SIEMENS 3¹⁰¹



Synco™ 200

Universal Controllers

RLU2...

- With programmed standard applications
- Freely programmable controller, for optimum adaptation to the relevant type of plant
- P-, PI, or PID mode
- Menu-driven operation

Use

For use on basic to complex ventilation, air conditioning and chilled water plant. The universal controllers are designed to handle the following controlled variables: Temperature, relative/absolute humidity, pressure/differential pressure, airflow, indoor air quality and enthalpy.

Functions

Operating modes

Setpoints

- Selection of operating mode via status inputs: Comfort, Economy, Protection
- Display of current operating mode (Comfort, Economy, Protection)
- With each sequence controller: Individually adjustable heating and cooling setpoints (or maximum and minimum setpoints) for the Comfort and Economy modes
- Predefined room temperature setpoint with room unit or setpoint readjuster (passive)
- With each sequence controller: Predefined setpoint with remote setpoint adjuster (active or passive)
- Room temperature setpoint with summer and/or winter compensation
- With each sequence controller: Setpoint shift depending on sensor signal, selectable start and end points

Universal inputs

Universal inputs for:

- Passive or active analog input signals of various measured values (°C, %, ---)
- Digital input signals (potential-free contacts)

Control functions

- Universal controller (sequence controller) for 2 heating sequences (reverse acting) and 2 cooling sequences (direct acting), can be used as a controller providing P-, PI or PID mode, or as a differential controller
- Controller can be configured as a room/supply air temperature cascade controller with limitation of the supply air temperature
- Each sequence can be assigned modulating control (modulating output, step switch, mixed air damper/heat recovery equipment) and a pump. 2 sequences can act on the same modulating control (e.g. priority cooling/dehumidification)
- General limitation (minimum/maximum with PI mode per sequence controller, either as absolute limitation, e.g. for the supply air temperature or supply air humidity), or as relative temperature limitation (e.g. maximum limitation of the room/supply air temperature differential). Limitation acts on all sequences.
 Minimum limitation can be set to a lower setpoint while cooling is on (e.g cooling with DX cooler battery)
- Sequence limitation with PI mode per universal controller, can be defined as minimum or maximum limitation. Limitation acts on a single sequence (e.g. heat recovery anti-icing protection or maximum limitation of the heating coil's return temperature)
- The mixed air temperature controller controls the mixed air temperature via the air dampers
- Locking of individual sequences
- Digital input (heating limit switch, from a heating controller) for changing the control strategy (room-supply air temperature cascade control), configurable

Switching and supervisory functions

- 2-stage frost protection (modulating/2-position) or frost protection thermostat (heating sequences delivering 100 % output, fault relay for switching off the fans) (with RLU220 only indication)
- Control of pumps, constantly ON at low outside temperatures, ON according to load sequence controller (not with RLU220); periodic activation of pump (pump kick)
- Control of an analog output (not with RLU202). Configurable external presetting (controller used as a pure signal converter). Minimum and maximum position, invertible.
 - Minimum limitation at low outside temperatures
- Control of mixed air dampers or heat recovery equipment with maximum economy changeover (not with RLU202), startup function at low outside temperatures
- Control of a multistage aggregate with a step switch, with a maximum of 6 steps and a modulating output.
 - The switching on/off points of each step can be adjusted. Adjustable delay times. Configurable external presetting (controller used as a pure step switch). Modulating output with minimum and maximum position, invertible (only with RLU236)
- Control of a multistage aggregate with a step switch, with a maximum of 2 steps and a modulating output.
 - Functions as described above (not with RLU220)
- Control of a linear multistage aggregate with a step switch, with a maximum of 6 steps and a modulating output.
 - Fixed assignment of switching on/off points to the load. Adjustable delay times and priority changeover. Configurable external presetting (controller used as a pure step switch). Modulating output for load assignment to the steps, with minimum and maximum position, invertible (only with RLU232 and RLU236)
- Control of a binary multistage aggregate with a step switch, with a maximum of 4 relays for 15 steps and a modulating output.
 - Fixed switching on/off points with binary switching logic. Adjustable delay times. Configurable external presetting (controller used as a pure step switch). Modulating output for load assignment to the steps, with minimum and maximum position, invertible (only with RLU232 and RLU236)
- Control of a modulating 3-position actuator. Configurable presetting (controller used as a pure analog/3-position converter) (only with RLU202 and RLU222)
- · Delivery of a passive measuring signal as an active signal for use by other controllers

Type summary

Type reference	Universal inputs	Digital inputs	Positioning outputs	Switching outputs	Number of control loops
RLU202	4	1	0	2	1
RLU220	4	1	2	0	1
RLU222	4	1	2	2	2
RLU232	5	2	3	2	2
RLU236	5	2	3	6	2

Accessories

Name	Type reference
Mounting frame for flush panel mounting	ARG62.201
(consisting of 1 small frame, 1 large frame,	
2 hexagonal spacers, 4 fixing screws,	
Mounting Instructions)	

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When ordering, please give name and type reference of the controller, e.g.: Universal controller **RLU236**.

The products listed under "Accessories" must be ordered as separate items.

Equipment combinations

For equipment combinations, refer to the Basic Documentation P3101 or to the document covering the selected application.

Product documentation

Document type	Document number
Basic Documentation: Universal Controllers RLU2	CE1P3101en
Instructions Set (mounting, commissioning, operation)	74 319 0424 0
Declaration of Conformity (CE): RLU2	CE1T3101xx
Environmental Declaration: RLU202, RLU220, RLU222	CE1E3101en01
Environmental Declaration: RLU232 and RLU236	CE1E3101en02

Technical design

Each controller offers up to 45 ready programmed applications. When commissioning a plant, the relevant basic type must be entered. All associated functions, terminal assignments, settings and displays will then automatically be activated and parameters that are not required will be deactivated.

In addition, each type of universal controller has 2 empty applications loaded:

- 1 for basic type A (ventilation controller)
- 1 for basic type U (universal controller)

With the help of the built-in operation or the OCI700.1 service tool, the controller affords:

- Activation of a programmed application (refer to "Programmed standard applications")
- · Modification of a programmed application
- Free configuration of applications
- · Optimization of the controller settings

For operating actions of the functions, refer to the Basic Documentation.

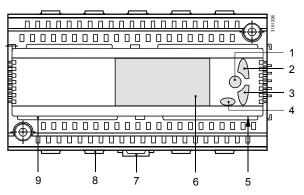
The universal controller consists of terminal base and controller insert with built-in operation.

The terminal base can be fitted to a DIN mounting rail or is screwed directly on a flat surface. It consists of a plastic housing with 2 terminal levels.

The controller insert engages in the terminal base. It consists of a plastic housing which accommodates the printed circuit boards.

Controller operation is fully integrated.

Operating, display and connecting elements



Legend

- 1 OK button for confirming the selected menu line or the value entered
- 2 Navigation button, upward (+) for selecting the menu line or changing the value
- 3 Navigation button, downward (–) for selecting the menu line or changing the value
 - ESC button for returning to the previous menu or for rejecting the value entered
- 5 Connection facility for the service tool (RJ45 connector)
- 6 Display

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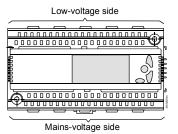
- 7 Catch for fitting the controller to a top hat rail
- 8 Fixing facility for a cable tie (cable strain relief)
- 9 Rest for the terminal cover

Engineering notes



- The controller operates on AC 24 V. Operating voltage must conform to the requirements of SELV/PELV (safety extra low-voltage)
- The transformers used must be safety isolating transformers featuring double insulation to EN 60 742 or EN 61 558-2-6; they must be suited for 100 % duty
- Fuses, switches, wiring and earthing must be in compliance with local regulations
- Sensor wires should not be run parallel to mains carrying wires that power fans, actuators, pumps, etc.
- It is recommended to use the standard applications provided. Specific plant situations may require certain adaptations however

- Controllers and extension modules are designed for:
 - Mounting in a standard cabinet to DIN 43 880
 - Wall mounting on an existing top hat rail (to EN 60715-TH35-7.5)
 - Wall mounting with 2 fixing screws
 - Flush panel mounting with ARG62.201 mounting frame
- Not permitted are wet or damp spaces. The permissible environmental conditions must be observed
- Disconnected the system from the power supply prior to mounting the controller
- The controller insert must not be removed from the terminal base!
- All connection terminals for protective extra low-voltage are located in the upper half of the unit, those for mains voltage at the bottom
- Each terminal (spring cage terminal) can accommodate only 1 solid wire or 1 stranded wire. For making the connections, the cables must be stripped for 7 to 8 mm. To introduce the cables into the spring cage terminals and to remove them, a screw driver size 1 is required. Cable strain relief can be provided with the help of the fixing facility for cable ties
- The controller is supplied complete with Installation and Operating Instructions



Commissioning notes

- The configuration and parameters of the standard applications offered by the controller can be changed any time by service staff who have been trained by HVAC Products and who have the required access rights, either locally or online/offline with the service tool
- During the commissioning process, the application is deactivated and the outputs are in a defined off state
- On completion of the configuration, the controller automatically makes a new start
- When leaving the commissioning pages, the peripheral devices connected to the
 universal inputs (including the extension modules) are automatically tested and
 identified. If a peripheral device is missing, a fault status message will be
 delivered
- If adaptions to specific plants are required, they must be recorded and the documentation kept inside the control panel
- For the procedure to be followed when starting up the plant for the first time, refer to the Installation Instructions

Disposal notes



The devices are considered electronics devices for disposal in terms of European Directive 2012/19/EU and may not be disposed of as domestic garbage.

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

Warranty

Technical data on specific applications are valid only together with Siemens products listed under "Equipment combinations". Siemens rejects any and all warranties in the event that third-party products are used.

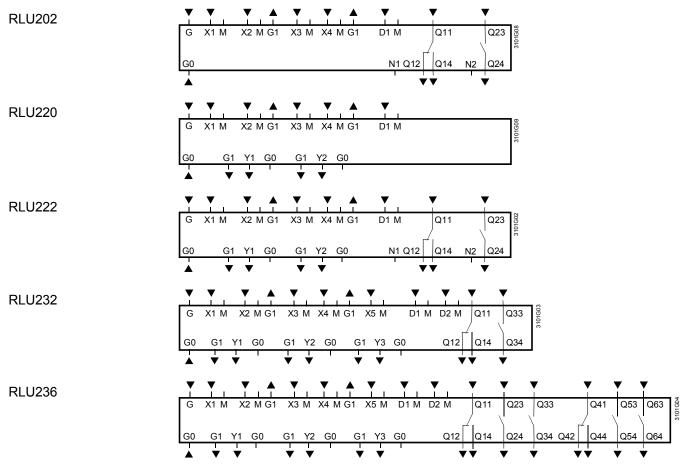
Technical data

Power supply (G, G0)	Rated voltage Requirements for external safety isolating trans-	AC 24 V ±20 % (SELV) EN 60 742 / EN 61 558-2-6,
	former to	min. 10 VA, max. 320 VA
	Frequency	50/60 Hz
	Power consumption	
	RLU202, RLU220, RLU222	5 VA
	RLU232, RLU236	6 VA
	Supply line fusing	Fuse slow max. 10 A
		or Circuit breaker max. 13 A Characteristic B, C, D accord ing to EN 60898 or Power source with current limitation of max. 10 A
U.S	Number	
Jniversal inputs	Number	refer to "Type summary"
Measured value inputs (X)	Sensors Passive Active	LG-Ni 1000, T1, Pt 1000 2x LG-Ni 1000 (averaging) DC 010 V
		DC 010 V
	Signal sources	0 4000 0 44000 4477 0
	Passive Active	01000 Ω / 10001175 Ω DC 010 V
Digital inputs (X, D)	Contact sensing	
Digital inputo (7t, D)	Voltage	DC 15 V
	Current	5 mA
	Requirements for status contacts	· · · · · · · · · · · · · · · · · · ·
		potential-free
	Signal coupling Type of contact	maintained contacts
	Insulating strength against mains potential	AC 3750 V to EN 60 730
	Perm. resistance	
	Contacts closed	may 200 O
	Contacts closed Contacts open	max. 200 Ω
	Contacts open	min. 50 kΩ
Outputs	Number of positioning and switching outputs	refer to "Type summary"
Positioning outputs Y	Output voltage	DC 010 V
	Output current	±1 mA
	Max. load	continuous short-circuit
Switching outputs	External supply line fusing	
AC 230 V	Non-renewable fuse (slow)	max. 10 A
(Q1xQ6x)	Automatic line cutout	max. 13 A
(GIAGOA)	Release characteristic	B, C, D to EN 60 898
	Cable length	max. 300 m
	Relay contacts	
	Switching voltage	max. AC 265 V min. AC 19 V
	AC current	max. 4 A ohm., 3 A ind. (cos φ = 0.6)
	At 250 V	min. 5 mA
	At 250 V At 19 V	min. 20 mA
	Switch-on current	max. 10 A (1 s)
	Contact life at AC 250 V	guide values:

	At 0.1 A res. At 0.5 A res. At 4 A res. Red. factor at ind. ($\cos \phi = 0.6$)	2 x 10 ⁷ cycles 4 x 10 ⁶ cycles (NO) 2 x 10 ⁶ cycles (changeover) 3 x 10 ⁵ cycles (NO) 1 x 10 ⁵ cycles (changeover) 0.85
	Insulating strength Between relay contacts and system electronics (reinforced insulation) Between neighboring relay contacts (operational insulation)	AC 3750 V, to EN 60 730-1
	Q1⇔Q2; Q3⇔Q4; Q5⇔Q6 Between relay groups (reinforced insulation)	AC 1250 V, to EN 60 730-1
	(Q1, Q2) ⇔ (Q3, Q4) ⇔ (Q5, Q6)	AC 3750 V, to EN 60 730-1
Power supply external	Voltage	AC 24 V
devices (G1)	Current	max. 4 A
Interfaces	Service tool connection facility	RJ45 connector
Perm. cable lengths	For passive measuring and positioning signals Type of signal LG-Ni 1000, T1 Pt 1000 01000 Ω 10001235 Ω Contact sensing	(measuring errors can be corrected) max. 300 m refer to Data Sheet of the signal delivering device
Electrical connections	Connection terminals For wires For stranded wires without ferrules For stranded wires with ferrules	spring cage terminals 0.6 mm dia2.5 mm ² 0.252.5 mm ² 0.251.5 mm ²
Degrees of protection	Degree of protection of housing to IEC 60 529 Safety class to EN 60 730	IP 20 (when mounted) device suited for use with equipment of safety class II
Environmental conditions	Operation to Climatic conditions Temperature (housing and electronics) Humidity Mechanical conditions Transport to Climatic conditions Temperature Humidity Mechanical conditions	IEC 60 721-3-3 class 3K5 050 °C 595 % r.h. (non-condensing) class 3M2 IEC 60 721-3-2 class 2K3 -25+70 °C < 95 % r.h. class 2M2
Classifications to EN 60 730	Mode of operation, automatic controls Degree of contamination, controls' environment Software class Rated surge voltage Temperature for ball-pressure test of housing	type 1B 2 A 4000 V 125 °C

Materials and colors	Terminal base	Polycarbonate, RAL 7035 (light-grey)	
	Controller insert	Polycarbonate, RAL 7035 (light-grey)	
	Packaging	corrugated cardboard	
Standards, directives	Product standard	EN 60730-1	
and approvals		Automatic electrical controls for household and similar use	
	Electromagnetic compatibility (Applications)	For use in residential, commercial and industrial	
	EU conformity (CE)	environments CE1T3101xx *)	
	UL certification	UL916	
	or continuation	http://database.ul.com	
	RCM-conformity (EMC)	CE1T3110en_C1*)	
	EAC conformity	Eurasia conformity	
Environmental	Product environmental declarations:	CE1E3101de01 *)	
compatibility	contain data on environmentally compatible	CE1E3101de02 *)	
	product design and assessments (RoHS compli-		
	ance, materials composition, packaging, envi-		
	ronmental benefit, disposal)		
Weight,	RLU202	0,334 kg	
excl. packaging	RLU220	0,292 kg	
	RLU222	0,334 kg	
	RLU232	0,437 kg	
	RLU236	0,481 kg	
	*) Documents can be downloaded at http://www.siemens.com/bt/download		

Internal diagrams



Legend G, G0 Rated voltage AC 24 V

G1 Output voltage AC 24 V for powering external active sensors, signal sources, monitors or

setting units

M Measuring neutral for signal input G0 System neutral for signal output

X... Universal signal inputs for LG-Ni 1000, 2x LG-Ni 1000 (averaging), T1, Pt 1000,

DC 0...10 V, 0...1000 Ω (= REM), 1000...1175 Ω (= REL)

X..., D... Contact sensing (potential-free)

Y... Control or status outputs, analog DC 0...10 V Q... Potential-free relay outputs for AC 24...230 V

N1, N2 Neutral conductor connection for radio interference suppression elements

Notes

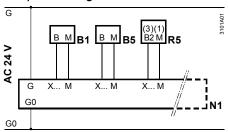
- Each terminal (spring cage terminal) can only accommodate 1 solid wire or 1 stranded wire. Double terminals are internally interconnected
- If a 3-position AC 230 V actuator is used, the radio suppression element must be activated: Connect terminal N1 to the neutral conductor and fit a wire link between N1 and N2 (see connection diagram 5)

Connection diagrams

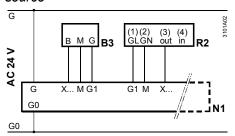
Examples:

Connections on the measuring side

Connection diagram 1: Measuring section with passive main and auxiliary sensors and passive signal source

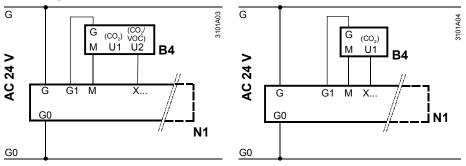


Connection diagram 2: Measuring section with active sensor and active signal source.



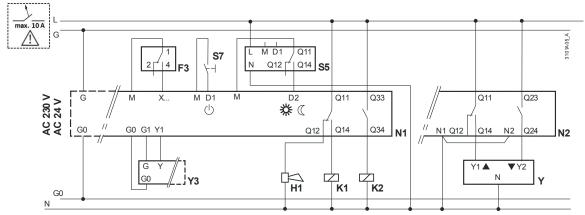
Connection diagrams 3 and 4:

Measuring section with CO2/VOC- and CO2-evaluation



Connections on the control and monitoring side

Connection diagram 5:



Legend to the connection diagrams 1 through 5

- N1 Universal controller RLU2...
- N2 Universal controller RLU222
- B1 Supply air temperature sensor QAM2120.040
- B3 Frost sensor QAF63.2/QAF63...
- B4 CO₂/VOC sensor QPA2002/2002D
- B4 CO₂ sensor QPA2000
- B5 Room temperature sensor QAA24
- F3 Frost unit QAF81...
- H1 Horn for fault status message from fan
- K1 Fan release relay
- K2 Pump release relay
- R2 Setpoint adjuster BSG61
- R5 Setpoint readjuster BSG21.5
- S4 On/off switch "Locking signal"
- S5 Digital time switch SEH62.1
- S7 Manual switch "On/Standby"
- Y Actuating device with 3-position control
- Y3 Actuating device for heating

Note

The plant diagrams / connection diagrams assigned to the basic types are only examples.

Controller- / basic type	Application no. / description	Plant diagram / connection diagram
RLU202 A01	ADA006 LU0 HQ Extract air (room) temperature control with electric air heater battery. Options: • Minimum and maximum limitation of the supply air temperature • Outside temperature-dependent functions • Remote setpoint readjuster • 2-stage electric air heater battery • Comfort / Protection Mode changeover (time switch)	B2 NX1 B3 NX3 B1 NX4 NX1 NX2 S5 N.D1
RLU202 A02	ADA012 LU0 HQ Supply air temperature control with electric air heater battery. Options: Room temperature cascade control Outside temperature-dependent functions Remote setpoint readjuster 2-stage electric air heater battery Comfort / Protection Mode changeover (time switch)	## F1 NX1 PS NX2 Cascade B5 NX2 Cascade F1 R5 NX4 F1 R5 NX4
RLU202 A03	ADA014 LU0 HQ Supply air temperature control with hot water heating coil. Options: Room temperature cascade control Outside temperature-dependent functions Remote setpoint readjuster Comfort / Protection Mode changeover (time switch)	\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
RLU202 A04	ADB003 LU0 HQ Extract air (room) temperature control with DX cooler battery. Options: • Minimum and maximum limitation of the supply air temperature • Outside temperature-dependent functions • Remote setpoint readjuster • 2-stage DX cooler battery • Comfort / Protection Mode changeover (time switch)	B9 M7 + N.01 N.02 II
RLU202 A05	ADB007 LU0 HQ Supply air temperature control with DX cooler battery. Options: Room temperature cascade control Outside temperature-dependent functions Remote setpoint readjuster 2-stage DX cooler battery Comfort / Protection Mode changeover (time switch)	St N.X2 Cascade
RLU202 A06	AEC001 LU0 HQ Extract air (room) temperature control with hot water heating coil and DX cooler battery. Options: • Minimum and maximum limitation of the supply air temperature • Outside temperature-dependent functions • Remote setpoint readjuster • Comfort / Protection Mode changeover (time switch)	B2 N.X1 B9 N.X3 M3 N.Q1 D M3 N.Q1 D M7 N.Q2 D S5 N.D1

Controller-/	Application no. / description	Plant diagram / connection diagram
basic type		
RLU202 A07	AEC002 LU0 HQ Supply air temperature control with hot water heating coil and DX cooler battery. Options: Room temperature cascade control	B5 N.X2 Cascade The R5 N.X4
	Outside temperature-dependent functions Remote setpoint readjuster Comfort / Protection Mode changeover (time switch)	M3 H7 N,Q2 B1 N,X1 B1 N,X1 C S5 N,D1
RLU202	ADKA02 LU0 HQ	1000
U01	Extract air (room) humidity control (r.h.) with spray humidifier. Options: Maximum limitation of the air humidity Remote setpoint adjuster 2-stage spray humidifier Comfort / Protection Mode changeover (time switch)	M8
RLU202	ADI003 LU0 HQ	\$ J.D. \(\bar{\bar{\bar{\bar{\bar{\bar{\bar{
U02	Extract air (room) humidity control (r.h.) with DX cooler battery. Options: • Additional maximum selection from internal and external	□ B5 B12 N.X.1 [%]
	 signal Room temperature-dependent shifting of humidity setpoint Remote setpoint adjuster 2-stage DX cooler battery Comfort / Protection Mode changeover (time switch) 	M7 (4) N.01 N.02 N.02 N.02 N.02 N.03 N.03 N.04
RLU202	ADI005 LU0 HQ	
U03	Extract air (room) humidity control (a.h.) with DX cooler battery. Options: Additional maximum selection from internal and external	■ B18 N.X.3 B18 N.X.3
	signal Room temperature-dependent shifting of humidity setpoint Remote setpoint adjuster 2-stage DX cooler battery Comfort / Protection Mode changeover (time switch)	Gp/kg R5 N.X4 M7 N.Q2 M S5 N.D1 N.X2 M N.X2
RLU202	ADZA01 LU0 HQ	0 000
U04	Extract air (room) humidity control (r.h.) with spray humidifier and DX cooler battery. Options:	B12 NX1 [%]
	Maximum limitation of the supply air humidity Additional maximum selection from internal and external signal Paragraph acts size adjuster.	₩X M7 + B11 N.X2 [%]
	Remote setpoint adjuster Comfort / Protection Mode changeover (time switch)	N.Q1 S5 N.D1 N.X3
RLU202	AZZ001 LU0 HQ	4
U05	Indoor air quality control with fan control. Options: • Additional maximum selection from internal and external	■ B4 NX1 [ppm]
	signal	M1 ml A R5
	Outside temperature-dependent functionsRemote setpoint adjuster2-speed fan	B9 N.73 N.02
	Comfort / Protection Mode changeover (time switch)	N.D1 N.X2
RLU202 U06	HZC001 LU0 HQ Temperature control of mixing heating circuit. Options:	© B9 N.X3 B1 D S
	Minimum limitation of the return temperature Outside temperature-dependent functions Remote setpoint adjuster	Y3 N.Q1 N.Q2 (M)
	Comfort / Protection Mode changeover (time switch)	B7 NX2

Controller- / basic type	Application no. / description	Plant diagram / connection diagram
RLU202 U07	HZC002 LU0 HQ Boiler temperature control (substitute for RCA12.2) Application: Minimum limitation of the boiler return temperature Options: Remote setpoint adjuster (absolute) Comfort / Protection Mode changeover (time switch)	Y3 N.Q1 N.Q2 M T B7 N.X1
RLU202 U08	ADC019 LU0 HQ Universal control (substitute for RKN2 / RKN22) Application: Temperature control (on/off pump control) Options: Remote setpoint adjuster (absolute) Comfort / Protection changeover	M3 M4 N.Q2 PS5 N.X1
RLU202 U09	SA0001 LU0 HQ Differential temperature control (substitute for RSA24) Application: Solar heat storage plant Options: • Maximum limitation of the boiler temperature • Minimum limitation of the charging temperature • Comfort / Protection Mode changeover (time switch)	B6 (1) N.X1 (2) B3 N.X2 (5)
RLU202 U10	ZZZ001 LU0 HQ 3-position actuator	DC 0 10 V G X1 M G1 D1 M Q11 Q23 \$ RLU202 G0 N1 Q12 Q14 N2 Q24
RLU202 U11	ZZZ002 LU0 HQ Variable 2-step switch	DC 0 10 V G X1 M G1 D1 M Q11 Q23 \$ RLU202
RLU220 A01	ADA001 LU2 HQ Extract air (room) temperature control with hot water heating coil. Options: • Minimum and maximum limitation of the supply air temperature • Remote setpoint readjuster • Outside temperature-dependent functions • Comfort / Protection Mode changeover (time switch)	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$
RLU220 A02	ADA008 LU2 HQ Supply air temperature control with hot water heating coil. Options: Room temperature cascade control Remote setpoint readjuster Outside temperature-dependent functions Comfort / Protection Mode changeover (time switch)	B5 NX2 Cascade B9 NX3 PY3 NX1 C S5 N.D1

Controller- / basic type	Application no. / description	Plant diagram / connection diagram
RLU220 A03	ADA003 LU2 HQ Extract air (room) temperature control with hot water heating coil and frost protection. Options: • Minimum and maximum limitation of the supply air temperature • Outside temperature-dependent functions • Comfort / Protection Mode changeover (time switch)	F3 N,X3 N,X1 N,X2 P3 N,X1 N,X2 P3 N,X1 N,X2 P3
RLU220 A04	ADA010 LU2 HQ Supply air temperature control with hot water heating coil and frost protection. Options: Room temperature cascade control Outside temperature-dependent functions Comfort / Protection Mode changeover (time switch)	F3 N,X3 F3 N,X3 Cascade B1 N,X1 Cy N,Y1 N,D1
RLU220 A05	ADA017 LU2 HQ Extract air (room) temperature control with hot water heating coil, frost protection. Options: • Minimum and maximum limitation of the supply air temperature • Remote setpoint readjuster • Comfort / Protection Mode changeover (time switch)	F3 N,X3 PT R5 R5 N,X4 N,X1 N,X1 N,X1 N,X1 N,X1 N,X1 N,X1 N,X1
RLU220 A06	ADB001 LU2 HQ Extract air (room) temperature control with chilled water cooling coil. Options: • Minimum and maximum limitation of the supply air temperature • Remote setpoint readjuster • Outside temperature-dependent functions • Comfort / Protection Mode changeover (time switch)	₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩
RLU220 A07	ADB005 LU2 HQ Supply air temperature control with chilled water cooling coil. Options: Room temperature cascade control Remote setpoint readjuster Outside temperature-dependent functions Comfort / Protection Mode changeover (time switch)	BS NX2 Cascade PA NX4 NX4 NX1 NX4 NX1
RLU220 A08	ACAD01 LU2 HQ Extract air (room) temperature control with mixed air dampers and outside temperature-dependent functions. Options: • Additional maximum selection from internal and external signal • Comfort / Protection Mode changeover (time switch)	Y2 (b) B2 NX1 S5 ND1 NX2
RLU220 A09	ABC001 LU2 HQ Supply air temperature control with heating / cooling coil and frost protection. Options: Outside temperature-dependent functions Comfort / Protection Mode changeover (time switch)	F3 N.X3 D D D D D D D D D D D D D D D D D D D

Controller- / basic type	Application no. / description	Plant diagram / connection diagram
RLU220 A10	ADC021 LU2 HQ Extract air (room) temperature control with hot water heating coil and chilled water cooling coil. Options: Room temperature cascade control Outside temperature-dependent functions Remote setpoint readjuster Comfort / Protection Mode changeover (time switch)	B9 NX3 W Y4 NY2 S5 ND1
RLU220 A11	ADC023 LU2 HQ Supply air temperature control with hot water heating coil and chilled water cooling coil. Options: Room temperature cascade control Outside temperature-dependent functions Remote setpoint readjuster Comfort / Protection Mode changeover (time switch)	B5 NX2 Cascade P T R5 NX4 NX1
RLU220 A12	ADC022 LU2 HQ Extract air (room) temperature control with hot water heating coil, frost protection, chilled water cooling coil. Options: • Minimum and maximum limitation of the supply air temperature • Outside temperature-dependent functions • Comfort / Protection Mode changeover (time switch)	F3 NX1 B2 NX1 B1 NX2 B3 NX4 W3 Y4 NY2 NY2 S5 N.D.D.
RLU220 A13	ADC024 LU2 HQ Supply air temperature control with hot water heating coil, frost protection, chilled water cooling coil. Options: Room temperature cascade control Outside temperature-dependent functions Comfort / Protection Mode changeover (time switch)	F3 N.X2 Cascade B9 N.X4 W Y4 N.Y2 N.Y1 N.Y1 N.Y1 N.Y1 N.Y1 N.D1
RLU220 A14	AEAF03 LU2 HQ Extract air (room) temperature control with closed-circuit heat recovery system and hot water heating coil. Options: • Minimum and maximum limitation of the supply air temperature • Outside temperature-dependent functions • Remote setpoint readjuster • Comfort / Protection Mode changeover (time switch)	B2 N.X1 N.X2 N.X2 N.X1 N.X2 N.X1 N.X2 N.X1 N.X2 N.X1 N.X2 N.X1 N.X2 N.X1 N.X2 N.X1 N.X2 N.X1 N.X2 N.X1 N.X2 N.X1 N.X2 N.X3 N.X4 N.X4 N.X4 N.X4 N.X4 N.X4 N.X4 N.X4
RLU220 A15	AEAF04 LU2 HQ Supply air temperature control with closed-circuit heat recovery system and hot water heating coil. Options: • Room temperature cascade control • Outside temperature-dependent functions • Remote setpoint readjuster • Comfort / Protection Mode changeover (time switch)	## Property of the control of the co
RLU220 A16	AEAD03 LU2 HQ Extract air (room) temperature control with mixed air dampers, hot water heating coil, frost protection. Options: • Minimum and maximum limitation of the supply air temperature • Outside temperature-dependent functions • Comfort / Protection Mode changeover (time switch)	Y1

Controller- / basic type	Application no. / description	Plant diagram / connection diagram
RLU220 A17	AEAD04 LU2 HQ Supply air temperature control with mixed air dampers, hot water heating coil, frost protection. Options: Room temperature cascade control Outside temperature-dependent functions Comfort / Protection Mode changeover (time switch)	Y2 (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)
RLU220 A18	ADB012 LU2 HQ Extract air (room) temperature control with chilled water cooling coil and 2 cooling towers. Options: • Minimum and maximum limitation of the supply air temperature • Outside temperature-dependent functions • Remote setpoint readjuster • Comfort / Protection Mode changeover (time switch)	B2 N.X1 P G1 N.Y1 P G2 N.Y2 N.Y2 N.X3 P S5 N.D1
RLU220 U01	ADKA01 LU2 HQ Extract air (room) humidity control (r.h.) with spray humidifier. Options: • Maximum limitation of the supply air humidity • Remote setpoint adjuster • Comfort / Protection Mode changeover (time switch)	B12 N,X1 [%] B11 N,X2 Y8 N,Y1 S5 N,D1
RLU220 U02	ADI001 LU2 HQ Extract air (room) humidity control (r.h.) with chilled water cooling coil. Options: • Additional maximum selection from internal and external signal • Remote setpoint adjuster • Comfort / Protection Mode changeover (time switch)	B12 N.X1 [%] C S5 N.X3 C S5 N.X3 N.X1 N.X1 N.X1 N.X2
RLU220 U03	ADI002 LU2 HQ Extract air (room) humidity control (a.h.) with chilled water cooling coil. Options: • Additional maximum selection from internal and external signal • Remote setpoint adjuster • Comfort / Protection Mode changeover (time switch)	B18 N.X1 g/kg P1 R5 NX3 S5 NX3 NY1 N,D1 N.X2
RLU220 U04	PB0001 LU2 HQ Differential pressure control of water with speed-controlled pump. Options: • Minimum and maximum limitation of the differential pressure • Remote setpoint adjuster • Comfort / Protection Mode changeover (time switch)	B23 (a) B22 (b) [bar] B9 N.X4 [bar] R5 N.X3 G1 N.Y1 (b) S5 N.D1
RLU220 U05	PB0004 LU2 HQ Differential pressure control of water with speed-controlled pumps. Options: • Minimum and maximum pressure limit controller • Outside temperature-dependent functions • Remote setpoint adjuster • Comfort / Protection Mode changeover (time switch)	B23 (a) B22 (a) N.X1 (bar)

Controller- / basic type	Application no. / description	Plant diagram / connection diagram
RLU220 U06	AZL001 LU2 HQ Differential pressure control of air with speed-controlled fan. Options: • Minimum and maximum limitation of the differential pressure • Remote setpoint adjuster • Comfort / Protection Mode changeover (time switch)	B25 (a) B24 (b) [Pa] 5 (c) S5 (c) N.D.1
RLU220 U07	AZL004 LU2 HQ Differential pressure control of air with speed-controlled fans. Options: • Minimum and maximum pressure limit controller • Outside temperature-dependent functions • Remote setpoint adjuster • Comfort / Protection Mode changeover (time switch)	B25 W B24 W N.X.1 PA
RLU220 U08	AAZD01 LU2 HQ Indoor air quality control with mixed air dampers. Options: Additional maximum selection from internal and external signal Remote setpoint adjuster Comfort / Protection Mode changeover (time switch)	Y1 96 Y1 96 R5 NX1 PS5 NX2 ND1 NX2
RLU220 U09	CZC002 LU2 HQ Temperature control of chilled ceilings. Options: • Setpoint compensation depending on humidity • Deviation alarm • Comfort / Protection Mode changeover (time switch)	□
RLU220 U10	ADC025 LU2 HQ Universal control (substitute for RKN8 / RKN88) Application: Temperature control (modulating valve control) Options: • Remote setpoint adjuster (absolute) • Comfort / Protection Mode changeover (time switch)	Y3 @ Y
RLU222 A01	ADA006 LU2 HQ Extract air (room) temperature control with electric air heater battery. Options: • Minimum and maximum limitation of the supply air temperature • Outside temperature-dependent functions • Remote setpoint readjuster • 2-stage electric air heater battery • Comfort / Protection Mode changeover (time switch)	B9
RLU222 A02	ADA012 LU2 HQ Supply air temperature control with electric air heater battery. Options: Room temperature cascade control Outside temperature-dependent functions Remote setpoint readjuster 2-stage electric air heater battery Comfort / Protection Mode changeover (time switch)	■ E1 NX1 S5 NX4 NX4 NX1 NX1 S5 NX1 NX1 S5 NX1

Controller- / basic type	Application no. / description	Plant diagram / connection diagram
RLU222 A03	ADA014 LU2 HQ Supply air temperature control with hot water heating coil. Options: Room temperature cascade control Outside temperature-dependent functions Remote setpoint readjuster Comfort / Protection Mode changeover (time switch)	## Page 1
RLU222 A04	ADA004 LU2 HQ Extract air (room) temperature control with hot water heating coil, frost protection and fan release. Options: • Minimum and maximum limitation of the supply air temperature • Outside temperature-dependent functions • Comfort / Protection Mode changeover (time switch)	N.Q1
RLU222 A05	ADA005 LU2 HQ Extract air (room) temperature control with hot water heating coil, frost protection and fan release. Options: • Minimum and maximum limitation of the supply air temperature • Remote setpoint readjuster • Comfort / Protection Mode changeover (time switch)	N.Q1
RLU222 A06	ADA0011 LU2 HQ Supply air temperature control with hot water heating coil, frost protection and fan release. Options: Room temperature cascade control Outside temperature-dependent functions Comfort / Protection Mode changeover (time switch)	N.Q1
RLU222 A07	ADB003 LU2 HQ Extract air (room) temperature control with DX cooler battery. Options: • Minimum and maximum limitation of the supply air temperature • Outside temperature-dependent functions • Remote setpoint readjuster • 2-stage DX cooler battery • Comfort / Protection Mode changeover (time switch)	M7
RLU222 A08	ADB007 LU2 HQ Supply air temperature control with DX cooler battery. Options: Room temperature cascade control Outside temperature-dependent functions Remote setpoint readjuster 2-stage DX cooler battery Comfort / Protection Mode changeover (time switch)	B5 N,X2 Cascade Y7 N,Y1 B1 N,X4 N
RLU222 A09	ADC002 LU2 HQ Extract air (room) temperature control with hot water heating coil and chilled water cooling coil. Options: Room temperature cascade control Outside temperature-dependent functions Remote setpoint readjuster Comfort / Protection Mode changeover (time switch)	B9 NX3 NX1 NX1 NX1 NX1 NX1 NX1 NX1 NX1 NX1 NX1

Controller- / basic type	Application no. / description	Plant diagram / connection diagram
RLU222 A10	ADC010 LU2 HQ Supply air temperature control with hot water heating coil and chilled water cooling coil. Options: Room temperature cascade control Outside temperature-dependent functions Remote setpoint readjuster Comfort / Protection Mode changeover (time switch)	M3 N,Q1 N,Q2 N,Q2 N,Q2 N,Q2 N,Q2 N,Q2 N,Q2 N,Q2
RLU222 A11	ADC004 LU2 HQ Extract air (room) temperature control with electric air heater battery and chilled water cooling coil. Options: • Minimum and maximum limitation of the supply air temperature • Outside temperature-dependent functions • Remote setpoint readjuster • 2-stage electric air heater battery • Comfort / Protection Mode changeover (time switch)	B9
RLU222 A12	ADC012 LU2 HQ Supply air temperature control with electric air heater battery and chilled water cooling coil. Options: Room temperature cascade control Outside temperature-dependent functions Remote setpoint readjuster 2-stage electric air heater battery Comfort / Protection Mode changeover (time switch)	B9 E1 N.X1 B5 N.X2 Cascade B1 N.X1 C S5 N.X4 N.Y2 N.Y2 N.Y2 N.Y2 N.Y2 N.Y2 N.Y2 N.Y2
RLU222 A13	ADC003 LU2 HQ Extract air (room) temperature control with hot water heating coil and DX cooler battery. Options: • Minimum and maximum limitation of the supply air temperature • Outside temperature-dependent functions • Remote setpoint readjuster • 2-stage DX cooler battery • Comfort / Protection Mode changeover (time switch)	## A
RLU222 A14	ADC011 LU2 HQ Supply air temperature control with hot water heating coil and DX cooler battery. Options: Room temperature cascade control Outside temperature-dependent functions Remote setpoint readjuster 2-stage DX cooler battery Comfort / Protection Mode changeover (time switch)	B5 NX2 Cascade NX3 NY1 NO1 NO2 ND1 ND1 ND1 ND1 ND1
RLU222 A15	ADC006 LU2 HQ Extract air (room) temperature control with hot water heating coil, frost protection, chilled water cooling coil and fan release. Options: • Minimum and maximum limitation of the supply air temperature • Outside temperature-dependent functions • Comfort / Protection Mode changeover (time switch)	N.Q1 S2 N.X1 N.X2 S5 N.X1 N.X2 S5 N.X1 N.X2 S5 N.D1
RLU222 A16	ADC014 LU2 HQ Supply air temperature control with hot water heating coil, frost protection, chilled water cooling coil and fan release. Options: Room temperature cascade control Outside temperature-dependent functions Comfort / Protection Mode changeover (time switch)	N.Q1 S

Controller- / basic type	Application no. / description	Plant diagram / connection diagram
RLU222 A17	ADC007 LU2 HQ Extract air (room) temperature control with hot water heating coil, frost protection, DX cooler battery and fan release. Options: • Minimum and maximum limitation of the supply air temperature • Outside temperature-dependent functions • Comfort / Protection Mode changeover (time switch)	N.Q1 1 0 B2 NX1 NX3 V 1 0 B9 NX4 W X X X X NY1 N N X X N N N N N N N N N
RLU222 A18	ADC016 LU2 HQ Supply air temperature control with hot water heating coil, frost protection, DX cooler battery and fan release. Options: Room temperature cascade control Outside temperature-dependent functions Comfort / Protection Mode changeover (time switch)	N.Q1 N,Q1 B5 N,X2 Cascade T N,X1 N,
RLU222 A19	AEAG01 LU2 HQ Extract air (room) temperature control with closed-circuit heat recovery system and hot water heating coil. Options: • Minimum and maximum limitation of the supply air temperature • Outside temperature-dependent functions • Remote setpoint readjuster • Comfort / Protection Mode changeover (time switch)	M6 N,Q2 N,X1 Y6 Y6 N,Y2 WM3 N,Q1 N,Q1 N,Q1 N,Q1 N,Q1 N,Q1 N,Q1 N,Q1
RLU222 A20	AEAG02 LU2 HQ Supply air temperature control with closed-circuit heat recovery system and hot water heating coil. Options: Room temperature cascade control Outside temperature-dependent functions Remote setpoint readjuster Comfort / Protection Mode changeover (time switch)	M6 N.Q2 Cascade Y6 Y6 N.Y2 N.Y2 M3 N.Q1 N.X1 S5 N.D1
RLU222 A21	AEAD01 LU2 HQ Extract air (room) temperature control with mixed air dampers, hot water heating coil, frost protection and fan release. Options: • Minimum and maximum limitation of the supply air temperature • Outside temperature-dependent functions • Comfort / Protection Mode changeover (time switch)	N.Q1 Y2
RLU222 A22	AEAD02 LU2 HQ Supply air temperature control with mixed air dampers, hot water heating coil, frost protection and fan release. Options: Room temperature cascade control Outside temperature-dependent functions Comfort / Protection Mode changeover (time switch)	N.Q1 Y2 Y1 Y6 F3 N.X3 N.X3 N.X1 B1 N.X1 S5 N.D1
RLU222 A23	ADB009 LU2 HQ Extract air (room) temperature control with chilled water cooling coil and 2 cooling towers. Options: • Minimum and maximum limitation of the supply air temperature • Outside temperature-dependent functions • Remote setpoint readjuster • Comfort / Protection Mode changeover (time switch)	B9 NX3 NY1 NY2 B1 NX4 S5 N.D1

Controller- / basic type	Application no. / description	Plant diagram / connection diagram
RLU222 A24	AECD01 LU2 HQ Extract air (room) temperature control with mixed air dampers, hot water heating coil and DX cooler battery. Options: • Minimum and maximum limitation of the supply air temperature • Outside temperature-dependent functions • Remote setpoint readjuster • Comfort / Protection Mode changeover (time switch)	Y2
RLU222 A25	AECD04 LU2 HQ Supply air temperature control with mixed air dampers, hot water heating coil and DX cooler battery. Options: Room temperature cascade control Outside temperature-dependent functions Remote setpoint readjuster Comfort / Protection Mode changeover (time switch)	Y2
RLU222 A26	AECD02 LU2 HQ Extract air (room) temperature control with mixed air dampers, hot water heating coil and DX cooler battery. Options: • Minimum and maximum limitation of the supply air temperature • Outside temperature-dependent functions • Remote setpoint readjuster • 2-stage DX cooler battery • Comfort / Protection Mode changeover (time switch)	Y2 (b) B2 N.X1 (c) R5 N.X4 (c) R5 N.X4 (c) R5 N.X4 (c) R5 N.X1 (c) R5 N.X4 (c)
RLU222 A27	AECD05 LU2 HQ Supply air temperature control with mixed air dampers, hot water heating coil and dx cooler battery. Options: Room temperature cascade control Outside temperature-dependent functions Remote setpoint readjuster 2-stage DX cooler battery Comfort / Protection Mode changeover (time switch)	Y2
RLU222 A28	AECD03 LU2 HQ Extract air (room) temperature control with mixed air dampers, electric air heater battery and chilled water cooling coil. Options: • Minimum and maximum limitation of the supply air temperature • Outside temperature-dependent functions • Remote setpoint readjuster • 2-stage electric air heater battery • Comfort / Protection Mode changeover (time switch)	Y2 (1) Y2 (1) Y3 (1) Y4 (1) N (1)
RLU222 A29	AECD06 LU2 HQ Supply air temperature control with mixed air dampers, electric air heater battery and chilled water cooling coil. Options: Room temperature cascade control Outside temperature-dependent functions Remote setpoint readjuster 2-stage electric air heater battery Comfort / Protection Mode changeover (time switch)	Y2 10
RLU222 U01	ADKA02 LU2 HQ Extract air (room) humidity control (r.h.) with spray humidifier. Options: • Maximum limitation of the air humidity • Remote setpoint adjuster • 2-stage spray humidifier • Comfort / Protection Mode changeover (time switch)	Y8 @ X

Controller-/	Application no. / description	Plant diagram / connection diagram
basic type		
RLU222 U02	PB0002 LU2 HQ Differential pressure control of water with speed-controlled pumps. Options: • Minimum and maximum pressure limit controller • Outside temperature-dependent functions • Remote setpoint adjuster • Comfort / Protection Mode changeover (time switch)	B23 ⊕ N.X2 ⊕ N.X1 ⊕ N.
RLU222 U03	AZL002 LU2 HQ Differential pressure control of air with speed-controlled fans. Options: • Minimum and maximum pressure limit controller • Outside temperature-dependent functions • Remote setpoint adjuster • Comfort / Protection Mode changeover (time switch)	N.Q1 N.X2 ⊕ N.X1 ⊕ N.X4 ⊕ N.X
RLU222 U04	ADI003 LU2 HQ Extract air (room) humidity control (r.h.) with DX cooler battery. Options: Additional maximum selection from internal and external signal Room temperature-dependent shifting of humidity setpoint Remote setpoint adjuster 2-stage DX cooler battery Comfort / Protection Mode changeover (time switch)	## 12 B5 NX3 B5 NX3 P6 NX4 P7 NY1 NY2 NY1 NY2 NY1 NY2 NY2 NY3 NY
RLU222 U05	ADI005 LU2 HQ Extract air (room) humidity control (a.h.) with DX cooler battery. Options: • Additional maximum selection from internal and external signal • Room temperature-dependent shifting of humidity setpoint • Remote setpoint adjuster • 2-stage DX cooler battery • Comfort / Protection Mode changeover (time switch)	## 1
RLU222 U06	AAZD02 LU2 HQ Indoor air quality control with mixed air dampers and fan control. Options: Additional maximum selection from internal and external signal Outside temperature-dependent functions Remote setpoint adjuster 2-speed fan Comfort / Protection Mode changeover (time switch)	Y2 (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)
RLU222 U07	ADZA01 LU2 HQ Extract air (room) humidity control (r.h.) with spray humidifier and DX cooler battery. Options: • Maximum limitation of the supply air humidity • Additional maximum selection from internal and external signal • Remote setpoint adjuster • Comfort / Protection Mode changeover (time switch)	Y8 (b) Y7 (b) (b) (c) (c) (c) (c) (c) (c) (c) (c) (c) (c

Controller- / basic type	Application no. / description	Plant diagram / connection diagram
RLU222 U08	CZC001 LU2 HQ Temperature control of chilled ceilings. Options: Setpoint compensation depending on humidity Deviation alarm Comfort / Protection Mode changeover (time switch)	M4
RLU222 U09	HZC001 LU2 HQ Temperature control of mixing heating circuit. Options: • Minimum limitation of the return temperature • Outside temperature-dependent functions • Remote setpoint adjuster • Comfort / Protection Mode change	T B9 N.X1 Y3 N.Q1 N.Q2 M T R5 N.X4
RLU222 U10	ZZZ001 LU2 HQ 3-position actuator	G X1 M G1 / D1 M Q11 Q23 \$\frac{1}{2}\$ RLU222 G0
RLU222 U11	ZZZ002 LU2 HQ Variable 2-step switch	DC 0 10 V G X1 M G1 D1 M Q11 Q23 \$ G0 N1 Q12 Q14 N2 Q24 L 2Q VAR.
RLU222 U12	ADC019 LU2 HQ Universal control (substitute for RKN2 / RKN22) Application: Temperature control (on/off pump control) Options: • Remote setpoint adjuster (absolute) • Comfort / Protection Mode changeover (time switch)	M3 N.Q1
RLU222 U13	ADC020 LU2 HQ Universal control (substitute for RKN8 / RKN88) Application: Temperature control (modulating valve control) Options: • Remote setpoint adjuster (absolute) • Comfort / Protection Mode changeover (time switch)	▼3 ⊕ ▼

Controller- / basic type	Application no. / description	Plant diagram / connection diagram
RLU222 U14	HZC002 LU2 HQ Boiler temperature control (substitute for RCA12.2) Application: Minimum limitation of the boiler return temperature Options: • Remote setpoint adjuster (absolute) • Comfort / Protection Mode changeover (time switch)	Y3 N.Q1 N.Q2 (M) T R5 N.X2
RLU222 U15	SA0001 LU2 HQ Differential temperature control (substitute for RSA24) Application: Solar heat storage plant Options: • Maximum limitation of the boiler temperature • Minimum limitation of the charging temperature	M3 NQ1 M3 N,X2 5
RLU222 U16	ABL001 LU2 HQ Supply air differential pressure control Options: • Switching via external time switch • Differential pressure monitor	G1
RLU222 U17	ADZ001 LU2 HQ Supply air differential pressure control, Extract air volume control Options: Switching via external time switch Setpoint shift through volumetric supply air flow Differential pressure monitor	F1 G2 N.Y1 B2 NX1 F1 W B3 NX1 C) S5 ND1 NY2 B1 B7 NX2 NX3
RLU222 U18	ADL001 LU2 HQ Supply air and room differential pressure control Options: • Switching via external time switch • Differential pressure monitor	F1 G2 N.Y1 B81 N.X2 S1 N.Y2 D S5 N.D1
RLU222 U19	ADZA02 LU2 HQ Extract air (room) humidity control Options: • Maximum limitation of supply air humidity • Comfort / Protection Mode changeover (time switch)	Y8 (b) X B11 N.X2 N.X3 N.X3 N.X3 N.X3 N.X2 N.X2 N.X2 N.X2 N.X2 N.X2 N.X2 N.X2

Controller- / basic type	Application no. / description	Plant diagram / connection diagram
RLU232 A01	AEAF01 LU3 HQ Extract air (room) temperature control with heat recovery, hot water heating coil, frost protection and fan release. Options: • Minimum and maximum limitation of the supply air temperature • Outside temperature-dependent functions • Anti-icing protection for heat recovery • Comfort / Economy changeover • Comfort / Protection Mode changeover (time switch)	N.Q1
RLU232 A02	AEAF02 LU3 HQ Supply air temperature control with heat recovery, hot water heating coil, frost protection and fan release Options: Room temperature cascade control Outside temperature-dependent functions Anti-icing protection for heat recovery Comfort / Economy changeover Comfort / Protection Mode changeover (time switch)	N,Q1
RLU232 A03	ADC015 LU3 HQ Supply air temperature control with hot water heating coil, frost protection, chilled water cooling coil and fan release Options: Room temperature cascade control Outside temperature-dependent functions Comfort / Economy changeover Comfort / Protection Mode changeover (time switch)	N,Q1
RLU232 A04	AECG01 LU3 HQ Extract air (room) temperature control with closed-circuit heat recovery system, hot water heating coil and chilled water cooling coil. Options: • Minimum and maximum limitation of the supply air temperature • Outside temperature-dependent functions • Anti-icing protection for heat recovery • Remote setpoint readjuster • Comfort / Economy changeover • Comfort / Protection Mode changeover (time switch)	M6 B2 NX1 Y6 NX5 NX1 NX1 NX2 S5 NX5 NX1 NX2 S6 NX4 NX3 NX3 NX3 NX4 NX3 NX3 NX4 NX3 NX5 N
RLU232 A05	AECG02 LU3 HQ Supply air temperature control with closed-circuit heat recovery system, hot water heating coil and chilled water cooling coil. Options: Room temperature cascade control Outside temperature-dependent functions Anti-icing protection for heat recovery Remote setpoint readjuster Comfort / Economy changeover Comfort / Protection Mode changeover (time switch)	M6 B21 NX4 W6 NQ3 N,Y2 W1 R5 R5 R5 NX5 R5 NX1 R5 R5 NX1 R5
RLU232 A06	AECF01 LU3 HQ Extract air (room) temperature control with heat recovery, hot water heating coil and chilled water cooling coil. Options: • Minimum and maximum limitation of the supply air temperature • Outside temperature-dependent functions • Anti-icing protection for heat recovery • Remote setpoint readjuster • Comfort / Economy changeover • Comfort / Protection Mode changeover (time switch)	B10 N.X4 N.Y1 M3 N.Q3 M4 N.Q3 M4 N.Q3 M4 N.Q3 M4 N.Q3 M4 N.Q3 M5 N.D1 M5 N.D1 M6 N.D1 M7 N.D1 M7 N.D1 M8 N.D1 N.D2

Controller- / basic type	Application no. / description	Plant diagram / connection diagram
RLU232 A07	AECF03 LU3 HQ Supply air temperature control with heat recovery, hot water heating coil and chilled water cooling coil. Options: Room temperature cascade control Outside temperature-dependent functions Anti-icing protection for heat recovery Remote setpoint readjuster Comfort / Economy changeover Comfort / Protection Mode changeover (time switch)	B5 N.X2 Cascade N.X4 M4 N.Y3 M4 N.X1 P. S5 N.D1 N.Y1 N.Y2 N.Y3 N.Q1 N.Q3 N.Q3 N.Q1 N.Y1 N.Y3 N.Q1 N.Q3 N.Q3 N.Q1 N.Y2 N.Y3 N.Q1 N.Q3 N.Q3 N.Q3 N.Q3 N.Q3 N.Q3 N.Q3 N.Q3
RLU232 A08	AECF02 LU3 HQ Extract air (room) temperature control with heat recovery, hot water heating coil, frost protection, chilled water cooling coil and fan release. Options: • Minimum and maximum limitation of the supply air temperature • Outside temperature-dependent functions • Anti-icing protection for heat recovery • Comfort / Economy changeover • Comfort / Protection Mode changeover (time switch)	N.Q1 1
RLU232 A09	AECF04 LU3 HQ Supply air temperature control with heat recovery, hot water heating coil, frost protection, chilled water cooling coil and fan release. Options: Room temperature cascade control Outside temperature-dependent functions Anti-icing protection for heat recovery Comfort / Economy changeover Comfort / Protection Mode changeover (time switch)	N.Q1 B5 N.X2 Cascade
RLU232 A10	ADC009 LU3 HQ Extract air (room) temperature control with hot water heating coil and 2 chilled water cooling coils. Options: • Minimum and maximum limitation of the supply air temperature • Outside temperature-dependent functions • Remote setpoint readjuster • Comfort / Economy changeover • Comfort / Protection Mode changeover (time switch)	B2 NX1 NX3 NX3 NX3 NX3 NX3 NX3 NX3 NX3 NX3 NX3
RLU232 A11	ADC018 LU3 HQ Supply air temperature control with hot water heating coil and 2 chilled water cooling coils. Options: Room temperature cascade control Outside temperature-dependent functions Remote setpoint readjuster Comfort / Economy changeover Comfort / Protection Mode changeover (time switch)	B5 N.X2 Cascade
RLU232 A12	AEDK01 LU3 HQ Supply air temperature control and room humidity control (r.h.) with heat recovery, hot water heating coil and spray humidifier. Options: • Room temperature cascade control • Maximum limitation of the supply air humidity • Outside temperature-dependent functions • Comfort / Economy changeover • Comfort / Protection Mode changeover (time switch)	B1 B1 B1 N.X3 N.X2 Cascade N.X3 N.X3 N.X3 N.X3 N.X3 N.X3 N.X2 Cascade N.X3 N.X3 N.X3 N.X3 N.X4 N.X1 N.X4 N.X4 N.X5 N.X5 N.X5 N.X5 N.X5 N.X5 N.X5 N.X5

Controller- /	Application no. / description	Plant diagram / connection diagram
basic type		
RLU232 A13	ADE001 LU3 HQ Extract air (room) temperature control and dewpoint control with hot water preheating coil, frost protection, chilled water cooling coil, hot water reheating coil and fan release. Options: • Minimum and maximum limitation of the supply air temperature • Outside temperature-dependent functions • Comfort / Economy changeover • Comfort / Protection Mode changeover (time switch)	N.Q1 B2 N.X1 N.X2 N.X3 N.X3 N.X3 N.X3 N.X3 N.X3 N.X3 N.X4 N.X3 N.X1 N.X2 N.X3 N.X3 N.X4 N
RLU232	ADFA01 LU3 HQ	N.Q1
A14	Supply air temperature and extract air (room) humidity control (r.h.) with hot water heating coil, frost protection, spray humidifier, chilled water cooling coil and fan release. Options: Maximum limitation of the supply air humidity Outside temperature-dependent functions Comfort / Economy changeover Comfort / Protection Mode changeover (time switch)	B2 NX1 B2 NX1 B3 NX2 B4 NX2 B1 NX2 B1 NX2 B1 NX2 B1 NX2 B1 NX2 B1 NX2 B1 NX2 B1 NX2 B1 NX3 B1 NX2 B1 B1 B1 B1 B1 B1 B1 B1 B1 B1
RLU232	ADFA02 LU3 HQ	N.Q1 —
A15	Extract air (room) temperature control and dew point control with hot water preheating coil, frost protection, spray humidifier, chilled water cooling coil, hot water reheating coil and fan release. Options: Minimum and maximum limitation of the supply air temperature Additional maximum selection from internal and external signal Comfort / Economy changeover Comfort / Protection Mode changeover (time switch)	F3 N,X3 N,X4 N,X4 N,X3 N,X3 N,X3 N,X3 N,X3 N,X3 N,X3 N,X3
RLU232	AEFH01 LU3 HQ	N.Q1
A16	Supply air temperature and room humidity control (r.h.) with mixed air dampers, hot water heating coil, frost protection, chilled water cooling coil, spray humidifier and fan release. Options: Room temperature cascade control Outside temperature-dependent functions Comfort / Economy changeover Comfort / Protection Mode changeover (time switch)	Y2
RLU232 A17	AECD01 LU3 HQ Extract air (room) temperature control and mixed air temperature control Options:	© Y2 YE O HAMAS
	Minimum and maximum limitation of supply air temperature Outside temperature-dependent functions Comfort / Economy changeover Comfort / Protection Mode changeover (time switch)	B9 Y1 B31 C
RLU232 U01	ABA001 LU3 HQ 2 independent supply air temperature control systems with hot water heating coils. Options: • 2 independent remote setpoint adjusters • Outside temperature-dependent functions • Comfort / Protection Mode changeover (time switch)	M3.1 B1.1 N.01 N.X1 7 R5.1 N.Y1
RLU232 U02	ADL001 LU3 HQ Supply and extract air volume control with fan control. Options: 2 independent remote setpoint adjusters Outside temperature-dependent functions Comfort / Protection Mode changeover (time switch)	G2
		NAC NUT

Controller- / basic type	Application no. / description	Plant diagram / connection diagram
RLU232 U03	ZZZ003 LU3 HQ Linear 2-step switch	DC 0 10 V G X1 M G1 D1 M Q11 Q33 \$ G0 Q12 Q14 Q34 2Q LIN.
RLU232 U04	ZZZ004 LU3 HQ Binary 2-step switch	G X1 M G1 D1 M Q11 Q33 ₹ RLU232 G0 Q12 Q14 Q34 F1 Q2 Q18 IN.
RLU232 U05	ZZZ005 LU3 HQ Variable 2-step switch	G X1 M G1 D1 M Q11 Q33 \$ G0 Q12 Q14 Q34 Q34
RLU236 A01	ADA007 LU3 HQ Extract air (room) temperature control with electric air heater battery. Options: • Min. and max. limitation of the supply air temperature • Outside temperature-dependent functions • Remote setpoint readjuster • 6-stage electric air heater battery • Comfort / Economy changeover • Comfort / Protection Mode changeover (time switch)	●
RLU236 A02	ADA013 LU3 HQ Supply air temperature control with electric air heater battery. Options: Room temperature cascade control Outside temperature-dependent functions Remote setpoint readjuster G-stage electric air heater battery Comfort / Economy changeover Comfort / Protection Mode changeover (time switch)	■
RLU236 A03	ADB004 LU3 HQ Extract air (room) temperature control with DX cooler battery. Options: • Min. and max. limitation of the supply air temperature • Outside temperature-dependent functions • Remote setpoint readjuster • 6-stage dx cooler battery • Comfort / Economy changeover • Comfort / Protection Mode changeover (time switch)	B2 N,X1 N,24 N,25 N,24 N,25 N,27 N,27 N,27 N,27 N,27 N,27 N,27 N,27
RLU236 A04	ADB008 LU3 HQ Supply air temperature control with DX cooler battery. Options: Room temperature cascade control Outside temperature-dependent functions Remote setpoint readjuster G-stage DX cooler battery Comfort / Economy changeover Comfort / Protection Mode changeover (time switch)	N.X3 N.Q4 M7 N.X3 N.Q4 M7 N.X4 N.Q5 N.Q1 N.Q6 N.Q3 N.Q3 N.Q3 N.Q4 N.Q3 N.Q4 N.Q3 N.Q4 N.Q4 N.Q5 N.Q3 N.Q5 N.Q3 N.Q6 N.Q2 N.Q7 N.Q7 N.Q7 N.Q7 N.Q7 N.Q7 N.Q7 N.Q

Controller- / basic type	Application no. / description	Plant diagram / connection diagram
RLU236 A05	ADC005 LU3 HQ Extract air (room) temperature control with electric air heater battery and DX cooler battery. Options: • Minimum and maximum limitation of the supply air temperature • Outside temperature-dependent functions • Remote setpoint readjuster • 4-stage electric air heater battery • 2-stage DX cooler battery • Comfort / Economy changeover • Comfort / Protection Mode changeover (time switch)	B2 N,X1 N,X2 N,X3 N,Q3 N,Q3 N,Q3 N,Q4 N,Y1 N,Q8 N,Q8 N,D1 S5 N,D1 S6 S6 N,D1 S6 S6 N,D2
RLU236 A06	ADC013 LU3 HQ Supply air temperature control with electric air heater battery and DX cooler battery. Options: Room temperature cascade control Outside temperature-dependent functions Remote setpoint readjuster 4-stage electric air heater battery 2-stage DX cooler battery Comfort / Economy changeover Comfort / Protection Mode changeover (time switch)	B5 NX2 Cascade
RLU236 A07	ADC008 LU3 HQ Extract air (room) temperature control with hot water air heating coil, frost protection, DX cooler battery and fan release. Options: • Minimum and maximum limitation of the supply air temperature • Outside temperature-dependent functions • Remote setpoint readjuster • 4-stage DX cooler battery • Comfort / Economy changeover • Comfort / Protection Mode changeover (time switch)	N.01 S5 N.X5 N.X
RLU236 A08	ADC017 LU3 HQ Supply air temperature control with hot water heating coil, frost protection, DX cooler battery and fan release. Options: Room temperature cascade control Outside temperature-dependent functions Remote setpoint readjuster 4-stage DX cooler battery Comfort / Economy changeover Comfort / Protection Mode changeover (time switch)	N.Q1 N.Q1 B5 N.X2 Cascade T R5 N.X5 N.Q2 N.Q2 N.Q3 N.Q2 N.Q3
RLU236 A09	AEDL01 LU3 HQ Supply air temperature and supply air humidity control (r.h.) with closed-circuit heat recovery system, hot water heating coil, frost protection, spray humidifier and fan release. Options: Room temperature cascade control Outside temperature-dependent functions Comfort / Economy changeover Comfort / Protection Mode changeover (time switch)	N.Q1 M6
RLU236 A10	AEFL01 LU3 HQ Supply air temperature and supply air humidity control (r.h.) with closed-circuit heat recovery system, DX cooler battery, hot water heating coil, frost protection, spray humidifier and fan release. Options: Room temperature cascade control Outside temperature-dependent functions 2-stage DX cooler battery Comfort / Economy changeover Comfort / Protection Mode changeover (time switch)	N.Q1 M6

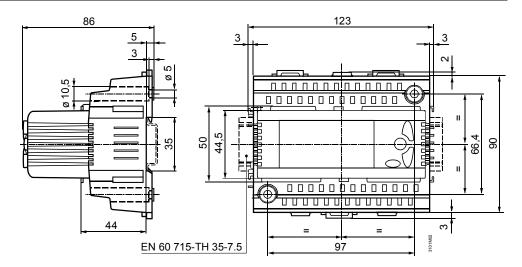
Controller- /	Application no. / description	Plant diagram / connection diagram
basic type	,	
RLU236 A11	AECD02 LU3 HQ Extract air (room) temperature control and mixed air temperature control Options: • Minimum and maximum limitation of supply air temperature • Outside temperature-dependent functions • Remote setpoint readjuster • 2-stage electric air heater battery • 2-stage direct expansion cooler battery • Comfort / Economy changeover • Comfort / Protection Mode changeover (time switch)	1
RLU236 A12	AEZD01 LU3 HQ Extract air (room) temperature and mixed air temperature	
AIZ	control and supply air differential pressure control Options: Minimum and maximum limitation of supply air temperature Outside temperature-dependent functions 2-stage electric air heater battery 2-stage direct expansion cooler battery Comfort / Economy changeover Comfort / Protection Mode changeover (time switch)	© 2 Y2 Y6
RLU236 A13	AEGD01 LU3 HQ Extract air (room) temperature and mixed air temperature control and humidity control Options: • Minimum and maximum limitation of supply air temperature • Outside temperature-dependent functions • 2-stage electric air heater battery • 2-stage direct expansion cooler battery • Comfort / Economy changeover • Comfort / Protection Mode changeover (time switch)	SE SE SE SE SE SE SE SE
RLU236 A14	AECD03 LU3 HQ Supply air temperature control Options: Room temperature cascade control Outside temperature-dependent functions Remote setpoint readjuster 4-stage electric air heater battery 2-stage direct expansion cooler battery Comfort / Economy changeover Comfort / Protection Mode changeover (time switch)	Y2
RLU236 U01	ADKA03 LU3 HQ Extract air (room) humidity control (r.h.) with spray humidifier. Options: • Maximum limitation of the supply air humidity • Outside temperature-dependent functions • Remote setpoint adjuster • 6-stage spray humidifier • Comfort / Economy changeover • Comfort / Protection Mode changeover (time switch)	B9 N.24 Y8 @ X N.12 N.22 N.13 N.22 N.14 N.22 N.14 N.22 N.14 N.22 N.23 N.24 N.25 N.24 N.25 N.24 N.25 N.25 N.24 N.25 N.25 N.25 N.25 N.25 N.25 N.25 N.25
RLU236 U02	PB0003 LU3 HQ Differential pressure control of water with load-dependent pump control. Options: • Minimum and maximum pressure limit controller • Outside temperature-dependent functions • Remote setpoint adjuster • Comfort / Economy changeover • Comfort / Protection Mode changeover (time switch)	B23 ⊕ B22 ⊕ NX1 ⊕ NX2 ⊕ NX1 ⊕ S5 NX4 ⊕ S5 NX3 ⊕

Controller-/ basic type	Application no. / description	Plant diagram / connection diagram
• •		
RLU236 U03	AZL003 LU3 HQ Differential pressure control of air with load-dependent fan control. Options: • Minimum and maximum pressure limit controller • Outside temperature-dependent functions • Remote setpoint adjuster • Comfort / Economy changeover • Comfort / Protection Mode changeover (time switch)	B25 ⊕ B24 ⊕ N,X1 ⊕ Fpal
RLU236	ADI004 LU3 HQ	3 18
U04	Extract air (room) humidity control (r.h.) with DX cooler battery. Options: Additional maximum selection from internal and external signal Room temperature-dependent shifting of humidity setpoint Remote setpoint adjuster 6-stage DX cooler battery Comfort / Economy changeover Comfort / Protection Mode changeover (time switch)	NO2 M7
RLU236	ADI006 LU3 HQ	
U05	Extract air (room) humidity control (a.h.) with DX cooler battery. Options: Additional maximum selection from internal and external signal Room temperature-dependent shifting of humidity setpoint Remote setpoint adjuster	B5 NX3 B4 NX1 Ig/kg NX2 S5 S5
	 6-stage DX cooler battery Comfort / Economy changeover Comfort / Protection Mode changeover (time switch) 	N.02 M7 N.03 N.04 N.04 N.05 N.06 N.06
RLU236	AAZD03 LU3 HQ	11.
U06	Indoor air quality control with mixed air dampers and fan control. Options: Additional maximum selection from internal and external signal Outside temperature-dependent functions Remote setpoint adjuster 6-speed fan Comfort / Economy changeover Comfort / Protection Mode changeover (time switch)	Y2 ⊕ Y4 ⊕ Y6
RLU236 U07	ADZA02 LU3 HQ Extract air (room) humidity control (r.h.) with spray humidifier and DX cooler battery. Options: • Maximum limitation of supply air humidity • Additional maximum selection from internal and external signal • Remote setpoint adjuster • 2-stage spray humidifier • 4-stage DX cooler battery • Comfort / Economy changeover • Comfort / Protection Mode changeover (time switch)	Y8 ⊕ Y7 NY1 N,12 N,03 N,03 N,04 N,05 N,05 N,03 N,05 N
RLU236	ZZZ006 LU3 HQ	DC 0 10 V
U08	Linear 3-step switch	G X1 M G1 Q11 Q23 Q33 Q41 Q53 Q63 \$ RLU236 Q12 Q14 Q24 Q34 Q42 Q44 Q54 Q64 3Q LIN.

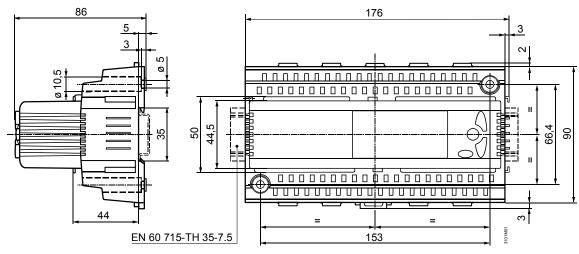
Controller- / basic type	Application no. / description	Plant diagram / connection diagram
RLU236 U09	ZZZ007 LU3 HQ Linear 4-step switch	G X1 M G1
RLU236 U10	ZZZ008 LU3 HQ Linear 5-step switch	G X M G1
RLU236 U11	ZZZ009 LU3 HQ Linear 6-step switch	G X1 M G1
RLU236 U12	ZZZ010 LU3 HQ Variable 3-step switch	G X1 M G1
RLU236 U13	ZZZ011 LU3 HQ Variable 4-step switch	G X1 M G1
RLU236 U14	ZZZ012 LU3 HQ Variable 5-step switch	DC 0 10 V G X1 M G1 Q11 Q23 Q33 Q41 Q53 Q63 Q63 Q64 Q64

Controller- / basic type	Application no. / description	Plant diagram / connection diagram
RLU236 U15	ZZZ013 LU3 HQ Variable 6-step switch	G X1 M G1 Q11 Q23 Q33 Q41 Q53 Q63 Q63 Q63 Q64 Q54 Q54 Q54 Q54 Q54 Q54 Q54 Q54 Q54 Q5
RLU236 U16	ZZZ014 LU3 HQ Binary step switch with 7 steps (3 relays)	G X1 M G1 Q11 Q23 Q33 Q41 Q53 Q63 Q63 Q63 Q63 Q63 Q63 Q63 Q63 Q63 Q6
RLU236 U17	ZZZ015 LU3 HQ Binary step switch with 15 steps (4 relays)	DC 0 10 V G X1 M G1
RLU236 U18	CZZ001 LU3 HQ Condensation pressure control Options: • Switching via external time switch	M11 N.Q1 N.Q2 N.Q3 N.Q4 B21 N.X1

RLU202, RLU220, RLU222



RLU232, RLU236

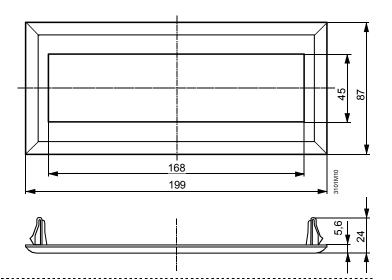


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Mounting frame for RLU202, RLU220 and RLU222:

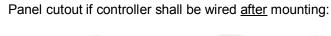
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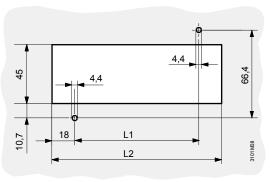
Mounting frame for RLU232 and RLU236:



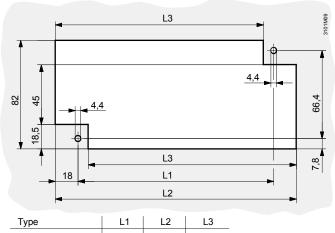
Panel cutout if controller shall be wired prior to mounting:







Туре	L1	L2
RLU202, RLU220, RLU222	97	133
RLU232, RLU236	153	189



Type	L1	L2	L3
RLU202, RLU220, RLU222	97	133	107
RLU232, RLU236	153	189	163

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