

# HY-M900 / HY-LM900 series

## Limit switch

- Solid die casting case and built in the 2 circuits double micro switch
- High mechanical intensity with the heat resistance, oil proof and dust protection structure
- Various actuators (8 types) provide wide application
- IP67 protective structure (when using the company product HYC-M1 in wire opening)
- Check the operation state on the outside by attaching the operation indicator.



Control switch  
Combination display light

Power switch  
Main switch  
Cam switch

Limit switch  
Micro switch

Hoist switch  
Foot switch  
Mono lever switch

Sign tower  
Signal light

Buzzer  
Terminal block  
Fuse holder

Control box  
Cable connector

Discontinued Products

### ●● Suffix code

Model	Code	Description
HY-M90		Limit switch (No operation indicator)
HY-LM90	□ □	Limit switch (Operation indicator attachment type)
Actuator (operation part)	2	Roller Plunger Type
	3	Ball Plunger Type
	4	Roller Adjustable Lever Type
	7	Adjustable Rod Wire Type
	8	Roller Lever Type
	8L	Fork Roller Lever
	8R	∅50 Roller Lever Type
	9	Coil Spring Type
Operation indicator classification (HY-LM90□□)		No operation indicator
	A	a.c indicator attachment type
	D	d.c indicator attachment type

### ●● Operation indicator attachment type classification

- M900 series limit switch is generally composed of the product with operation indicator and without operation indicator. Also divided into the a.c type and d.c type operation indicator.
- It can be used as an operation indicator just by changing the cover of limit switch. It does not need the separate connection and it selects ON/OFF by rotating the holder 180 degree.

Voltage	a.c operation indicator (250 V a.c)	d.c operation indicator (24 V d.c)
Model	HY-LM90□A (a.c)	HY-LM90□D (d.c)
Indicator type	Neon lamp	L,E,D
Leakage current	approx 1.2 mA (250 V a.c)	approx 1.0 mA (24 V d.c)

## ●● Ratings

Rated voltage		Rated electro current (A)			
		Resistive load	Inductive load	electric motor load	
				N.C	N.O
a.c	125 V	15	10	3	1.5
	250 V	10	6	2	1
	480 V	3	2	1.5	0.75
d.c	8 V	15	10	–	–
	14 V	15	10	–	–
	30 V	6	5	–	–
	125 V	0.4	0.05	–	–
	250 V	0.2	0.03	–	–

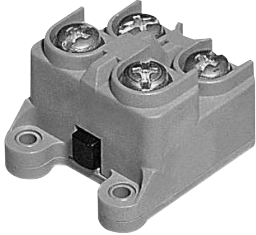
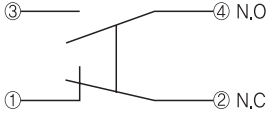
※ In case of electric magnetic coil and incandescent lamp load then it is same as the electric motor load.

## ●● Specification

Contact structure	M4 screw tightening terminal, 2 circuits double type (1a1b)	
Contact material	AgNi	
Protective structure	IP67 (Only when using our company product HYC-M2 in the wire opening)	
Operation indicator	a.c : Neon lamp, d.c : LED (only with the HY-LM series)	
Rated current(Ie)	6 A 250 V a.c (AC-15, DC-13)	
Dielectric strength	2,000 V a.c 50/60 Hz for 1 min (between the terminal and non-recharging metal part)	
Insulation resistance	Min 100 M $\Omega$ (500 V d.c insulated ohmmeter)	
Contact resistance	Max 50 M $\Omega$ (default value)	
Rated voltage(Ue)	250 V a.c, 30 V d.c	
Actuator intensity	5 times larger than O.F (force required to operate) 1min to the, operating direction	
Vibration	Double amplitude 1.5mm, frequency 10 ~ 55 Hz, continuously 2 hour	
Shock	1,000 $\%$ (durability), 300 $\%$ (malfunction)	
Allowable operation speed	0.1 ~ 1 $\%$ (without damaging the actuator)	
Life expectancy	Mechanical	Min 1million times (open/close frequency 120 times/min)
	Electrical	Min 300 thousand times (open/close frequency 20 times/min)
Ambient temperature	-10 ~ 70 $^{\circ}$ C	
Ambient humidity	45 ~ 95 % R.H.	
Weight	Approx 350 g (included the box with HY-M904)	

HY-M900/HY-LM900 series



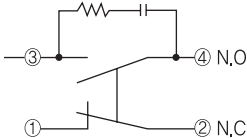
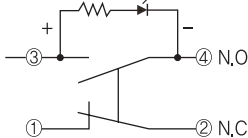
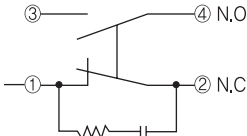
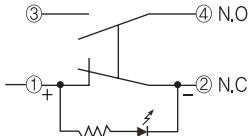
●● Built in type micro switch

Appearance (LS-10)	Connection diagram
	

Control switch  
Combination display light

Power switch  
Main switch  
Cam switch

●● Cover for operation indicator and internal connection diagram

a.c	d.c
	
<p>L,ON when Normal close (default)</p> 	<p>L,ON when Normal close (default)</p> 
<p>L,ON when Push</p> 	<p>L,ON when Push</p> 

Limit switch  
Micro switch

Hoist switch  
Foot switch  
Mono lever switch

Sign tower  
Signal light

Buzzer  
Terminal block  
Fuse holder

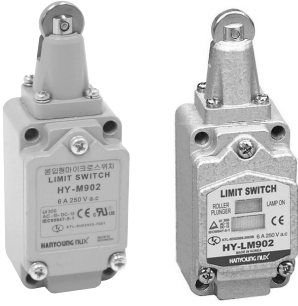
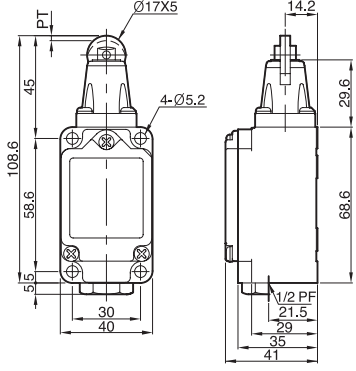
Control box  
Cable connector

Discontinued Products


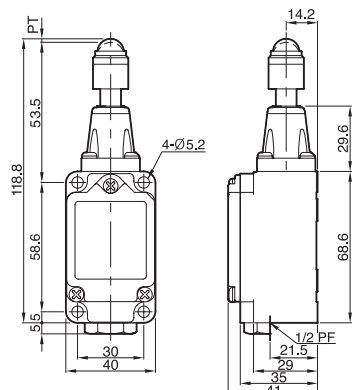
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Dimension (unit : mm)


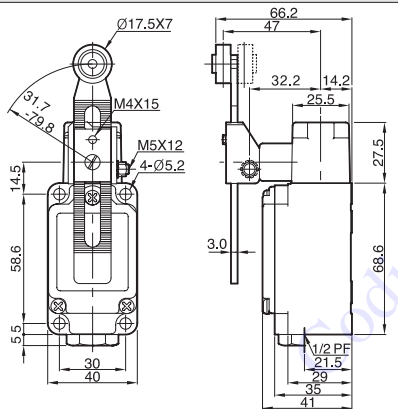
■ Roller Plunger

Appearance	Dimension	Operation characteristic
 <p>HY-M902      HY-LM902</p>		<p>O.F max : 28 N (2857 gf)                      R.F min : 8 N (816 gf)                      P.T : 2.0 mm                      M.D max : 1.0 mm</p>

■ Ball Plunger


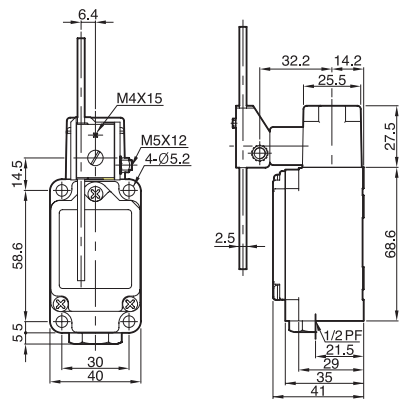
Appearance	Dimension	Operation characteristic
 <p>HY-M903      HY-LM903</p>		<p>O.F max : 28 N (2857 gf)                      R.F min : 8 N (816 gf)                      P.T : 2.0 mm                      M.D max : 1.0 mm</p>

■ Roller Adjustable Lever


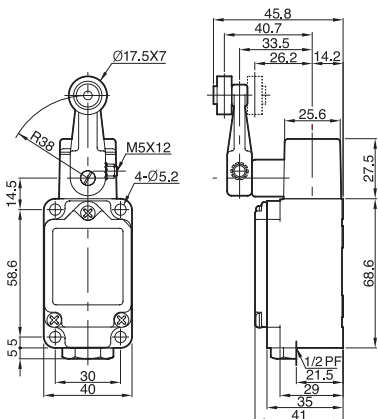
Appearance	Dimension	Operation characteristic
 <p>HY-M904      HY-LM904</p>		<p>O.F max : 14 N (1428 gf)                      R.F min : 2.1 N (214 gf)                      P.T : 15° ±5°                      M.D max : 12°                      T.T : 40°</p>

HY-M900/HY-LM900 series


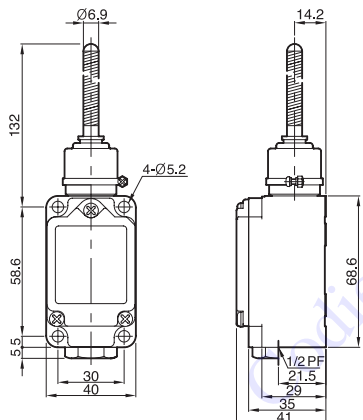
■ Rod Lever

Appearance	Dimension	Operation characteristic
 <p>HY-M907      HY-LM907</p>		<p>O.F max : 1.5 N (153 gf)                      R.F min: 0.25 N (25 gf)                      P.T : 15° ±5°                      M.D max : 12°                      T.T : 40°</p>

■ Roller Lever

Appearance	Dimension	Operation characteristic
 <p>HY-M908      HY-LM908</p>		<p>O.F max : 14 N (1428 gf)                      R.F min: 2.1 N (214 gf)                      P.T : 15° ±5°                      M.D max : 12°                      T.T : 40°</p>

■ Coil Spring

Appearance	Dimension	Operation characteristic
 <p>HY-M909      HY-LM909</p>		<p>O.F max : 1.5 N (153 gf)                      P.T : 20.0 ±10.0 mm</p>

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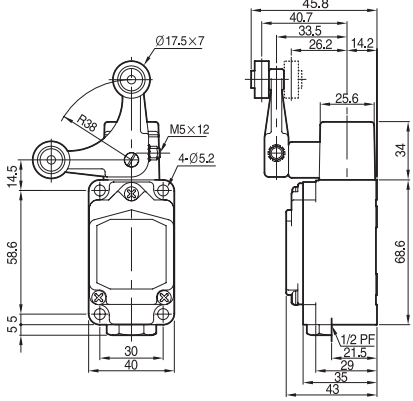
Sign tower  
Signal light

Buzzer  
Terminal block  
Fuse holder


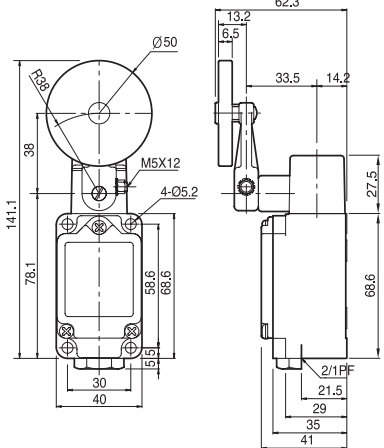
Control box  
Cable connector

Discontinued Products

■ Fork Roller Lever

Appearance	Dimension	Operation characteristic
 <p data-bbox="268 691 374 718">HY-M908L</p>		<p data-bbox="1005 455 1225 483">O.F max : 11,8N(1200gf)</p> <p data-bbox="1005 494 1133 521">P.T : 50° ±5°</p> <p data-bbox="1005 533 1133 560">O.T max : 12°</p> <p data-bbox="1005 571 1133 598">T.T : 90° ±5°</p>

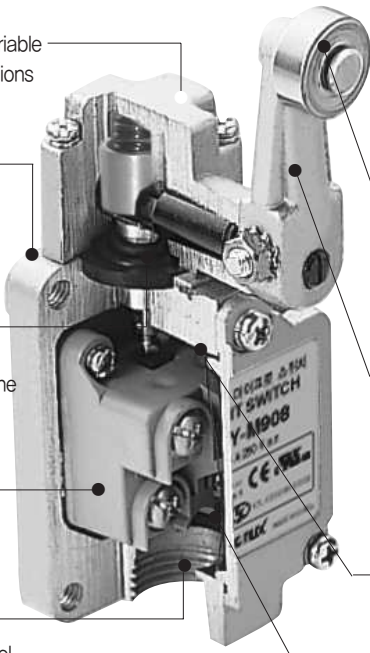
■ Ø50 Roller Lever

Appearance	Dimension	Operation characteristic
 <p data-bbox="268 1259 374 1286">HY-M908R</p>		<p data-bbox="1005 981 1213 1008">O.F max : 14 N (1428 gf)</p> <p data-bbox="1005 1020 1190 1047">R.F min: 2,1 N (214 gf)</p> <p data-bbox="1005 1058 1119 1085">P.T : 15° ±5°</p> <p data-bbox="1005 1097 1119 1124">M.D max : 12°</p> <p data-bbox="1005 1136 1076 1163">T.T : 40°</p>

HY-M900/HY-LM900 series

●● Structure

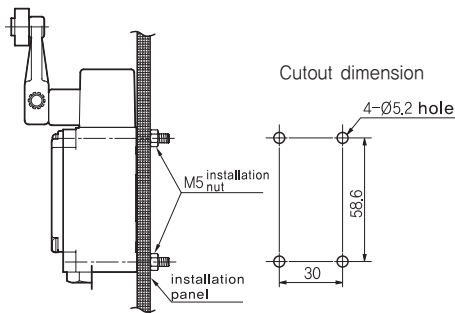
- **Head** : Al die casting roller lever type, variable roller lever type : Attach in any of 4 directions by unloosening 4 screws.
- **Case** : Al die casting, high mechanical durability and has a heat resistance, oil-proof and dust protective structure.
- **Plunger** : Accurate manufacturing which provides excellent reciprocating motion. It makes the operation of built-in switch very smooth.
- **MICRO S/W** : long mechanical life expectancy
- **Wire opening** : Connector screw is PF 1/2 common parallel screw. When using it with our company connector (M1 and M2) then it will be sealed more tightly.



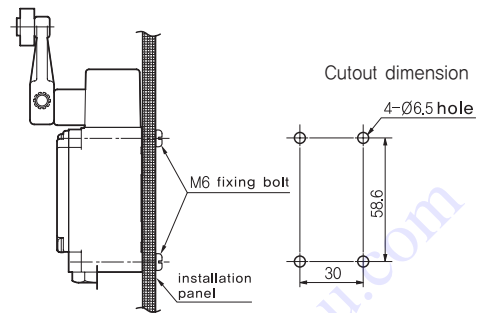
- **Roller** : Excellent hardness and abrasion resistance
- **Lever** : Al die-casting (M908) variable roller lever type, variable rod type and roller lever type can set the lever position within any position (360 degree)
- **Cover Seal** : O ring. It tightens the cover properly which helps it to seal the area
- **Insulating paper** : Excellent insulation

●● Installation method

■ Front installation



■ Back installation



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