

High Rigidity Style

Series *MHQG2*

ø32, ø40

Provided with a guide holder.

Solid state switches with indicator light can be mounted.



Specifications

| | | | |
|-------------------------------------|---------------|-----------------|---|
| Fluid | | Air | |
| Operating pressure | Double acting | | 0.1 to 0.6MPa |
| | Single acting | Normally open | 0.25 to 0.6MPa |
| | | Normally closed | |
| Ambient and fluid temperature | | | -10 to 60°C |
| Repeatability | | | ø32/40: ±0.02mm |
| Max. operating frequency | | | ø32/40: 60c.p.m |
| Lubrication | | | Not required |
| Action | | | Double acting, Single acting |
| Auto switch (Option) ⁽¹⁾ | | | Solid state switch: D-Y59 ^Δ , D-Y69 ^Δ |



¹⁾ Refer to p.2.11-26 for auto switch specifications.

Model

| Action | Model | Bore size (mm) | Holding force ⁽¹⁾ (Effective value) (N) | Opening/closing stroke (Both sides) (mm) | Weight ⁽²⁾ (g) | |
|---------------|-----------------|----------------|--|--|---------------------------|------|
| Double acting | MHQG2-32D | 32 | External hold: 88 Internal hold: 139 | 20 | 1100 | |
| | MHQG2-40D | 40 | External hold: 158 Internal hold: 247 | 28 | 1940 | |
| Single acting | Normally open | MHQG2-32S | 32 | 69 | 20 | 1110 |
| | | MHQG2-40S | 40 | 130 | 28 | 1960 |
| | Normally closed | MHQG2-32C | 32 | 127 | 20 | 1110 |
| | | MHQG2-40C | 40 | 227 | 28 | 1960 |



¹⁾ Values at 0.5MPa. Represent both external and internal holding force for double acting, external holding force for single acting normally open and internal holding force for single acting normally closed.

²⁾ Except weight of auto switches

³⁾ Refer to CAT. E230 for details.

Solid State Switch/Direct Mounting Type

D-Y59^A/_B/D-Y69^A/_B/D-Y7P(V)

Grommet



Applicable air gripper series

| Series | Size | Auto switch setting example |
|--------|------------------------------|-----------------------------|
| MHZ2 | 10, 16, 20, 25 | Refer to p.2.10-1 |
| MHL2 | 10, 16, 20, 25, 32, 40 | Refer to p.2.10-3 |
| MHS | 32, 40, 50, 63, 80, 100, 125 | Refer to p.2.10-9 |
| MHC2 | 10, 16, 20, 25 | Refer to p.2.10-1 |
| MHW2 | 20, 25, 32, 40, 50 | Refer to p.2.10-11 |

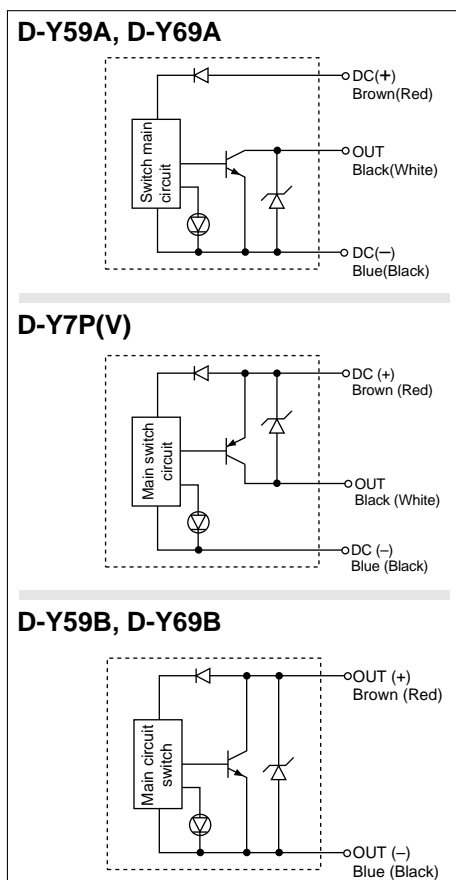
Auto switch specifications

PLC: Programmable Logic Controller

| D-Y5, D-Y6, D-Y7P, D-Y7PV (with indicator light) | | | | | | |
|--|---|---------------|--------------|---------------|-------------------------|---------------|
| Auto switch part no. | D-Y59A | D-Y69A | D-Y7P | D-Y7PV | D-Y59B | D-Y69B |
| Electrical entry direction | In-line | Perpendicular | In-line | Perpendicular | In-line | Perpendicular |
| Wiring | 3 wire | | | 2 wire | | |
| Output | NPN type | | PNP type | | — | |
| Applicable load | IC circuit, Relay, PLC | | | | 24V DC relay, PLC | |
| Power voltage | 5, 12, 24V DC (4.5 to 28V DC) | | | | — | |
| Current consumption | 10mA or less | | | | — | |
| Load voltage | 28V DC or less | | — | | 24V DC (10 to 28V DC) | |
| Load current | 40mA or less | | 80mA or less | | 5 to 40mA | |
| Internal voltage drop | 1.5V or less (0.8V or less at load current 10mA) | | 0.8V or less | | 4V or less | |
| Leakage current | 100μA or less at 24V DC | | | | 0.8mA or less at 24V DC | |
| Indicator light | ON: Red light emitting diode | | | | | |

Auto switch internal circuit

() : Before IEC standard



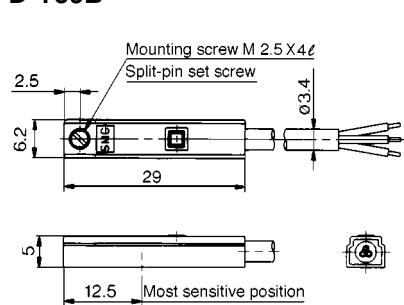
● Lead wire — Oil proof vinyl heavy insulation cable $\phi 3.4$, 0.2mm², 3 wire (brown, black, blue), 2 wire (brown, blue) 0.18mm², 0.5m

Note 1) Refer to p.2.11-5 for common specifications of solid state switch.

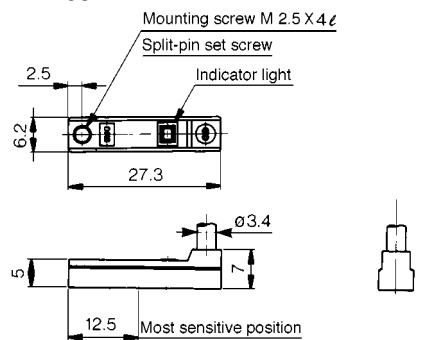
Note 2) Refer to p.2.11-5 for lead wire length.

Dimensions

D-Y59A, D-Y7P, D-Y59B



D-Y69A, D-Y7PV, D-Y69B



2 Color Indication Solid State Switch/Direct Mounting Type D-Y7NW(V)/D-Y7PW(V)/D-Y7BW(V)

Grommet

The optimal operating position can be verified by the color of the light.

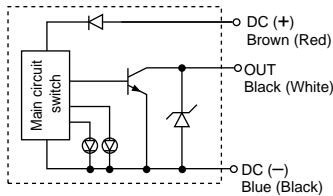
(Red → Green ← Red)



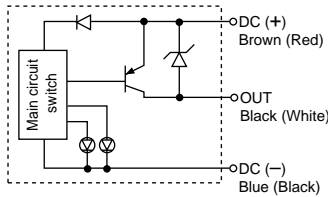
Auto switch internal circuit

() : Before IEC standard

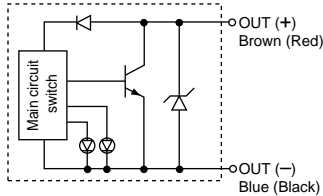
D-Y7NW(V)



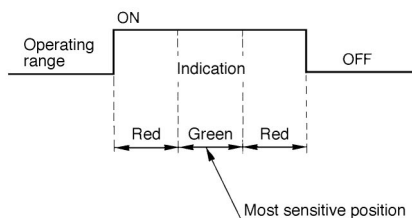
D-Y7PW(V)



D-Y7BW(V)



Indicator light/Operation



Applicable air gripper series

| Series | Size | Auto switch setting example |
|--------|------------------------------|-----------------------------|
| MHZ2 | 10, 16, 20, 25 | Refer to p.2.10-1 |
| MHS | 32, 40, 50, 63, 80, 100, 125 | Refer to p.2.10-9 |
| MHL2 | 10, 16, 20, 25, 32, 40 | Refer to p.2.10-3 |

Auto switch specifications

PLC: Programmable Logic Controller

D-Y7□W/D-Y7□WV (With indicator light)

| Auto switch model no. | D-Y7NW | D-Y7NWV | D-Y7PW | D-Y7PWV | D-Y7BW | D-Y7BWV |
|-----------------------|---|---------------|--------------|---------------|--|---------------|
| Electrical entry | In-line | Perpendicular | In-line | Perpendicular | In-line | Perpendicular |
| Wiring | 3 wire | | | 2 wire | | |
| Output | NPN type | | PNP type | | — | |
| Applicable load | IC circuit, Relay, PLC | | | | 24V DC Relay, PLC | |
| Power voltage | 5, 12, 24V DC (4.5 to 28V DC) | | | | — | |
| Current consumption | 10mA or less | | | | — | |
| Load voltage | 28V DC or less | | — | | 24V DC (10 to 28V DC) | |
| Load current | 40mA or less | | 80mA or less | | 5 to 40mA | |
| Internal voltage drop | 1.5V or less (0.8V or less at load current 10mA) | | 0.8V or less | | 4V or less | |
| Leakage current | 100μA or less at 24V DC | | | | 0.8mA or less at 24V DC | |
| Indicator light | Operating position.....Red light emitting diode | | | | Most sensitive position.....Green light emitting diode | |



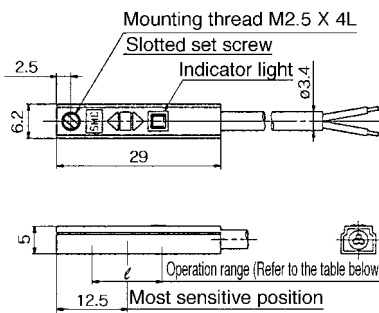
● Lead wire — Oil proof vinyl heavy insulation cable $\phi 3.4$ 0.15mm², 3 wire (brown, black, blue), 2 wire (brown, blue) 0.5m

Note 1) Refer to p.2.11-5 for common specifications of solid state switch.

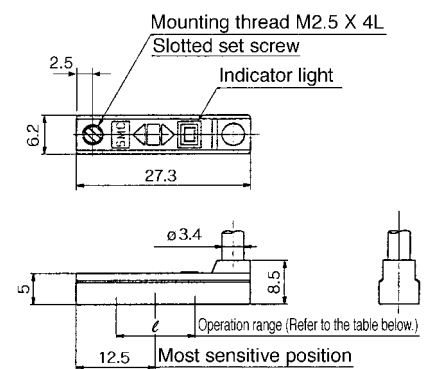
Note 2) Refer to p.2.11-5 for lead wire length.

Dimensions

D-Y7□W



D-Y7□WV



Water Resistant 2 Color Indication Solid State Switch/Direct Mounting Type **D-Y7BAL**

Grommet

Water resistant (Coolant) type



Applicable air gripper series

| Series | Size | Auto switch adjustment |
|-------------------------------------|------------------------------|------------------------|
| MHL2 (Oil proof specifications -X5) | 10, 16, 20, 25, 32, 40 | Refer to p.2.10-3 |
| MHS (Oil proof specifications -X5) | 32, 40, 50, 63, 80, 100, 125 | Refer to p.2.10-9 |
| MHW2 (Oil proof specifications -X5) | 20, 25, 32, 40, 50 | Refer to p.2.10-11 |

Auto switch specifications

PLC: Programmable Logic Controller

D-Y7BAL (With indicator light)

| Auto switch model no. | D-Y7BAL |
|-----------------------|---|
| Wiring | 2 wire |
| Applicable load | 24V DC Relay, PLC |
| Load voltage | 24V DC (10 to 28V DC) |
| Load current | 5 to 40mA |
| Internal voltage drop | 4V or less |
| Leakage current | 0.8mA or less at 24V DC |
| Indicator light | Operating position: Red light emitting diode Most sensitive position: Green light emitting diode |



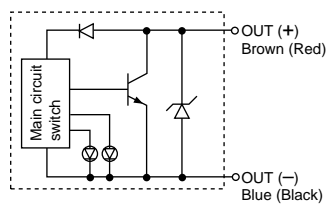
●Lead wire — Oil proof and bend proof vinyl heavy insulation cable $\phi 3.4$ 0.15mm² 2 wire (brown, blue), 3m(Standard)

Note 1) Refer to p.2.11-5 for common specifications of solid state switch.

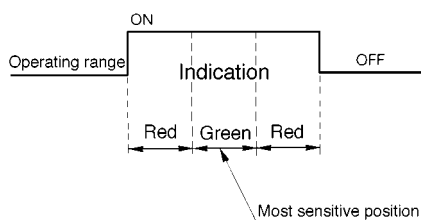
Note 2) Refer to p.2.11-5 for lead wire length.

Auto switch internal circuit

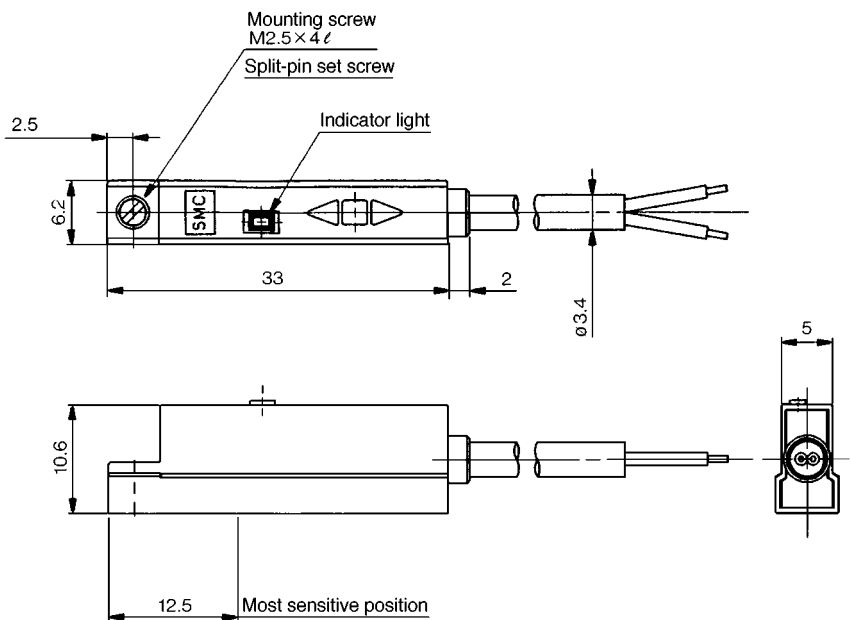
(): Before IEC standard



Indicator light/Operation



Dimensions



⚠ Specific Product Precautions

Be sure to read before handling.
Refer to p.0-20 and 0-21 for Safety Instructions and common precautions on the products mentioned in this catalog, and refer to p.2.11-2 to 2.11-4 for detailed precautions on every series.

⚠ Caution

Contact SMC when requiring solution except water.