SIEMENS

Acvatix™

Electromotoric actuator

SUE21P

For Siemens PICV

- AC 230 V operating voltage, 2-position control signal
- Positioning force 100 N
- Direct mounting with M30 x 1.5 union nut (no tools required)
- 3-wire connection with integral 0.8 m connecting cable
- LED indicates actuator motion
- Parallel connection of multiple actuators are possible

Use

For Siemens PICV: VPI46.., VPP46.., VQI46.. and VQP46..

- In ventilation and air conditioning plants for control on the water side and automatic hydraulic balancing of terminal units, such as fan coils, induction units, and in heat exchangers for heating or cooling
- In heating zones like self-contained heating systems, apartments, individual rooms, etc.
- For closed circuits

Technical design

The actuator opens the valve electrically. It incorporates an electric motor and gear mechanism. The maximum stroke is limited mechanically (valve seat). No motor power consumption in fully open and closed position. The actuator is connected with a 0.8 m cable, which is an integral part of it. The actuator can open or close the valve via controller (thermostat) output signal.

2-position SPST control signal

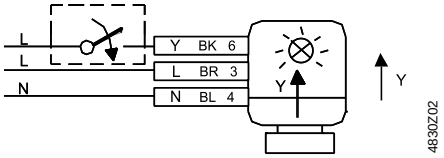
The actuator requires an on/off controller, typically a room thermostat.

Voltage at Y:	Stem retracts	Valve opens
No voltage at Y:	Stem extends	Valve closes

⚠ CAUTION

Do not operate the SUE21P actuators in a 3-position control mode!

LED operating mode display, example of SUE21P:



Voltage on Y: LED is lit

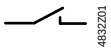
No voltage on Y: LED is off at end position

The LED is lit when the actuator stem protrudes, retracts, or the valve fully opens. The LED goes out when the actuator stem protrudes to the valve's fully closed position.

Type summary

Type	Stock number	Operating voltage	Positioning time		Control signal [1]	Cable length
			open	close		
SUE21P	S55176-A106	AC 230 V	12 s at 50 Hz		2-position, SPST	0.8 m

[1] SPST = single pole, single throw



Ordering

When ordering, please specify the type and quantity.

Example:

Type	Stock number	Designation	Quantity
SUE21P	S55176-A106	Electromotoric actuator	2

Delivery

The valves and actuators are supplied in separate packages. The position of the actuator stem is retracted when supplied for better valve assembly.

Equipment combinations

Room thermostats

Type	Room thermostat compatible to SUE21P
RAB...	RAB11; RAB11.1; RAB21; RAB31; RAB31.1
RAA...	RAA11; RAA21; RAA31…; RAA41
RCC...	RCC10; RCC20; RCC30
RCU...	RCU10
RDF...	RDF110...; RDF310.2/MM; RDF300.02; RDF302; RDF510; RDF530; RDF600...; RDF800...;
RDG...	RDG100...; RDG110
RDD...	RDD100; RDD100.1; RDD100.1RFS; RDD310/MM; RDD310/EH
RDE...	RDE100; RDE100.1; RDE100.1RFS; RDE410/EH
RDH…	RDH100; RDH100RF/SET
RDJ…	RDJ100; RDJ100RF/SET
REV…	REV13...; REV24…, REV24RF/SET
RDS...	RDS110

PICV VPP46../VPI46..

Connection	Type	Stock no.	DN	H_{100} [mm]	$\dot{V}_{min}$ [l/h]	$\dot{V}_{100}$ [l/h]	Δp_{max} [kPa]	Data sheet
Internally threaded	VPI46.20F1.4	S55264-V111	20	5	220	1330	600	N4855
	VPI46.25F1.8	S55264-V125	25		250	1600		
	VPI46.32F4	S55264-V126	32		500	3630		
	VPI46.20F1.4Q	S55264-V114	20		220	1330	600	
	VPI46.25F1.8Q	S55264-V127	25		250	1600		
	VPI46.32F4Q	S55264-V128	32		500	3630		
Externally threaded	VPP46.10L0.4	S55264-V131	10	5	65	370	600	
	VPP46.20F1.4	S55264-V104	20		220	1330		
	VPP46.25F1.8	S55264-V121	25		250	1600		
	VPP46.32F4	S55264-V122	32		500	3630		
	VPP46.10L0.4Q	S55264-V132	10		65	370	600	
	VPP46.20F1.4Q	S55264-V108	20		220	1330		
	VPP46.25F1.8Q	S55264-V123	25		250	1600		
	VPP46.32F4Q	S55264-V124	32		500	3630		

Δpmax: Maximum permissible differential pressure across the valve's control path, valid for the entire actuating range of the motorized valve

PICV VQP46../VQI46.. (for On/Off application)

Connection	Type	Stock no.	DN	H_{100} [mm]	V_{100} [l/h]	V_{100} [l/h]	Δp_{max} [kPa]	Data sheet
Internally threaded	VQI46.15L0.5	S55264-V136	15	4	30	520	600	A6V11878322
	VQI46.15L0.5Q	S55264-V135						
	VQI46.15F1.3	S55264-V140			300	1300		
	VQI46.15F1.3Q	S55264-V139						
	VQI46.20F1.5	S55264-V144	20		320	1500		
	VQI46.20F1.5Q	S55264-V143						
	VQI46.25F1.8	S55264-V148	25		620	1800		
	VQI46.25F1.8Q	S55264-V147						
Externally threaded	VQP46.10L0.5	S55264-V134	10		30	520		
	VQP46.10L0.5Q	S55264-V133						
	VQP46.15L0.5	S55264-V138	15					
	VQP46.15L0.5Q	S55264-V137						
	VQP46.15F1.3	S55264-V142			300	1300		
	VQP46.15F1.3Q	S55264-V141						
	VQP46.20F1.5	S55264-V146	20		320	1500		
	VQP46.20F1.5Q	S55264-V145						
	VQP46.25F1.8	S55264-V150	25		620	1800		
	VQP46.25F1.8Q	S55264-V149						

Δp_{max}: Maximum permissible differential pressure across the valve's control path, valid for the entire actuating range of the motorized valve

Product documentation

Topic	Title	Document ID:
Mounting and installation	Mounting instructions [1)]	A6V11678006
Standards and directives	CE declarations	A5W90000522
	RCM declarations	A5W90000858
Environmental compatibility	Environmental declarations	A6V10634107

[1)] The mounting instructions is enclosed in product packaging.

Notes

Mounting

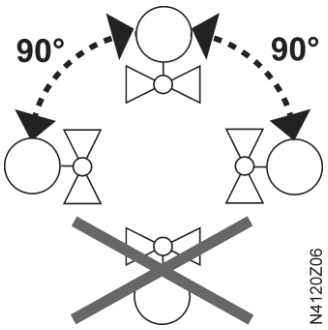
⚠ WARNING

Do not use pipe wrenches, spanners or similar tools.

Valve and actuator are easy to assemble on site before commissioning:

- Remove protective cover from the valve body.
- Put the actuator in position and tighten the union nut manually.

Orientation



Installation

- The admissible temperatures (see “Technical data [➞ 7]”) must be observed.
- Operate the actuator only with alternating current (see “Technical data [➞ 7]”).
- The cable should not be twisted.
- Magnets can damage the actuator.
- A means of isolation from the power supply must be provided, for example: connecting a circuit breaker or switch fuse to the upstream of the actuator and controller, typically a room thermostat.

	**⚠ CAUTION**
	National safety regulations Failure to comply with national safety regulations may result in personal injury and property damage • Observe national provisions and comply with the appropriate safety regulations.

	**⚠ CAUTION**
	Phase cut and pulse-duration-modulated (PDM) signals are not suitable. **Regulations and requirements to ensure the safety of people and property must be observed at all times!**

Commissioning

- Check wiring.
- Check the functions of the actuator.

Maintenance

SUE21P actuators require no maintenance.

	**⚠ WARNING**
	Voltage must be switched off during any maintenance process!

Repair

- Faulty actuators cannot be repaired and must be replaced by complete units.
- The actuator can be replaced without removing the valve.

Disposal

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

- Disassemble the device into individual parts prior to disposing of it and sort the individual parts by the various types of materials.
- 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	
Operating voltage Tolerance	AC 230 V +10%/-15%
Frequency	50/60 Hz
Power consumption	6 VA at 50 Hz (when running only)
Primary fuse or breaker rating	External, 2 A quick blow

Signal input	
Control signal	2-position (SPST) [1]
Parallel operation	Permitted [2]

[1] Phase cut and pulse-duration-modulated (PDM) signals are not suitable, 3 position operation not permissible, SPST = Single Pole, Single Throw

[2] Consider controller's output power

Operating data	
Position with de-energized contact Y	See "Technical design [➞ 2]"
Positioning time (open/close)	12 s at 50 Hz 10 s at 60 Hz
Positioning force	100 N
Nominal stroke	5 mm
Permissible temperature of medium in the connected valve	1...110 °C

Electrical connection	
Connecting cable (integral)	3-core, 0.8 m 3 x 0.75 mm^2 (18 AWG)

Mounting	
Fixing on valve	Plastic union nut M30 x 1.5
Orientation	Upright to 90°, horizontal; do not suspend

Standards	
EU conformity (CE)	A5W90000522
Housing protection degree	IP 40
Protection class	II Class to EN 60730-1
Environmental compatibility	The product environmental declaration (A6V10634107) contains data on environmentally compatible product design and assessments (RoHS compliance, materials composition, packaging, environmental benefit, disposal).

Housing color	
Cover/base	Plastic, light gray, RAL 7035/Pigeon blue RAL 5014
Union nut	Pigeon blue RAL 5014

General ambient conditions			
	Operation EN 60721-3-3	Transport EN 60721-3-2	Storage EN 60721-3-1
Environmental conditions	Class 3K3	Class 2K3	Class 1K3
Temperature	+1...+50 °C	-25...+70 °C	-5...+50 °C
Humidity	5...85% r.h.	<95% r.h.	5...95% r.h.

Materials

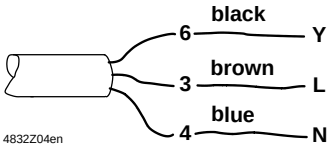
Cover/base: PBT

Weight

307 g

Diagrams

Connection terminals



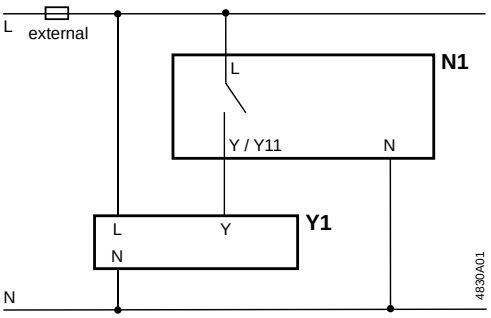
SPST

control signal OPEN (AC 230 V))

phase (AC 230 V)

neutral

Connection diagrams



N1 = room thermostat

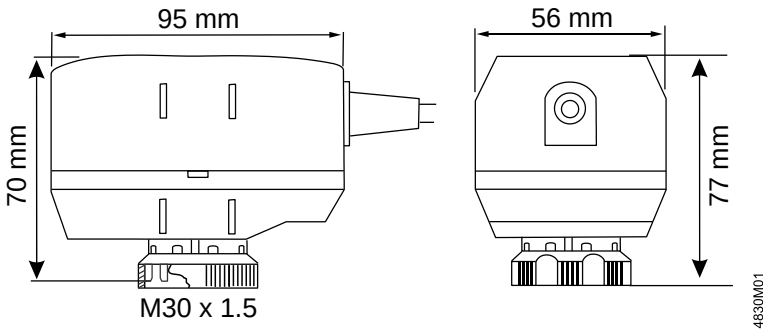
Y1 = actuator SUE21P

Y/Y11 = control signal OPEN

L = phase

N = neutral

Dimensions



Revision numbers

Type	Valid from rev. no.
SUE21P	..A

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