

FOOT SWITCH

HRF-HD8

Part number

HRF - HD8 - 1 2 3 4

1 Protection form	S : Standard(HD8)	L : Anti-operation error lever type (HD8L)		
2 Operation form	1 : Standard 2 : 3 position with resistance point and reset button	3 : Safety type [KSB1-A with resistance point and reset button] 8 : Maintained alternating type		
3 Built-in switch	1 : KSB1 (slow action contacts 20A)			
4 Contact form	1 : 1a+1b	2 : 2a	3 : 2a+2b	4 : 2b

Performance and specifications

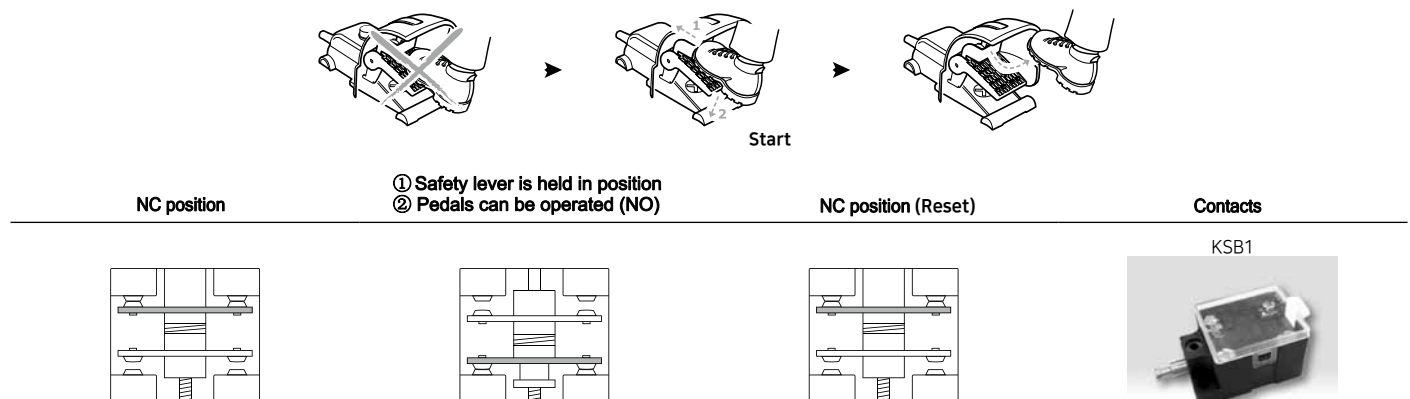
Contacts	Material	Ag Alloy (24K Au Plated)		
	Rated current	20A 250VAC		
	Rated voltage	Max. 440VAC		
	Contact resistance	Max. 50mΩ		
Specifications	Dielectric	2,000VAC (1min.)		
	Lifespan	Electrical	200,000	
		Mechanical	1,000,000	
	IP rating	IP67		
	Insulation resistance	100MΩ min.(at 500VDC)		

For IP65 and above, a COC can be issued. Please contact our Quality and Technical Department for more information.

(HRF-HD8L811)

Mechanical anti-malfunction device prevents operation due to user mistake or impact maximised user safety, the anti-malfunction lever is inside compared to conventional products, making it easier to operate and more convenient to press the pedal.

Action flowchart





Safe-Reset (HRF-HD8S811)

Quick control, in case of emergency, press the reset button on the top to quickly deactivate the pedal → Maximise safety

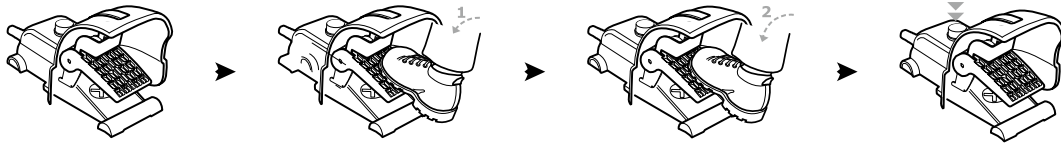
NC: Normal Close
NO: Normal Open



Reset button

3 Part

Action flowchart

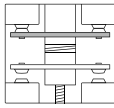


① Initial position 1

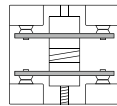
② Position 3

③ Position 3

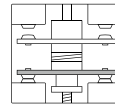
④ Initial position 1(Reset)



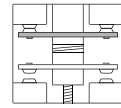
Initial position 1
(Contact B (NC)-on / Contact A (NO)-off)



Position 2 with a pressing motion Both B (NC) & A (NO) contacts are ON



Position 3, the B contact (NC) is OFF and the A contact (NO) is ON by pressing the footrest . (Self - sustaining state where the foot is removed from the pedal until the reset button is pressed.)



Press the Reset-Button on the top of the footswitch to reset to the initial state. B contact (NC)-on / A contact (NO)-off

Contact flowchart



Built-in switch

KSB1-S



FOOT SWITCH

HRF-HD8 Series

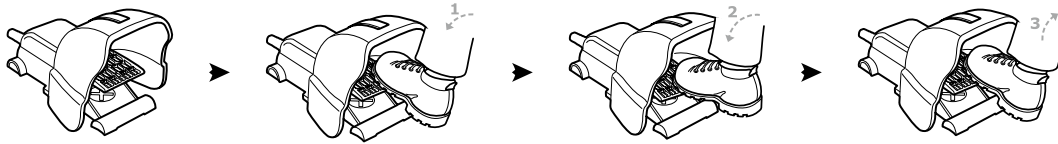
3 position (HRF-HD8S212)

It is a 3 position control system using a step-stopper and two contact blocks under the pedal, and multi-control is possible with one footswitch. Ex) The second position resets the readiness or starts the machine, and the third position starts or stops the machine, etc.



Stopper

Action flowchart

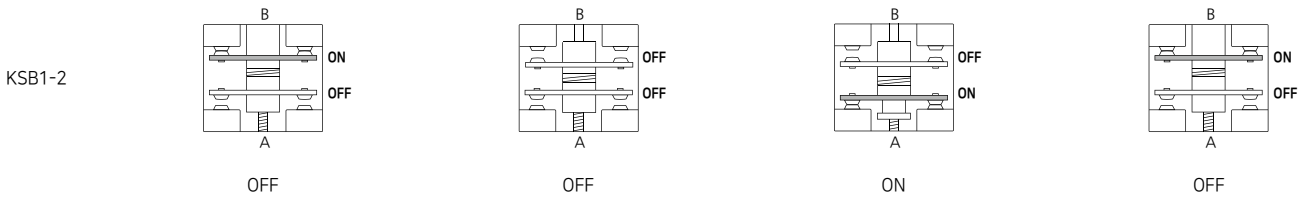
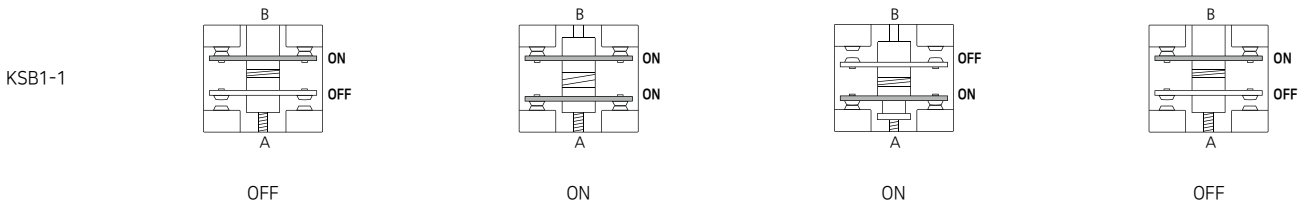


① Position 1
A-contact (NO) 1-OFF / A-contact (NO)-OFF

② Position 2
A-contact (NO)1-ON / A-contact (NO)2-OFF

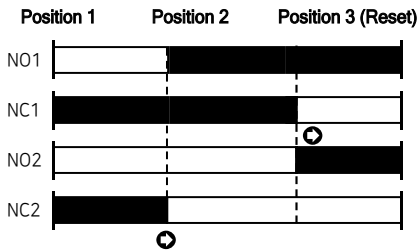
③ Position 3
A-contact (NO)1-ON / A-contact (NO)2-ON

④ Position 1 (Reset)
A contact (NO)1-OFF / A contact (NO)2-OFF



Position 3: 15 kg-f minimum

Contact flowchart



Built-in switch

KSB1-1



KSB1-2

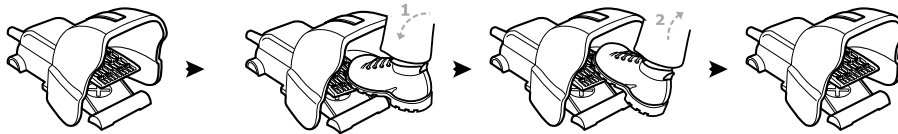


Self-sustaining (HRF-HD8S311)

Suitable for frequent continuous motion or continuous motion processes, reducing operator fatigue → increasing productivity (pressing the pedal for emergency reset results in a quick stop).

3 Part

Action flowchart

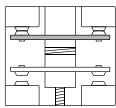


① Position 1

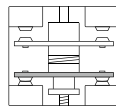
② Position 2 (self-sustaining)

③ Position 3

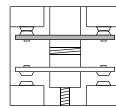
④ Position 1(Reset)



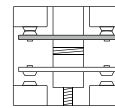
Initial state
Contact B (NC)-on / Contact A
(NO)-off



With the push
operation B contact (NC) is
turned OFF and A contact
(NO) is ON (self-sustaining
state that remains ON even
when the foot is removed), self-
sustaining state)



Press pedal again to release
magnetic hold (B contact (NC) -
on / A contact (NO) - off)

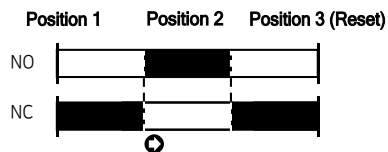


Initial state

Contact flowchart

Built-in switch

KSB1-A



FOOT SWITCH

HRF-HD8 Series

Types of Contact Blocks

Micro limit switch type contact block

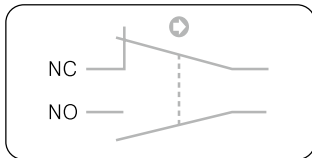
1. forced disconnect function for contacts meeting EN60947 standard (B contact (NC) only)
2. 20A/250VAC large contact capacity
3. 1 million electrical life cycles
4. 24k gold-plated contacts

Micro limit switch schematic

KSB1 : standard

KSB1-A : Self-sustaining

KSB1-S : Safe-Reset



Contact flowchart

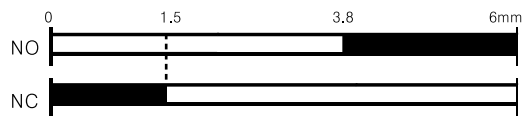
KSB1-S



Type where contact A is turned ON first, then contact B is turned OFF, only applicable to safety-reset type

■ Contact is ON

KSB1 / KSB1-A

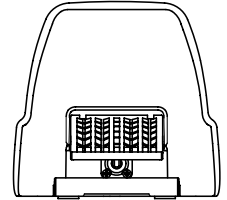
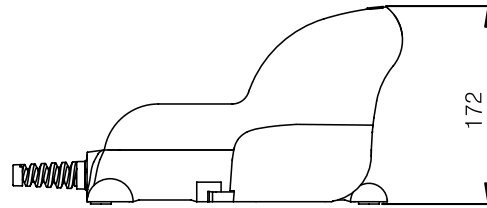
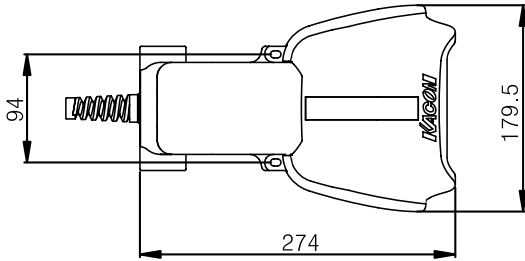


Type where B contact is turned OFF first and A contact is turned ON, applicable to basic type & self-sustaining type

External dimensions

Unit : mm

HRF - HD8 □ 1 □ □ / HD8 □ 2 □ □ / HD8 □ 3 □ □



3 Part

HRF - HD8 □ 8 □ □

