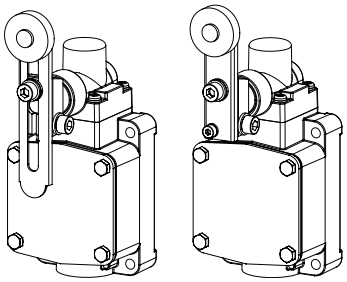
Heavy-Duty Limit Switch

SW2MS Series



IP66 -10~+55℃ -40~+40℃ -50~+120℃

Thank you for purchasing Qlight's products. Please read this user manual carefully prior to installation and operation to ensure safe and correct use.

⚠ Precautions for Safety

Failure to follow the instructions below may cause a loss of life or serious physical injury.

1. During wiring or maintenance, please completely turn off the power of the product. (Failure to follow this may lead to an electric shock.)
2. Do not install the product in locations that subjects it to excessive dust or water other than the conditions designated by the IP protection ratings indicated for each product. (Failure to follow these instructions may cause a fire to the product, electric shock, physical injury, malfunction or damage to the product.)
3. Do not alter or repair this product. If maintenance or repair service is required, please contact your local Qlight contact point. (Failure to follow these instructions may lead to fire, electric shock, or product damage.)
4. Please apply the correct voltage to the product. (Failure to follow these instructions may lead to fire, electric shock, or product damage.)
5. When the product is applied to a condition that may impact lives or property, please make sure to have a double safety device. (Failure to follow this may cause damage to property, fire, electric shock and loss of life.)
6. This product requires grounding.

⚠ Precautions for Correct Use

Failure to follow the proper instructions may cause damage to property, the product, or malfunction of the product that would void the warranty.

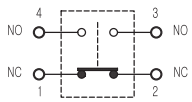
1. Please remove any objects that can interrupt ventilation around the product.
2. Please turn off the power of the product immediately if it fails to operate properly.
3. Carefully wire the product according to each product's specification.
4. Please be careful in preventing chemicals such as thinner, benzene, etc. in contact with the surface of the product.
5. Do not apply excessive force/impact to the product.
6. Failure to follow any of the instructions above may cause malfunction or damage to the product, fire, and electric shock.

Ordering Specifications

■ Rated specifications

Rated voltage(V)		Non-inductive load(A)				Inductive load(A)			
		Resistance load		Lamp load		Inductive load		Electric motor load	
		NC(normally closed)	NO(normally opened)	NC(normally closed)	NO(normally opened)	NC(normally closed)	NO(normally opened)	NC(normally closed)	NO(normally opened)
AC	125	10		3	1.5	10		5	2.5
	250	6		2	1	10		3	1.5
	480	2		1.5	0.8	3		1.5	0.8
DC	8	10		6	3	6		6	
	14	10		6	3	6		6	
	30	6		4	3	4		4	
	125	0.8		0.2	0.2	0.8		0.2	
	250	0.4		0.1	0.1	0.4		0.1	

■ Circuit configuration

Contact	2CKT-DB (2 differential circuit pair)
Circuit configuration	
Appearance	

Inrush current	NC(normally closed)	Max. 20A
	NO(normally opened)	Max. 10A

※Annotation

1. The figures in the diagram present normal current.
2. The inductive load has a power factor of 0.4 or higher (AC) and a time constant of 7 ms or less (DC)
3. The lamp load is assumed to have 10 times the inrush current.
4. The motor load current is assumed to have 6 times the inrush current.

Please scan the QR code for more detailed product information.

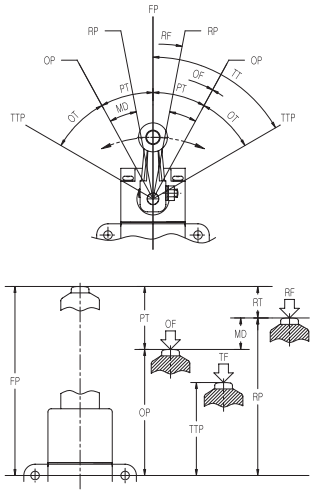
www.qlight.com

■ **Operating specifications**

Actuator type	Model number	Operating characteristics					Weight
		OF Max.g	RF Min.g	PT Max.	TT Min.	MD Max.	
Adjustable Roller Lever	SW2MS-AL	1,380	260	25˚±5˚	55˚	10˚	Abt. 1.45kg
Roller Lever	SW2MS-RL						Abt. 1.44kg
Large Roller Lever	SW2MS-LRL						Abt. 1.46kg

Product Specifications

■ Operating characteristics

Definition of operation features	Classification	Terms	Abbreviation	Unit	Definition
	Power	Operating force	OF	g, kg g -mm	The force applied to the actuator required to move from the free position (FP) to the operating position (OP)
		Release force	RF		The force applied to the actuator required to move from the motion limit position (TTP) to the return position (RP)
		Total travel force	TF		The force applied to the actuator required to move from the operating position (OP) to the operating limit position (TTP)
	Movement	Pre travel	PT	mm,°	Movement distance or movement angle from the free position (FP) of the actuator to the operating position (OP)
		Over travel	OT		Movement distance or movement angle from the operating position (OP) of the actuator to the operating limit position (TTP)
		Movement differential	MD		Movement distance or movement angle from the operating position (OP) of the actuator to the return position (RP)
		Total travel	TT		Movement distance or movement angle from the free position (FP) of the actuator to the motion limit position (TTP)
	Position	Free position	FP	mm,°	Actuator position of the operating part when external force is not applied
		Operating position	OP		The position of the actuator when the movable contact is accurately reversed from the free position (FP) state by the addition of external force to the actuator
		Release position	RP		The position of the actuator when the movable contact is accurately reversed from the operating position (OP) state to the free position state (FP) by reducing the external force of the actuator.
		Total travel position	TTP		Actuator's position when the actuator reaches the stop position

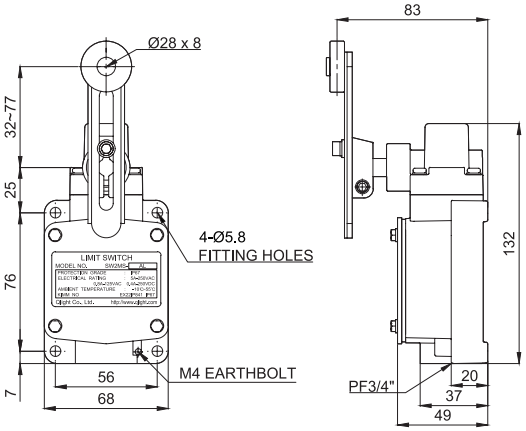
■ General product specifications

Protection rating		IP67
Mechanical life		Over 0.3 million operations
Electrical life		Over 0.1 million operations
Allowable operating cycle	Mechanical	120 Operations per minute max.
	Electrical	30 Operations per minute max.
Insulation resistance		100MΩ min. at 500V DC
Contact resistance		50MΩ max.
Withstand voltage	Between non-continuous terminal	1,000V AC, 50 to 60Hz for 1 minute
	Between each termanal and non-conducting metal part	2,000V AC, 50 to 60Hz for 1 minute
Impact resistance	Endurance	Approx. 1,000m/s^2 (100G)
	Malfunction	Approx. 250m/s^2 (25G)
Vibration		10 to 55Hz 1.5mm double amplitude(Double amplitude)
Ambient operating temperature		-10°C to +55°C -40°C to +40°C(Cold-Resistant Type) +50°C to +120°C(Heat-Resistant Type)
Ambient operating humidity		45 to 85% RH
Certificates		KIMM

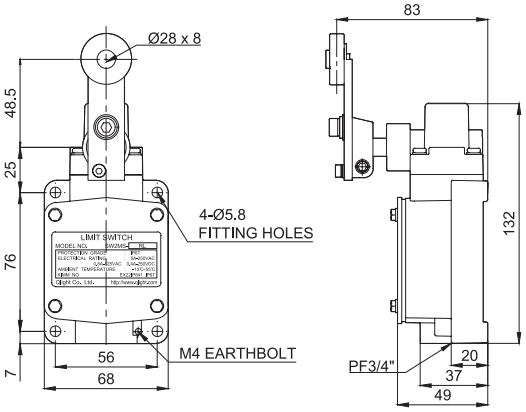
Dimensions

(Units : mm)

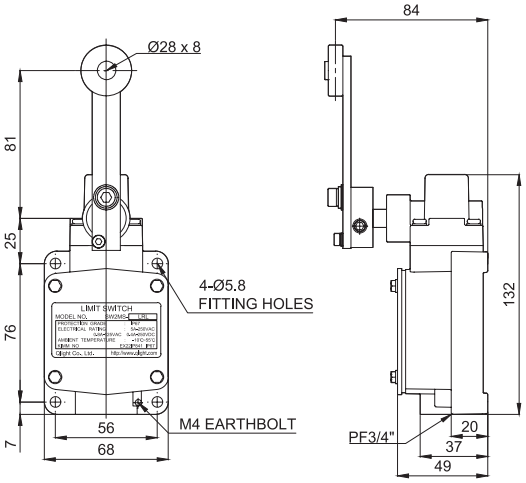
SW2MS-AL



SW2MS-RL

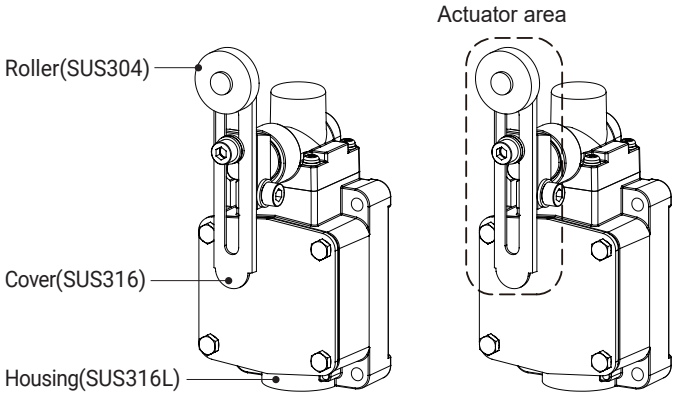


SW2MS-LRL

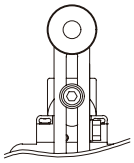
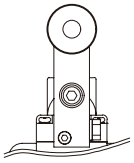
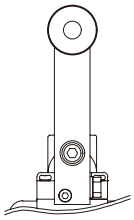


Parts Definition/ Installation

■ **Parts Definition**



• Actuator area

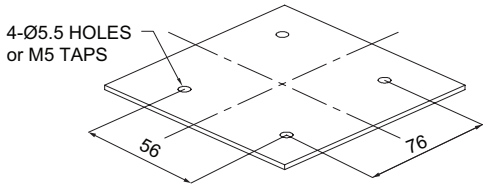
SW2MS-AL	SW2MS-RL	SW2MS-LRL
		

■ **Installation**

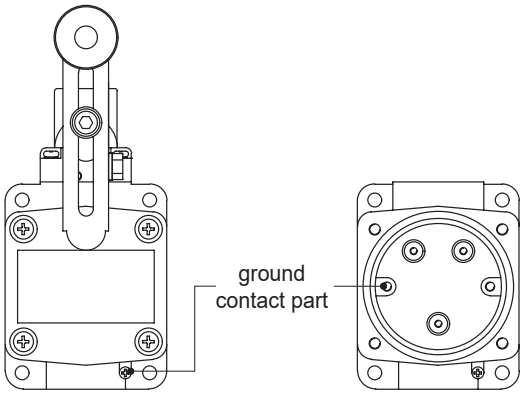
- First, remove the flange nuts from bolts and place the product through the mounting surface holes.
- The mounting hole of this product is Ø5.8 in diameter.
- When machining taps, fasten the bolt through the mounting hole of the product.
- When machining holes, insert the bolt through the hole of the product, and tighten the nut from the opposite side of the mounting surface.

Mounting Hole Specifications

- Machine holes on the mounting surface referring to the diagram below.

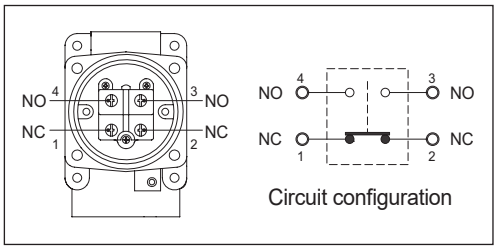


Grounding Instructions



- Please ground using M4 bolts in the grounding hole.
- The internal grounding hole is M4.
- When connecting the grounding cable, please use a ring terminal.
- Please use a grounding cable with a diameter greater than 4mm.

Terminal Box Wiring Instructions



Circuit configuration

- This product has a terminal block installed inside the device.
- Please apply fork (U-type) or ring (O-type) locking spade terminal at naked tip of the wire for secure connection.
- Connect after checking the circuit configuration of the terminal block.

Installation Environment and Protection Rating

- This product is designed for use with protection rating of IP67.
- If the product is installed in locations that subject it to excessive dust or water other than the designated IP protection rating indicated(IP67), it may cause malfunction or damage to the product.
- For further information, please visit our website (www.qlight.com).

MEMO

MEMO

⚠ For your safety

Specification and dimensions listed in this catalogue subject to change without notice for product quality improvement.
The newest product information is available on our website.(www.qlight.com)
Please read the instruction manual attached to the product carefully before installation and use.

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