

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.



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	Ø50 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)

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

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	—	—

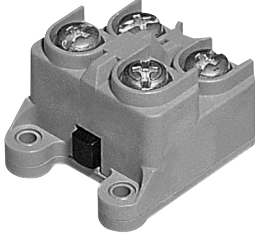
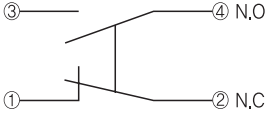
※ In case of electric magnetic coil and incandescent lamp load then it is same as the electric motor load.

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-recharing metal part)
Insulation resistance		Min 100 M Ω (500 V d.c insulated ohmmeter)
Contact resistance		Max 50 M Ω (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 °C
Ambient humidity		45 ~ 95 % R.H.
Weight		Approx 350 g (included the box with HY-M904)

HY-M900/HY-LM900 series

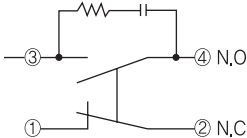
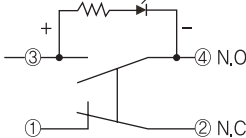
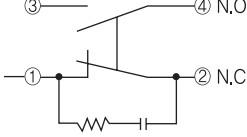
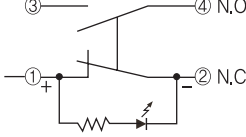
Built in type micro switch

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
	
L.ON when Normal close (default)	L.ON when Normal close (default)
	
L.ON when Push	L.ON when Push
	

Limit switch
Micro switch

Hoist switch
Foot switch
Mono lever switch

Sign tower
Signal light

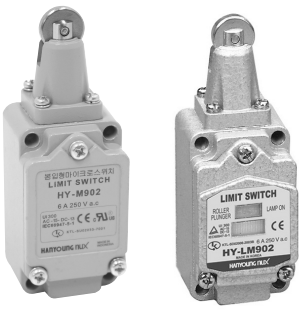
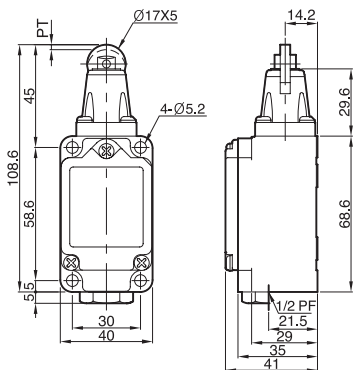
Buzzer
Terminal block
Fuse holder

Control box
Cable connector

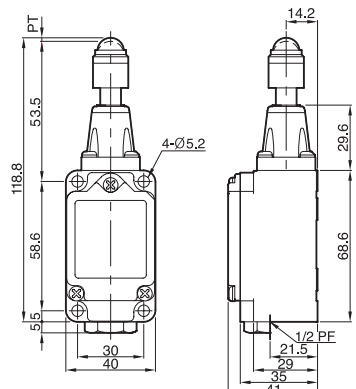
Discontinued
Products

Dimension (unit : mm)

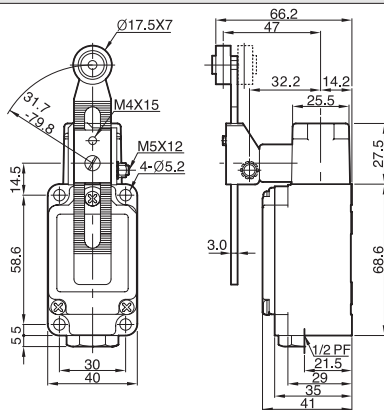
■ Roller Plunger

Appearance	Dimension	Operation characteristic
 HY-M902 HY-LM902	 Technical drawing showing dimensions for roller plunger limit switch (HY-M902 / HY-LM902): - Top view: 30 (width), 40 (depth), 4-Ø5.2 (mounting holes), 5.5 (bottom flange), 58.6 (main body height), 45 (plunger height), 108.6 (total height), PT (plunger tip), Ø17X5 (plunger shaft). - Side view: 14.2 (top flange), 29.6 (plunger height), 68.6 (main body height), 1/2 PF (thread), 21.5 (thread offset), 29 (bottom flange), 35 (base width), 41 (total base width).	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

■ Ball Plunger

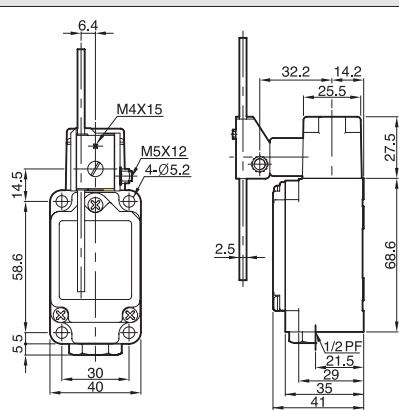
Appearance	Dimension	Operation characteristic
 HY-M903 HY-LM903	 Technical drawing showing dimensions for ball plunger limit switch (HY-M903 / HY-LM903): - Top view: 30 (width), 40 (depth), 4-Ø5.2 (mounting holes), 5.5 (bottom flange), 58.6 (main body height), 53.5 (ball plunger height), 118.8 (total height), PT (plunger tip). - Side view: 14.2 (top flange), 29.6 (plunger height), 68.6 (main body height), 1/2 PF (thread), 21.5 (thread offset), 29 (bottom flange), 35 (base width), 41 (total base width).	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

■ Roller Adjustable Lever

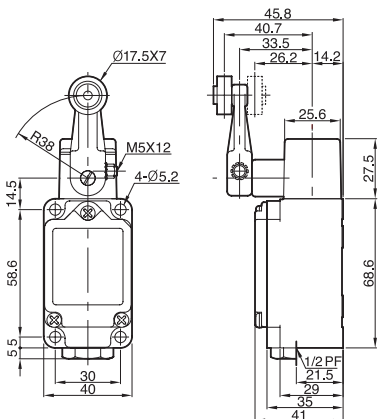
Appearance	Dimension	Operation characteristic
 HY-M904 HY-LM904	 Technical drawing showing dimensions for roller adjustable lever limit switch (HY-M904 / HY-LM904): - Top view: 30 (width), 40 (depth), 4-Ø5.2 (mounting holes), 5.5 (bottom flange), 58.6 (main body height), 14.5 (lever height), 31.7 (lever tip), 79.8 (total height), Ø17.5X7 (lever shaft), M4X15 (lever nut), M5X12 (lever screw). - Side view: 66.2 (top flange), 47 (plunger height), 32.2 (plunger height), 14.2 (top flange), 25.5 (plunger height), 27.5 (main body height), 1/2 PF (thread), 21.5 (thread offset), 29 (bottom flange), 35 (base width), 41 (total base width), 3.0 (lever offset).	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°

HY-M900/HY-LM900 series

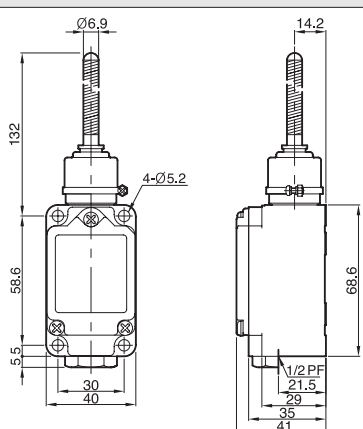
■ Rod Lever

Appearance	Dimension	Operation characteristic
 HY-M907 HY-LM907		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°

■ Roller Lever

Appearance	Dimension	Operation characteristic
 HY-M908 HY-LM908		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°

■ Coil Spring

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

Control
switch
Combination
display light

Power switch
Main switch
Cam switch

Limit switch
Micro switch

Hoist switch
Foot switch
Mono lever switch

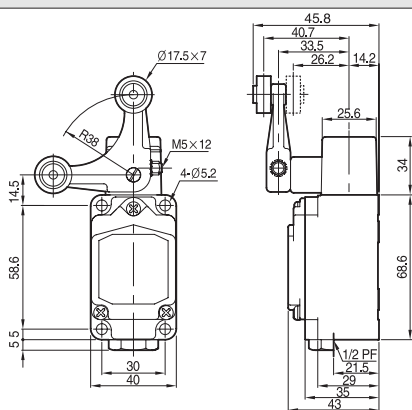
Sign tower
Signal light

Buzzer
Terminal block
Fuse holder

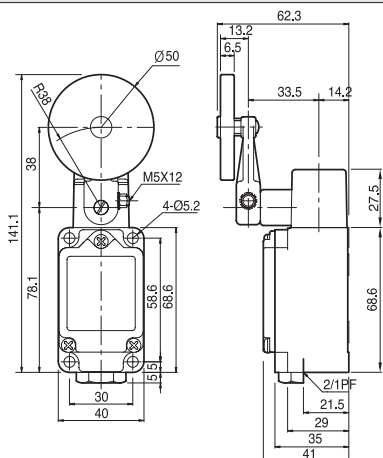
Control box
Cable connector

Discontinued
Products

■ Fork Roller Lever

Appearance	Dimension	Operation characteristic
 HY-M908L		O.F max : 11.8N(1200gf) P.T : 50° ±5° O.T max : 12° T.T : 90° ±5°

■ Ø50 Roller Lever

Appearance	Dimension	Operation characteristic
 HY-M908R		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°

HY-M900/HY-LM900 series

Structure

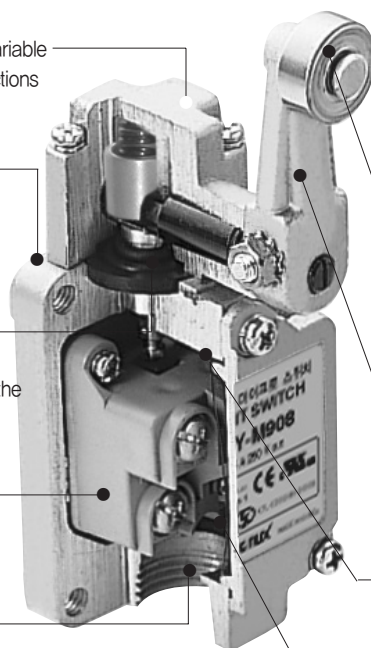
• **Head** : Al die casting roller lever type, variable roller lever type : Attach in any of 4 directions by unloosening 4 screws.

• **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

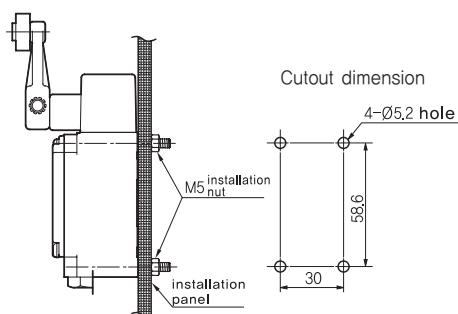
• **Lever** : Al die-casting (M908) variable roller lever type, variable rod type and roller lever type can set the lever position within any position (360 degree)

• **Cover Seal** : O ring. It tightens the cover properly which helps it to seal the area

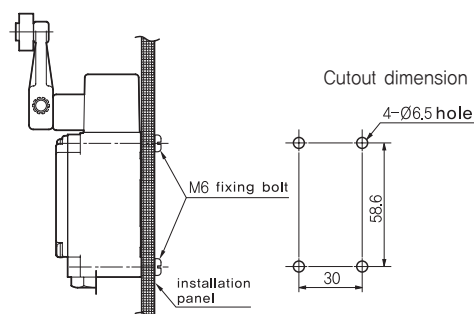
• **Insulating paper** : Excellent insulation

Installation method

Front installation



Back installation


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