

MICRO SWITCH

## KH-9015



### CLASSIFICATION

KH - 9015 - HLL

① TYPE NUMBER	9015	Micro switch, Standard type
② ACTUATOR	PBF	Slim spring plunger
	PBL	Panel mount plunger
	RP	Panel mount roller plunger
	CRP	Panel mount cross roller plunger
	PBS	Short spring plunger
	HL	Short hinge lever
	HLL	Long hinge lever
	HP	Leaf spring
	HRL	Long hinge roller lever
	HRM	Medium hinge roller lever
	HRS	Short hinge roller lever
	HLZ	Hinge lever Z type
	HR(S)W	Hinge roller lever W type

### UL, cUL Standards UL508 No. E117960

Rated Voltage	600VAC	250VAC	125VAC	8VDC	14VDC	30VDC	125VDC	250VDC
Rated Current	3A Resistive	10A Resistive	15A Resistive	15A	15A	6A	0.4A	0.2A

CONTROL COMPONENTS

MICRO SWITCH









FOOT SWITCH







LIMIT SWITCH

POWER SWITCH

HOIST SWITCH

CAM SWITCH

Model	Model	OF Max.	RF min.	PT Max.	OT min.	MD Max.	FP Max.	OP	Material
KH-9015-PBF		380g	110g	1.0mm	1.3mm	0.13mm	-	28.2mm ± 0.6	Body: Phenol Pushbutton: Brass(Ni Plated) Roller: Stainless steel
KH-9015-RP		380g	110g	1.0mm	5.2mm	0.13mm	-	21.8mm ± 0.8	
KH-9015-PBL		380g	110g	1.0mm	1.3mm	0.13mm	-	21.2mm ± 0.8	
KH-9015-PBS		380g	110g	1.0mm	3.2mm	0.13mm	-	33.3mm ± 1.4	
KH-9015-HP		70g	24g	7.6mm	7.6mm	1.3mm	31.0mm	23.4mm ± 0.8	Body: Phenol Lever: Stainless Steel Roller: Stainless steel
KH-9015-CRP		380g	110g	1.0mm	1.0mm	0.13mm	-	33.4mm ± 1.4	
KH-9015-HL		100g	14g	10mm	4.0mm	2.4mm	28.2mm	19.1mm ± 1.0	
KH-9015-HLL		70g	14g	12.2mm	7mm	1.5mm	33.0mm	19.0mm ± 0.8	

Model	Model	OF Max.	RF min.	PT Max.	OT min.	MD Max.	FP Max.	OP	Material
KH-9015-HRL		100g	14g	8.0mm	3.6mm	2.4mm	36.5mm	30.2mm ± 1.0	Body: Phenol Lever: Stainless Steel Roller: Stainless steel
KH-9015-HLZ		130g	31g	5.5mm	3.4mm	0.8mm	36.0mm	30.5mm ± 0.4	
KH-9015-HRS		160g	28g	5.0mm	2.0mm	1.2mm	32.5mm	30.2mm ± 1.0	
KH-9015-HRM		180g	30g	5.0mm	2.0mm	1.2mm	44.0mm	38.5mm ± 2.0	Body: Phenol Lever: Stainless Steel Roller: Stainless steel
KH-9115-HRS		160g	28g	-	2.6mm	1.2mm	43.6mm	41.3mm ± 0.8	
KH-9015-HRSW		160g	28g	5.0mm	2.0mm	1.2mm	32.5mm	30.2mm ± 1.0	

CONTROL COMPONENTS

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FOOT SWITCH

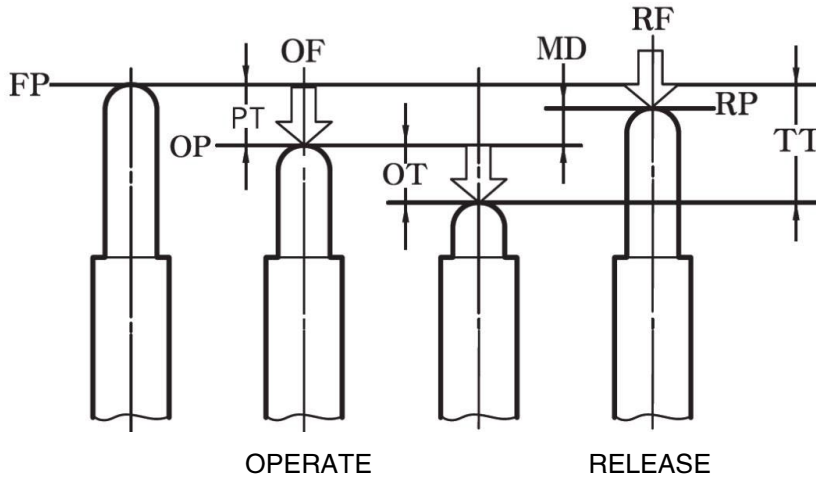
LIMIT SWITCH

POWER SWITCH

HOIST SWITCH

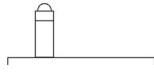
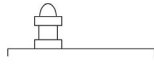
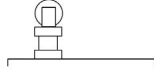

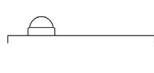
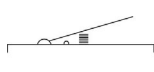
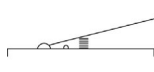
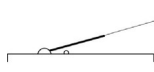


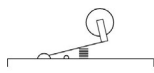


CAM SWITCH

Reference



OF	Required force to actuate	Required force to move from free position (FP) to operating position (OP)
RF	Return force	Required force to return from total travel position (TTP) to return position (RP)
PT	Movement to actuation	Distance or angle of movement from free position (FP) to operating position (OP)
MD	Movement differential	Distance or angle of movement from operating position (OP) to return position (RP)
OT	Movement after actuation	Distance or angle of movement from operating position (OP) to total travel position (TTP)
OP	Operating position	Actuator position when a contact point (NO (normal open)) is actuated (On) at free position (FP).
FP	Free position	Actuator position when no external force is applied to actuator
TTP	Total travel position	Actuator position when actuator arrives at stop.
RP	Return position	Actuator when a contact point (NO) is off at operating position (OP).
TT	Entire movement	Distance or angle of movement from free position (FP) to total travel position (TTP).

Actuator

KH - 9015 - PBF	Slim spring plunger	
KH - 9015 - PBL	Panel mount plunger	
KH - 9015 - RP	Panel mount roller plunger	
KH - 9015 - CRP	Panel mount cross roller plunger	
KH - 9015 - PBS	Short spring plunger	
KH - 9015 - HL	Short hinge lever	
KH - 9015 - HLL	Long hinge lever	
KH - 9015 - HP	Leaf spring	
KH - 9015 - HRL	Long hinge roller lever	
KH - 9015 - HRM	Medium hinge roller lever	
KH - 9015 - HRS	Short hinge roller lever	
KH - 9015 - HLZ	Hinge lever Z type	
KH - 9015 - HR(S)W	Hinge roller lever W type	

CONTROL COMPONENTS

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FOOT SWITCH

LIMIT SWITCH

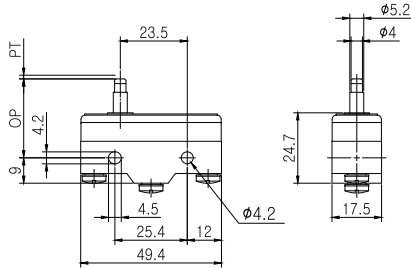
POWER SWITCH

HOIST SWITCH

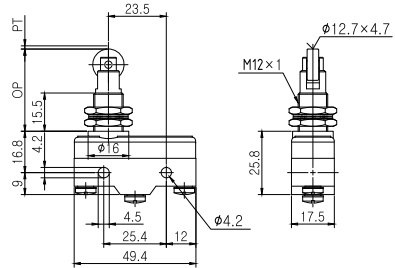
CAM SWITCH

**Dimension**

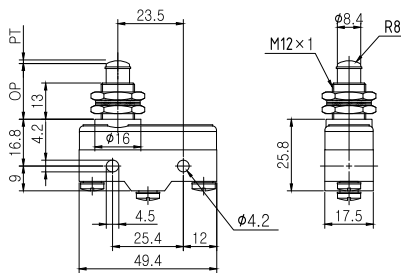
**Z4G1P03B (KH-9015-PB(F))**



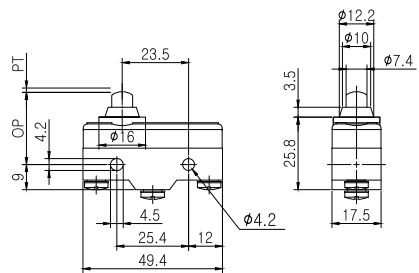
**Z4G1P07B (KH-9015-RP)**



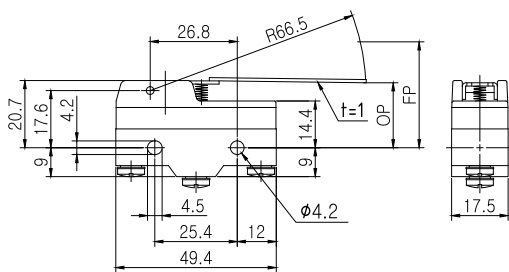
**Z4G1P05B (KH-9015-PB(L))**



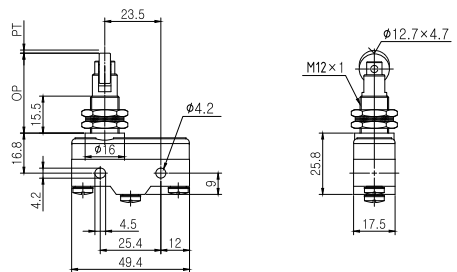
**Z4G1P09B (KH-9015-PB(S))**



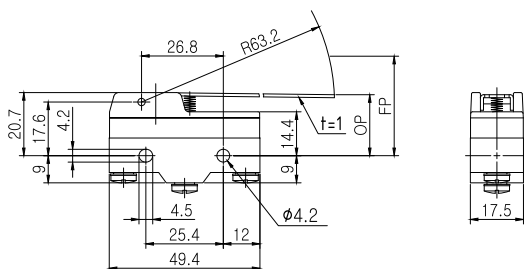
**KH-9015-HP(PIN TYPE)**



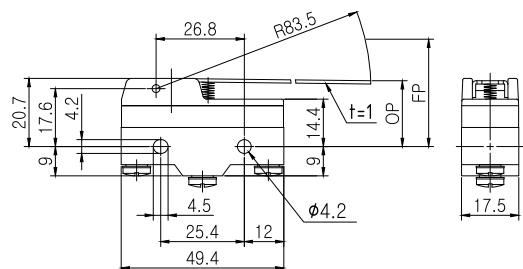
**KH-9015-CRP**



**Z4G1L01B (KH-9015-HL)**

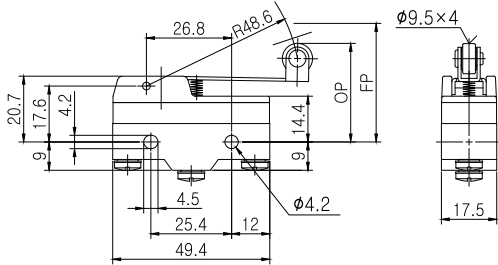


**Z4G1L02B (KH-9015-HL(L))**

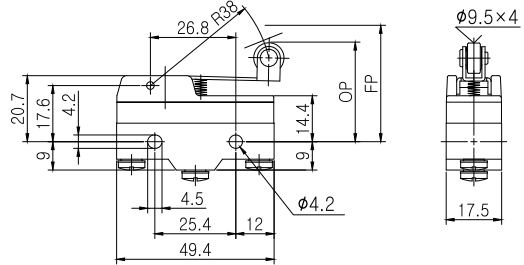


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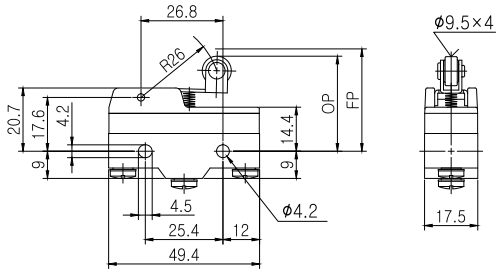
**Z4G1L03B (KH-9015-HR(L))**



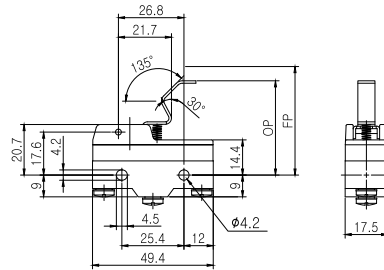
**Z4G1L04B (KH-9015-HR(M))**



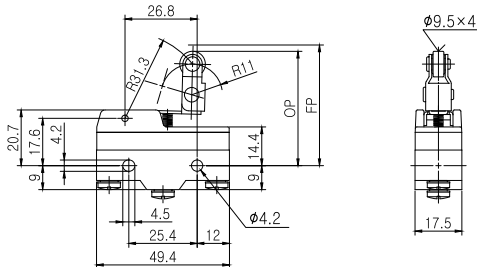
**Z4G1L07B (KH-9015-HR(S))**



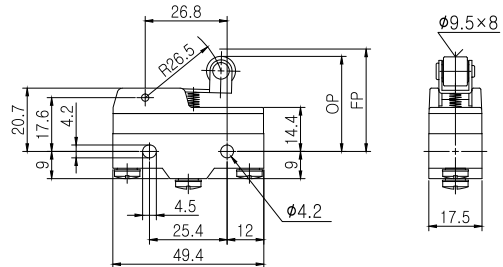
**Z4G1L01B (KH-9015-HLZ)**



**KH-9115-HR(S)**



**Z4G1L07B (KH-9015-HR(S)W)**



CONTROL COMPONENTS

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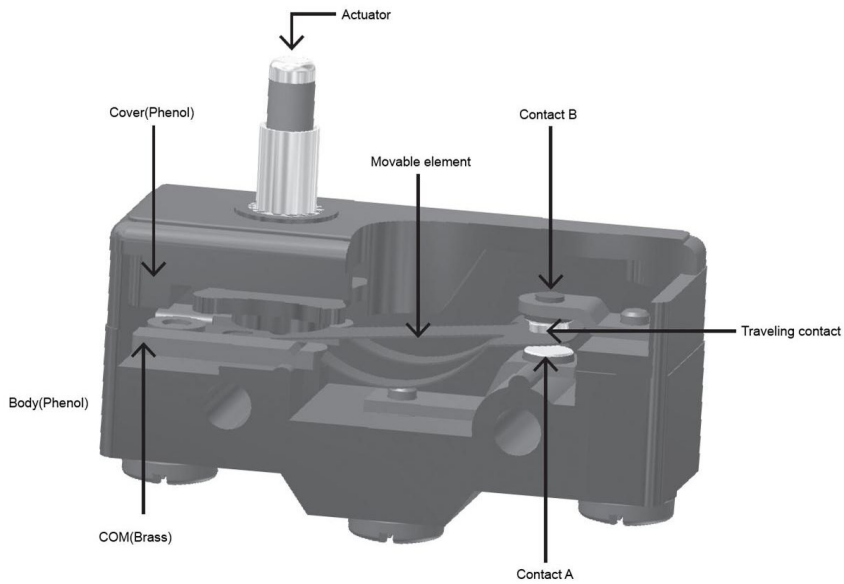
FOOT SWITCH

LIMIT SWITCH

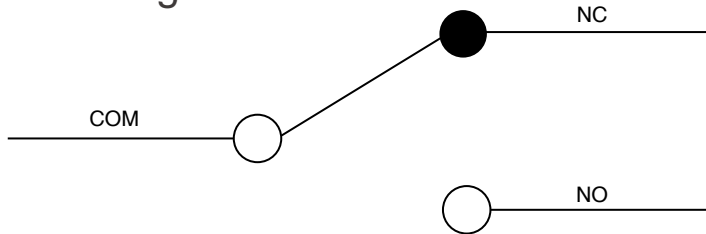
POWER SWITCH

HOIST SWITCH

CAM SWITCH



**Circuit Diagram**



**Contact Ratings**

Rated Voltage	Resistive Load		Inductive Load		Motor Load	
	NC	NO	NC	NO	NC	NO
125VAC	15A		10A		3A	1.5A
250VAC	10A		6A		2A	1A
500VAC	3A		2A		1.5A	0.75A
8VDC	15A		10A		-	-
14VDC	15A		10A		-	-
30VDC	10A		6A		-	-
125VDC	0.6A		0.1A		-	-
250VDC	0.3A		0.05A		-	-



## Technical Information

Allowed Operating Velocity		0.1mm/s~1mm/s
Operating Frequency	Mechanical	240 operations/minute
Operating Frequency	Electrical	20 operations/minute
Insulation Resistance		100MΩ min. (DC500V)
Contact Resistance		15mΩ Max.
Dielectric Strength	Between live parts	1,000VAC(50/60Hz) for 1 minute
	Between dead parts	2,000VAC(50/60Hz) for 1 minute
Vibration Resistance	Malfunction	10~55Hz double amplitude 1.5mm, X,Y,Z at each direction
Shock Resistance	Destruction	100G
	Malfunction	5G
Durability	Mechanical	5,000,000 operations
	Electrical	500,000 operations
Protection		IP50
Ambient Temperature		-25~+80 (not freezing condition)
Ambient Humidity		45~85% RH
Weight		31.5~59.5g