjustable limits
- Optimum start control
- Quick setback
- Control of the storage tank charging temperature with adjustable setpoints for Normal, Reduced, Legionella and Protective mode
- Time switch program for DHW heating

The indicated energy efficiency classification can be attained only if the following functions are implemented:

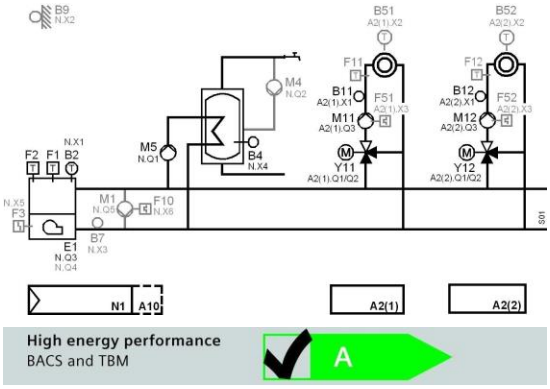
- Integrated individual room control including demand control "by occupancy, air quality, etc." (Heating circuits for precontrol in individual room control)
- Indoor temperature control (Room temperature in individual room control via KNX requires extra configuration)
- Variable speed pump control with constant Δp (The pump must have integrated output control)
- Variable temperature depending on the load (Heat demand signal required)

Weather-compensated heating control, heat generation, 2 heating circuits, d.h.w.

RMH760B..

HCDA01 H6B HQ

- Weather-compensated flow temperature control with adjustable setpoints for Comfort, Precomfort, Economy and Protective Mode
- Frost protection for the building and the plant
- Changeover between 3 room temperature setpoints according to the time switch program
- Yearly clock
- Holiday and special day program with up to 16 periods
- 7-day program (maximum six switching points per day)
- Time switch programs for heating circuits 1 and 2
- Limitation of the flow temperature
- Automatic heating limit with adjustable limits
- Optimum start control
- Quick setback
- Control of the storage tank temperature with adjustable setpoints for Normal, Reduced, Legionella and Protective mode
- Time switch program for DHW heating
- Demand-compensated boiler temperature control
- Protective boiler startup by reducing the consumer setpoints
- Control of a single-stage or 2-stage burner
- Control of the boiler temperature via modulating burner with DC 0...10 V control
- Burner fault contact



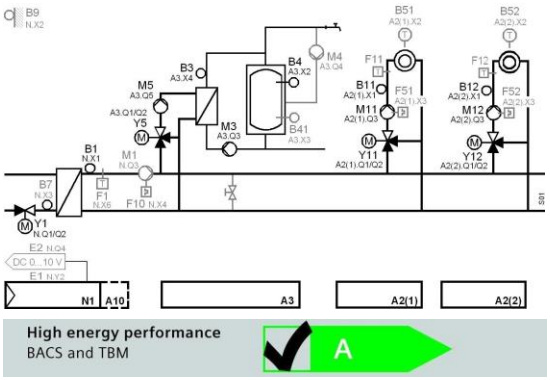
To fulfill the classification, the plant must be equipped with all indicated functions.

The indicated energy efficiency classification can be attained only if the following functions are implemented:

- Integrated individual room control including demand control "by occupancy, air quality, etc." (Heating circuits for precontrol in individual room control)
- Indoor temperature control (Room temperature in individual room control via KNX requires extra configuration)
- Variable speed pump control with constant Δp (The pump must have integrated output control)
- enerator; Variable temperature depending on the load

RMH760B..

DADC04 H6B HQ



To fulfill the classification, the plant must be equipped with all indicated functions.

Weather-compensated heating system, district heating connection, 2 heating circuits, d.h.w

- Weather-compensated flow temperature control with adjustable setpoints for Comfort, Precomfort, Economy and Protective mode
- Frost protection for the building and the plant
- Changeover between 3 room temperature setpoints according to the time switch program
- Yearly clock
- Holiday and special day program with up to 16 periods
- 7-day program (maximum six switching points per day)
- Time switch programs for the heating circuits
- Control of the storage tank charging temperature with adjustable setpoints for Normal, Reduced, Legionella and Protective mode
- Time switch program for DHW heating
- Limitation of the flow temperature
- Automatic heating limit with adjustable limits
- Optimum start control
- Quick setback
- Demand-compensated primary control

The indicated energy efficiency classification can be attained only if the following functions are implemented:

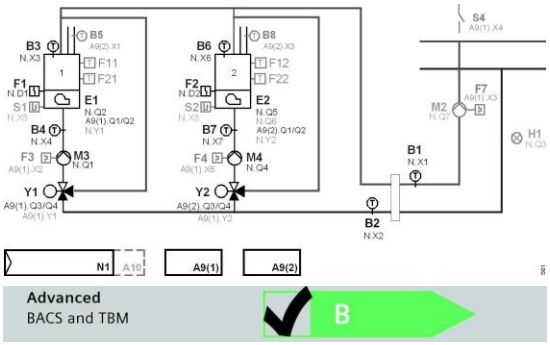
- Integrated individual room control including demand control "by occupancy, air quality, etc." (Heating circuits for precontrol in individual room control)
- Indoor temperature control (Room temperature in individual room control via KNX requires extra configuration)
- Variable speed pump control with constant Δp (The pump must have integrated output control)
- Intermittent control of emission and/or distribution, automatic control with optimum start/stop
- Generator; Variable temperature depending on the load

Dual-boiler plant, boiler pumps, boiler return with 3-port valve

RMK770..

HFF003 MK7 HQ

- Control of the boiler sequence
- Automatic changeover of lead boiler depending on the number of boiler operating hours
- Control of the boiler pumps
- Control of the boiler temperature via modulating burner with 3-position or DC 0...10 V control
- Burner fault contact
- Limitation of the burner's minimum on time
- Controlled maintained boiler return temperature with 3-port valve and 3-position or DC 0...10 V actuator
- Protective boiler startup
- Maximum and minimum limitation of the boiler temperature
- Selection of boiler operating mode
- Flue gas measuring mode, boiler testing mode
- Burner hours run and burner startup counter
- Minimum and maximum limitation of the flow temperature
- Automatic changeover to summer operation
- (heating OFF)
- Pump overrun, pump kick
- Valve overrun, valve kick
- Acquisition and evaluation of heat requisition signals via Konnex bus



To fulfill the classification, the plant must be equipped with all indicated functions.

The indicated energy efficiency classification can be attained only if the following functions are implemented:

In connection with an application that fulfils the energy efficiency class B, necessary for:

- Emission control
- Control of distribution network hot watertemperature (supply or return)
- Control of distribution pumps
- Intermittent control of emission and/or distribution

RMZ790

Plug-in type operator unit

- Operator unit plugs into the Synco™ 700 controllers
- For displaying and changing plant data for service staff and enduser
- Clear-text operation
- Can be plugged in and removed during operation
- Power supply via the controller

Data sheet	N3111
Mounting	DIN rail

Stock no.	Product no.
BPZ:RMZ790	**RMZ790**

RMZ791

Detached operator unit with 3 m cable

Like plug-in type operator unit, but:
- Other mounting choices (typically for control panel door or wall mounting)
- Larger display
- Connection via a prefabricated 3 m cable, supplied as standard

Data sheet	N3112
Mounting	Surface mounted (plaster)

Stock no.	Product no.
BPZ:RMZ791	**RMZ791**

RMZ792

Bus operator unit

Communicating operator unit for operating up to 150 controllers, room units and central units from the Synco™ 700 range via KNX bus.
Favorite pages can be freely defined. Designed for fixed installation or mobile use.

Data sheet	N3113
Operating voltage	AC 24 V
Voltage supply	KNX bus
Power consumption	2.5 VA
Degree of protection	IP20
Dimensions (W x H x D)	145 x 96 x 34 mm

Stock no.	Product no.
BPZ:RMZ792	**RMZ792**

Room unit with KNX bus

QAW740

Configurable unit with display of operating mode, timer, temperatures and fault.

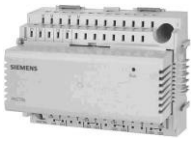
With 3 operating elements:
- Knob for setpoint readjustments
- Operating mode button
- Timer button

Data sheet	N1633
Operating voltage	DC 24 V
Voltage supply	KNX bus
Measuring range, temperature	0...45 °C
Setpoint readjustment range	-3...3 K
Communication	KNX (KNX TP1)
Connection cable	2-wire
Degree of protection	IP20
Dimensions (W x H x D)	96 x 96 x 47 mm
Weight (net)	0.22 kg

	Stock no.	Product no.
	BPZ:QAW740	**QAW740**

Universal modules

RMZ78..



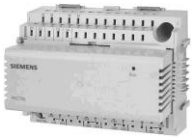
Additional inputs and outputs required by the Synco™ 700 controllers can be provided by these modules.
A description of the functions is given with the relevant controller module.

Data sheet	N3146
Voltage supply	Supply from controller module
Power consumption	3 VA
Analog output, signal	DC 0...10 V
Analog output, current	Max. 1 mA
Universal input, signal	0...1000 Ohm 1000...1175 Ohm DC 0...10 V Potential-free digital status contact LG-Ni1000 Pt1000 T1 (PTC) 2 x LG-Ni1000
Relay outputs	switching contact, potential-free
Relay output, switching voltage	AC 19...265 V
Relay output, switching current	4 (3) A
Degree of protection	IP20
Dimensions (W x H x D)	117 × 90 × 75 mm

Range overview RMZ78..

Universal-inputs, number	Analog outputs, number	Relay outputs, number	Weight (net) [kg]	Stock no.	Product no.
4	2	2	0.322	BPZ:RMZ788	**RMZ788**
6	2	4	0.359	BPZ:RMZ789	**RMZ789**
8	0	0	0.3	BPZ:RMZ785	**RMZ785**
4	0	4	0.334	BPZ:RMZ787	**RMZ787**

RMZ782B



Heating circuit module

- Weather-compensated flow temperature control via heating circuit's mixing valve
- Control of heating circuit pump

The available heating circuit control and supervisory functions are the same as those of the RMH760B-1

Data sheet	N3136
Operating voltage	AC 24 V
Voltage supply	Supply from controller module
Power consumption	3 VA
Analog outputs, number	1
Analog output, signal	DC 0...10 V
Analog output, current	1 mA
Universal inputs, number	3
Universal input, signal	LG-Ni1000 0...1000 Ohm 1000...1175 Ohm DC 0...10 V Pt1000 NTC 575 2 x LG-Ni1000
Relay outputs, number	3
Relay outputs	Normally open contact Potential-free
Relay output, switching voltage	AC 19...265 V
Relay output, switching current	4 (3)A
Degree of protection	IP20
Weight (net)	0.334 kg
Dimensions (W x H x D)	117 x 90 x 75 mm

Stock no.	Product no.
BPZ:RMZ782B	**RMZ782B**

DHW module

RMZ783B

- Control of the storage tank temperature
- Storage tank charging with integrated coil, with pump or mixing valve
- Storage tank charging with detached heat exchanger, with pump and mixing valve
- Storage tank charging according to a time program
- Control of the circulating pump according to a time program

Data sheet	N3136
Operating voltage	AC 24 V
Voltage supply	Supply from controller module
Power consumption	3 VA
Analog outputs, number	1
Analog output, signal	DC 0...10 V
Analog output, current	1 mA1 A
Universal inputs, number	4
Universal input, signal	LG-Ni1000 0...1000 Ohm 1000...1175 Ohm DC 0...10 V Pt1000 NTC 575 2 x LG-Ni1000
Relay outputs, number	5
Relay outputs	Normally open contact Potential-free
Relay output, switching voltage	AC 19...265 V
Relay output, switching current	4 (3)A
Degree of protection	IP20
Weight (net)	0.36 kg
Dimensions (W x H x D)	117 x 90 x 75 mm

Stock no.	Product no.
BPZ:RMZ783B	**RMZ783B**

Module connector

RMZ780

Module connector for detached mounting of extension modules within the control panel.

Data sheet	N3138
Max. cable length	10 m
Dimensions (W x H x D)	18.5 x 87.5 x 22.5 mm

Stock no.	Product no.
BPZ:RMZ780	**RMZ780**

Communicating heating controllers
Field devices for RMH760B.. and RMK770..

Sensors, setpoint adjusters

Product Title	Data sheet	Stock no.	Product no.
Flue gas temperature sensor Pt1000	N1846	BPZ:FGT-PT1000	**FGT-PT1000**
Immersion temperature sensor 100 mm LG-Ni1000, with protection pocket	N1781	S55720-S516	**QAE9120.010**
Solar sensor	N1943	BPZ:QLS60	**QLS60**
Outside sensor LG-Ni1000	N1811	BPZ:QAC22	**QAC22**
Outside sensor NTC 575 Ohm	N1811	BPZ:QAC32	**QAC32**
Strap-on temperature sensor LG-Ni1000	N1801	BPZ:QAD22	**QAD22**
Strap-on temperature sensor with cable LG-Ni1000	N1802	BPZ:QAD26.220	**QAD26.220**
Immersion temperature sensor 100 mm LG-Ni1000, with protection pocket	N1781	BPZ:QAE2120.010	**QAE2120.010**
Immersion temperature sensur Ø 4 mm with cable and fitting	N1790	BPZ:QAE26.9..	**QAE26.9..**
Cable temperature sensor PVC 2 m, LG-Ni1000	N1831	BPZ:QAP22	**QAP22**

Monitors

Product Title	Data sheet	Stock no.	Product no.
Flow switch for use in hydraulic systems, PN10, DN32...200	N1592	BPZ:QVE1900	**QVE1900**
Flow switch for use in hydraulic systems, PN25, DN20...200	N1594	BPZ:QVE1901	**QVE1901**
Thermal reset limit thermostat	N1202	BPZ:RAK-TW.1..H	**RAK-TW.1..H**
Temperature limiter	N1206	BPZ:RAK-TB.1..M	**RAK-TB.1..M**
Safety limit thermostat	N1204	BPZ:RAK-ST..M	**RAK-ST..M**

Room units / sensors

Product Title	Data sheet	Stock no.	Product no.
Front module with passiv temperature measurement, LG-Ni1000	N1408	S55720-S133	**AQR2531ANW**
Front module for base modules, temperature (active)	N1411	S55720-S136	**AQR2532NNW**
Room temperature sensor LG-Ni1000	N1721	BPZ:QAA24	**QAA24**
Room sensor KNX for temperature, white	N1602	S55624-H103	**QMX3.P30**
Room unit with room temperature sensor and setpoint readjuster -3...3 K	N1721	BPZ:QAA27	**QAA27**
Room temperature sensor LG-Ni1000 for mounting on recessed conduit boxes	N1722	BPZ:QAA64	**QAA64**
Room unit with KNX bus	N1633	BPZ:QAW740	**QAW740**
Mounting plates for front modules with passiv temperature measurement	N1408	BPZ:AQR2500..	**AQR2500..**
Base module with KNX for temperature and humidity measurement	N1411	BPZ:AQR2570..	**AQR2570..**

Transformers

Product Title	Data sheet	Stock no.	Product no.
Transformers	N5536	BPZ:SEM62..	**SEM62..**

Service tool

Product Title	Data sheet	Stock no.	Product no.
Commissioning and plant operating software	N5649	S55800-Y100	**ACS790**
Service tool for KNX / LPB	N5655	BPZ:OCI700.1	**OCI700.1**
USB - KNX Service interface	A6V10438951	S55800-Y101	**OCI702**
Web server for Synco devices	N5701	BPZ:OZW772..	**OZW772..**

The software (ACS790) can be downloaded for free via http://www.siemens.com/acs790.

District heating controller

RVD12..

Control of district heat substations, space heating and d.h.w. heating.
Optimized for low return temperatures in district heating networks.

- 3 ready programmed and preselected plant types
- Straightforward, easy-to-understand operation
- Analog adjustment of room temperature setpoint, other adjustments with operating lines
- Display of time of day, time program, setpoints, actual values, limitations, errors, etc.
- Optional remote operation via room unit
- 2 independent switching programs each with 3 occupancy times per day
- Holiday function (via room unit)
- DRT limitation for the reduction of peak loads
- Maximum limitation of the return temperature on the primary side
- Minimum and maximum limitation of the flow temperature
- Automatic summer / winter changeover
- Automatic ECO function
- Pump protection
- Legionella function
- Frost protection function
- Automatic monitoring of sensors with alarm indication
- Relay and sensor tests, manual operation
- Locking function for district heat parameters
- Communication via Modbus
- Display with background lighting

Plant-specific
- 1 pump heating circuit, control of the flow temperature, optionally weather-compensated / weather- and room temperature-compensated / room temperature-compensated
- D.h.w. heating:
- Storage system with integrated heat exchanger and 1 storage tank sensor
- Charging pump

Data sheet	N2510
Operating voltage	AC 230 V
Frequency	50 Hz
Power consumption	5.5 VA
Analog input, signal	LG-Ni1000 NTC 575
Digital outputs	3 × AC 230 V 1(1) A 1 × AC 230 V 2(2) A
Dimensions (W x H x D)	144 x 96 x 109 mm

Range overview RVD12..

Product Title	Stock no.	Product no.
Controller, 3 programmed plant types, instructions in da, de, en, fi, fr, it, sv	S55370-C109	**RVD120-A**

RVD14..

District heating controller

Same functionality as the RVD120, but with the following extra features:
– 8 ready programmed and preselected plant types
– Solar d.h.w. heating
– D.h.w. heating with electric immersion heater
– Refill function
– Communication via Modbus

Plant-specific
- Precontrol of internal control loops
- 1 pump or mixing heating circuit, flow temperature control, optionally weather-compensated / weather- and room temperature-compensated / room temperature-compensated
- D.h.w. heating:

– Instantaneous system
– Storage tank charging system with 1 or 2 storage tank sensors
– Storage system with integrated heat exchanger
– 2 charging pumps
– Circulating pump
– Solar d.h.w. heating

Data sheet	N2510
Operating voltage	AC 230 V
Frequency	50 Hz
Power consumption	6 VA
Analog input, signal	LG-Ni1000 NTC 575 DC 0...10 V
Digital inputs, number	1
Digital inputs	Flow switch
Digital outputs	5 × AC 230 V 1(1) A 4 × AC 230 V 2(2) A
Dimensions (W x H x D)	144 x 96 x 109 mm

Range overview RVD14..

Product Title	Stock no.	Product no.
Controller, 8 programmed plant types, instructions in da, de, en, fi, fr, it, sv	S55370-C113	**RVD140-A**

Field devices for RVD1..

Product Title	Data sheet	Stock no.	Product no.
Pressure sensor for neutral and slightly aggressive liquids and gases (0...10 V)	A6V10432494	BPZ:QBE2003-P..	**QBE2003-P..**
Pressure sensor for refrigerants (0...10 V)	A6V10434676	BPZ:QBE2004-P..U	**QBE2004-P..U**
Immersion temperature sensor 100 mm LG-Ni1000, with protection pocket	N1781	S55720-S516	**QAE9120.010**
Multifunctional room operator unit	N1637	BPZ:QAW70..	**QAW70..**
Outside sensor LG-Ni1000	N1811	BPZ:QAC22	**QAC22**
Outside sensor NTC 575 Ohm	N1811	BPZ:QAC32	**QAC32**
Strap-on temperature sensor LG-Ni1000	N1801	BPZ:QAD22	**QAD22**
Immersion temperature sensor 100 mm LG-Ni1000, with protection pocket	N1781	BPZ:QAE2120.010	**QAE2120.010**
Cable temperature sensor for high-temperature applications (180°C)	N1833	BPZ:QAP21.2	**QAP21.2**
Cable temperature sensor silicone 1.5 m, LG-Ni1000	N1831	BPZ:QAP21.3	**QAP21.3**

Application examples RVD1..

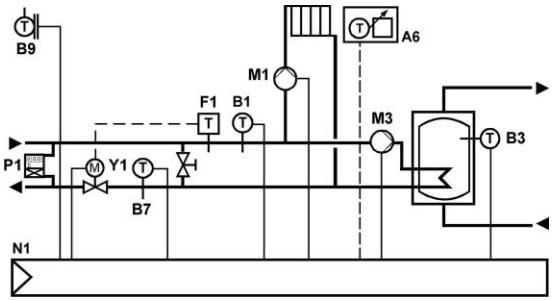
These are a few examples of applications that can be done with the controllers RVD1..
More applications are described in "HIT" (the HVAC project engineering tool with a library of over 300 pre-configured HVAC-applications) and in the RVD1.. data sheet.

Direct system, weather-compensated heating and d.h.w.

RVD12..

DAAA01 VD1 HQ

- Weather-compensated flow temperature control with pump heating circuit
- Demand-dependend flow temperature control with 3-position actuator acting on two-port valve
- Maximum limitation of primary return temperature depending on the outside temperature
- Frost protection for building and plant
- Digital 7-day time switch
- 2 time switch programs, each with 3 heating periods
- Flow temperature limit control
- ECO function switches off heating depending on outside temperature
- Room temperature-dependent quick setback (with room sensor or with building model)
- Optional remote operation via room unit

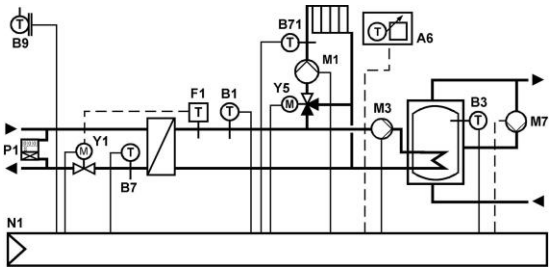


Weather-compensated flow temperature control acting on mixing circuit, d.h.w. supply with storage tank

RVD14..

DACA01 VD1 HQ

- Demand-dependent flow temperature control with 3-position actuator acting on primary two-port valve
- Weather-compensated flow temperature control with 3-position actuator acting on mixing valve
- Maximum limitation of primary return temperature depending on the outside temperature
- Frost protection for building and plant
- Digital 7-day time switch
- 2 time switch programs, each with 3 heating periods
- Flow temperature limit control
- ECO function switches off heating depending on the outside temperature
- Room temperature-dependent quick setback (with room sensor or with building model)
- Optional remote operation via room unit



RVD25..

District heating controller

Multifunctional heating controller for use in district heating substations and district heating plants with LPB and M-bus communication. Suited for one heating circuit with d.h.w. heating in instantaneous systems or with storage tank. 28 programmed plant types. Operating voltage AC 230 V.

Key features:
- Optimized for low return temperatures in district heating networks.
- Display of time of day, time program, setpoints, actual values, limitations, errors, etc.
- Optional remote operation via room unit
- 2 independent switching programs each with 3 occupancy times per day
- Yearly clock with automatic summer- / wintertime changeover
- Power and / or volumetric flow limitation in combination with heat meter
- Pump and valve protection
- Automatic monitoring of sensors with display of alarm
- Locking function for district heat parameters
- Optional suppression of hydraulic creep
- Frost protection function
- DRT limitation for the reduction of peak loads and of idle heat
- Maximum limitation of the return temperature on the primary side
- Minimum and maximum limitation of the flow temperature
- Optimum start / stop control of the heating system
- Automatic ECO function
- Legionella function
- Forced charging function for plant with storage tank
- Cooling down protection for the primary supply lines
- Solar d.h.w. heating
- D.h.w. heating with electric immersion heater
- Refill function
- Selectable heating period

Plant-specific:
- Precontrol internal and interconnected
- 1 mixing or pump heating circuit
- D.h.w. heating with selectable priority:
- Instantaneous systems
- Storage charging system
- Storage system with integrated heat exchanger
- Circulating pump, 2 charging pumps

Data sheet	N2513
Operating voltage	AC 230 V
Frequency	50 Hz
Power consumption	5.5 VA
Communication	LPB (interconnected controller) M-bus (slave)
Analog input, signal	DC 0...10 V LG-Ni1000 NTC 575
Digital inputs, number	1
Digital inputs	Pulse transmitter Status contact
Digital outputs	1 × PWM, DC 12 V 2 × AC 230 V 2(2) A 8 × AC 230 V 1(1) A
Dimensions (W x H x D)	144 x 96 x 109 mm

Range overview RVD25..

Product Title	Stock no.	Product no.
Controller, 28 programmed plant types, instructions in de, en, fr, it, da, fi, sv	S55370-C125	**RVD250-A**

District heating controller

RVD26..

Multifunctional heating controller for use in district heating substations and district heating plants with LPB and M-bus communication. Suited for 2 heating circuits with d.h.w. heating in instantaneous systems or with storage tank. 14 programmed plant types. Operating voltage AC 230 V.

Same functionality as RVD250, but with the following extra features:
– 2 heating circuits
– Without precontrol in interconnected systems
– 3 independent switching programs each with 3 occupancy times per day

Plant-specific:
- Precontrol internal control loops
- 2 heating circuits (mixing and / or pump heating circuit): Control of flow temperature, optionally weather-compensated / weather- and room temperature-compensated / room temperature-compensated
- D.h.w. heating with selectable priority:

– Instantaneous systems
– Storage charging system
– Storage system with integrated heat exchanger
– Charging pump
– Circulating pump

Data sheet	N2515
Operating voltage	AC 230 V
Frequency	50 Hz
Power consumption	6 VA
Communication	LPB (interconnected controller) M-bus (slave)
Analog input, signal	DC 0...10 V LG-Ni1000 NTC 575
Digital inputs, number	1
Digital inputs	Pulse transmitter Status contact
Digital outputs	1 × PWM, DC 12 V 2 × AC 230 V 2(2) A 8 × AC 230 V 1(1) A
Dimensions (W x H x D)	144 x 96 x 109 mm

Range overview RVD26..

Product Title	Stock no.	Product no.
Controller, 14 programmed plant types, instructions in de, en, fr, it, da, fi, sv	S55370-C129	**RVD260-A**

Sensor and room units for RVD..

Product Title	Data sheet	Stock no.	Product no.
Pressure sensor for neutral and slightly aggressive liquids and gases (0...10 V)	A6V10432494	BPZ:QBE2003-P..	**QBE2003-P..**
Pressure sensor for refrigerants (0...10 V)	A6V10434676	BPZ:QBE2004-P..U	**QBE2004-P..U**
Immersion temperature sensor 100 mm LG-Ni1000, with protection pocket	N1781	S55720-S516	**QAE9120.010**
Multifunctional room operator unit	N1637	BPZ:QAW70..	**QAW70..**
Outside sensor LG-Ni1000	N1811	BPZ:QAC22	**QAC22**
Outside sensor NTC 575 Ohm	N1811	BPZ:QAC32	**QAC32**
Web Server for LPB devices	N5712	BPZ:OZW672..	**OZW672..**
Strap-on temperature sensor LG-Ni1000	N1801	BPZ:QAD22	**QAD22**
Immersion temperature sensor 100 mm LG-Ni1000, with protection pocket	N1781	BPZ:QAE2120.010	**QAE2120.010**
Cable temperature sensor for high-temperature applications (180°C)	N1833	BPZ:QAP21.2	**QAP21.2**
Cable temperature sensor silicone 1.5 m, LG-Ni1000	N1831	BPZ:QAP21.3	**QAP21.3**

Service tool

Product Title	Data sheet	Stock no.	Product no.
Commissioning and plant operating software	N5649	S55800-Y100	**ACS790**
Service tool for KNX / LPB	N5655	BPZ:OCI700.1	**OCI700.1**
Web Server for LPB devices	N5712	BPZ:OZW672..	**OZW672..**

The software (ACS790) can be downloaded for free via http://www.siemens.com/acs790.

Application examples RVD2..

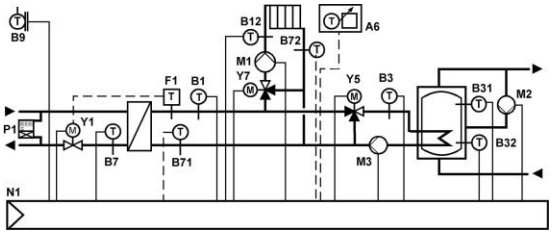
These are a few examples of applications that can be done with the controllers RVD2...
More applications are described in "HIT" (the HVAC project engineering tool with a library of over 300 pre-configured HVAC-applications) and in the RVD2.. data sheet.

Indirect system, weather-compensated heating with mixing circuit and d.h.w

RVD25..

DACB01 VD2 HQ a

- Demand-dependent flow temperature control acting on 3-position actuator with primary two-port valve
- Weather-compensated flow temperature control with 3-position actuator acting on mixing valve
- D.h.w. temperature control - storage tank with mixing valve
- Maximum limitation of primary return temperature depending on the outside temperature
- Frost protection for building and plant
- 2 time switch programs, each with 3 heating periods
- Flow temperature limit control
- ECO function switches off heating depending on the outside temperature
- Room temperature-dependent quick setback (with room sensor only or with building model)
- Control of d.h.w. circulation pump

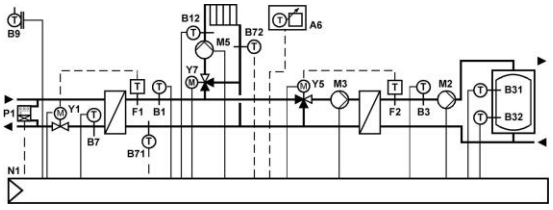


Demand-dependent control of heat exchanger with indirect district heat substation with 2-port valve

RVD25..

DACC01 VD2 HQ

- Demand-dependent flow temperature control acting on 3-position actuator with primary two-port valve
- Weather-compensated flow temperature control with 3-position actuator acting on mixing valve
- D.h.w. temperature control - storage tank with exchanger and mixing valve
- Maximum limitation of primary return temperature depending on the outside temperature
- Frost protection for building and plant
- 2 time switch programs, each with 3 heating periods
- Flow temperature limit control
- ECO function switches off heating depending on the outside temperature
- Room temperature-dependent quick setback (with room sensor only or with building model)

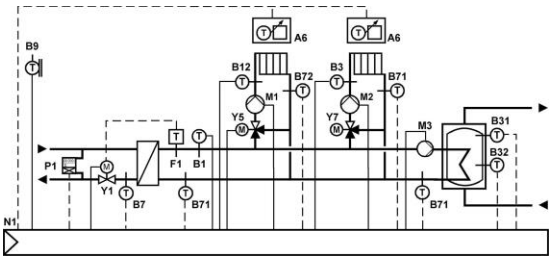


Weather-compensated flow temperature control of 2 heating circuits with mixing valves

RVD26..

DADA01 VD2 HQ

- Demand-dependent flow temperature control with 3-position actuator acting on primary two-port valve
- Weather-compensated flow temperature control with 3-position actuator acting on mixing valve
- D.h.w. temperature control - storage tank
- Maximum limitation of primary return temperature depending on the outside temperature
- Frost protection for building and plant
- 3 time switch programs, each with 3 heating periods
- Flow temperature limit control
- ECO function switches off heating depending on the outside temperature
- Room temperature-dependent quick setback (with room sensor only or with building model)



RLM162

Air duct temperature controller, AC 24 V, 2 outputs DC 0...10 V

Compact electronic controller with integral duct mounted temperature sensor and setting unit combined in one device. It is designed for installation directly onto the plant. Only the wires for power supply connection and controller output need to be laid. Supplied complete with mounting flange.

Application:
Modulating temperature controller, with 1 or 2 continuous DC 0...10 V output signals. The RLM162 is used for control and limiting of extract or supply air temperatures in small HVAC plants:
- Restaurants, conference rooms, store rooms
- Lecture theatres, classrooms
- In conjunction with central air handling units

The following units can be controlled:
- Heating (or cooling) valve actuators
- Air damper actuators
- Step controllers or current valves for electric heating
- Signal converters
- DX cooling units

Features:
- Auxiliary digital output
- Compensation via outside sensor
- Connection for remote setting unit
- P or PI control (selectable)
- Service modes
- Heating and cooling modes available
- Setpoint changeover via external contact or time switch
- Heating/cooling changeover via external contact

Data sheet	N3332
Operating voltage	AC 24 V
Frequency	50/60 Hz
Power consumption	2 VA
Setpoint readjustment range	0...10 K
Setpoint setting range	0...50 °C
Analog input, signal	LG-Ni1000 0...1000 Ohm DC 0...10 V
Analog outputs, number	2
Analog output, signal	DC 0...10 V
Analog output, current	Max. 1 mA
Digital input, contact query	DC 3...6 mA DC 6...15 V
Digital outputs, number	1
Relay outputs	N.O. contact, potential-free
Relay output, switching voltage	AC 24...230 V
Relay output, switching current	2 A
Probe length	400 mm
Type of fixing	Flange
Degree of protection	IP65
Dimensions (W x H x D)	125 × 152 × 78 mm

	Stock no.	Product no.
	BPZ:RLM162	**RLM162**

Field devices for RLM162

Product Title	Data sheet	Stock no.	Product no.
Outside sensor LG-Ni1000	N1811	BPZ:QAC22	**QAC22**

Application examples Synco™ 100

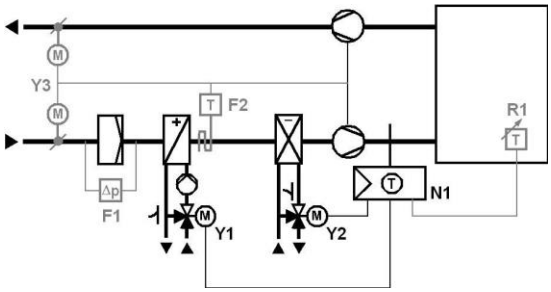
These are only a few examples of many applications that can be done with the with Synco™100 controllers: RLE..
More Synco™100 applications are described in "HIT" (the HVAC project engineering tool with a library of over 300 pre-configured HVAC-applications) and in the RLE.. data sheet.

Partial Air Conditioning Plant, Heating / Cooling - Supply air temperature control

RLM162

ADC001 LM1 HQ

- Controller (N1) with built-in sensor to control the room temperature via sequential control of the heat-ing valve (Y1) or the cooling valve (Y2)
- Frost protection with frost thermostat F2 (indepen-dent of controller) to open the heating valve (Y1), close the outside air dampers (Y3) and deactivate the fans
- Air damper actuator with spring return (Y3) to control the fans with an auxiliary switch

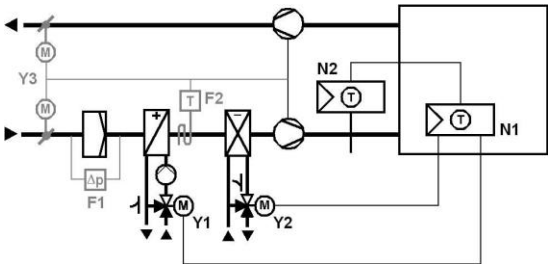


Room temperature control with limitation of supply air temperature

RLM162

ADC001 LA1 DE

- Room temperature control via control of the heating valve and the cooling valve
- Limitation of supply air temperature
- Outside temperature compensation



RLA162

Room temperature controller, AC 24 V, 2 outputs DC 0...10 V

Electronic controller designed for room mounting applications. It is configurable for heating and/or cooling applications and can operate as a single controller or together with duct mounted units (RLM) for limiting.

Application:
Modulating temperature controller, with 1 or 2 continuous DC 0...10 V output signals. The RLA162 is used for control and limiting of room temperatures in small HVAC plants.

The following units can be controlled:
- Heating (or cooling) valve actuators
- Air damper actuators
- Step controllers or current valves for electric heating
- Signal converters

Features:
- Low limitation input (supply air temperature)
- Compensation via outside sensor
- Connection for remote setting unit
- P or PI control (selectable)
- Service modes
- Heating and cooling modes available
- Setpoint changeover via external contact or time switch

Data sheet	N3331
Operating voltage	AC 24 V
Frequency	50/60 Hz
Power consumption	2 VA
Setpoint readjustment range	0...10 K
Setpoint setting range	8...30 °C
Analog input, signal	LG-Ni1000 DC 0...10 V
Analog outputs, number	2
Analog output, signal	DC 0...10 V
Analog output, current	Max. 1 mA
Digital inputs	Potential-free input signal
Digital input, contact query	DC 3...6 mA DC 6...15 V
Digital outputs, number	1
Degree of protection	IP30
Dimensions (W x H x D)	97 × 114 × 43 mm

	Stock no.	Product no.
	BPZ:RLA162	**RLA162**

Field devices for RLA162

Product Title	Data sheet	Stock no.	Product no.
Air duct temperature controller, AC 24 V, 2 outputs DC 0...10 V	N3332	BPZ:RLM162	**RLM162**
Outside sensor LG-Ni1000	N1811	BPZ:QAC22	**QAC22**

Universal controllers

RLU..

- Tested, predefined applications
- Flexible configuration
- Suited for the controlled variables temperature, relative / absolute humidity, pressure / differential pressure, air flow rate, indoor air quality, etc.
- Autonomous sequence controllers with P, PI or PID mode
- Integrated operation
- No commissioning tool required (optional)

Data sheet	N3101
Operating voltage	AC 24 V
Frequency	50/60 Hz
Analog output, signal	DC 0...10 V
Analog output, current	Max. 1 mA
Digital input, contact query	5 mA DC 15 V
Universal input, signal	0...1000 Ohm 1000...1175 Ohm DC 0...10 V Potential-free digital status contact LG-Ni1000 Pt1000 T1 (PTC) 2 x LG-Ni1000
Relay output, switching voltage	AC 19...265 V
Relay output, switching current	4 (3) A
Degree of protection	IP20

Range overview RLU..

Digital inputs, number	Universal-inputs, number	Analog outputs, number	Relay outputs, number	Control loops, number	Stock no.	Product no.
1	4	0	2	1	BPZ:RLU202	**RLU202**
1	4	2	0	1	BPZ:RLU220	**RLU220**
1	4	2	2	2	BPZ:RLU222	**RLU222**
2	5	3	2	2	BPZ:RLU232	**RLU232**
2	5	3	6	2	BPZ:RLU236	**RLU236**

Accessories for RLU..

Product Title	Data sheet	Stock no.	Product no.
Front panel mounting frame	N3101	BPZ:ARG62.201	**ARG62.201**

Service tool

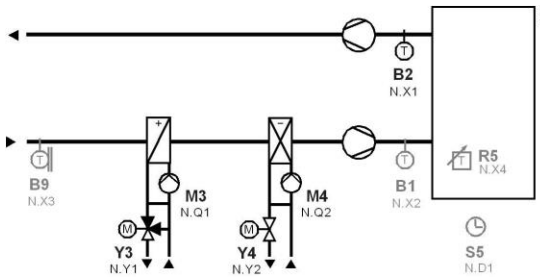
Product Title	Data sheet	Stock no.	Product no.
Service tool for KNX / LPB	N5655	BPZ:OCI700.1	**OCI700.1**

Application examples Synco™ 200

These are only a few examples of many applications that can be done with the with Synco™200 controllers: RLU..
More Synco™200 applications are described in "HIT" (the HVAC project engineering tool with a library of over 300 pre-configured HVAC-applications) and in the RLU.. data sheet..

RLU222

ADC002 LU2 HQ

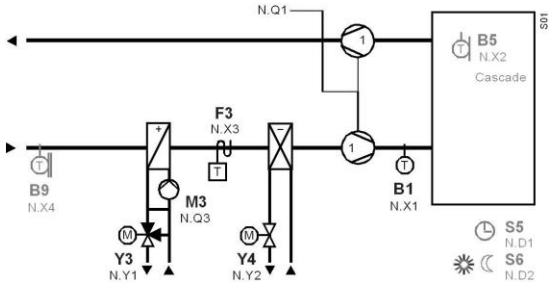


Partial Air Conditioning Plant, Heating / Cooling - Extract air (room) temperature control

- Extract air (room) temperature control via the heating coil valve and cooling coil valve in sequence
- Control of the heating coil and cooling coil pumps
- Operating mode selection Comfort / Protection

RLU232

ADC015 LU3 HQ

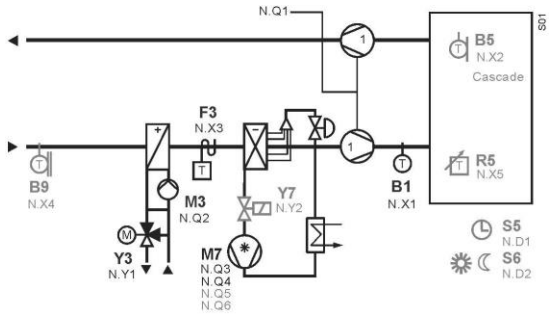


Partial Air Conditioning Plant, Heating / Cooling - Supply air temperature control with frost protection and release of fan

- Supply air temperature control via the heating coil valve and cooling coil valve in sequence
- Control of the heating coil and cooling coil pumps
- Fan release via relay output
- Frost protection with frost protection monitor
- Operating mode selection Comfort / Protection
- Operating mode selection Comfort/Economy

RLU236

ADC017 LU3 HQ



Partial Air Conditioning Plant, Heating / Cooling - Supply air (room) temperature control with frost protection and release of fan

- Supply air temperature control via the heating coil valve and the direct expansion evaporator in sequence
- Control of the heating coil pump
- Fan release via relay output
- Frost protection with frost protection monitor
- Operating mode selection Comfort / Protection
- Operating mode selection Comfort/Economy

Sensors, setpoint adjusters

Product Title	Data sheet	Stock no.	Product no.
Frost detector, modulating	A6V10432020	BPZ:QAF63..J	**QAF63..J**
Pressure sensor for neutral and slightly aggressive liquids and gases (0...10 V)	A6V10432494	BPZ:QBE2003-P..	**QBE2003-P..**
Pressure sensor for refrigerants (0...10 V)	A6V10434676	BPZ:QBE2004-P..U	**QBE2004-P..U**
Differential pressure sensor, DC 0...10 V	N1910_01	BPZ:QBM2030..	**QBM2030..**
Flue gas temperature sensor Pt1000	N1846	BPZ:FGT-PT1000	**FGT-PT1000**
Immersion temperature sensor 100 mm DC 0...10 V	N1782	BPZ:QAE2164.010	**QAE2164.010**
Immersion temperature sensor 150 mm DC 0...10 V	N1782	BPZ:QAE2164.015	**QAE2164.015**
Immersion temperature sensor 100 mm LG-Ni1000, with protection pocket	N1781	S55720-S516	**QAE9120.010**
Duct temperature sensor 400 mm, LG-Ni1000	N1761	BPZ:QAM2120.040	**QAM2120.040**
Duct temperature sensor 2000 mm, LG-Ni1000	N1761	BPZ:QAM2120.200	**QAM2120.200**
Duct temperature sensor 6000 mm, LG-Ni1000	N1761	BPZ:QAM2120.600	**QAM2120.600**
Window pane temperature sensor	N1830	BPZ:QAT22	**QAT22**
Duct sensor for humidity (DC 0...10 V)	N1864	BPZ:QFM2100	**QFM2100**
Duct sensor for humidity (0...10 V) and temperature (Ni1000)	N1864	BPZ:QFM2120	**QFM2120**
Duct sensor for humidity (DC 0...10 V) and temperature (DC 0...10 V)	N1864	BPZ:QFM2160	**QFM2160**
Duct sensor for humidity (0...10 V) and temperature (0...10 V) with calibration certificate	N1883	BPZ:QFM4160	**QFM4160**
Solar sensor	N1943	BPZ:QLS60	**QLS60**
Duct sensor for air velocity	N1932	BPZ:QVM62.1	**QVM62.1**
Outside sensor LG-Ni1000	N1811	BPZ:QAC22	**QAC22**
Differential pressure sensor for liquids and gases	N1923	BPZ:QBE61.3-DP..	**QBE61.3-DP..**
Differential pressure sensors for liquids and gase (DC 0...10 V)	N1920	BPZ:QBE63-DP..	**QBE63-DP..**
Strap-on temperature sensor LG-Ni1000	N1801	BPZ:QAD22	**QAD22**
Strap-on temperature sensor with cable LG-Ni1000	N1802	BPZ:QAD26.220	**QAD26.220**
Immersion temperature sensor 100 mm LG-Ni1000, with protection pocket	N1781	BPZ:QAE2120.010	**QAE2120.010**
Immersion temperature sensor Ø 6 mm with cable and fitting	N1790	BPZ:QAE26.9	**QAE26.9**
Duct temperature sensor 400 mm, Pt1000	N1761	BPZ:QAM2112.040	**QAM2112.040**
Differential pressure sensors for liquids and gase (0...10 V)	N1922	BPZ:QBE3000..	**QBE3000..**
Immersion temperature sensor 150 mm, LG-Ni1000, with protection pocket	N1781	BPZ:QAE2120.015	**QAE2120.015**
Immersion temperature sensor 100 mm, LG-Ni1000, without protection pocket	N1781	BPZ:QAE2121.010	**QAE2121.010**
Cable temperature sensor for high-temperature applications (180°C)	N1833	BPZ:QAP21.2	**QAP21.2**
Cable temperature sensor silicone 1.5 m, LG-Ni1000	N1831	BPZ:QAP21.3	**QAP21.3**
Outside/room temperature sensor DC 0...10 V	N1814	BPZ:QAC3161	**QAC3161**
Cable temperature sensor PVC 2 m, LG-Ni1000	N1831	BPZ:QAP22	**QAP22**
Duct sensor for humidity (DC 0...10 V) for demanding requirements	N1882	BPZ:QFM3100	**QFM3100**
Duct air quality sensor CO_2/ temperature / rel. humidity / VOC	N1962	BPZ:QPM21..	**QPM..**
Duct sensor for humidity (DC 0...10 V) and temperature (DC 0...10 V) for demanding requirements	N1882	BPZ:QFM3160	**QFM3160**
Duct air quality sensor CO_2 / temperature / rel. humidity / VOC; Modbus	A6V11610641	BPZ:QPM21..-MO	**QPM../MO**
Duct temperature sensor	A6V12251940	BPZ:QAM16..020	**QAM16..020**

Monitors

Product Title	Data sheet	Stock no.	Product no.
Condensation monitor	A6V10741072	BPZ:QXA21..	**QXA21..**
Frost monitor, 2-point, capillary tube 3000 mm, -10...+15 °C	A6V12051788	S55700-P163	**QAF65.3AR-J**
Frost monitor, 2-point, capillary tube 6000 mm, -10...+15 °C	A6V12051788	S55700-P164	**QAF65.6AR-J**
Duct hygrostat, setpoint setting range 15...95 % r.h.	N1514	BPZ:QFM81.2	**QFM81.2**
Room hygrostat, setpoint setting range 15...95 % r.h., setpoint adjuster inside device	N1514	BPZ:QFM81.21	**QFM81.21**
Frost detector, air side, 2-point	A6V10432022	BPZ:QAF64..J	**QAF64..J**
Frost monitor, 2-point, capillary tube 3000 mm, -10...+15 °C	A6V11965899	S55700-P161	**QAF65.3M-J**
Frost monitor, 2-point	N1284	BPZ:QAF81..	**QAF81..**
Frost monitor, 2-point, capillary tube 6000 mm, -10...+15 °C	A6V11965899	S55700-P162	**QAF65.6M-J**

Monitors

Product Title	Data sheet	Stock no.	Product no.
Room hygrostat, setpoint setting range 30...90 % r.h., setpoint adjuster inside device	N1518	BPZ:QFA1000	**QFA1000**
Room hygrostat, setpoint setting range 30...90 % r.h., external setpoint adjustment	N1518	BPZ:QFA1001	**QFA1001**
Differential pressure monitor	N1552	BPZ:QBM81..	**QBM81..**

Room units / sensors

Product Title	Data sheet	Stock no.	Product no.
Front module with passiv temperature measurement, LG-Ni1000	N1408	S55720-S133	**AQR2531ANW**
Room air quality sensor CO_2 / temperature / rel. Humidity / VOC	N1961	BPZ:QPA20..	**QPA..**
Room sensor for humidity (DC 0...10 V) for demanding requirements	N1858	BPZ:QFA3100	**QFA3100**
Room sensor for humidity (DC 0..10V) and temperature (DC 0..10V) with calibration certificate	N1859	BPZ:QFA4160	**QFA4160**
Room unit with room temperature sensor and setpoint adjuster	N1721	BPZ:QAA25	**QAA25**
Indoor air quality controller with integrated VOC sensor for mixed gas	N1571	BPZ:QPA84	**QPA84**
Room sensor for humidity (DC 0...10 V) and temperature (DC 0...10 V) for demanding requirements	N1858	BPZ:QFA3160	**QFA3160**
Room temperature sensor LG-Ni1000	N1721	BPZ:QAA24	**QAA24**
Room sensor for humidity (DC 0...10 V)	N1857	BPZ:QFA2000	**QFA2000**
Room sensor for humidity (DC 0...10 V) and temperature (LG-Ni1000)	N1857	BPZ:QFA2020	**QFA2020**
Room unit with room temperature sensor and setpoint readjuster -3...3 K	N1721	BPZ:QAA27	**QAA27**
Room sensor for humidity (DC 0...10 V) and temperature (DC 0...10 V)	N1857	BPZ:QFA2060	**QFA2060**
Room temperature sensor LG-Ni1000 for mounting on recessed conduit boxes	N1722	BPZ:QAA64	**QAA64**
Room hygrostat, setpoint setting range 30...90 % r.h., setpoint adjuster inside device	N1518	BPZ:QFA1000	**QFA1000**
Room hygrostat, setpoint setting range 30...90 % r.h., external setpoint adjustment	N1518	BPZ:QFA1001	**QFA1001**
Mounting plates for front modules with passiv temperature measurement	N1408	BPZ:AQR2500..	**AQR2500..**

Step switches, signal converters, transformers and display

Product Title	Data sheet	Stock no.	Product no.
Transformers	N5536	BPZ:SEM62..	**SEM62..**
Universal digital indicator	N5312	BPZ:BAU200	**BAU200**
Current valve	N4938	S55376-C160	**SEA45.5**
Digital time switch, 1-channel, with 7-day program	N5243	BPZ:SEH62.1	**SEH62.1**
Signal converter DC 0...10 V or DC 0 / 10 V in AC 0 / 24 V	N5102	BPZ:SEM61.4	**SEM61.4**
Variable Speed Drive for pumps and fans, IP55, Filter B (C1)	N5111	BPZ:G120P..AM..B..	**G120P..5B**
Variable Speed Drive for pumps and fans, IP55, Filter A (C2)	N5111	BPZ:G120P..AM..A..	**G120P..5A**
Variable Speed Drive for pumps and fans, IP20, Filter B (C1)	N5111	BPZ:G120P..AE..B..	**G120P..2B**
Variable Speed Drive for pumps and fans, IP20, Filter A (C2)	N5111	BPZ:G120P..AE..A..	**G120P..2A**
Signal converter with preprogrammed applications	N5146	BPZ:SEZ220	**SEZ220**

Universal controller for HVAC systems

RWD Universal..

Universal controller with P or PI action for heating, ventilation and air conditioning.

Auxiliary functions
- PI limiter function (absolute and relative limit)
- Remote setpoint
- Setpoint compensation
- Winter/summer mode changeover (analogue or digital input)
- Cascade control
- Maximum priority for cooling / dehumidifying

Frequency	50/60 Hz
Digital inputs	Potential-free input signal
Universal inputs, number	2
Universal input, signal	LG-Ni1000 DC 0...10 V Pt1000
Degree of protection	IP20

Range overview RWD..

Operating voltage [V]	Analog outputs, number	Relay outputs, number	Control loops, number	Stock no.	Product no.
AC 24	2		1	BPZ:RWD62	**RWD62**
AC 24	1	1	1	BPZ:RWD68	**RWD68**
AC 24		2	1	BPZ:RWD82	**RWD82**

Universal Controller, 1 Analog Output

RWD60

Stock no.	Product no.
S55370-C135	**RWD60**

Field devices for RWD..

Product Title	Data sheet	Stock no.	Product no.
Front module with passiv temperature measurement, LG-Ni1000	N1408	S55720-S133	**AQR2531ANW**
Duct temperature sensor 400 mm, LG-Ni1000	N1761	BPZ:QAM2120.040	**QAM2120.040**
Thermal reset limit thermostat, 40...120 °C, protective pocket 100 mm, capillary tube 700 mm, clamping band	N1202	S55700-P117	**RAK-TW.1200B-H**
Switching and monitoring device	N3124	S55370-C100	**RMS705B-1**
Outside sensor LG-Ni1000	N1811	BPZ:QAC22	**QAC22**
Room temperature sensor LG-Ni1000	N1721	BPZ:QAA24	**QAA24**
Mounting plates for front modules with passiv temperature measurement	N1408	BPZ:AQR2500..	**AQR2500..**

Accessories for RWD..

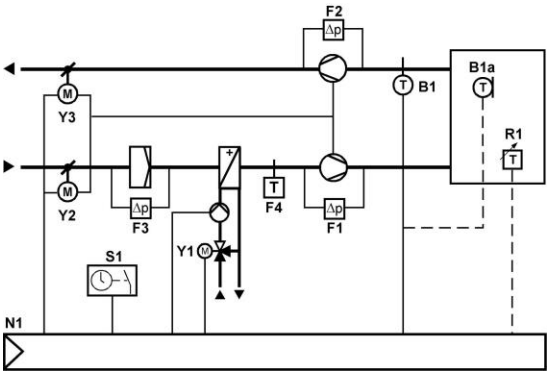
Product Title	Data sheet	Stock no.	Product no.
Transformers	N5536	BPZ:SEM62..	**SEM62..**

Application examples RWD..

These are only a few examples of many applications that can be done with the with controllers RWD..
More applications are described in "HIT" (the HVAC project engineering tool with a library of over 300 pre-configured HVAC-applications) and in the RWD.. data sheet.

RWD62

ADA002 WC6 HQ a

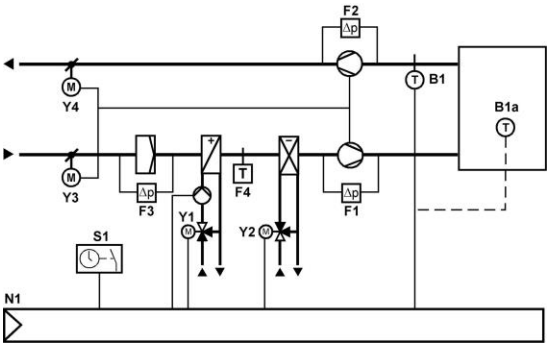


Return air temperature control

- Room temperature control by modulating the heater battery valve
- Frost protection with frost protection thermostat (independent of controller) when tripped, heater battery valve fully opens, dampers close, fan switches off

RWD62

ADC003 WC6 HQ a



Return air temperature control

- Return air temperature control by modulating the heater battery valve and the cooler battery valve in sequence
- Frost protection with frost protection thermostat (independent of controller): when tripped, heater battery valve fully opens, supply and extract fans switch off, outside air and extract air dampers close
- Use of an external time switch to provide day/night settings
- Summer compensation

Universal controller

RMU7..0B-1

- Universal controllers with integrated control and supervisory functions
- Suited for the controlled variables temperature, relative / absolute humidity, pressure / differential, air flow rate, indoor air quality, etc.
- Autonomous sequence controllers with P, PI or PID mode
- Tested, predefined applications (refer to Application Catalog)
- Flexible configuration
- Clear-text operation with separate operator unit (plug-in type or detached)
- Integrated KNX bus communication
- No commissioning tool required

The RMU7..0B-1 supports the languages: English, German, French, Italian, Spanish, Portuguese, Dutch, Danish, Finnish, Norwegian, Swedish, Polish, Czech, Hungarian, Russian, Slovak, Bulgarian, Greek, Romanian, Slovenian, Serbian, Croatian, Turkish, Chinese.

Extension modules complement the universal controller and offer extra functions. They are attached to the controller via plug-in connectors. The extension modules do not operate autonomously.
The operation of the device from commissioning to enduser operation can be done via the operator unit.
Available extension modules:
- 1 universal module RMZ785
- 2 universal modules RMZ787
- 2 universal modules RMZ788

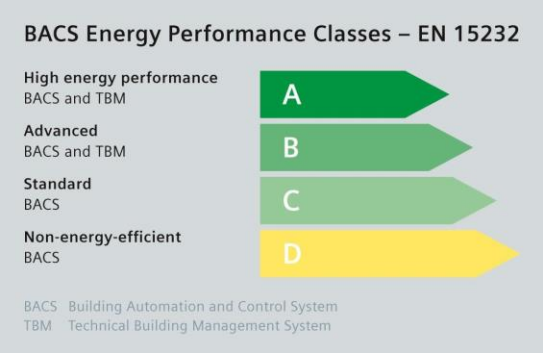
A total of 4 extension modules can simultaneously be used with the universal controller.

Available operator units:
- Plug-in type operator unit RMZ790
- Detached operator unit RMZ791
- Bus operating unit RMZ792

Data sheet	N3150
Operating voltage	AC 24 V
Frequency	50/60 Hz
Power consumption	12 VA
Communication	KNX (KNX TP1)
Analog output, signal	DC 0...10 V
Analog output, current	Max. 1 mA
Universal input, signal	LG-Ni1000 T1 (PTC) Pt1000 0...1000 Ohm 1000...1175 Ohm DC 0...10 V Digital pulse contact Potential-free digital status contact 2 x LG-Ni1000
Relay output, switching voltage	AC 19...250 V
Relay output, switching current	4 (3) A
Degree of protection	IP20
Dimensions (W x H x D)	173 x 90 x 80 mm

Range overview RMU7..0B..

Analog outputs, number	Universal-inputs, number	Relay outputs, number	Control loops, number	Stock no.	Product no.
2	6	2	1	BPZ:RMU710B-1	**RMU710B-1**
3	8	4	2	BPZ:RMU720B-1	**RMU720B-1**
4	8	6	3	BPZ:RMU730B-1	**RMU730B-1**

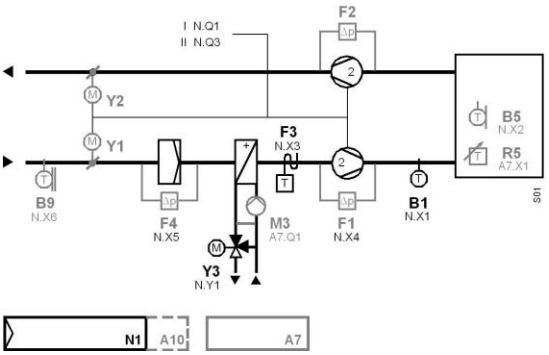


Application examples RMU710B..

These are only a few examples of many applications that can be done with the with Synco™700 controllers: RMU710B..
More Synco™700 applications are described in "HIT" (the HVAC project engineering tool with a library of over 300 pre-configured HVAC-applications) and in the RMU710B.. data sheet.

The evaluation of the energy efficiency classification is based on EN15232:2012. For a determination of the energy efficiency classification of the application, please use the "HIT Tool".
Further details are available in the manual "Building automation - impact on energy efficiency" in our HIT Online.
www.siemens.com/hit

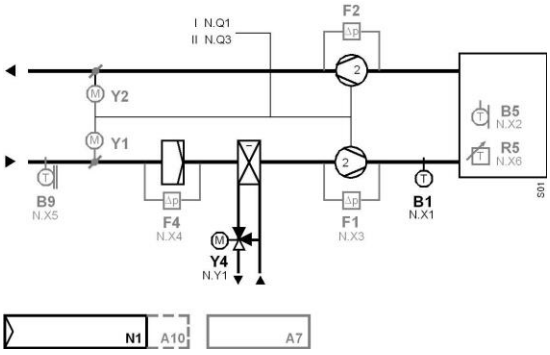
ADA001 U1B HQ



Ventilation Plant, Heating - Room-supply air temperature cascade control

- 7-day time switch with holiday / special day program
- Control of a 2-speed fan
- Control of the supply air temperature via the heating coil valve
- Frost protection with frost protection monitor
- Supervision of the supply and extract air fans with differential pressure sensors
- Supervision of the supply air filter with a differential pressure sensor

ADB001 U1B HQ



To fulfill the classification, the plant must be equipped with all indicated functions.

Ventilation Plant, Cooling - Room-supply air temperature cascade control

- 7-day time switch with holiday / special day program
- Control of a 2-speed fan
- Control of the supply air temperature via the cooling coil valve
- Supervision of the supply and extract air fans with differential pressure sensors
- Supervision of the supply air filter with a differential pressure sensor

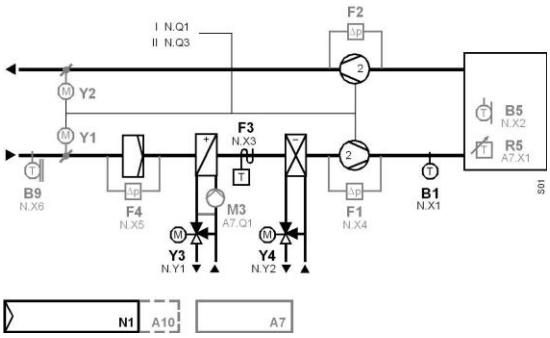
The indicated energy efficiency classification can be attained only if the following functions are implemented:

- Air flow control at the room level on demand (Air quality sensor must be integrated as an additional feature)
- Air flow control at the air handler level (Automatic fan step switching corresponds to Efficiency Class B / Step 2 must be switched based on air quality)
- Free mechanical cooling (Outside air temperature and room temperature sensor required)
- Supply temperature control, variable set point with load dependant compensation
- Humidity control (Not applicable, as no humidity control)

Partial Air Conditioning Plant, Heating / Cooling - Room-supply air temperature cascade control

ADC001 U1B HQ

- 7-day time switch with holiday / special day program
- Control of a 2-speed fan
- Control of the supply air temperature via the heating coil valve and the cooling coil valve in sequence
- Frost protection with frost protection monitor
- Supervision of the supply and extract air fans with differential pressure sensors
- Supervision of the supply air filter with a differential pressure sensor



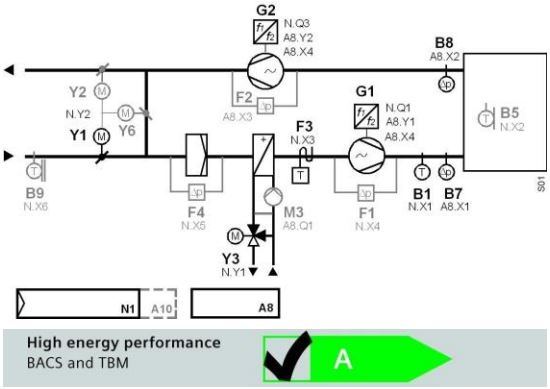
Ventilation Plant, Heating

AEA001 U1B DE

- 7-day time switch with holiday / special day program
- Control of a variable-speed fan
- Control of the supply air temperature via the mixed air dampers and the heating coil valve in sequence
- Frost protection with frost protection monitor
- Supervision of the supply and extract air fans with differential pressure sensors
- Supervision of the supply air filter with a differential pressure sensor

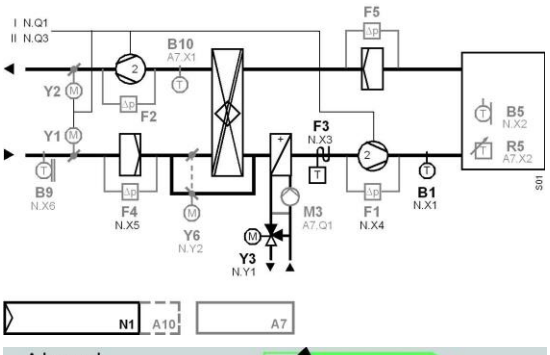
The indicated energy efficiency classification can be attained only if the following functions are implemented:

- Air flow control at the room level, demand control
- Air flow control at the air handler level, automatic flow or pressure control with or without pressure reset
- With heat exchanger overheating control
- Free mechanical cooling (Not applicable due to lack of cooling sequence)
- Humidity control (Not applicable, as no humidity control)
- Home automation / building automation and control system and technical home/building management required satisfying Efficiency Class A

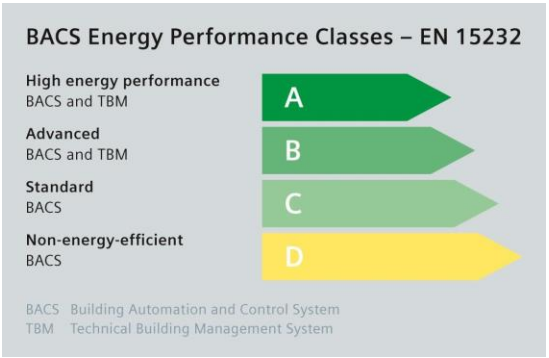


To fulfill the classification, the plant must be equipped with all indicated functions.

ADAE01 U1B HQ



To fulfill the classification, the plant must be equipped with all indicated functions.



Ventilation Plant, Heating - Room-supply air temperature cascade control

- 7-day time switch with holiday / special day program
- Control of a 2-speed fan
- Control of the supply air temperature via the heat recovery system and the heating coil valve in sequence
- Frost protection with frost protection monitor
- Supervision of the supply and extract air fans with differential pressure sensors
- Supervision of the supply and extract air filters with differential pressure sensors

The indicated energy efficiency classification can be attained only if the following functions are implemented:

- Air flow control at the room level, demand control (Air quality sensor must be integrated as an additional feature)
- Air flow control at the air handler level, automatic flow or pressure control with or without pressure reset (Automatic fan step switching corresponds to Efficiency Class B / Step 2 must be switched based on air quality)
- Heat exchanger defrost control (Exhaust air temperature sensor required)
- Heat exchanger overheating control
- Supply Temperature control (Variable set point with load dependant compensation)

Application examples RMU720B..

These are only a few examples of many applications that can be done with the with Synco™700 controllers: RMU720B..
More Synco™700 applications are described in "HIT" (the HVAC project engineering tool with a library of over 300 pre-configured HVAC-applications) and in the RMU720B.. data sheet.

The evaluation of the energy efficiency classification is based on EN15232:2012. For a determination of the energy efficiency classification of the application, please use the "HIT Tool".
Further details are available in the manual "Building automation - impact on energy efficiency" in our HIT Online.
www.siemens.com/hit

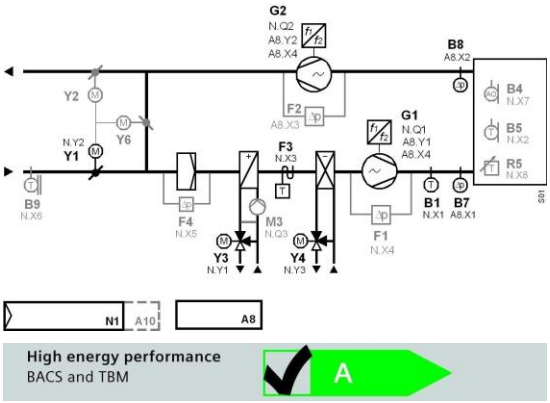
Partial Air Conditioning Plant, Heating / Cooling

- 7-day time switch with holiday / special day program
- Control of a variable-speed fan
- Control of the supply air temperature via the mixed air dampers, the heating coil valve and cooling coil valve in sequence
- Frost protection with frost protection monitor
- Supervision of the supply and extract air fans with differential pressure sensors
- Supervision of the supply air filter with a differential pressure sensor
- Home automation / building automation and control system and technical home/building management required satisfying Efficiency Class A

The indicated energy efficiency classification can be attained only if the following functions are implemented:

- Air flow control at the room level, demand control
- Air flow control at the air handler level, automatic flow or pressure control with or without pressure reset
- With heat exchanger overheating control
- Free mechanical cooling (Outside air temperature and room temperature sensor required)
- Supply temperature control, variable set point with load dependant compensation

AEC001 U2B DE



To fulfill the classification, the plant must be equipped with all indicated functions.

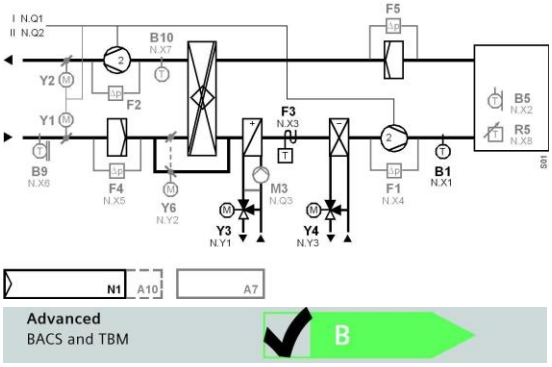
Partial Air Conditioning Plant, Heating / Cooling - Room-supply air temperature cascade control

- 7-day time switch with holiday / special day program
- Control of a 2-speed fan
- Control of the supply air temperature via the heating coil valve and the cooling coil valve in sequence
- Frost protection with the frost protection monitor
- Supervision of the supply and extract air fans with differential pressure sensors
- Supervision of the supply and extract air filter with a differential pressure sensor

The indicated energy efficiency classification can be attained only if the following functions are implemented:

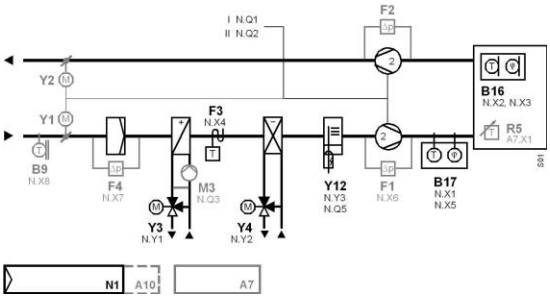
- Air flow control at the room level, demand control (Air quality sensor must be integrated as an additional feature)
- Air flow control at the air handler level, automatic flow or pressure control with or without pressure reset (Automatic fan step switching corresponds to Efficiency Class B / Step 2 must be switched based on air quality)
- Heat exchanger defrost control (Exhaust air temperature sensor required)
- With heat exchanger overheating control
- Free mechanical cooling (Outside air temperature and room temperature sensor required)
- Supply Temperature control, variable set point with load dependant compensation

ADCE01 U2B HQ



To fulfill the classification, the plant must be equipped with all indicated functions.

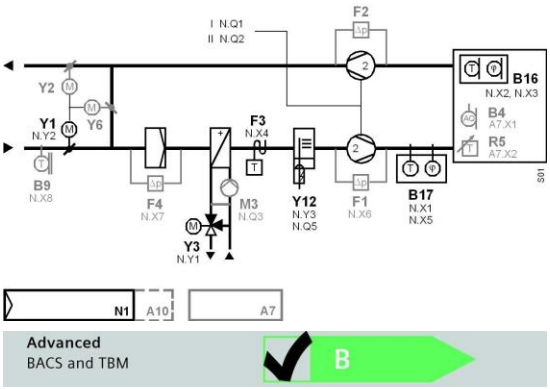
ADFB01 U2B HQ



Partial Air Conditioning Plant, Heating / Cooling / Humidifying - Room-supply air temperature cascade and humidity control

- 7-day time switch with holiday / special day program
- Control of a 2-speed fan
- Control of the supply air temperature via the heating coil valve and cooling coil valve in sequence
- Control of room humidity via the air humidifier (on command and modulating positioning signal)
- Frost protection with frost protection monitor
- Supervision of the supply and extract air fans with differential pressure sensors
- Supervision of the supply air filter with differential pressure sensors
- Limitation of supply air humidity

AEDB01 U2B HQ



To fulfill the classification, the plant must be equipped with all indicated functions.

Partial Air Conditioning Plant, Heating / Humidifying - Room-supply air temperature cascade and humidity control

- 7-day time switch with holiday / special day program
- Control of a 2-speed fan
- Control of the supply air temperature via the mixed air dampers and the heating coil valve in sequence
- Control of room humidity via the air humidifier (on command and modulating positioning signal)
- Frost protection with frost protection monitor
- Supervision of the supply and extract air fans with differential pressure sensors
- Supervision of the supply air filter with a differential pressure sensor
- Limitation of supply air humidity

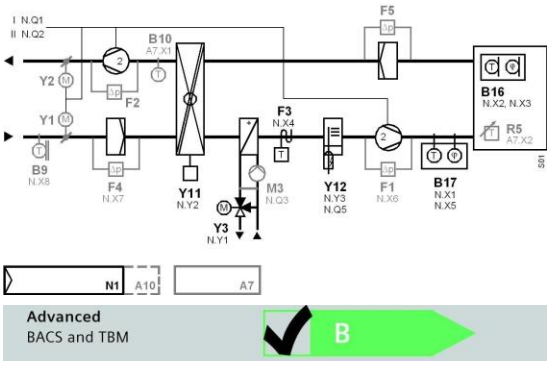
The indicated energy efficiency classification can be attained only if the following functions are implemented:

- Air flow control at the room level, demand control (Air quality sensor required)
- Air flow control at the air handler level, automatic flow or pressure control with or without pressure reset (Automatic fan step switching corresponds to Efficiency Class B / Step 2 must be switched based on air quality)
- With heat exchanger overheating control
- Supply Temperature control, variable set point with load dependant compensation
- Room or exhaust air humidity control

Partial Air Conditioning Plant, Heating / Humidifying - Room-supply air temperature cascade and humidity control

ADDP01 U2B HQ

- 7-day time switch with holiday / special day program
- Control of a 2-speed fan
- Control of the supply air temperature via the heat recovery system and the heating coil valve in sequence
- Control of room humidity via the air humidifier (on command and modulating positioning signal)
- Frost protection with frost protection monitor
- Supervision of the supply and extract air fans with differential pressure sensors
- Supervision of the supply and extract air filters with differential pressure sensors
- Limitation of supply air humidity



To fulfill the classification, the plant must be equipped with all indicated functions.

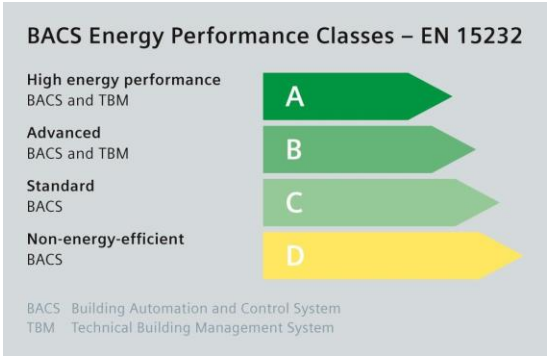
The indicated energy efficiency classification can be attained only if the following functions are implemented:

- Air flow control at the room level, demand control (Air quality sensor must be integrated as an additional feature)
- Air flow control at the air handler level, automatic flow or pressure control with or without pressure reset (Automatic fan step switching corresponds to Efficiency Class B / Step 2 must be switched based on air quality)
- Heat exchanger defrost control (Exhaust air temperature sensor required)
- With heat exchanger overheating control
- Supply Temperature control, variable set point with load dependant compensation
- Room or exhaust air humidity control

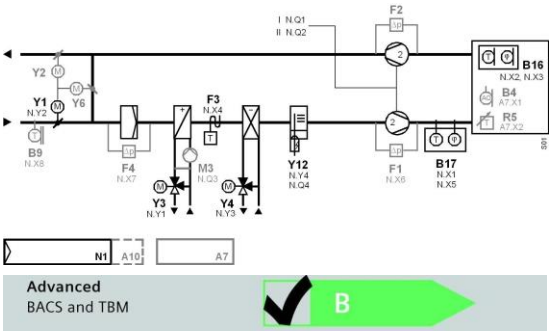
Application examples RMU730B..

These are only a few examples of many applications that can be done with the with Synco™700 controllers: RMU730B..
More Synco™700 applications are described in "HIT" (the HVAC project engineering tool with a library of over 300 pre-configured HVAC-applications) and in the RMU730B.. data sheet.

The evaluation of the energy efficiency classification is based on EN15232:2012. For a determination of the energy efficiency classification of the application, please use the "HIT Tool".
Further details are available in the manual "Building automation - impact on energy efficiency" in our HIT Online.
www.siemens.com/hit



AEFB01 U3B HQ



To fulfill the classification, the plant must be equipped with all indicated functions.

Partial Air Conditioning Plant, Heating / Cooling / Humidifying - Room-supply air temperature cascade and humidity control

- 7-day time switch with holiday / special day program
- Control of a 2-speed fan
- Control of the supply air temperature via the mixed air dampers, the heating coil valve and cooling coil valve in sequence
- Control of room humidity via the air humidifier (on command and modulating positioning signal)
- Frost protection with frost protection monitor
- Supervision of the supply and extract air fans with differential pressure sensors
- Supervision of the supply air filter with a differential pressure sensor
- Limitation of supply air humidity

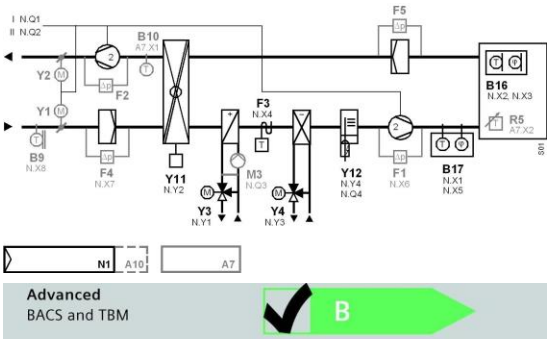
The indicated energy efficiency classification can be attained only if the following functions are implemented:

- Air flow control at the room level, demand control (Air quality sensor required)
- Air flow control at the air handler level, automatic flow or pressure control with or without pressure reset (Automatic fan step switching corresponds to Efficiency Class B / Step 2 must be switched based on air quality)
- With heat exchanger overheating control
- Free mechanical cooling (Outside air temperature and room temperature sensor required)
- Supply Temperature control, variable set point with load dependant compensation
- Room or exhaust air humidity control

Air Conditioning Plant, Heating / Cooling / Humidifying / Dehumidifying - Room-supply air temperature cascade and humidity control

ADFP01 U3B HQ

- 7-day time switch with holiday / special day program
- Control of a 2-speed fan
- Control of the supply air temperature via the heat recovery system, the heating coil valve and cooling coil valve in sequence
- Control of room humidity via the air humidifier (on command and modulating positioning signal)
- Frost protection with frost protection monitor
- Supervision of the supply and extract air fans with differential pressure sensors
- Supervision of the supply and extract air filters with differential pressure sensors
- Limitation of the supply air humidity



To fulfill the classification, the plant must be equipped with all indicated functions.

The indicated energy efficiency classification can be attained only if the following functions are implemented:

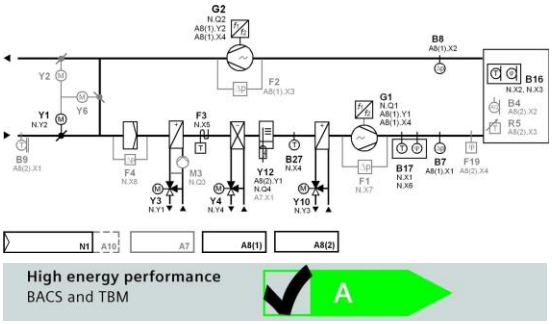
- Air flow control at the room level, demand control (Air quality sensor must be integrated as an additional feature)
- Air flow control at the air handler level, automatic flow or pressure control with or without pressure reset (Automatic fan step switching corresponds to Efficiency Class B / Step 2 must be switched based on air quality)
- Heat exchanger defrost control (Exhaust air temperature sensor required)
- With heat exchanger overheating control
- Free mechanical cooling (Outside air temperature and room temperature sensor required)
- Supply Temperature control, variable set point with load dependant compensation
- Room or exhaust air humidity control

Air Conditioning Plant, Heating / Cooling / Humidifying / Dehumidifying - Room-supply air temperature cascade and humidity control

ADZA01 U3B HQ

- 7-day time switch with holiday / special day program
- Control of a 2-speed fan
- Room (extract air)-supply air temperature cascade control with minimum and maximum limitation of the supply air temperature
- Control of the supply air temperature via the reheater valve and the cooling coil valve in sequence
- Control of the dewpoint temperature via the preheater valve and the cooling coil valve in sequence
- Control of room humidification via the air humidifier (on command)
- Control of room dehumidification by changing the outputs of dewpoint temperature control
- Frost protection with frost protection monitor
- Supervision of the supply and extract air fans with differential pressure sensors
- Supervision of the supply air filter with a differential pressure sensor
- Limitation of supply air humidity by shutting down the preheater and by switching off the air humidifier in sequence

AEZH01 U3B DE



To fulfill the classification, the plant must be equipped with all indicated functions.

Air Conditioning Plant, Heating / Cooling / Humidifying / Dehumidifying

- 7-day time switch with holiday / special day program
- Control of variable speed fan
- Room (extract air)-supply air temperature cascade control with minimum and maximum limitation of the supply air temperature
- Control of the supply air temperature via the mixed air dampers, the reheater valve and cooling coil valve in sequence
- Control of the dewpoint temperature via the mixed air dampers, the preheater valve and cooling coil valve in sequence
- Control of room humidification via the air humidifier (on command)
- Control of room dehumidification by changing the outputs of dewpoint temperature control
- Frost protection with frost protection monitor
- Supervision of the supply and extract air fans with differential pressure sensors
- Supervision of the supply air filter with a differential pressure sensor
- Limitation of supply air humidity

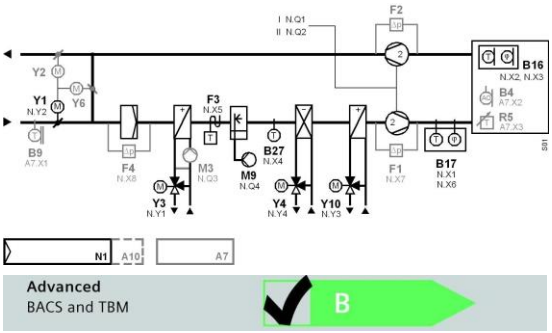
The indicated energy efficiency classification can be attained only if the following functions are implemented:

- Air flow control at the room level, demand control
- Air flow control at the air handler level, automatic flow or pressure control with or without pressure reset
- With heat exchanger overheating control
- Free mechanical cooling
- Supply Temperature control, variable set point with load dependant compensation
- Room or exhaust air humidity control
- Home automation / building automation and control system and technical home/building management required satisfying Efficiency Class A

Air Conditioning Plant, Heating / Cooling / Humidifying / De-humidifying - Room-supply air temperature cascade and humidity control

AEZH02 U3B HQ

- 7-day time switch with holiday / special day program
- Control of a 2-speed fan
- Room (extract air)-supply air temperature cascade control with minimum and maximum limitation of the supply air temperature
- Control of the supply air temperature via the mixed air dampers, the reheater valve and the cooling coil valve in sequence
- Control of the dewpoint temperature via the mixed air dampers and the preheater valve in sequence
- Control of room humidification via the air humidifier (on command) and the cooling coil valve in sequence
- Frost protection with frost protection monitor
- Supervision of the supply and extract air fans with differential pressure sensors
- Supervision of the supply air filter with a differential pressure sensor
- Limitation of supply air humidity by switching off the air humidifier in sequence



To fulfill the classification, the plant must be equipped with all indicated functions.

The indicated energy efficiency classification can be attained only if the following functions are implemented:

- Air flow control at the room level, demand control (Air quality sensor required)
- Air flow control at the air handler level, automatic flow or pressure control with or without pressure reset (Automatic fan step switching corresponds to Efficiency Class B / Step 2 must be switched based on air quality)
- With heat exchanger overheating control
- Free mechanical cooling (Outside air temperature and room temperature sensor required)
- Supply Temperature control, variable set point with load dependant compensation
- With supply air humidity control

RWG1.M12

RWG1.M12 Universal building controller

For monitor and control in FAU, AHU, heat exchange units, fans, pumps, lighting and other electromechanical equipments. Onboard RS485 and ethernet interface for flexible field data acquisition andcommunication· Smart and graphical program tools.

Universal IO to support AI, AO, DI, DO

Universal building controller with 12IOs, Modbus RTU and Modbus TCP interface

Data sheet	A6V10733750

Stock no.	Product no.
S55370-C171	**RWG1.M12**

RWG1.M8

RWG1.M8 Universal controller

For monitor and control in FAU, AHU, heat exchange units, fans, pumps, lighting and other electromechanical equipments.

- High flexibility and economical efficiency
- Onboard RS485 and ethernet interface for flexible field data acquisition and communication
- Smart and graphical user interface
- Self-explanatory programming language
- Comprehensive Siemens reference application library
- Powerful offline simulator

Data sheet	A6V10733750
Operating voltage	AC 24 V DC 24 V
Frequency	50/60 Hz
Power consumption	7 W / DC 24 V 14 VA / AC 24 V
Communication	Modbus RS485 and TCP
Max. cable length	30 m
Universal inputs/outputs, number	8
Degree of protection	IP20
Dimensions (W x H x D)	143 x 131 x 61 mm

Stock no.	Product no.
S55370-C172	**RWG1.M8**

Switching and monitoring device

RMS705B-1

The RMS705B-1 complements the range of Synco700 products as a freely configurable unit for
- control and supervisory functions in heating, ventilation and refrigeration plant
- non-standard applications

and, for this reason, offers no predefined standard applications.

The RMS705B-1 is especially suited for the following functions:
- Connection of additional universal alarm inputs
- Adding free inputs for display and supervision
- Event logging (e.g. legionella function)
- Additional time programs (ON / OFF) for basic functions
- Calculation of enthalpy, enthalpy differential, absolute humidity, dewpoint and wet bulb temperature
- Logic function blocks for switching on / off depending on different conditions
- Lead / lag control of pumps, fans, motors, etc., with automatic changeover
- Step switch with linear, binary or flexible functionality

The RMS705B-1 supports the languages: English, German, French, Italian, Spanish, Portuguese, Dutch, Danish, Finnish, Norwegian, Swedish, Polish, Czech, Hungarian, Russian, Slovak, Bulgarian, Greek, Romanian, Slovenian, Serbian, Croatian, Turkish, Chinese.

Extension modules complement the switching and monitoring device and offer extra functions. They are attached to the controller via plug-in connectors. The extension modules do not operate autonomously. The operation of the device from commissioning to enduser operation can be done via the operator unit.
Available extension modules:
- 1 universal module RMZ785
- 2 universal modules RMZ787
- 2 universal modules RMZ788

A total of 4 extension modules can simultaneously be used with the switching and monitoring device.

Available operator units:
- Plug-in operator unit RMZ790
- Detached operator unit RMZ791
- Bus operating unit RMZ792

Data sheet	N3124
Operating voltage	AC 24 V
Frequency	50/60 Hz
Power consumption	12 VA
Communication	KNX (KNX TP1)
Analog outputs, number	4
Analog output, signal	DC 0...10 V
Analog output, current	1 mA
Digital outputs, number	6
Universal inputs, number	8
Universal input, signal	T1 (PTC) Pt1000 Potential-free digital status contact LG-Ni1000 Digital pulse contact DC 0...10 V 2 x LG-Ni1000 0...1000 Ohm
Relay outputs, number	6
Relay output, switching voltage	AC 19...250 V
Relay output, switching current	4 (3)A
Mounting	DIN rail
Degree of protection	IP20
Dimensions (W x H x D)	173 x 90 x 80 mm

	Stock no.	Product no.
	S55370-C100	**RMS705B-1**

RMZ790

Plug-in type operator unit

- Operator unit plugs into the Synco™ 700 controllers
- For displaying and changing plant data for service staff and enduser
- Clear-text operation
- Can be plugged in and removed during operation
- Power supply via the controller

Data sheet	N3111
Mounting	DIN rail

Stock no.	Product no.
BPZ:RMZ790	**RMZ790**

RMZ791

Detached operator unit with 3 m cable

Like plug-in type operator unit, but:
- Other mounting choices (typically for control panel door or wall mounting)
- Larger display
- Connection via a prefabricated 3 m cable, supplied as standard

Data sheet	N3112
Mounting	Surface mounted (plaster)

Stock no.	Product no.
BPZ:RMZ791	**RMZ791**

RMZ792

Bus operator unit

Communicating operator unit for operating up to 150 controllers, room units and central units from the Synco™ 700 range via KNX bus.
Favorite pages can be freely defined. Designed for fixed installation or mobile use.

Data sheet	N3113
Operating voltage	AC 24 V
Voltage supply	KNX bus
Power consumption	2.5 VA
Degree of protection	IP20
Dimensions (W x H x D)	145 x 96 x 34 mm

Stock no.	Product no.
BPZ:RMZ792	**RMZ792**

Room unit with KNX bus

QAW740

Configurable unit with display of operating mode, timer, temperatures and fault.

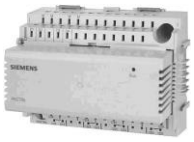
With 3 operating elements:
- Knob for setpoint readjustments
- Operating mode button
- Timer button

Data sheet	N1633
Operating voltage	DC 24 V
Voltage supply	KNX bus
Measuring range, temperature	0...45 °C
Setpoint readjustment range	-3...3 K
Communication	KNX (KNX TP1)
Connection cable	2-wire
Degree of protection	IP20
Dimensions (W x H x D)	96 x 96 x 47 mm
Weight (net)	0.22 kg

Stock no.	Product no.
BPZ:QAW740	**QAW740**

Universal modules

RMZ78..



Additional inputs and outputs required by the Synco™ 700 controllers can be provided by these modules.
A description of the functions is given with the relevant controller module.

Data sheet	N3146
Voltage supply	Supply from controller module
Power consumption	3 VA
Analog output, signal	DC 0...10 V
Analog output, current	Max. 1 mA
Universal input, signal	0...1000 Ohm 1000...1175 Ohm DC 0...10 V Potential-free digital status contact LG-Ni1000 Pt1000 T1 (PTC) 2 x LG-Ni1000
Relay outputs	switching contact, potential-free
Relay output, switching voltage	AC 19...265 V
Relay output, switching current	4 (3) A
Degree of protection	IP20
Dimensions (W x H x D)	117 × 90 × 75 mm

Range overview RMZ78..

Universal-inputs, number	Analog outputs, number	Relay outputs, number	Weight (net) [kg]	Stock no.	Product no.
4	2	2	0.322	BPZ:RMZ788	**RMZ788**
6	2	4	0.359	BPZ:RMZ789	**RMZ789**
8	0	0	0.3	BPZ:RMZ785	**RMZ785**
4	0	4	0.334	BPZ:RMZ787	**RMZ787**

RMZ780

Module connector

Module connector for detached mounting of extension modules within the control panel.

Data sheet	N3138
Max. cable length	10 m
Dimensions (W x H x D)	18.5 x 87.5 x 22.5 mm

Stock no.	Product no.
BPZ:RMZ780	**RMZ780**

Sensors, setpoint adjusters

Product Title	Data sheet	Stock no.	Product no.
Frost detector, modulating	A6V10432020	BPZ:QAF63..J	**QAF63..J**
Differential pressure sensor, DC 0...10 V	N1910_01	BPZ:QBM2030..	**QBM2030..**
Flue gas temperature sensor Pt1000	N1846	BPZ:FGT-PT1000	**FGT-PT1000**
Immersion temperature sensor 100 mm DC 0...10 V	N1782	BPZ:QAE2164.010	**QAE2164.010**
Immersion temperature sensor 150 mm DC 0...10 V	N1782	BPZ:QAE2164.015	**QAE2164.015**
Immersion temperature sensor 100 mm LG-Ni1000, with protection pocket	N1781	S55720-S516	**QAE9120.010**
Duct temperature sensor 400 mm, LG-Ni1000	N1761	BPZ:QAM2120.040	**QAM2120.040**
Duct temperature sensor 2000 mm, LG-Ni1000	N1761	BPZ:QAM2120.200	**QAM2120.200**
Duct temperature sensor 6000 mm, LG-Ni1000	N1761	BPZ:QAM2120.600	**QAM2120.600**
Window pane temperature sensor	N1830	BPZ:QAT22	**QAT22**
Duct sensor for humidity (DC 0...10 V)	N1864	BPZ:QFM2100	**QFM2100**
Duct sensor for humidity (0...10 V) and temperature (Ni1000)	N1864	BPZ:QFM2120	**QFM2120**
Duct sensor for humidity (DC 0...10 V) and temperature (DC 0...10 V)	N1864	BPZ:QFM2160	**QFM2160**
Duct sensor for humidity (0...10 V) and temperature (0...10 V) with calibration certificate	N1883	BPZ:QFM4160	**QFM4160**
Solar sensor	N1943	BPZ:QLS60	**QLS60**
Duct sensor for air velocity	N1932	BPZ:QVM62.1	**QVM62.1**
Frost detector, air side, 2-point	A6V10432022	BPZ:QAF64..J	**QAF64..J**
Outside sensor LG-Ni1000	N1811	BPZ:QAC22	**QAC22**
Differential pressure sensor for liquids and gases	N1923	BPZ:QBE61.3-DP..	**QBE61.3-DP..**
Differential pressure sensors for liquids and gase (DC 0...10 V)	N1920	BPZ:QBE63-DP..	**QBE63-DP..**
Strap-on temperature sensor LG-Ni1000	N1801	BPZ:QAD22	**QAD22**
Strap-on temperature sensor with cable LG-Ni1000	N1802	BPZ:QAD26.220	**QAD26.220**
Immersion temperature sensor 100 mm LG-Ni1000, with protection pocket	N1781	BPZ:QAE2120.010	**QAE2120.010**
Duct temperature sensor 400 mm, Pt1000	N1761	BPZ:QAM2112.040	**QAM2112.040**
Immersion temperature sensur Ø 4 mm with cable and fitting	N1790	BPZ:QAE26.9..	**QAE26.9..**
Differential pressure sensors for liquids and gase (0...10 V)	N1922	BPZ:QBE3000..	**QBE3000..**
Immersion temperature sensor 150 mm, LG-Ni1000, with protection pocket	N1781	BPZ:QAE2120.015	**QAE2120.015**
Immersion temperature sensor 100 mm, LG-Ni1000, without protection pocket	N1781	BPZ:QAE2121.010	**QAE2121.010**
Cable temperature sensor for high-temperature applications (180°C)	N1833	BPZ:QAP21.2	**QAP21.2**
Cable temperature sensor silicone 1.5 m, LG-Ni1000	N1831	BPZ:QAP21.3	**QAP21.3**
Immersion temperature sensor 150 mm LG-Ni1000, without protection pocket	N1781	BPZ:QAE2121.015	**QAE2121.015**
Outside/room temperature sensor DC 0...10 V	N1814	BPZ:QAC3161	**QAC3161**
Cable temperature sensor PVC 2 m, LG-Ni1000	N1831	BPZ:QAP22	**QAP22**
Duct sensor for humidity (DC 0...10 V) for demanding requirements	N1882	BPZ:QFM3100	**QFM3100**
Duct air quality sensor CO_2/ temperature / rel. humidity / VOC	N1962	BPZ:QPM21..	**QPM..**
Duct sensor for humidity (DC 0...10 V) and temperature (DC 0...10 V) for demanding requirements	N1882	BPZ:QFM3160	**QFM3160**
Duct air quality sensor CO_2 / temperature / rel. humidity / VOC; Modbus	A6V11610641	BPZ:QPM21..-MO	**QPM../MO**
Duct temperature sensor	A6V12251940	BPZ:QAM16..020	**QAM16..020**

Monitors

Product Title	Data sheet	Stock no.	Product no.
Condensation monitor	A6V10741072	BPZ:QXA21..	**QXA21..**
Frost monitor, 2-point, capillary tube 3000 mm, -10...+15 °C	A6V12051788	S55700-P163	**QAF65.3AR-J**
Frost monitor, 2-point, capillary tube 6000 mm, -10...+15 °C	A6V12051788	S55700-P164	**QAF65.6AR-J**
Duct hygrostat, setpoint setting range 15...95 % r.h.	N1514	BPZ:QFM81.2	**QFM81.2**
Room hygrostat, setpoint setting range 15...95 % r.h., setpoint adjuster inside device	N1514	BPZ:QFM81.21	**QFM81.21**
Frost detector, air side, 2-point	A6V10432022	BPZ:QAF64..J	**QAF64..J**
Frost monitor, 2-point, capillary tube 3000 mm, -10...+15 °C	A6V11965899	S55700-P161	**QAF65.3M-J**
Frost monitor, 2-point	N1284	BPZ:QAF81..	**QAF81..**
Frost monitor, 2-point, capillary tube 6000 mm, -10...+15 °C	A6V11965899	S55700-P162	**QAF65.6M-J**

Monitors

Product Title	Data sheet	Stock no.	Product no.
Room hygrostat, setpoint setting range 30...90 % r.h., setpoint adjuster inside device	N1518	BPZ:QFA1000	**QFA1000**
Room hygrostat, setpoint setting range 30...90 % r.h., external setpoint adjustment	N1518	BPZ:QFA1001	**QFA1001**
Temperature controller	N1205	BPZ:RAK-TR.1..H	**RAK-TR.1..H**
Thermal reset limit thermostat	N1202	BPZ:RAK-TW.1..H	**RAK-TW.1..H**
Temperature limiter	N1206	BPZ:RAK-TB.1..M	**RAK-TB.1..M**
Safety limit thermostat	N1204	BPZ:RAK-ST..M	**RAK-ST..M**
Temperature controller/ thermal reset limit thermostat	N1212	BPZ:RAZ-TW.1..J	**RAZ-TW.1..J**
Differential pressure monitor	N1552	BPZ:QBM81..	**QBM81..**
Temperature controller/ safety limit thermostat	N1214	BPZ:RAZ-ST..J	**RAZ-ST..J**

Room units / sensors

Product Title	Data sheet	Stock no.	Product no.
Front module with passiv temperature measurement, LG-Ni1000	N1408	S55720-S133	**AQR2531ANW**
Room air quality sensor CO_2 / temperature / rel. Humidity / VOC	N1961	BPZ:QPA20..	**QPA..**
Room sensor for humidity (DC 0...10 V) for demanding requirements	N1858	BPZ:QFA3100	**QFA3100**
Room sensor for humidity (DC 0..10V) and temperature (DC 0..10V) with calibration certificate	N1859	BPZ:QFA4160	**QFA4160**
Room sensor CO_2 /Humidity/Temperature Modbus	A6V12046144	S55720-S510	**QPA2052/MO**
Front module for base modules, temperature (active)	N1411	S55720-S136	**AQR2532NNW**
Room unit with room temperature sensor and setpoint adjuster	N1721	BPZ:QAA25	**QAA25**
Indoor air quality controller with integrated VOC sensor for mixed gas	N1571	BPZ:QPA84	**QPA84**
Room sensor for humidity (DC 0...10 V) and temperature (DC 0...10 V) for demanding requirements	N1858	BPZ:QFA3160	**QFA3160**
Room temperature sensor LG-Ni1000	N1721	BPZ:QAA24	**QAA24**
Room sensor for humidity (DC 0...10 V)	N1857	BPZ:QFA2000	**QFA2000**
Room sensor KNX for temperature, white	N1602	S55624-H103	**QMX3.P30**
Room sensor for humidity (DC 0...10 V) and temperature (LG-Ni1000)	N1857	BPZ:QFA2020	**QFA2020**
Room unit with room temperature sensor and setpoint readjuster -3...3 K	N1721	BPZ:QAA27	**QAA27**
Room sensor for humidity (DC 0...10 V) and temperature (DC 0...10 V)	N1857	BPZ:QFA2060	**QFA2060**
Room temperature sensor LG-Ni1000 for mounting on recessed conduit boxes	N1722	BPZ:QAA64	**QAA64**
Room unit with KNX bus	N1633	BPZ:QAW740	**QAW740**
Room sensor KNX for temperature and humidity, white	N1602	S55624-H116	**QMX3.P40**
Room sensor KNX for temperature, humidity, CO2, white	N1602	S55624-H104	**QMX3.P70**
Mounting plates for front modules with passiv temperature measurement	N1408	BPZ:AQR2500..	**AQR2500..**
Base module with KNX for temperature and humidity measurement	N1411	BPZ:AQR2570..	**AQR2570..**

Step switches, signal converter and transformers

Product Title	Data sheet	Stock no.	Product no.
Transformers	N5536	BPZ:SEM62..	**SEM62..**
Universal digital indicator	N5312	BPZ:BAU200	**BAU200**
Current valve	N4938	S55376-C160	**SEA45.5**
Signal converter DC 0...10 V or DC 0 / 10 V in AC 0 / 24 V	N5102	BPZ:SEM61.4	**SEM61.4**
Variable Speed Drive for pumps and fans, IP55, Filter B (C1)	N5111	BPZ:G120P..AM..B..	**G120P..5B**
Variable Speed Drive for pumps and fans, IP55, Filter A (C2)	N5111	BPZ:G120P..AM..A..	**G120P..5A**
Variable Speed Drive for pumps and fans, IP20, Filter B (C1)	N5111	BPZ:G120P..AE..B..	**G120P..2B**
Variable Speed Drive for pumps and fans, IP20, Filter A (C2)	N5111	BPZ:G120P..AE..A..	**G120P..2A**
Signal converter with preprogrammed applications	N5146	BPZ:SEZ220	**SEZ220**

Service tool

Product Title	Data sheet	Stock no.	Product no.
Commissioning and plant operating software	N5649	S55800-Y100	**ACS790**
Service tool for KNX / LPB	N5655	BPZ:OCI700.1	**OCI700.1**
USB - KNX Service interface	A6V10438951	S55800-Y101	**OCI702**
Web server for Synco devices	N5701	BPZ:OZW772..	**OZW772..**

The software (ACS790) can be downloaded for free via http://www.siemens.com/acs790.

SEA45.5

Current valve

Current valve for AC 24 V pulse/pause control
of electrical loads up to 30 kW

Mounting & local electrical regulations to be considered

SEA45.5 Current valve

Data sheet	N4938
Operating voltage	AC 24 V
Frequency	50/60 Hz
Power consumption	0.24 VA
Degree of protection	IP20
Dimensions (W x H x D)	35.6 x 110 x 136 mm

Stock no.	Product no.
S55376-C160	**SEA45.5**

SEM61.4

Signal converter DC 0...10 V or DC 0 / 10 V in AC 0 / 24 V

For converting a DC 0...10 V or DC 0 / 10 V input signal to a pulse-width modulated output signal AC 24 V for the control of maximum 20 current valves

Data sheet	N5102
Operating voltage	AC 24 V
Frequency	50/60 Hz
Power consumption	1 VA
Analog input, signal	DC 0...10 V
Digital input, contact query	DC 0/10 V
Relay output, switching voltage	24 V
Triac output, switching voltage	24 V
Triac output, switching current	0.5 A
Degree of protection	IP20
Dimensions (W x H x D)	36 x 90 x 60 mm

Stock no.	Product no.
BPZ:SEM61.4	**SEM61.4**

UA1T

Power amplifier for thermal actuators AC 24 V, PWM

The UA1T power amplifier is used to allow the connection of additional valve actuators to controllers with an AC 24 V output signal.

Indoor use

Data sheet	N3591
Operating voltage	AC 24 V
Current consumption	15 A
Digital outputs	AC 24V PWM, for max. 2x2 therm. Fan
Universal input, signal	AC 24 V
Degree of protection	IP20
Weight (incl. packaging)	0.42 kg
Dimensions (W x H x D)	55 x 18 x 22 mm

Stock no.	Product no.
BPZ:UA1T	**UA1T**

Signal converter with preprogrammed applications — SEZ220

- Maximum and minimum selection
- Calculation of average
- Calculation of enthalpy, enthalpy differential, absolute humidity, dewpoint
- Flexible adaptation, limitation, inversion and conversion of input signal
- Tested preselected applications
- Flexible configuration

Data sheet	N5146
Operating voltage	AC 24 V
Frequency	50/60 Hz
Power consumption	5 VA
Analog outputs, number	2
Analog output, signal	DC 0...10 V
Analog output, current	1 mA
Universal inputs, number	5
Universal input, signal	0...1000 Ohm DC 0...10 V LG-Ni1000 Pt1000 T1 (PTC) 2 x LG-Ni1000
Degree of protection	IP20
Dimensions (W x H x D)	123 x 90 x 86 mm

Stock no.	Product no.
BPZ:SEZ220	**SEZ220**

Signal converter DC 0...20 V Phs to DC 0...10 V — SEZ91.6

For the conversion of DC 0...20 VPh signals
to DC 0...10 V signals

Data sheet	N5143
Operating voltage	AC 24 V
Frequency	50/60 Hz
Power consumption	0.5 VA
Analog input, signal	DC 0...20 V Phs
Analog output, signal	DC 0...10 V
Degree of protection	IP20
Dimensions (W x H x D)	57 x 22 x 18 mm

Stock no.	Product no.
BPZ:SEZ91.6	**SEZ91.6**

BAU200

Universal digital indicator

Universal single point digital indicator
- Suitable for front-mounting in control panel
- With LED display
- Input signal (type of signal and measuring range) can be set with buttons
- For all Siemens Building Technologies sensors (LG-Ni 1000, T1, PT100, PT 1000, 0 ... 10 V)

Data sheet	N5312
Analog input, signal	DC 0...10 V LG-Ni1000 Pt100 Pt1000 T1 (PTC)
Analog output, signal	DC 0...10 V
Mounting	Front mounting DIN rail

Stock no.	Product no.
BPZ:BAU200	**BAU200**

Digital time switch, 1-channel, with 7-day program

SEH62.1

Programmable as 24-hour or 7-day time switch. Wall or DIN rail mounting.

Data sheet	N5243
Operating voltage	AC 230 V
Power consumption	3 VA
Frequency	50/60 Hz
Buffer time	72 h
Display	LCD
Digital inputs, number	1
Digital input, contact query	8 mA DC 24 V
Digital input, application	Countdown timer
Relay output, switching voltage	AC 24...250 V 24 V
Relay output, switching current	AC 6 (3) A DC 0.1...4 A
Relay outputs	Change-over contact, potential-free
Connection cable	Max. 2.5 mm^2
Type of fixing	Wall mouting with screws DIN rail 60 mm long min.
Degree of protection	IP20
Ambient temperature, operation	0...50 °C
Dimensions (W x H x D)	79 x 106 x 56 mm

Stock no.	Product no.
BPZ:SEH62.1	**SEH62.1**

SEM62..

Transformers

Transformer with housing, providing a reduction in voltage from AC 230 V to AC 24 V (output power 30 VA)

- Self-resetting fuse integrated on the primary side
- Secondary On/Off switch and replaceable fuse (SEM62.2 only)
- Plug-in screw terminals
- Two secondary output plug-in terminals

Data sheet	N5536
Frequency	50/60 Hz
Primary voltage	AC 230 V
Secondary voltage	AC 24 V
Output rating	30 VA
Degree of protection	IP20
Dimensions (W x H x D)	114 x 106 x 57 mm

Range overview SEM62..

Product Title	Stock no.	Product no.
Transformer	BPZ:SEM62.1	**SEM62.1**
Transformer with switch and replaceable fuse	BPZ:SEM62.2	**SEM62.2**

Published by
Siemens Switzerland Ltd

Smart Infrastructure
Global Headquarters
Theilerstrasse 1a
6300 Zug
Switzerland
Tel +41 58 724 24 24

For the U.S. published by
Siemens Industry Inc.

800 North Point Parkway
Suite 450
Alpharetta, GA 30005
United States

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