



HY-M900/HY-LM900 series



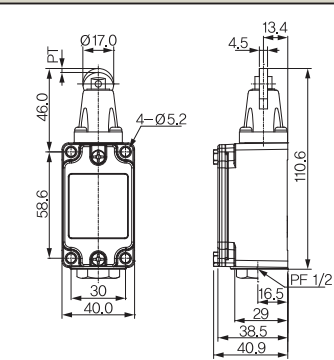
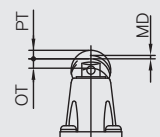
Aluminum die cast limit switch

h Specifications

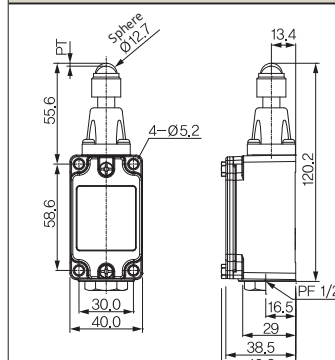
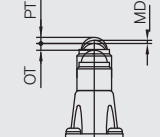
| Model | HY-M902 | HY-LM902 | HY-M903 | HY-LM903 | HY-M904 | HY-LM904 | HY-M907 | HY-LM907 | HY-M908 | HY-LM908 | HY-M909 | HY-LM909 | HY-M908R | HY-M908L |
|------------------------------|---|----------|--|----------|----------------------------|----------|----------------|----------|-------------------|----------|------------------|----------|-----------------------|------------------------|
| Appearance | | | | | | | | | | | | | | |
| Operation characteristics | Roller plunger type | | Ball plunger type | | Roller adjuster lever type | | Rod lever type | | Roller lever type | | Coil spring type | | Ø50 roller lever type | Fork roller lever type |
| Contact structure | M4 screw clamp terminal, 2-circuit double-throw type (1a1b) | | | | | | | | | | | | | |
| Terminal tightening torque | 1.2 N·m or less | | | | | | | | | | | | | |
| Operation indicator | AC type: Neon lamp / DC type: LED (HY-LM series only) | | | | | | | | | | | | | |
| Rated voltage | 250 V a.c. / 30 V d.c. | | | | | | | | | | | | | |
| Rated current | 6 A 250 V a.c. (AC-15, DC-13) | | | | | | | | | | | | | |
| Actuator force | 5 times the O.F. (Operating Force), applied in the operating direction for 1 minute | | | | | | | | | | | | | |
| Protective structure | IP67 (when using our connectors HYC-M1, M2 in piping sections) | | | | | | | | | | | | | |
| Allowable manipulation speed | 0.1 - 1 m/s | | | | | | | | | | | | | |
| Switching frequency | Mechanical | | 120 times/minute | | | | | | | | | | | |
| | Electrical | | 20 times/minute | | | | | | | | | | | |
| Insulation resistance | 100 MΩ or higher (500 V d.c.) | | | | | | | | | | | | | |
| Dielectric strength | Between terminals | | 1,500 V a.c. 1 minute at 50/60 Hz | | | | | | | | | | | |
| | Between each terminal and uncharged metal parts | | 2,000 V a.c. 1 minute at 50/60 Hz | | | | | | | | | | | |
| Contact resistance | 25 mΩ or lower (initial value) | | | | | | | | | | | | | |
| Vibration resistance | 10 - 55 Hz, double amplitude: 1.5 mm | | | | | | | | | | | | | |
| Shock resistance | Durability | | 1,000 m/s ² or more (100 G or higher) | | | | | | | | | | | |
| | Malfunction | | 300 m/s ² or more (30 G or higher) | | | | | | | | | | | |
| Life | Mechanical | | More than 1 million operations | | | | | | | | | | | |
| | Electrical | | More than 300,000 operations (at rated load) | | | | | | | | | | | |
| Ambient temperature | -10 to +80 °C (however, there should be no condensation or icing) | | | | | | | | | | | | | |
| Ambient humidity | 45 to 85% RH or lower | | | | | | | | | | | | | |
| Weight | Approximately 350 g (including the box, for HY-M904) | | | | | | | | | | | | | |
| Storage temperature | -40 to 70 °C | | | | | | | | | | | | | |

External dimensions

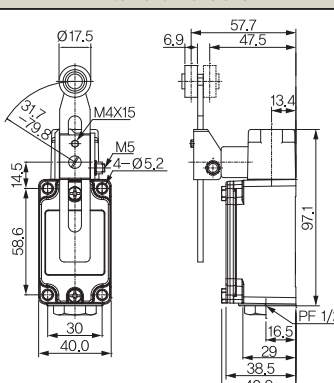
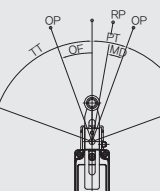
HY-M902 / LM902

| External dimensions | Operation characteristics |
|---|---|
|  <p>Technical drawing showing front and side views of the HY-M902 / LM902 switch. Dimensions include: PT, 46.0, 58.6, 30, 40.0, 40.9, 38.5, 29, 16.5, 4-Ø5.2, 13.4, 110.6, and PF 1/2.</p> | <ul style="list-style-type: none"> · OF Maximum : 28 N (2857 gf) · RF Minimum : 8 N (816 gf) · PT : 2.0 mm · MD Maximum : 1.0 mm · OP : 44.0 ±1.0  <p>Diagram showing the operating range with labels OT, PT, and MD.</p> |

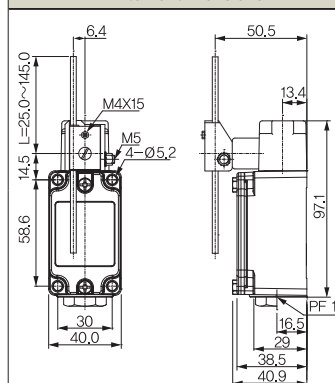
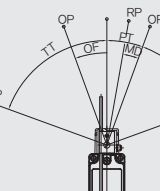
HY-M903 / LM903

| External dimensions | Operation characteristics |
|---|---|
|  <p>Technical drawing showing front and side views of the HY-M903 / LM903 switch. Dimensions include: PT, 55.6, 58.6, 30.0, 40.0, 40.9, 38.5, 29, 16.5, 4-Ø5.2, 13.4, 120.2, and PF 1/2. A note indicates a sphere with diameter Ø12.7.</p> | <ul style="list-style-type: none"> · OF Maximum : 28 N (2857 gf) · RF Minimum : 8 N (816 gf) · PT : 2.0 mm · MD Maximum : 1.0 mm · OP : 53.5 ±1.0  <p>Diagram showing the operating range with labels OT, PT, and MD.</p> |

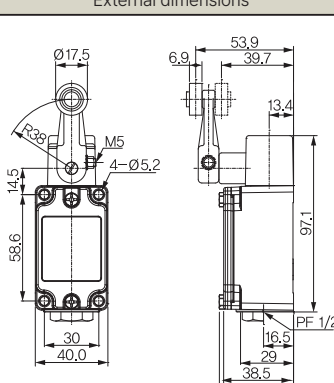
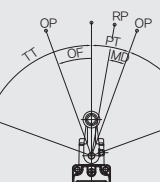
HY-M904 / LM904

| External dimensions | Operation characteristics |
|--|--|
|  <p>Technical drawing showing front and side views of the HY-M904 / LM904 switch. Dimensions include: Ø17.5, 6.9, 57.7, 47.5, 13.4, 97.1, 14.5, 58.6, 30, 40.0, 40.9, 38.5, 29, 16.5, 4-Ø5.2, M5, M4X15, 31.7, and 19.9.</p> | <ul style="list-style-type: none"> · OF Maximum : 14 N (1,428 gf) · RF Minimum : 2.1 N (214 gf) · PT Maximum : 15° ±5° · MD Maximum : 12° · TT : 80° ±5°  <p>Diagram showing the operating range with labels TT, OP, RP, PT, MD, OF, OT, and TTP.</p> |

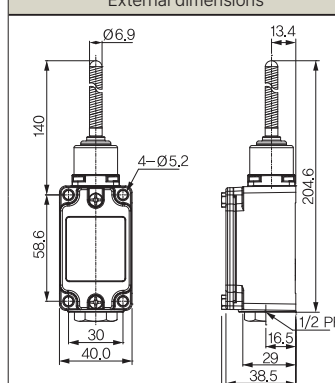
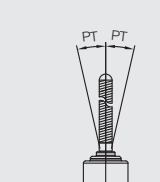
HY-M907 / LM907

| External dimensions | Operation characteristics |
|--|---|
|  <p>Technical drawing showing front and side views of the HY-M907 / LM907 switch. Dimensions include: 6.4, 50.5, 13.4, 97.1, 14.5, 58.6, 30, 40.0, 40.9, 38.5, 29, 16.5, 4-Ø5.2, M5, M4X15, and L=25.0~145.0.</p> | <ul style="list-style-type: none"> · OF Maximum : 1.5 N (153 gf) · RF Minimum : 0.25 N (25 gf) · PT : 15° ±5° · MD Maximum : 12° · TT : 80° ±5°  <p>Diagram showing the operating range with labels TT, OP, RP, PT, MD, OF, OT, and TTP.</p> |

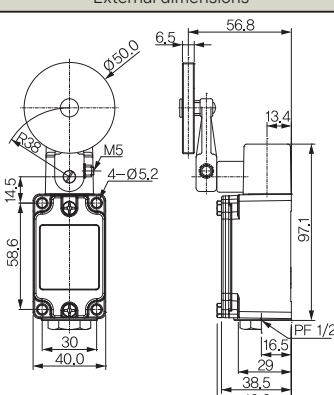
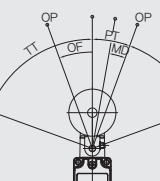
HY-M908 / LM908

| External dimensions | Operation characteristics |
|---|---|
|  <p>Technical drawing showing front and side views of the HY-M908 / LM908 switch. Dimensions include: Ø17.5, 6.9, 53.9, 39.7, 13.4, 97.1, 14.5, 58.6, 30, 40.0, 40.9, 38.5, 29, 16.5, 4-Ø5.2, M5, and R39.</p> | <ul style="list-style-type: none"> · OF Maximum : 14 N (1,428 gf) · RF Minimum : 2.1 N (214 gf) · PT : 15° ±5° · MD Maximum : 12° · TT : 80° ±5°  <p>Diagram showing the operating range with labels TT, OP, RP, PT, MD, OF, OT, and TTP.</p> |

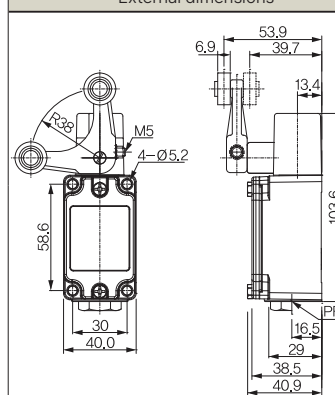
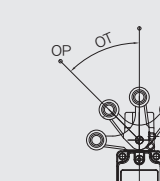
HY-M909 / LM909

| External dimensions | Operation characteristics |
|--|--|
|  <p>Technical drawing showing front and side views of the HY-M909 / LM909 switch. Dimensions include: Ø6.9, 13.4, 140, 58.6, 30, 40.0, 40.9, 38.5, 29, 16.5, 4-Ø5.2, and 204.6. A note indicates PF 1/2.</p> | <ul style="list-style-type: none"> · OF Maximum : 1.5 N (153 gf) · PT : 20.0 ±10.0 mm <p>* Can be used in the axial direction, with built-in micro switch protection.</p> <p>* The operating range of the manipulator is within 1/3 of the total length of the spring from the spring end.</p>  <p>Diagram showing the operating range with labels PT and OT.</p> |

HY-M908R

| External dimensions | Operation characteristics |
|---|---|
|  <p>Technical drawing showing front and side views of the HY-M908R switch. Dimensions include: 6.5, 56.8, 13.4, 97.1, 14.5, 58.6, 30, 40.0, 40.9, 38.5, 29, 16.5, 4-Ø5.2, M5, and Ø30.0.</p> | <ul style="list-style-type: none"> · OF Maximum : 14 N (1,428 gf) · RF Minimum : 2.1 N (214 gf) · PT : 15° ±5° · MD Maximum : 12° · TT : 40°  <p>Diagram showing the operating range with labels TT, OP, RP, PT, MD, OF, OT, and TTP.</p> |

HY-M908L

| External dimensions | Operation characteristics |
|---|--|
|  <p>Technical drawing showing front and side views of the HY-M908L switch. Dimensions include: 6.9, 53.9, 39.7, 13.4, 103.6, 14.5, 58.6, 30, 40.0, 40.9, 38.5, 29, 16.5, 4-Ø5.2, M5, and R39.</p> | <ul style="list-style-type: none"> · OF Maximum : 11.8 N (1,200 gf) · PT : 50° ±5° · OT Maximum : 12° · TT : 90° ±5°  <p>Diagram showing the operating range with labels OP and OT.</p> |

Rating

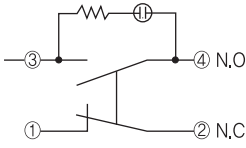
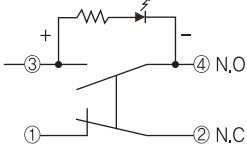
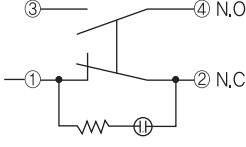
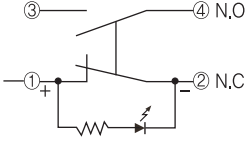
| Rated voltage (V) | | Non-inductive load (A) | | | | Inductive load (A) | | | |
|-------------------|-----|------------------------|-----|------|-----|--------------------|-----|------------|------|
| | | Resistive load | | Lamp | | Inductive load | | Motor load | |
| | | N.C | N.O | N.C | N.O | N.C | N.O | N.C | N.O |
| AC | 125 | 15 | | 3 | 1.5 | 10 | | 3 | 1.5 |
| | 250 | 10 | | 2 | 1 | 6 | | 2 | 1 |
| | 480 | 3 | | 1.5 | 0.8 | 2 | | 1.5 | 0.75 |
| DC | 8 | 15 | | 6 | 3 | 10 | | - | |
| | 14 | 15 | | 6 | 3 | 10 | | - | |
| | 30 | 6 | | 4 | 3 | 5 | | - | |
| | 125 | 0.4 | | 0.2 | 0.2 | 0.05 | | - | |
| | 250 | 0.2 | | 0.1 | 0.1 | 0.03 | | - | |

Operation indicator types

| Voltage | AC operation indicator (250 V a.c.) | DC operation indicator (24 V d.c.) |
|-----------------|-------------------------------------|------------------------------------|
| Model | HY-LM90□ A | HY-LM90□ B |
| Indicator type | Neon lamp | LED (light-emitting diode) |
| Leakage current | Approximately 1.2 mA (250 V a.c.) | Approximately 1.0 mA (24 V d.c.) |


- The LM900 series limit switches are available in two configurations: models without an operation indicator and models with an operation indicator. They are further categorized into versions for AC and DC operation indicator types.
- You can convert the limit switch into an operation indicator type by simply changing the cover, without the need for additional wiring.
- By rotating the indicator holder 180 degrees, you can turn the light on or off.

Operation indicator covers

| For AC | For DC |
|---|--|
|  |  |
|  |  |

h Upgrades

01 Improved body structure

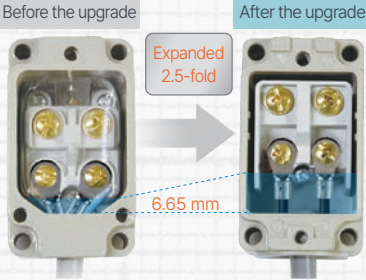


Cover fixing screws
2

Fixable protection cover
No insulator required

Bigger wiring space
6.65 mm

02 Bigger wiring space



Before the upgrade

After the upgrade

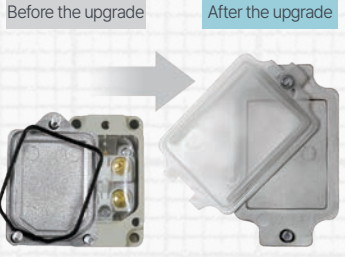
Expanded 2.5-fold

6.65 mm

Insufficient wiring space

2.5x bigger than the original

03 Increased fixation strength and water resistance



Before the upgrade

After the upgrade

Separate insulator and rubber band

Integrated protection cover eliminates the need for an insulator

h Built-in micro switch

■ Connection diagram

