


Series 11-CRA1

Rack & Pinion type
Rotary actuator: Size 30, 50

How to Order



Clean series
11 Vacuum suction type

Auto switch

Nil	No
D	Built-in magnet

Mounting style

B	Basic style
L	Foot style

Shaft type

S	Single shaft
W	Double shaft

Size

30
50

Rotating angle

90	90°
180	180°
100	100°*
190	190°*

* Not available for ø30

Cushion

Nil	Without air cushion
C*	With air cushion on both ends

* Not available for ø30

Number of auto switches

Nil	2 pcs.
S	1 pc.

Type of auto switch (For model with auto switch)

Nil	Without auto switch (Built-in magnet cylinder)
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* For the applicable auto switch model, refer to the next page.
* Auto switches are shipped together, (but not assembled).

Ordering Example: 11 - C D R A 1 B S 50 - 90 [] Z - M9B []

Specifications

Size	30	50
Fluid	Air (Non-lube)	
Max. operating pressure	1MPa	
Min. operating pressure	0.1MPa	
Ambient and fluid temperature	0 to 60°C	
Cushion	With air cushion	Not available / Without air cushion, With air cushion
Allowable kinetic energy (J)	Without air cushion	0.01 / 0.05
	With air cushion	— / 0.98
Cushion angle	—	35°
Adjustable range of rotation time	0.2 to 1 s/90°	0.2 to 2 s/90°
Port size	M5 x 0.8	Rc1/8
Mounting style	Basic style, Flange style	
Grease	Fluorine grease	
Particle generation grade (Refer to front matter pages 13 to 22 for details.)	Grade 2	

* The maximum absorbed energy under proper adjustment of the cushion valve

Suction flow rate of vacuum suction type (Reference values)

Size	Suction flow rate L/min (ANR)
30	1
50	5

Auto switch specifications (Refer to Best Pneumatics No. 4 for detailed specifications and auto switches not in the following table.)

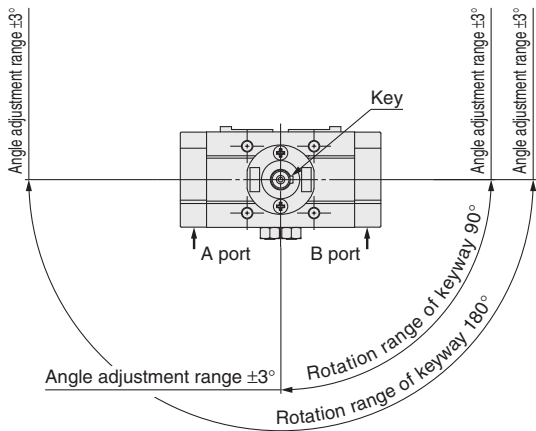
Type	Auto switch part no.	Load voltage	Load current range	Indicator light	Application	
Solid state auto switch	2-wire	D-M9B	24 VDC (10 to 28 VDC)	2.5 to 40 mA	○	24 VDC relay, PLC
	3-wire	D-M9N, D-M9P	28 VDC or less	40 mA or less	○	IC circuit, Relay, PLC
Reed auto switch	D-A93, D-A96	24 VDC, 100 VAC	5 to 40 mA, 5 to 20 mA	○	Relay, PLC	

Refer to page 212 for a list of applicable auto switches.

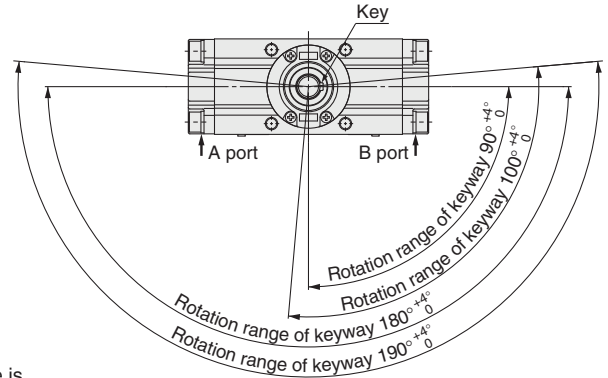
PLC: Programmable Logic Controller

Rotation Range of Keyway/Switch Mounting Position

11-CDRA1□□30



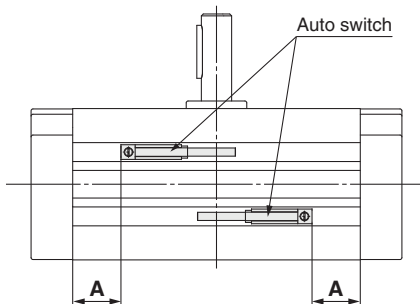
11-CDRA1□□50



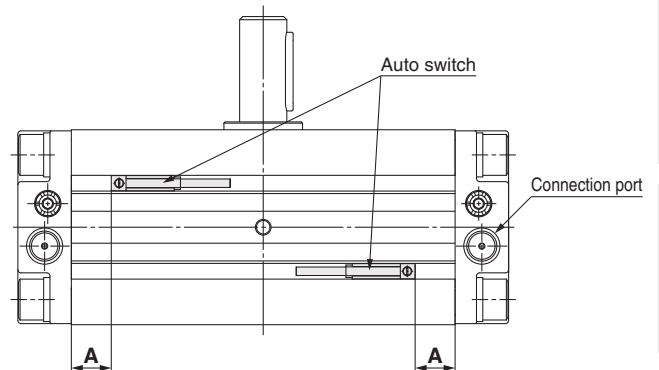
* If air pressure is applied from the A side, the shaft rotates clockwise. If air pressure is applied from the B side, the shaft rotates counterclockwise.

Auto Switch Proper Mounting Position (Detection at Rotation End)

11-CDRA1□□30



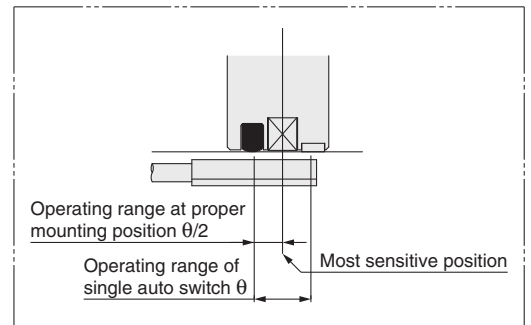
11-CDRA1□□50



Note) For size 30, the auto switch cannot be mounted on the connection port side since there is a vacuum port.

Size	Rotating angle	D-M9□/M9□V D-M9□W/M9□WV D-M9□A/M9□AV		D-A9□/A9□V	
		Proper mounting position A (mm)	Operating range θ (°)	Proper mounting position A (mm)	Operating range θ (°)
30	90	13	42°	9	81°
	180	22		18	
50	90	22.5	30°	18.5	44°
	180	39		35	

* Values which include hysteresis are for guideline purposes only, they are not a guarantee (assuming approximately ±30% dispersion) and may change substantially depending on the ambient environment. Adjust the auto switch after confirming the operating conditions in the actual setting.



Switch Spacer Part No.

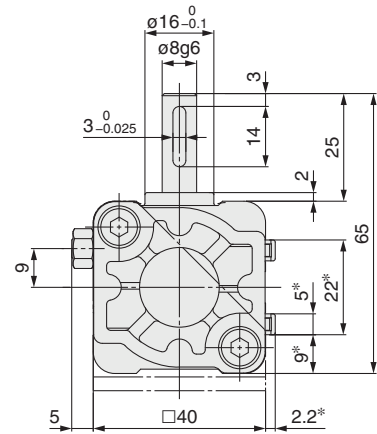
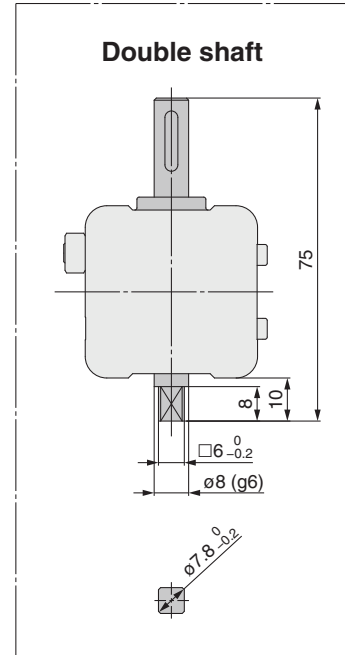
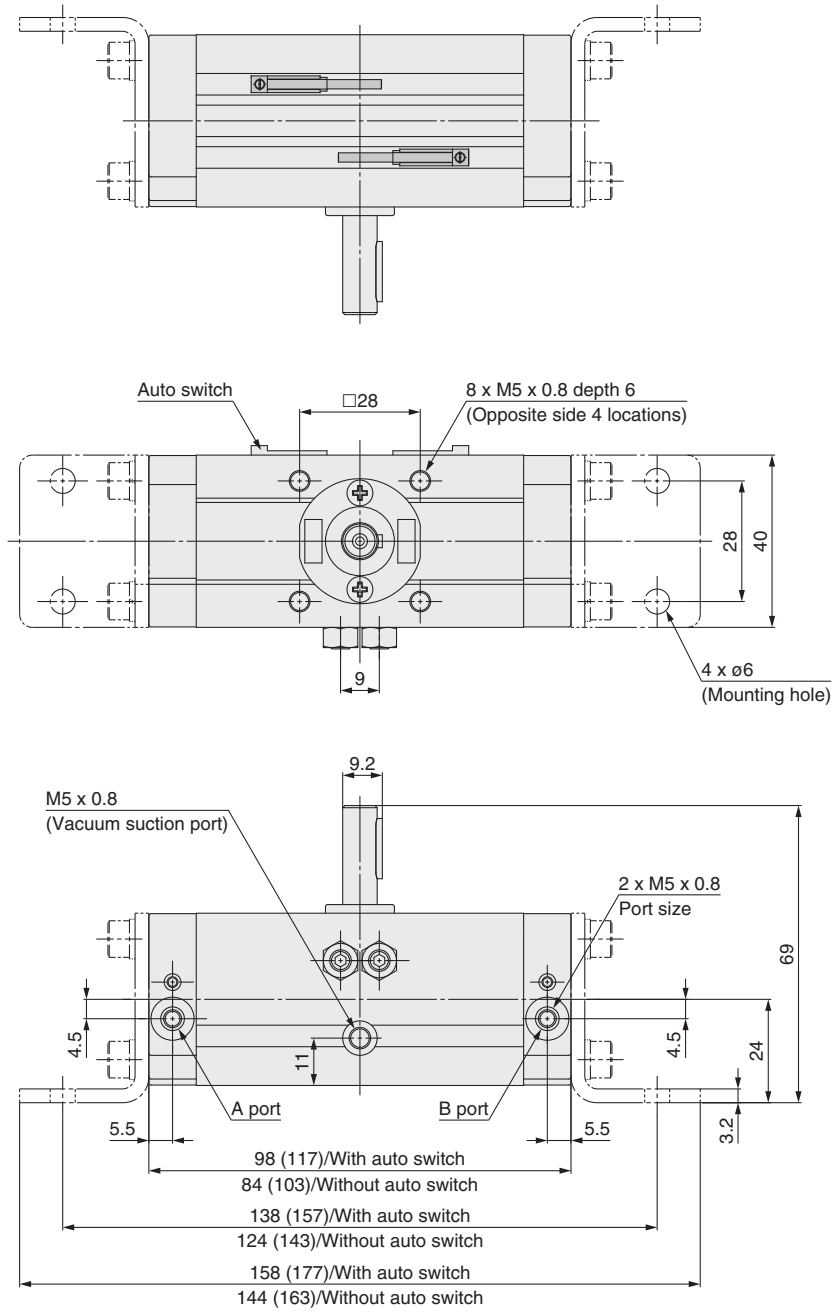
Size	30	50
Switch spacer part no.	BMY3-016	

* The above part number includes one switch spacer.
* Two switch spacers are included with the product with built-in magnet.

Dimensions/Basic Type: 11-C□RA1□S30

Size: 30

Single shaft

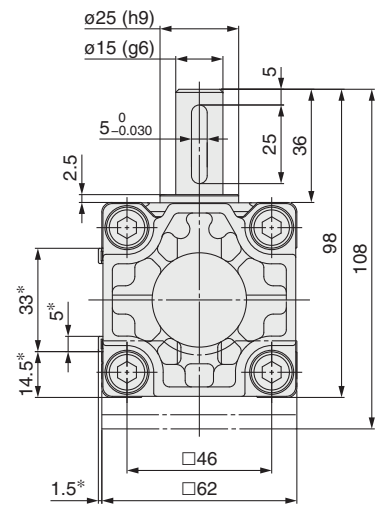
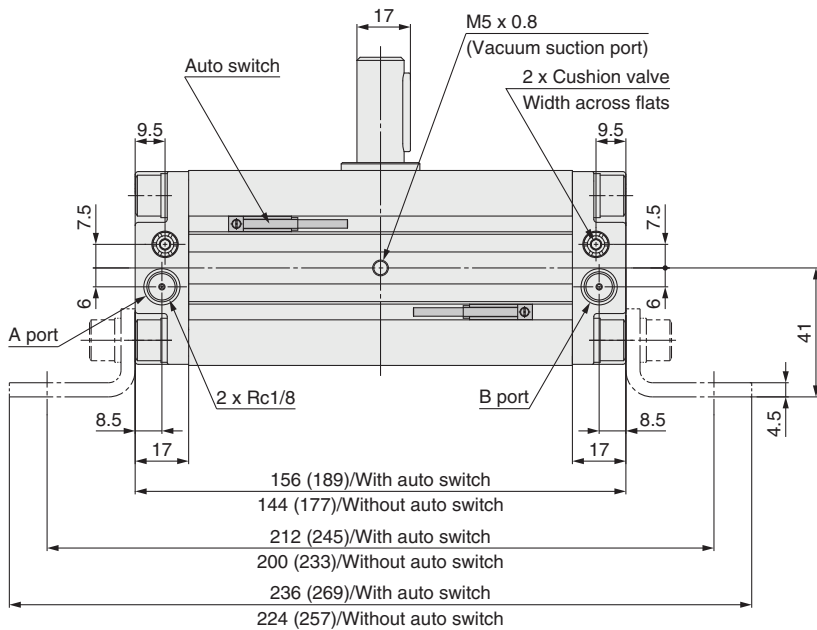
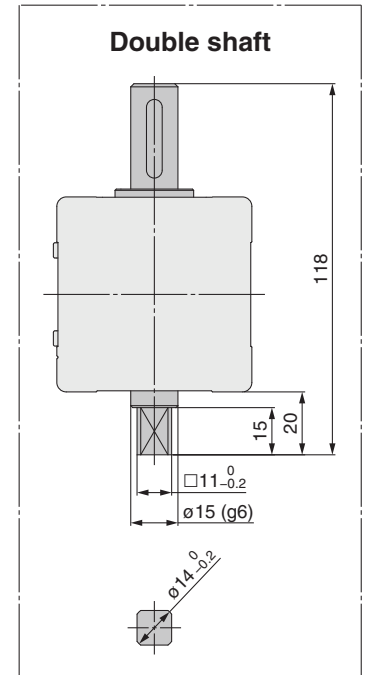
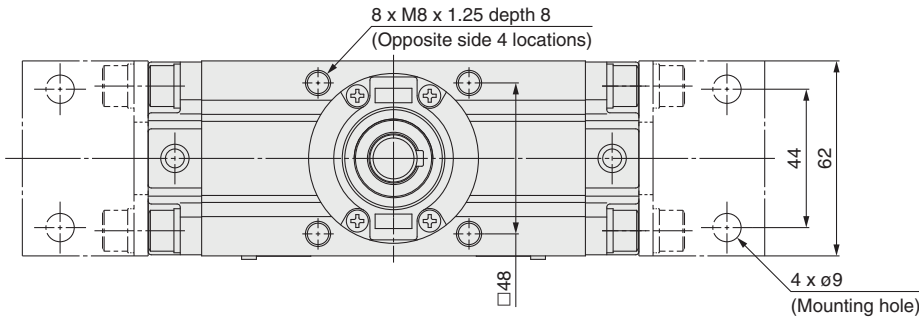


- The dimensions above show pressurization to B port.
 - Drawing shows the auto switch is mounted. (Dimensions with an asterisk mark (*) are not required for actuators without the auto switch.)
 - * () are the dimensions for rotation of 180°.
- Note) A parallel key is included in the same package, (but not assembled).

Dimensions/Basic Type: 11-C□RA1□S50

Size: 50

Single shaft



- The dimensions above show pressurization to B port.
 - Drawing shows the auto switch mounted on the port side. (Dimensions with an asterisk mark (*) are not required for actuators without the auto switch.)
 - * () are the dimensions for rotation of 180° and 190°.
- Note) A parallel key is included in the same package, (but not assembled).

Air cylinder

Rotary actuator

Air gripper

Directional control valve

Flow control equipment

Filter, Pressure control equipment

Fittings & Tubing

Air preparation equipment

Pressure switch

Clean gas filter