Automatic Shutters
1 axis / 4 axis Shutter Controller | SSH
SSH-CRA

SSH

RoHS | Catalog Code W4045

These electromagnetic shutters are intended for applications including remote on/off of laser light and for timed exposures.
Requires dedicated shutter controller (SSH-C2B) and cable (SSH-CA2-LOAA) for operation.

- SSH-S is intended for small diameter laser beams (φ4mm or less) while SSH-25RA is intended for use with large diameter imaging lens systems (φ24mm or less).
- Typical applications include holography, exposure of photosensitive materials and as safety measures of laser optical systems.
- By removing the post, the shutters can be installed directly on a baseplate with M3 threads.
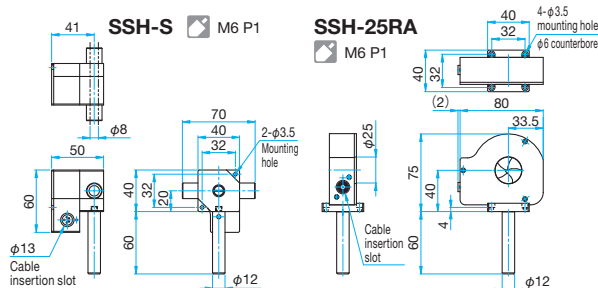- Shutters can be operated with a PC via the two-axis shutter controller (SSH-C2B).

Guide

▶ Post length can be changed by specifying the post length when you place an order. We may charge the difference in price depending on the length. Contact our Sales Division for more information.

Attention

▶ Automatic shutters cannot be used with high power lasers or high power pulse lasers. Please use high power laser shutters (SHPS).
▶ Please always use these automatic shutters with the dedicated controller. Otherwise, these shutters may not operate properly.
▶ SSH-25RA cannot operate with the old type shutter controllers (SSH-C4B, SSH-C1R). SSH-S can operate with SSH-C4B.
▶ These shutters and controllers do not come with cables.
▶ Please order the dedicated cables along with them.

Outline Drawing

SSH-S M6 P1   **SSH-25RA** M6 P1

Specifications

Primary material: Aluminum
Finish: Black anodized (Finish of blades of SSH-25RA-W Shutter : None)

Part Number	Shutter Type	Aperture Diameter [mm]	Compatible Controller	Shutter Speed [s]	Weight [kg]
SSH-S	Solenoid	φ8	SSH-C2B	about 0.7 –	0.28
SSH-25RA	Blades type (Black)	φ25	SSH-C2B SSH-C1RA, SSH-C4RA	0.1 –	0.5
SSH-25RA-W	Blades type (Black)				

SSH-CRA

RoHS | Catalog Code W4120

Controller for driving the SSH-RA series electromagnetic shutters.

- Shutters can be manually opened and closed using the shutter buttons on the controller body.
- Shutters can also be opened and closed using a TTL signal from an external controller.
- 4-axis shutter controller (SSH-C4RA) can independently control up to four shutters.

Guide

▶ Controller does not include a shutter. Compatible only with SSH-RA series auto-blade shutters.
▶ Cable to connect the controller and the shutter is not included. Use the dedicated cable (SSH-CA2-LORA). Reference C069
▶ If timer functions are required, we recommend using the SSH-C2B shutter controller. Reference C069
▶ controllers come with AC adapter(DC5V) and 3.5mm Stereo mini plug (for TTL)

Attention

▶ This shutter controller is only compatible with the SSH-RA series.
▶ Please do not connect to any electromagnetic shutter other than SSH-RA series.
Due to differences in the electrical driving characteristics, other shutters can be damaged.
▶ Please contact our sales team for TTL cable to be connected to an external device.
▶ In SSH-C1RA and SSH-C1RA-H, the logic of TTL connecting to external equipment is inverted. If you need the shutter controller SSH-C4RA with TTL logic inverted, please contact our Sales Division.

Outline Drawing

Specifications

Primary material: Aluminum
Finish: Black anodized
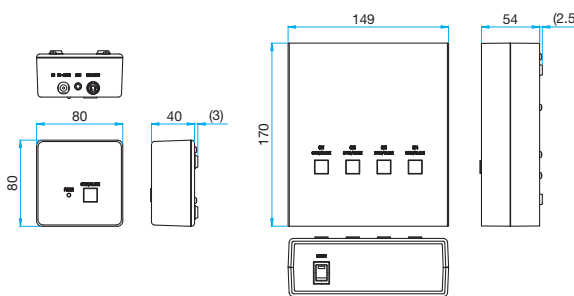
Part Number	Controllable Number of Units [unit]	Compatible Shutters	External input Signal (TTL)	Power Source [V]	Power consumption [VA]	Weight [kg]
SSH-C4RA	4	SSH-RA	Open/Close:0/5V	DC5	1	0.45
SSH-C1RA	1	SSH-RA	Open/Close:0/5V	DC5	0.25	0.07
SSH-C1RA-H	1	BSH2	Open/Close:5/0V	DC5	0.25	0.07

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Blade Type Automatic Shutter SSH-RA RoHS

Mechanical electromagnetic shutter to turn on and off the laser or to emit for a certain period of time remotely.
Please use with designated controller and cable.

● In addition to assemble with a post, SSH-RA can be assembled with cage system.
● It is small and space-saving and faster opening/closing than the conventional products.
● It can be operated with an external trigger or PC via the shutter controller SSH-C2B.

Common Specifications	
Operating Temperature	5 - +40℃
Storage Temperature	-20 - +60℃
Ambient Humidity	20 – 80%RH (without condensation)

▌Guide

▶Please use SSH-C2B as a controller.

▶Please use SSH-CA2-LORA (cable length 2m) and SSH-CA2-LOAB(extension cable, cable length 2m) as a cable.

▌Attention

▶The blade type automatic shutter cannot be used with high-power lasers or high-energy pulse lasers. Please use high power laser shutter unit.
▶The controller SSH-CRA cannot be used with SSH-RA.
▶The opening/closing speed is 10% -90% of the aperture as a standard value and is not guaranteed.
Lifetime is a reference value and not guaranteed.
▶Please refer for the setting (please refer to a lower figure★) of the 2 axis shutter controller SSH-C2B before ver1.00,003 in user setting.

Specifications								
Part Number	Aperture Diameter [mm]	Applicable size of cage	Speed setting	Opening speed [ms]	Closing speed [ms]	Controller setting	Lifetime (Low/High) reference value	Weight [kg]
C16-SSH-06RA	6	C16	Low	1.1	1.3	SSH06-L	1 million times	0.04
			High	0.6	0.7	SSH06-H	100 thousand times	
C30-SSH-06RA	6	C30	Low	1.1	1.3	SSH06-L	1 million times	0.062
			High	0.6	0.7	SSH06-H	100 thousand times	
C30-SSH-17RA	17	C30	Low	6	6	SSH17-L	1 million times	0.09
			High	3	4	SSH17-H	100 thousand times	
C60-SSH-25RA	25.5	C60	Low	7	7	SSH25-L	1 million times	0.208
			High	3	4	SSH25-H	100 thousand times	

★Please refer for the setting (please refer to a lower figure) of the 2 axis shutter controller SSH-C2B before ver1.00,003 in user setting.
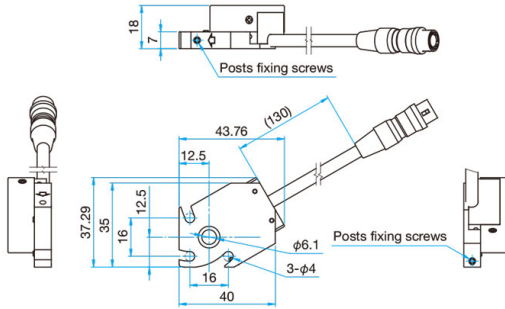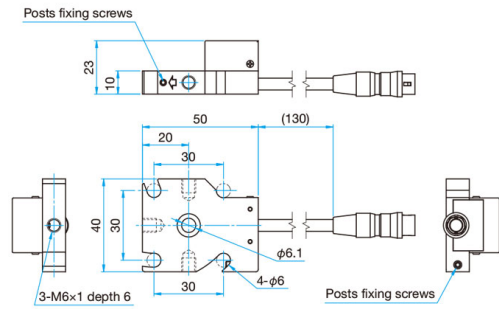
Part Number	Speed setting	TYPE	V-hold	V-pulse	T-cp	T-op
C16-SSH-06RA	Low	TYPE-B	05	07	010.0	010.0
	High	TYPE-B	05	16	005.0	005.0
C30-SSH-06RA	Low	TYPE-B	05	07	010.0	010.0
	High	TYPE-B	05	16	005.0	005.0
C30-SSH-17RA	Low	TYPE-B	05	07	025.0	025.0
	High	TYPE-B	05	16	015.0	015.0
C60-SSH-25RA	Low	TYPE-B	05	07	025.0	025.0
	High	TYPE-B	05	19	020.0	020.0

C16-SSH-06RA

18
7
Posts fixing screws

43.76 (130)
12.5
37.29
35
16
12.5
16
40
ϕ6.1
3-ϕ4
Posts fixing screws

C30-SSH-06RA

Posts fixing screws
23
10

50 (130)
20
30
40
30
30
ϕ6.1
3-M6×1 depth 6
4-ϕ6
Posts fixing screws

C30-SSH-17RA

3-M6×1 depth 10
Posts fixing screws
4-ϕ6
40
30
30
ϕ17
20
65 (130)
15
28.8
Posts fixing screws

C60-SSH-25RA

4-M6×1 depth 6
Posts fixing screws
4-ϕ6
86.5
(130)
35
70
35
60
60
ϕ25.5
15
28.8
Posts fixing screws
4-M3×0.5
ϕ4 counterbore depth 15
4-ϕ6 depth 10
30
22
4-ϕ4
30
22