SIEMENS

Albatros2

Controller, HMI and accessories

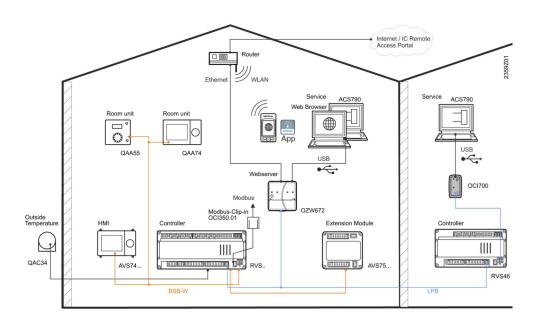
Range Description

Albatros2 product range

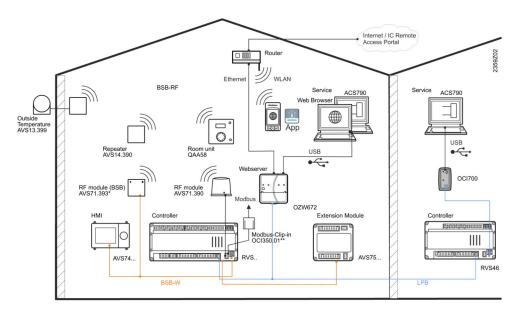
Albatros2, or:

- Intelligent control functions for the highest level of energy efficiency.
- Complete product range for all tasks in the heating segment.
- Scalable, modular concept for simple to complex plants.
- Modern communications and visualization.
- Peripheral devices featuring RF or wired communications.

Wired



Wireless



^{*} RF module and RF Module BSB as alternatives only.

^{**} RF module and OCI350.01 as alternatives only.

Controller

	RVS21.826	RVS61.843	LMS14/15	RVS13.143	RVS43.345	RVS46.530	RVS46.543
Heat pump							
Two-stage heat pumps							
Boilers							
2-stage burner/modulating burner (3-point)							
Modulating fan (PWM output)							
Combustion optimization Sitherm Pro (LMS15 only)							
Residential controlled mechanical ventilation							
Supplementary source							
Solar integration							
Buffer, swimming pool							
Modulating solar pump							
Solid fuel boiler integration							
Cascade							
Heating circuit control							
Cooling circuit control							
DHW control							
Instantaneous DHW heater (down stream of storage tank)							
Buffer storage tank							
LPB	■*		■*				
Modbus	* **	* **					

^{*} with LPB-Clip-in OCI345.06/101

^{**} with Modbus-Clip-in OCI350.01/101

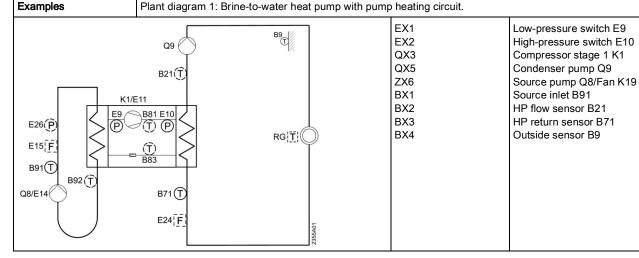
ALBATROS2 HEATI	RVS21.826		
Inputs, number		Outputs, number	·
Mains	4 EX	Relay	5 QX
Sensor	4 BX	Digital	3 fixed at X75
Digital-/010V	4 (2 fixed at X75, 2 HX)	Triac	1 ZX
		010V/PWM	3 UX
		5/12V act. sensors	1 GX
		•	·
Connection to	Designation		With/on
Operator units	Δ\/\$37 Δ\/\$74		Ribbon cable



Connection to	Designation	With/on	Designation
Operator units	AVS37, AVS74	Ribbon cable	AVS82.490/109,491/109
Extension modules	AVSx5.39x, AVS75.370 (max. 3 module)	Ribbon cable	AVS82.490/109,491/109
I/O modules	AVS55.19x (max. 1 module)	Ribbon cable	AVS82.496/109
Service tool	OCI700.1 (including ACS790)	"BSB" slot	Cable included in delivery
Radio module	AVS71.390 (for BSB-RF)	"X60" slot	Cable included in delivery
BSB devices	e.g. room units QAAxx	CL-, CL+ to "X86"	
LPB devices	As cascade or zone controller	LPB clip-in	OCI345.06/101
Modbus devices	As Modbus slave or master	Modbus clip-in	OCI350.01
Various plugs	AGP5S		

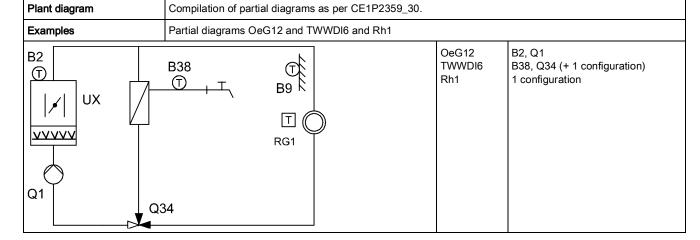
Power	Voltage	230 V ~, 50/60 Hz
IP class	as per EN 60529	IP 00 (no housing)
Climatic conditions (operation)	As per EN 60721-3-3	class 3K5, -2050 °C (non-condensing)
Dimensions	Length x Width x Height	185 x 115 x 42 mm
Weight	Excl. packaging	193 g
Packaging unit	includes	24 pcs.

	User Manual	E1U2355en_04x		
	Plant diagram	Selection of 17 preset diagrams of complete plants.		
		Compilation of partial diagrams as per CE1P2359_20.		
ĺ	Evamples	Plant diagram 1: Pring to water heat nump with nump heating girquit		



ALBATROS2 HEATPUMP C	ONTROLLER		RVS61.843 (as of series C	
Inputs, number		Outputs, numbe	er		The state of the s
Mains	10 EX	Relay	12 QX		
Sensor	11 BX	Triac	1 ZX		
Digital-/010V	2 HX	010V/PWM	2 UX		
	1		T		T
Connection to	Designation		With/on		Designation
Operator units	AVS37, AVS74		Ribbon cable		AVS82.490/109,491/109
Extension modules	AVSx5.39x (max. 3 mod	dules)	Ribbon cable		AVS82.490/109,491/109
Service tool	OCI700.1 (including AC	S790)	"BSB" slot		Cable included in delivery
Radio module	AVS71.390 (for BSB-RF	=)	"X60" slot		
BSB devices	e.g. room units QAAxx		Terminals CL-, 0	CL+	
Service tool	OCI700.1 (including AC	S790)	"LPB" slot		Cable included in delivery
LPB devices	As cascade or zone con	itroller	Terminals MB, D)B	
Modbus devices	As Modbus slave or mas	ster	Modbus clip-in		OCI350.01
Various plugs	AGP4S, AGP8S				
Power	Voltage		230 V ~, 50/60 Hz		
IP class	as per EN 60529		IP 00		
Climatic conditions (operation)	As per EN 60721-3-3		class 3K5, -2050 °C (non-condensing)		ndensing)
Dimensions	Length x Width x Height	:	281 x 121 x 70 mm		
Weight	Excl. packaging		650 g		
Packaging units	Contents		1 piece or 20 pieces		
User Manual	CE1U2355en_05x				
Plant diagram	Selection of 24 presCompilation of parti				
Examples	Plant diagram 5: Brine-to-water heat pump with buffer storage tank, DHW s Q3, and mixing or pump heating circuit.			storage tank with charging pump	
B21(Î) K1/E11 E26(P) E15(F) B91(T) B92(Î) B92(Î) B71(Î) E24(F)	Q9 Q3 ,g (T) B41 (T)		☐ Y1/Y2 ☐ Q2 ☐ B1 ☐ IT: RG	BX2 BX7 BX8 BX9 BX10 BX11 BX12 BX13 S	Buffer storage tank sensor B4 Buffer storage tank sensor B41 Hot-gas sensor B81 DHW sensor B3 Dutside sensor B9 HP flow sensor B21 B1 HP return sensor B71 Source inlet sensor B91 etc.

ALBATROS2 BOILER MAN	IAGEMENT UNIT, PCB		LMS14/15		
Inputs, number		Outputs, number		Displaying (Washing)	
Mains	1 fix (STB)	Relay	3 QX		
Sensor	7 (3 fix, 4 BX)	Stepping motor 1 QX			
Digital-/010V/Frequency	6 HX	PWM	1 PX		
Connection to	Designation	With/on		Designation	
Operator units	AVS37, AVS74	Ribbon cable		AVS82.490/109,491/109	
Extension modules	AVSx5.39x, AGU2.55x (max. 3 modules)	Ribbon cable		AVS82.490/109,491/109 AGU2.110A109	
Service tool	OCI700.1 (including ACS790)	"BSB,LPB" slot		Cable included in delivery	
Radio module	AVS71.390 (for BSB-RF)	"X60" slot			
BSB devices	e.g. room units QAAxx	Terminals CL-, CL+			
Lab tool	OCI430 (including ACS420)	"X13" slot		Cable included in delivery	
Parameter stick	AGU2.56x	"X12" slot		Docking station for programmin OCI432	
LPB devices	As cascade or zone controller	LPB clip-in		OCI345.06/101	
Various plugs	AGP4S, AGP8S				
Power	Voltage	230 V ~, 50 Hz; 1	15 V ~, 60 Hz		
IP class	as per EN 60529	IP 00			
Climatic conditions (operation)	As per EN 60721-3-3	Class 3K5, 060 °C (non-condensing		3)	
Dimensions	Length x Width x Height	203 x 150 x 30 mm			
Weight	Excl. packaging	254 g			
Packaging unit	includes	24 pcs.			
User Manual	CC1U7471en				
DI 4 II	0 11 1 1 11 11 0510000 00				



ALBATROS2 BOILER	CONTROLLER			RVS1	3.143	
Inputs, number		Outputs, numb	er		00 + 1 U +	
Mains	2 fixed	Mains	1 fix		PACK Annual (ACROY MIRATE EN TIDENS) POPUNCATION (IN THE PACK ANNUAL ENTITY OF THE PACK AN	
Sensor	6 (4 fix, 2 BX)	Relay	6 (5 fix	, 1 QX)	Editional distances	
Digital-/010V	1 HX				In the late of the	
Connection to	Designation			n	Designation	
Operator units	AVS37, AVS74		Ribbor	n cable	AVS82.490/109,491/109	
Extension modules	AVSx5.39x (max. 3	modules)	Ribbor	n cable	AVS82.490/109,491/109	
Service tool	OCI700.1 (including	ACS790)	"BSB"	slot	Cable included in delivery	
Radio module	AVS71.390 (for BSB	-RF)	X60 slo	ot	Cable included in delivery	
BSB devices	e.g. room units QAA	xx	Termin	nals CL-, CL+		
Various plugs	AGP4S, AGP8S	AGP4S, AGP8S				
Power	Voltage		230 V	230 V ~, 50/60 Hz		
IP class	as per EN 60529	as per EN 60529		IP 00		
Climatic conditions (operation)	As per EN 60721-3-3	As per EN 60721-3-3		Class 3K5, -2050 °C (non-condensing)		
Dimensions	Length x Width x He	ight	181 x ⁻	181 x 121 x 52 mm		
Weight	Excl. packaging		566 g	566 g		
Packaging unit	includes		20 pied	20 pieces		
User Manual	CE1U2357en_01, CI	E1U2357en_01a				
Plant diagram	Compilation of partia	l diagrams as per CE1	P2359_30.			
Examples	Partial diagrams OeG3 and TWWSp13 and Rh1					
B2 (T) (M) (T2) (Q1)	03 B3 P3		B9 ⊕ RG1∏	OeG3 TWWSp13 Rh1	B2, Q1 (+ 1 configuration) B3, Q3 (+ 2 configurations) 1 configuration	

ALBATROS2 BOILER C	ONTROLLER		F	RVS43.345	
Inputs, number		Outputs, number	<u> </u>		Services in the service of the servi
Mains	4 (3 fix, 1 EX)	Mains	1 fix		Section 19
Sensor	6 (2 fix, 4 BX)	Relay	5 QX		
Digital-/010V	2 HX	5/12V act. sensors	1 GX		
		PWM	1 fix		
Connection to	Designation		With/on		Designation
Operator units	AVS37, AVS74		Ribbon cable		AVS82.490/109,491/109
Extension modules	AVSx5.39x (max. 3 m	odules)	Ribbon cable		AVS82.490/109,491/109
Service tool	OCI700.1 (including A	CS790)	"BSB" slot		Cable included in delivery
Radio module	AVS71.390 (for BSB-F	RF)	X60 slot		Cable included in delivery
BSB devices	e.g. room units QAAxx	•	Terminals CL-,	CL+	
Service tool	OCI700.1 (including A	CS790)	"LPB" slot		Cable included in delivery
LPB devices	As cascade or zone co	ontroller	Terminals MB,	DB	
Various plugs	AGP4S, AGP8S				
Power	Voltage		230 V ~, 50/60 Hz		
IP class	as per EN 60529		IP 00		
Climatic conditions (operation)	As per EN 60721-3-3		Class 3K5, -2050 °C (non-condensing)		n-condensing)
Dimensions	Length x Width x Heigh	nt	181 x 121 x 52 mm		
Weight	Excl. packaging		400 g		
Packaging unit	includes		20 pieces		
User Manual	CE1U2354en_02x				
Plant diagram	Compilation of partial of	liagrams as per CE1P2359_3	0.		
Examples	Partial diagrams OeG2 and TWWSp4 and Rh3				
T8 (M) T2	03 B3 T	B9 T Y1	Rh3	/Sp4 B	32 (+ 1 configuration) 33, Q3 (+ 2 configurations) configurations

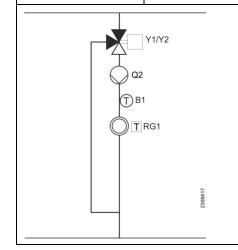
ALBATROS2 ZONE	CONTROLLER			RVS46.530
Inputs, number		Outputs, numb	Outputs, number	
Sensor	2 fixed	Relay	3 fix	
Digital-/010V	1 HX			
	•		•	



Connection to	Designation	With/on	Designation
Operator units	AVS37, AVS74	Ribbon cable	AVS82.490/109,491/109
Extension modules	AVSx5.39x (max. 2 modules)	Ribbon cable	AVS82.490/109,491/109
Service tool	OCI700.1 (including ACS790)	"BSB" slot	Cable included in delivery
Radio module	AVS71.390 (for BSB-RF)	X60 slot	Cable included in delivery
BSB devices	e.g. room units QAAxx	Terminals CL-, CL+	
Service tool	OCI700.1 (including ACS790)	"LPB" slot	Cable included in delivery
LPB devices	As generation controller	Terminals MB, DB	
Various plugs	AGP4S, AGP8S		
	•	<u>.</u>	
_			

Power	Voltage	AC 230 V ~, 50/60 Hz
IP class	as per EN 60529	IP 00
Climatic conditions (operation)	As per EN 60721-3-3	Class 3K5, -2050 °C (non-condensing)
Dimensions	Length x Width x Height	109 x 121 x 52 mm
Weight	Excl. packaging	431 g
Packaging units	Contents	1 piece or 20 pieces

User Manual	CE1U2353en_01, CE1U2353en_01a		
Plant diagram	ant diagram Compilation of partial diagrams as per CE1P2359_20, 30.		
Examples	Partial diagram Rh3		



Rh3	1 configuration

ALBATROS2 ZONE CO	NTROLLER			RVS46	543	
Inputs, number		Outputs, number				
Sensor	5 (3 fix, 4 BX)	Relay	5 (4 fix, 1 QX)		SHARMS SPECIAL STORY OF STORY	
Digital-/010V	1 HX					
	•	•	•		to be a particular property of the particular particula	
Connection to	Designation		With/on		Designation	
Operator units	AVS37, AVS74		Ribbon c	able	AVS82.490/109,491/109	
Extension modules	AVSx5.39x (max. 2 modul	les)	Ribbon c	able	AVS82.490/109,491/109	
Service tool	OCI700.1 (including ACS7	790)	"BSB" slo	ot	Cable included in delivery	
Radio module	AVS71.390 (for BSB-RF)		X60 slot		Cable included in delivery	
BSB devices	e.g. room units QAAxx		Terminal	s CL-, CL+		
Service tool	OCI700.1 (including ACS7	790)	"LPB" slo	ot	Cable included in delivery	
LPB devices	As generation controller		Terminal	s MB, DB		
Various plugs	AGP4S, AGP8S					
	1		11			
Power	Voltage	230 V ~,	50/60 Hz			
IP class	as per EN 60529		IP 00			
Climatic conditions (operation)	As per EN 60721-3-3		Class 3K	Class 3K5, -2050 °C (non-condensing)		
Dimensions	Length x Width x Height		181 x 12	181 x 121 x 52 mm		
Weight	Excl. packaging		587 g	587 g		
Packaging unit	includes		1 pc.			
User Manual	CE1U2353en_01, CE1U23	353en_01a				
Plant diagram	Compilation of partial diagr	rams as per CE1P2359	9_20, 30.			
Examples	Partial diagrams Sol1 and	TWWSp5 and Rh3				
B6 (T)	03 B3 T	Q2 TR	′1/Y2	Sol1 TWWSp5 Rh3	Q5, B6 Q3, B3 + 2 configurations 1 configuration	

Extension and I/O modules

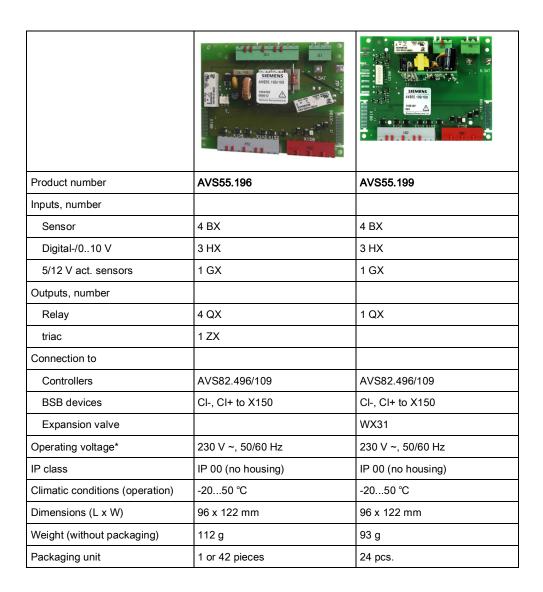
Extension modules

	CI SI NOLL	### (1 M (1) M (1	AGUS	THE GREAT WAS THE COLOR OF THE
Product number	AVS75.370	AVS75.39x **	AGU2.550	AGU2.551
Inputs, number				
Mains	1 EX	1 EX (AVS75.391 only)		
Sensor	2 BX	2 BX	2 BX	
Digital-/010 V	2 HX	1 HX	1 HX	
5/12 V act. sensors	1 GX		1 U+ (12 V)	
Outputs, number				
Relay	3 QX	3 QX	3 QX	2 QX
010V/PWM	2 UX			2 UX
Connection to				
Controllers	AVS82.490,491	AVS82.490,491	AVS82.490,491 AGU2.110	AVS82.490,491 AGU2.110
Extension modules	AVS82.490,491	AVS82.490,491	AVS82.490,491 AGU2.110	AVS82.490,491 AGU2.110
BSB devices	Terminals CL-, CL+		Cl-, Cl+ to X50	CI-, CI+ to X50
Expansion valve	WX21			
Operating voltage*	230 V ~, 50/60 Hz	230 V ~, 50/60 Hz	12 V DC (via LMS)	12 V DC (via LMS)
IP class	IP 00	IP 00	IP 00	IP 00
Climatic conditions (operation)	-2050 °C	-2050 °C	060 °C	060 °C
Dimensions (L x W)	109 x 121 mm	109 x 121 mm	108 x 55 mm	108 x 55 mm
Weight (without packaging)	248 g	293 g	84 g	100 g
Packaging unit	1 or 20 pieces	1 or 20 pieces	60 pcs.	60 pcs.

^{*} Additional technical data is available in the user guides for the controllers.

^{**} The identical device, from a technology standpoint, can be ordered under order number AVS55.391 (without housing).

I/O modules

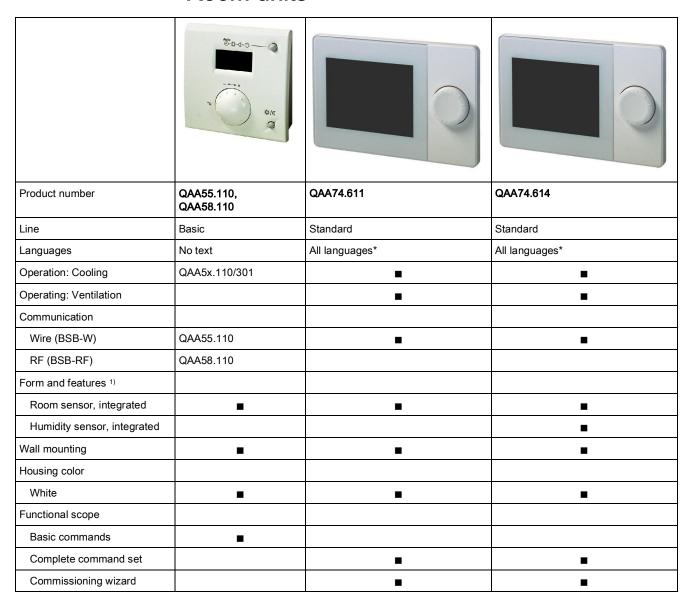


^{*} Additional technical data is available in the user guides for the controllers.

Compatibility

	RVS21	RVS61	LMS1x	RVS13	RVS43	RVS63	RVS46
AVS75.370	Yes	Yes			Yes		
AVS75.39x	Yes						
AVS55.196	Yes						
AVS55.199	Yes						
AGU2.550			Yes				
AGU2.551			Yes				

Room units



^{*} Includes: DE, EN, FR, IT, NL, ES, DA, SV, FI, PT, PL, CS, SK, SL, HU, EL, TR, RU, SR

Device dimensions and technical data in CE1U2358en_xx or CE1U2348en. Interfaces on partner devices in this document.

Operator units

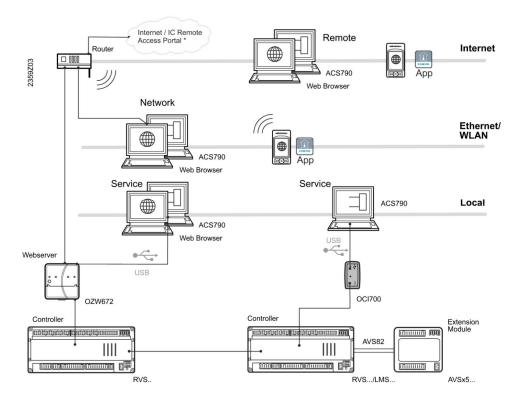
	2				
Product number	AVS37.390	AVS37.x9x	AVS74.261	AVS74.661	AVS74.761
Line	Basic	Standard	Standard	Standard	Standard
Language set 1 **	No text	AVS37.x9x/ 1 0x,/ 3 0x	All languages*	All languages*	All languages*
Language set 2 ***		AVS37.x9x/ 5 0x,/ 7 0x			
Suited for plants					
Boiler		■ 1)	Universal	Universal	Universal
Heat pump		AVS37.x9x/ 309 ,/ 709			
Operation cooling			•	•	•
Operating: Ventilation			•	-	•
Form and housing 2)	Circuit board	With housing	With cover	Without cover, air tight	With cover, IP44, air tight
Installation					
Front plate		AVS37. 2 9x ³⁾	•		
Rear view		AVS37. 3 9x ³⁾		•	
Housing color					
Basalt grey		AVS37.29 4 , AVS37.29 6			
White		AVS37.29 5 , AVS37.29 7	•	•	
Functional scope					
Basic commands	•				
Extended operation		■ ⁴⁾	•		•
Commissioning wizard					•

- * Includes: DE, EN, FR, IT, NL, ES, DA, SV, FI, PT, PL, CS, SK, SL, HU, EL, TR, RU, SR
- ** Language set 1 contains: DE, EN, FR, IT, NL, ES, DA, SV, FI, PT
- *** Language set 2 contains: EN, PL, CS, SK, SL, HU, EL, TR, RU, SR
- 1) Reset button for LMS14/15: AVS37.x96 und AVS37.x97
- 2) Device dimensions and technical data in CE1U2358en_xx or CE1U2348en. Interfaces on partner devices in this document.
- 3) On AVS37.296 the service buttons are on different, on AVS37.396 on the same level.
- 4) Without ventilation function

Albatros2 communications

Albatros2, communications, means:

- Modern communications and visualization.
- Access up to the controller's energy savings functions.
- Apps for mobile end devices.
- Design by drag&drop own Web plant visualizations.
- IC Remote Access Portal



	SIEMENS O 45- NG- Q	• 0 d d d d d d d d d d d d d d d d d d	
Product number	OZW672	OCI700	
Designation	Web server for LPB/BSB	Service interface	
Possible connections:			
Direct connection	USB, type A to mini-B	USB, type A to B	
Direct dial connection	No	No	
IP connection (Internet)	Yes.	No	
GSM	No	No	
Operation	Web browser GUIACS790HomeControl App	• ACS790	
Protocol interface	LPB/BSB on Ethernet Web API	LPB/BSB on USB	
Power	230 V ~, 50/60 HZ	DC 5 V (as per USB specification)	
IP class	IP30	IP20	
Climatic conditions (operation)	050 °C	050 °C	
Dimensions (LxWxH)	88 x 90 x 40 mm	126 x 70 x 32 mm	
Weight	136 g (without packaging)	1200 g (including case with ACS790 and packaging)	
Data Sheet	CE1N5712en	CE1N5655en	
Commissioning instructions	CE1C5712en		
Packaging unit	1 pc.	1 pc.	

Sensor

Overview



* 2 additional order numbers are available relating to outside sensor QAC34/101:			
AVS13.399/101 RF module including outside sensor QAC34			
AVS13.399/201 RF module for outside sensor QAC34; without the outside sensor.			

Accessories

Product number	AVS82.490/109 AVS82.491/109	AVS82.590/109	AVS82.496/109	AGU2.110A/109
Designation	Ribbon cable	Adapter cable	Ribbon cable	Bus cable
Length	490/109: 400 mm 491/109: 1000 mm	< 3000 mm*	100 mm	840 mm
Protocol	BSB	BSB	BSB	BSB
Links	Controllers	Controllers	Controllers	BMU LMS1
With	Operator unit or extension modules	Operator unit or extension modules	I/O module	Operator unit or extension modules

^{*} Cable between 2 adapters cannot exceed 3 meters for EMC reasons.



^{*} RF module (AVS71.390) and RF module BSB (AVS71.393) as alternative only

Housing, covers, spacer

Wall-mount housing AGS7A.100



- 1 controller with width 181 mm
- 2 controllers, 109 mm in width
- HMI AVS37...

Blanking cover AVS38.291



- e.g. with AGS7A.100
- Dimensions: 138 x 92 mm

HMI cover (rear side) AVS92.290



- For AVS37.x9x (not AVS37.390)
- Dimensions: 116 x 86 mm

Spacer AVS92.280/109



- For extension module AVS55.19x
- For mounting **on** the basic module (RVS21...)

Power section

Power supply AVS16.290



- Boiler control panel for floor-standing boilers
- Is connected using the supplied 5-pin plug to the controller's power input.
- Additional information is available in CE1U2358en

Demo case

Demo case KF8921.1



- Demo case for heat pump controller RVS61
- Includes, in addition to the room unit QAA75, the RF module AVS71.390, as well as potentiometer for plant simulation.
- Case dimensions: 47 x 44 x 20 cm (L x W x D)
- Case weight:: 8.5 kg

Demo case KF8900



- Demo case for heating controller RVS...
- Includes, in addition to the room unit QAA75, the RF module AVS71.390, as well as potentiometer for plant simulation.
- Case dimensions: 47 x 44 x 20 cm (L x W x D)
- Case weight: 8 kg

Additional information

Albatros2 documentation landscape

This product range description is a component of the Albatros2 documentation landscape.

Documentation type	Content
User guides for Albatros2 controllers [code letter U]	Hardware and parameter description of controllers (see as well Section "Controller [→ 3]", line "User's Guide")
User guides for Albatros2 operator, room, and peripheral devices [code letter U]	Mounting and operating instructions, parameter description, and technical data in CE1U2358en_xx
User guides for Albatros2 room and operator units (QAA74, AVS74) [code letter U]	Mounting and operating instructions, parameter description, and technical data in CE1U2348en.
Cross-product range basic documents [code letter P]	e.g. "Hydraulic partial diagrams and supplemental functions"
Sensor datasheets [code letter Q]	Technical data and functions (see Section "Sensor [→ 17]", line "Datasheet")
Product inserts [code letters B and G]	Delivered operating and mounting instructions
Environmental declarations [code letter E]	Material product components, environmental compatibility, and compliance with environmental laws (e.g. RoHS)
CE declaration of conformity [code letter T]	Declaration on the compliance with applicable electrical standards.

Additional support For questions on the described products, please contact your point-of-contact at

the responsible Siemens offices.

Additional information www.siemens.com/buildingtechnologies-oem

Notes on disposal

The following notes apply in the event that disposal is required when exchanging individual components (e.g. AVS13.399 or QAA55/58) as part of a service call:

Individual components without batteries



The device is considered an electronic device for disposal in accordance with the European Guidelines and may not be disposed of as domestic garbage.

- Dispose of the device through channels provided for this purpose.
- Comply with all local and currently applicable laws and regulations.

Individual components with batteries



The device is considered an electronic device for disposal in accordance with the European Guidelines and may not be disposed of as domestic garbage.

- Dispose of the device through channels provided for this purpose.
- Comply with all local and currently applicable laws and regulations.
- Dispose of empty batteries in designated collection points.

Issued by
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