

# Solid State Auto Switch Direct Mounting Style

## D-M9N(V)/D-M9P(V)/D-M9B(V)



Refer to SMC website for the details of the products conforming to the international standards.

### Auto Switch Specifications

PLC: Programmable Logic Controller

D-M9□, D-M9□V (With indicator light)						
Auto switch model	D-M9N	D-M9NV	D-M9P	D-M9PV	D-M9B	D-M9BV
Electrical entry direction	In-line	Perpendicular	In-line	Perpendicular	In-line	Perpendicular
Wiring type	3-wire				2-wire	
Output type	NPN		PNP		—	
Applicable load	IC circuit, Relay, PLC				24 VDC relay, PLC	
Power supply voltage	5, 12, 24 VDC (4.5 to 28 V)				—	
Current consumption	10 mA or less				—	
Load voltage	28 VDC or less		—		24 VDC (10 to 28 VDC)	
Load current	40 mA or less				2.5 to 40 mA	
Internal voltage drop	0.8 V or less at 10 mA (2 V or less at 40 mA)				4 V or less	
Leakage current	100 μA or less at 24 VDC				0.8 mA or less	
Indicator light	Red LED illuminates when turned ON.					
Standard	CE marking					

### Grommet

- 2-wire load current is reduced (2.5 to 40 mA).
- Flexibility is 1.5 times greater than the conventional model (SMC comparison).
- Using flexible cable as standard spec.



- Lead wires — Oilproof flexible heavy-duty vinyl cord:  $\phi 2.7 \times 3.2$  ellipse, 0.15 mm<sup>2</sup>, 2 cores (D-M9B(V)), 3 cores (D-M9N(V), D-M9P(V))

Note 1) Refer to page 1272 for solid state auto switch common specifications.

Note 2) Refer to page 1272 for lead wire lengths.

### Caution

#### Precautions

Fix the auto switch with the existing screw installed on the auto switch body. The auto switch may be damaged if a screw other than the one supplied is used.

### Mass

(g)

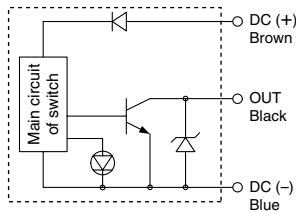
Auto switch model	D-M9N(V)	D-M9P(V)	D-M9B(V)	
Lead wire length (m)	0.5	8	8	7
	1	14	14	13
	3	41	41	38
	5	68	68	63

### Dimensions

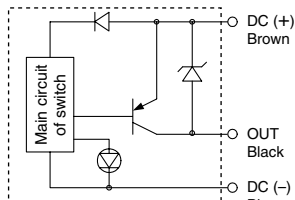
(mm)

#### Auto Switch Internal Circuit

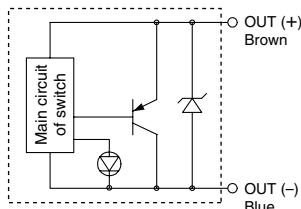
##### D-M9N, D-M9NV



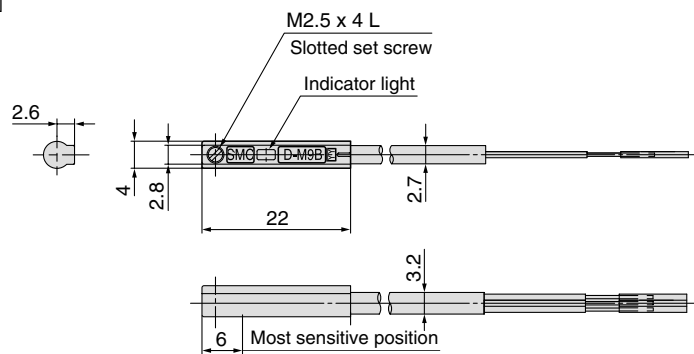
##### D-M9P, D-M9PV



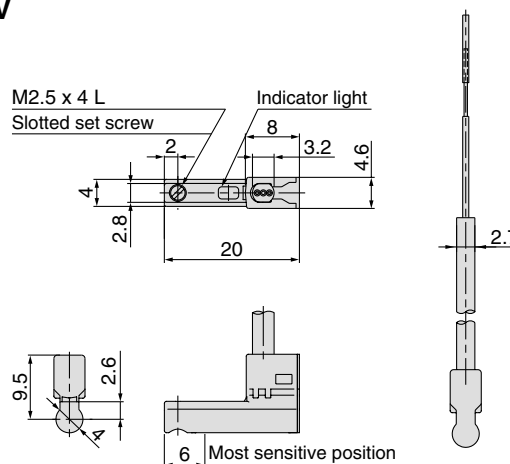
##### D-M9B, D-M9BV



#### D-M9□



#### D-M9□V



# Solid State Auto Switch Direct Mounting Style D-F8N/D-F8P/D-F8B



Refer to SMC website for the details of the products conforming to the international standards.

## Auto Switch Specifications

PLC: Programmable Logic Controller

D-F8□ (With indicator light)			
Auto switch model	D-F8N	D-F8P	D-F8B
Electrical entry direction	Perpendicular	Perpendicular	Perpendicular
Wiring type	3-wire		2-wire
Output type	NPN	PNP	—
Applicable load	IC circuit, 24 VDC Relay, PLC		24 VDC relay, PLC
Power supply voltage	5, 12, 24 VDC (4.5 to 28 VDC)		
Current consumption	10 mA or less		
Load voltage	28 VDC or less	—	24 VDC (10 to 28 VDC)
Load current	40 mA or less	80 mA or less	2.5 to 40 mA
Internal voltage drop	1.5 V or less (0.8 V or less at 10 mA load current)	0.8 V or less	4 V or less
Leakage current	100 μA or less at 24 VDC		0.8 mA or less at 24 VDC
Indicator light	Red LED illuminates when turned ON.		
Standard	CE marking		

- Lead wires — Oilproof heavy-duty vinyl cord,  $\phi 2.7$   
D-F8N, D-F8P 0.15 mm<sup>2</sup> x 3 cores (Brown, Black, Blue)  
D-F8B 0.18 mm<sup>2</sup> x 2 cores (Brown, Blue)

Note 1) Refer to page 1272 for solid state auto switch common specifications.

Note 2) Refer to page 1272 for lead wire lengths.

## Grommet



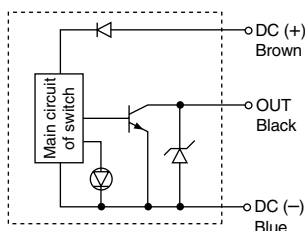
## Caution

### Precautions

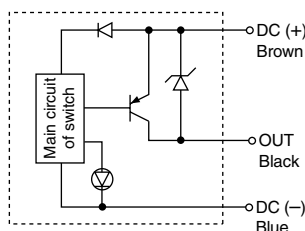
Fix the auto switch with the existing screw installed on the auto switch body. The auto switch may be damaged if a screw other than the one supplied is used.

## Auto Switch Internal Circuit

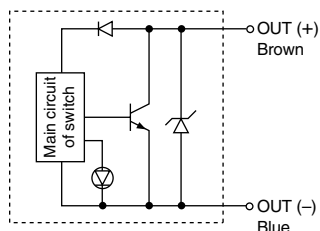
### D-F8N



### D-F8P



### D-F8B



## Mass

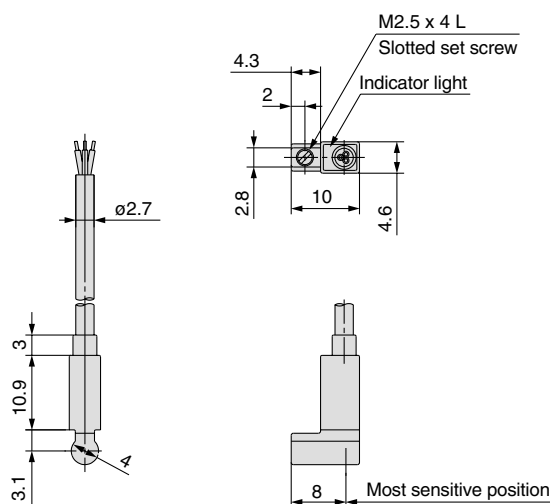
(g)

Auto switch model	D-F8N	D-F8P	D-F8B
Lead wire length (m)	0.5	7	7
	3	32	32
	5	52	52

## Dimensions

(mm)

### D-F8N/D-F8P/D-F8B



D-□

# Normally Closed Solid State Auto Switch Direct Mounting Style D-F9G/D-F9H



Refer to SMC website for the details of the products conforming to the international standards.

## Auto Switch Specifications

PLC: Programmable Logic Controller

D-F9G, D-F9H (With indicator light)		
Auto switch model	D-F9G	D-F9H
Wiring type	3-wire	
Output type	NPN	PNP
Applicable load	IC circuit, Relay, PLC	
Power supply voltage	5, 12, 24 VDC (4.5 to 28 VDC)	
Current consumption	10 mA or less	
Load voltage	28 VDC or less	—
Load current	40 mA or less	80 mA or less
Internal voltage drop	1.5 V or less (0.8 V or less at 10 mA load current)	0.8 V or less
Leakage current	100 $\mu$ A or less at 24 VDC	
Indicator light	Red LED illuminates when detecting nothing.	
Standard	CE marking	

- Lead wires — Oilproof heavy-duty vinyl cord,  $\phi$ 2.7, 0.15 mm<sup>2</sup>, 3 cores (Brown, Black, Blue) 0.5 m
- Note 1) Refer to page 1272 for solid state auto switch common specifications.
- Note 2) Refer to page 1272 for lead wire lengths.

### Grommet

Output signal turns on when no magnetic force is detected.



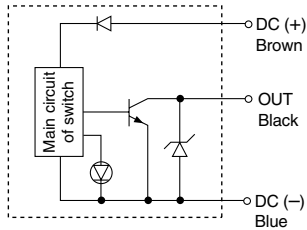
### Caution

#### Precautions

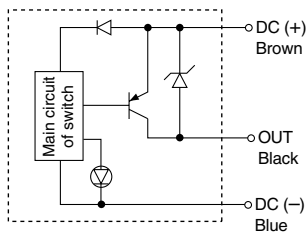
Fix the auto switch with the existing screw installed on the auto switch body. The auto switch may be damaged if a screw other than the one supplied is used.

### Auto Switch Internal Circuit

#### D-F9G



#### D-F9H



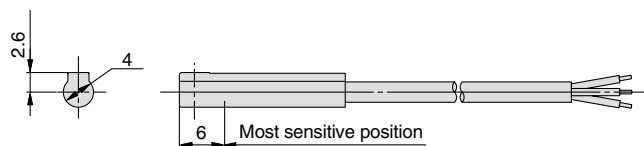
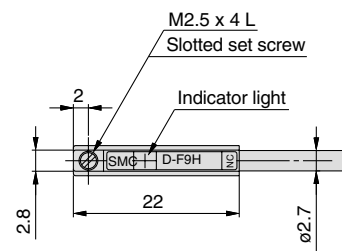
### Mass

(g)

Auto switch model	D-F9G	D-F9H
Lead wire length (m)	0.5	7
	3	37
	5	61

### Dimensions

(mm)



# Solid State Auto Switch Direct Mounting Style D-Y59<sup>A</sup>/<sub>B</sub>/D-Y69<sup>A</sup>/<sub>B</sub>/D-Y7P(V)



Refer to SMC website for the details of the products conforming to the international standards.

## Auto Switch Specifications

PLC: Programmable Logic Controller

D-Y5□, D-Y6□, D-Y7P, D-Y7PV (With indicator light)						
Auto switch model	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 type	3-wire			2-wire		
Output type	NPN		PNP		—	
Applicable load	IC circuit, Relay, PLC				24 VDC relay, PLC	
Power supply voltage	5, 12, 24 VDC (4.5 to 28 VDC)				—	
Current consumption	10 mA or less				—	
Load voltage	28 VDC or less		—		24 VDC (10 to 28 VDC)	
Load current	40 mA or less		80 mA or less		2.5 to 40 mA	
Internal voltage drop	1.5 V or less (0.8 V or less at 10 mA load current)		0.8 V or less		4 V or less	
Leakage current	100 μA or less at 24 VDC				0.8 mA or less at 24 VDC	
Indicator light	Red LED illuminates when turned ON.					
Standard	CE marking					

• Lead wires — Oilproof flexible heavy-duty vinyl cord, ø3.4, 0.15 mm<sup>2</sup>, 3 cores (Brown, Black, Blue), 2 cores (Brown, Blue), 0.5 m

Note 1) Refer to page 1272 for solid state auto switch common specifications.

Note 2) Refer to page 1272 for lead wire lengths.

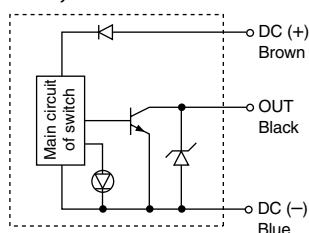
### Grommet

Using flexible cable as standard spec.

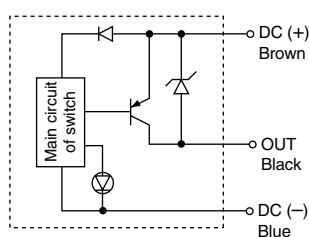


### Auto Switch Internal Circuit

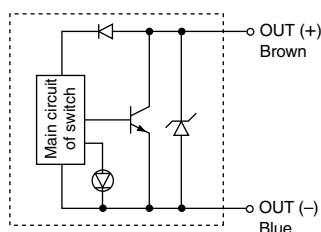
#### D-Y59A, D-Y69A



#### D-Y7P, D-Y7PV



#### D-Y59B, D-Y69B



### Mass

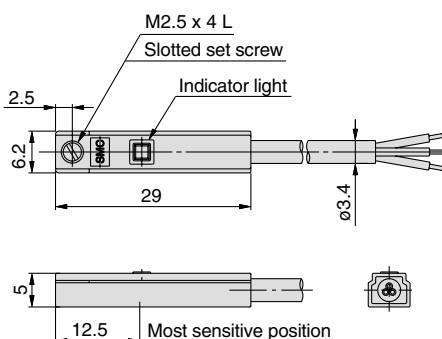
(g)

Auto switch model	D-Y59B	D-Y69B	D-Y59A	D-Y69A	D-Y7P(V)
Lead wire length (m)	0.5	9	10	10	10
	3	50	53	53	53
	5	83	87	87	87

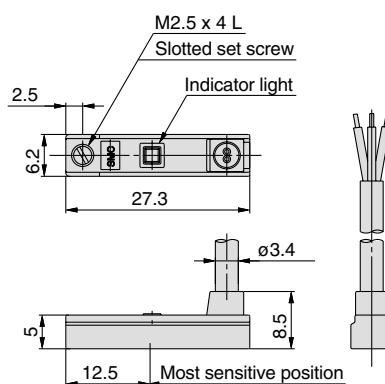
### Dimensions

(mm)

#### D-Y59A/D-Y7P/D-Y59B



#### D-Y69A/D-Y7PV/D-Y69B



D-□

# Normally Closed Solid State Auto Switch Direct Mounting Style D-Y7G/D-Y7H



Refer to SMC website for the details of the products conforming to the international standards.

## Auto Switch Specifications

PLC: Programmable Logic Controller

D-Y7G, D-Y7H (With indicator light)		
Auto switch model	D-Y7G	D-Y7H
Wiring type	3-wire	
Output type	NPN	PNP
Applicable load	IC circuit, Relay, PLC	
Power supply voltage	5, 12, 24 VDC (4.5 to 28 VDC)	
Current consumption	10 mA or less	
Load voltage	28 VDC or less	—
Load current	40 mA or less	80 mA or less
Internal voltage drop	1.5 V or less (0.8 V or less at 10 mA load current)	0.8 V or less
Leakage current	100 $\mu$ A or less at 24 VDC	
Indicator light	Red LED illuminates when detecting nothing.	
Standard	CE marking	

• Lead wires — Oilproof flexible heavy-duty vinyl cord,  $\phi$ 3.4, 0.15 mm<sup>2</sup>, 3 cores (Brown, Black, Blue), 0.5 m

Note 1) Refer to page 1272 for solid state auto switch common specifications.

Note 2) Refer to page 1272 for lead wire lengths.

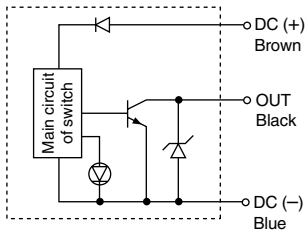
### Grommet

- Output signal turns on when no magnetic force is detected.
- Using flexible cable as standard spec.

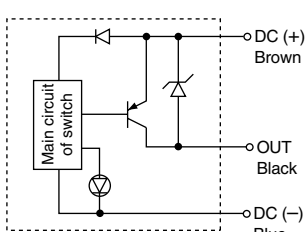


### Auto Switch Internal Circuit

#### D-Y7G



#### D-Y7H



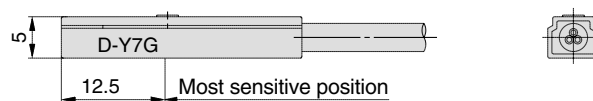
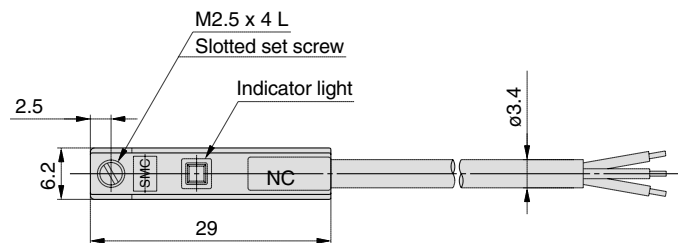
### Mass

(g)

Auto switch model		D-Y7G	D-Y7H
Lead wire length (m)	0.5	10	10
	3	53	53
	5	87	87

### Dimensions

(mm)



# Solid State Auto Switch Direct Mounting Style D-M5N/D-M5P/D-M5B



Refer to SMC website for the details of the products conforming to the international standards.

## Auto Switch Specifications

PLC: Programmable Logic Controller

D-M5□ (With indicator light)			
Auto switch model	D-M5N	D-M5P	D-M5B
Wiring type	3-wire		2-wire
Output type	NPN	PNP	—
Applicable load	IC circuit, Relay, PLC		24 VDC Relay, PLC
Power supply voltage	5, 12, 24 VDC (4.5 to 28 VDC)		
Current consumption	10 mA or less		
Load voltage	28 VDC or less	—	24 VDC (10 to 28 VDC)
Load current	40 mA or less	80 mA or less	5 to 40 mA
Internal voltage drop	1.5 V or less (0.8 V or less at 10 mA load current)	0.8 V or less	4 V or less
Leakage current	100 μA or less at 24 VDC		0.8 mA or less at 24 VDC
Indicator light	Red LED illuminates when turned ON.		
Standard	CE marking		

• Lead wires — Oilproof heavy-duty vinyl cord,  $\phi 3.4$ , 0.2 mm<sup>2</sup>, 3 cores (Brown, Black, Blue), 2 cores (Brown, Blue), 0.5 m

Note 1) Refer to page 1272 for solid state auto switch common specifications.

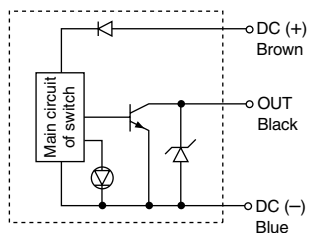
Note 2) Refer to page 1272 for lead wire lengths.

### Grommet

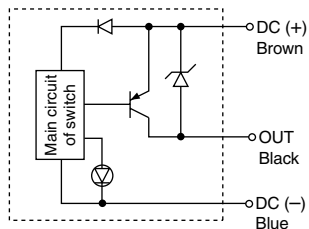


### Auto Switch Internal Circuit

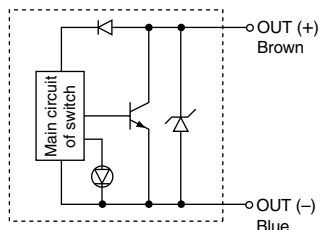
#### D-M5N



#### D-M5P



#### D-M5B



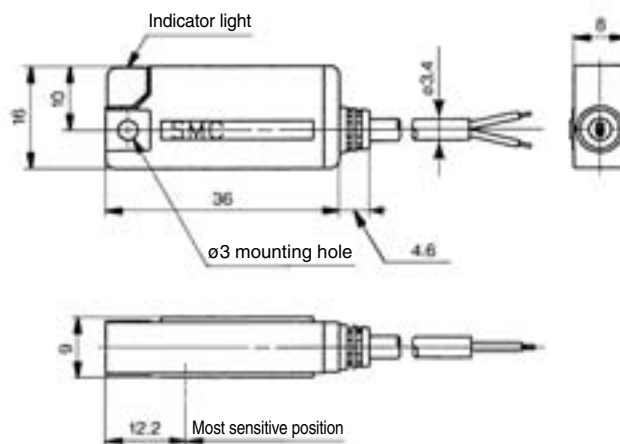
### Mass

(g)

Auto switch model	D-M5N	D-M5P	D-M5B
Lead wire length (m)	0.5	16	14
	3	60	53
	5	95	84

### Dimensions

(mm)



D-□