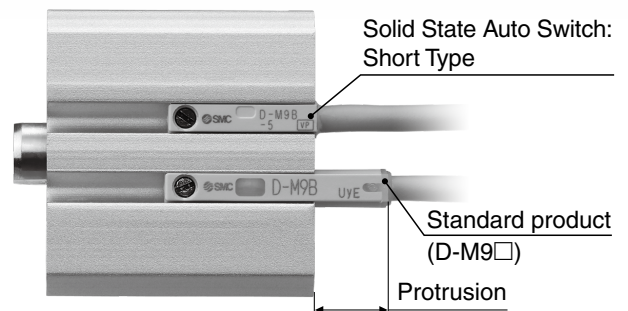


# Solid State Auto Switch: Short Type

Produced upon receipt of order



- **Overall length reduced by 32%**  
22 mm → 15 mm
- **Protrusion from the actuator end surface has been reduced.**
- **Specifications are the same as those of the standard product (D-M9□).**



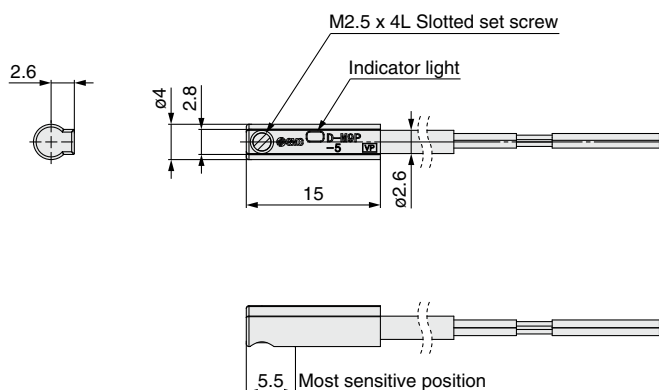
## How to Order



**D-M9 B L -5**

| Wiring/Output type |             | Lead wire length |       |
|--------------------|-------------|------------------|-------|
| <b>B</b>           | 2-wire      | <b>Nil</b>       | 0.5 m |
| <b>N</b>           | 3-wire, NPN | <b>M</b>         | 1 m   |
| <b>P</b>           | 3-wire, PNP | <b>L</b>         | 3 m   |
|                    |             | <b>Z</b>         | 5 m   |

## Dimensions



## Specifications

| Auto switch model            | D-M9N□-5                                         | D-M9P□-5 | D-M9B□-5              |
|------------------------------|--------------------------------------------------|----------|-----------------------|
| <b>Wiring type</b>           | 3-wire                                           |          | 2-wire                |
| <b>Output type</b>           | NPN                                              | PNP      | —                     |
| <b>Applicable load</b>       | IC circuit, Relay, PLC                           |          | 24 VDC relay, PLC     |
| <b>Power supply voltage</b>  | 5, 12, 24 VDC (4.5 to 28 V)                      |          | —                     |
| <b>Current consumption</b>   | 10 mA or less                                    |          | —                     |
| <b>Load voltage</b>          | 28 VDC or less                                   | —        | 24 VDC (10 to 28 VDC) |
| <b>Load current</b>          | 40 mA or less                                    |          | 2.5 to 40 mA          |
| <b>Internal voltage drop</b> | 0.8 V or less at 10 mA<br>(2 V or less at 40 mA) |          | 4 V or less           |
| <b>Leakage current</b>       | 100 μA or less at 24 VDC                         |          | 0.8 mA or less        |
| <b>Indicator light</b>       | Red LED lights up when turned ON.                |          |                       |
| <b>Standards</b>             | CE marking, RoHS                                 |          |                       |

## Oilproof Heavy-duty Lead Wire Specifications

| Auto switch model                             |                                   | D-M9N□-5                   | D-M9P□-5 | D-M9B□-5             |
|-----------------------------------------------|-----------------------------------|----------------------------|----------|----------------------|
| Sheath                                        | Outside diameter [mm]             | ø2.6                       |          |                      |
| Insulator                                     | Number of cores                   | 3 cores (Brown/Blue/Black) |          | 2 cores (Brown/Blue) |
|                                               | Outside diameter [mm]             | ø0.88                      |          |                      |
| Conductor                                     | Effective area [mm <sup>2</sup> ] | 0.15                       |          |                      |
|                                               | Strand diameter [mm]              | ø0.05                      |          |                      |
| Min. bending radius [mm]<br>(Reference value) |                                   | 17                         |          |                      |

## Weight

| Auto switch model |             |    |  | D-M9N□-5 | D-M9P□-5 | D-M9B□-5 |
|-------------------|-------------|----|--|----------|----------|----------|
| Lead wire length  | 0.5 m (Nil) | 7  |  |          | 6        |          |
|                   | 1 m (M)     | 13 |  |          | 11       |          |
|                   | 3 m (L)     | 35 |  |          | 31       |          |
|                   | 5 m (Z)     | 57 |  |          | 51       |          |

***D-M9*   -5**

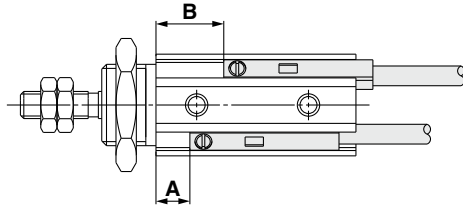


17-E683

# D-M9□-5

## Auto Switch Proper Mounting Position (Detection at stroke end)

■ The A and B dimensions are equivalent to the dimensions of the standard product (D-M9□) + 0.5 mm.



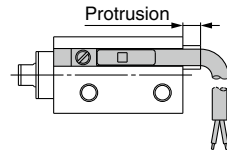
■ Actuators in which the protrusion from the body end surface can be eliminated by mounting the D-M9□-5

| Description                                       | Series       | Note                                                         |
|---------------------------------------------------|--------------|--------------------------------------------------------------|
| Air Cylinder                                      | <b>CJP2</b>  |                                                              |
| Mini Free Mount Cylinder                          | <b>CUJ</b>   | Excludes ø6, ø8, ø10, and ø12 (See right side.)              |
| Free Mount Cylinder                               | <b>CU</b>    |                                                              |
| Compact Cylinder                                  | <b>CQS</b>   |                                                              |
| Compact Cylinder: Guide Rod Type                  | <b>CQM</b>   |                                                              |
| Compact Slide                                     | <b>MXH</b>   | Excludes ø6 (See right side.)                                |
| Air Slide Table                                   | <b>MXJ</b>   |                                                              |
| Platform Cylinder                                 | <b>CXT</b>   |                                                              |
| Dual Rod Cylinder                                 | <b>CXSJ</b>  | Excludes ø6 and ø10 (See right side.)                        |
| Rotary Clamp Cylinder                             | <b>MK</b>    |                                                              |
| Escapements                                       | <b>MI□</b>   |                                                              |
| Compact Type Parallel Style Air Gripper           | <b>JMHZ2</b> | Excludes ø8 and ø12 (See right side.)                        |
| Parallel Type Air Gripper                         | <b>MHZ2</b>  | Excludes ø6 (See right side.)                                |
| Parallel Type Air Gripper                         | <b>MHZJ2</b> | Excludes ø6 and ø10 (See right side.)                        |
| Parallel Type Air Gripper                         | <b>MHZL2</b> | Excludes ø10 (See right side.)                               |
| Low Profile Air Gripper                           | <b>MHF2</b>  |                                                              |
| Parallel Type Air Gripper                         | <b>MHS□</b>  | Excludes the center pusher (cylinder type) (See right side.) |
| Angular Type Air Gripper                          | <b>MHC2</b>  | Excludes ø6 and ø10 (See right side.)                        |
| 180° Angular Type Air Gripper: Cam Type           | <b>MHY2</b>  |                                                              |
| 180° Angular Type Air Gripper: Rack & Pinion Type | <b>MHW2</b>  | Excludes ø20 and ø25 (See right side.)                       |

■ Protrusion from the body end surface

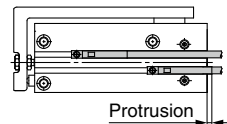
### Mini Free Mount Cylinder [mm]

| Model      | Bore size | Protrusion |
|------------|-----------|------------|
| <b>CUJ</b> | 6         | 0.5        |
|            | 8         | 0.5        |
|            | 10        | 0.5        |
|            | 12        | 0.5        |



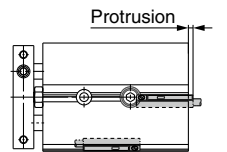
### Compact Slide [mm]

| Model      | Bore size | Protrusion |
|------------|-----------|------------|
| <b>MXH</b> | 6         | 1          |



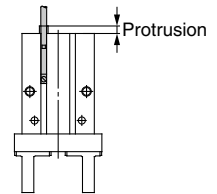
### Dual Rod Cylinder [mm]

| Model       | Bore size | Protrusion |
|-------------|-----------|------------|
| <b>CXSJ</b> | 6         | 3          |
|             | 10        | 0.5        |



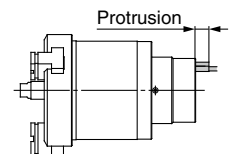
### Parallel Type Air Gripper [mm]

| Model        | Bore size | Finger position | Protrusion |
|--------------|-----------|-----------------|------------|
| <b>JMHZ2</b> | 8         | Closed          | 1          |
|              | 12        | Closed          | 1          |
| <b>MHZ2</b>  | 6         | Open            | 4.5        |
|              |           | Closed          | 6.5        |
| <b>MHZL2</b> | 10        | Closed          | 1.5        |
|              |           | Open            | 4.5        |
| <b>MHZJ2</b> | 6         | Closed          | 6.5        |
|              | 10        | Closed          | 0.5        |



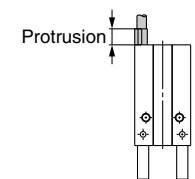
### Parallel Type Air Gripper: MHS Center Pusher (Cylinder Type) [mm]

| Model        | Bore size | Rod position | Protrusion |
|--------------|-----------|--------------|------------|
| <b>MHSH3</b> | 32        | Retracted    | 2.5        |
|              | 40        | Retracted    | 1.5        |
|              | 50        | Retracted    | 1          |
|              | 60        | Retracted    | 0.5        |



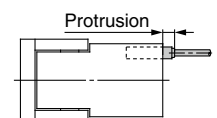
### Angular Type Air Gripper [mm]

| Model       | Bore size | Finger position | Protrusion |
|-------------|-----------|-----------------|------------|
| <b>MHC2</b> | 6         | Closed          | 2.5        |
|             | 10        | Closed          | 1          |



### 180° Angular Type Air Gripper: Rack & Pinion Type [mm]

| Model       | Bore size | Finger position | Protrusion |
|-------------|-----------|-----------------|------------|
| <b>MHW2</b> | 20        | Closed          | 0.5        |
|             | 25        | Closed          | 0.5        |



\* Adjust the auto switch after confirming the operating conditions in the actual setting.

**⚠ Safety Instructions** Be sure to read the "Handling Precautions for SMC Products" (M-E03-3) and "Operation Manual" before use.