

Solid State Auto Switch Direct Mounting Style D-M9N/D-M9P/D-M9B



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

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.



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 Specifications

PLC: Programmable Logic Controller

D-M9□, D-M9□V (With indicator light)			
Auto switch model	D-M9N	D-M9P	D-M9B
Electrical entry direction	In-line	In-line	In-line
Wiring type	3-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)		
Load current	2.5 to 40 mA		
Current consumption	10 mA or less		
Load voltage	28 VDC or less	—	24 VDC (10 to 28 VDC)
Load current	40 mA or less		
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, RoHS		

Oilproof Heavy-duty Lead Wire Specifications

Auto switch model		D-M9N	D-M9P	D-M9B
Sheath	Outside diameter [mm]	2.7 x 3.2 (ellipse)		
Insulator	Number of cores	3 cores (Brown/Blue/Black)		2 cores (Brown/Blue)
	Outside diameter [mm]	ø0.9		
Conductor	Effective area [mm ²]	0.15		
	Strand diameter [mm]	ø0.05		
Minimum bending radius [mm] (Reference values)		20		

Note 1) Refer to page 1194 for solid state auto switch common specifications.

Note 2) Refer to page 1194 for lead wire lengths.

Weight

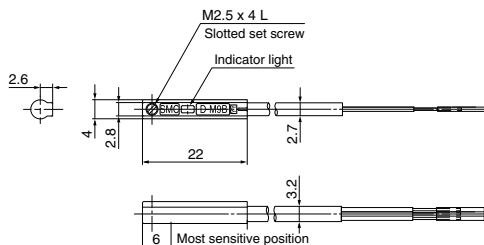
(g)

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

Dimensions

(mm)

D-M9□



Reed Auto Switch Direct Mounting Style D-A90/D-A93/D-A96



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

PLC: Programmable Logic Controller

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 Specifications

D-A90 (Without indicator light)			
Auto switch model	D-A90		
Applicable load	IC circuit, Relay, PLC		
Load voltage	24 V $\frac{DC}{\text{AC}}$ or less	48 V $\frac{DC}{\text{AC}}$ or less	100 V $\frac{DC}{\text{AC}}$ or less
Maximum load current	50 mA	40 mA	20 mA
Circuit diagram*	(4)		
Contact protection circuit	None		
Internal resistance	1 Ω or less (Including lead wire length of 3 m)		
Standard	CE marking		
D-A93, D-A96 (With indicator light)			
Auto switch model	D-A93	D-A96	
Applicable load	Relay, PLC	IC circuit	
Load voltage	24 VDC ⁽⁴⁾	100 VAC	4 to 8 VDC
Load current range and Maximum load current ⁽³⁾	5 to 40 mA	5 to 20 mA	20 mA
Circuit diagram*	(3)		(5)
Contact protection circuit	None		
Internal voltage drop	D-A93: 2.4 V or less (up to 20 mA)/3 V or less (up to 40 mA) D-A93V: 2.7 V or less	0.8 V or less	
Indicator light	Red LED illuminates when turned ON.		
Standard	CE marking		

Oilproof Heavy-duty Lead Wire Specifications

Auto switch model		D-A90	D-A93	D-A96
Sheath	Outside diameter [mm]	$\phi 2.7$		
Insulator	Number of cores	2 cores (Brown/Blue)		3 cores (Brown/Blue/Black)
	Outside diameter [mm]	$\phi 0.96$		$\phi 0.91$
Conductor	Effective area [mm ²]	0.18		0.15
	Strand diameter [mm]	$\phi 0.08$		
Lead wire minimum bending radius [mm] (Reference values)		17		

* Refer to the circuit diagram no. on page 1197.

Note 1) Refer to page 1194 for reed auto switch common specifications.

Note 2) Refer to page 1194 for lead wire lengths.

Note 3) Under 5 mA, the strength of the indicator light is poor. In some cases, visibility of the indicator light will not be possible where the output signal is less than 2.5 mA. However, there is no problem in terms of contact output, when an output signal exceeds 1 mA or more.

Note 4) The auto switches can operate at 12 VDC, but consider the internal voltage drop of the auto switch described in Reed Auto Switch Precautions on page 1205.

Weight

(g)

Model		D-A90	D-A93	D-A96
Lead wire length	0.5 m (NII)	6	6	8
	1 m (M)	—	11	—
	3 m (L)	30	30	41
	5 m (Z)	—	47	—

Dimensions

(mm)

D-A90/D-A93/D-A96

