Reed Switch
Direct Mounting Style
D-Z73/D-Z76/D-Z80

CE

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Grommet

Auto Switch Internal Circuit

D-Z73

D-Z76

D-Z80

Note 1) Operating load is an induction load.
Note 2) Wiring to the load is 5 m or longer.
Note 3) Load voltage is 100 VAC.
Use the contact protection box in any of the above listed situations. The contact point life may decrease. (Refer to page 6-16-7 for contact protection box.)

Auto Switch Specifications

PLC: Abbreviation of Programmable Logic Controller

D-Z7 (With indicator light)		
Auto switch model	**D-Z73**	**D-Z76**
Applicable load	Relay, PLC	IC circuit
Load voltage	24 VDC 100 VAC	4 to 8 VDC
Max. load current and load current range [3]	5 to 40 mA 5 to 20 mA	20 mA
Contact protection circuit	None	
Internal voltage drop	≤ 2.4 V (to 20 mA)/≤ 3 V (to 40 mA)	0.8 V or less
Indicator light	Red LED lights when ON.	

D-Z8 (Without indicator light)		
Auto switch model	**D-Z80**	
Applicable load	Relay, PLC, IC circuit	
Load voltage	24 V $_{DC}^{AC}$ or less	48 V $_{DC}^{AC}$	100 V $_{DC}^{AC}$
Maximum load current	50 mA	40 mA	20 mA
Contact protection circuit	None	
Internal resistance	1 Ω or less (Including 3 m lead wire)	

• Lead wire — Oil resistant vinyl heavy-duty cord, ø3.4, 0.2 mm², 3 cores (Brown, Black, Blue), 2 cores (Brown, Blue), 0.5 m (For only D-Z73, ø2.7, 0.18 mm², 2 cores)
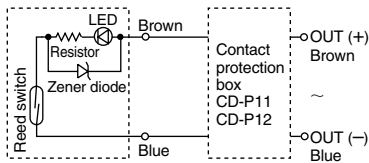Note 1) Regarding the common specifications of the reed switches, refer to page 6-16-7.
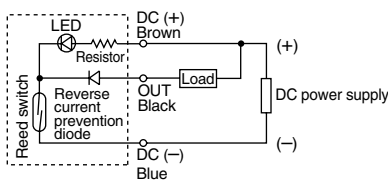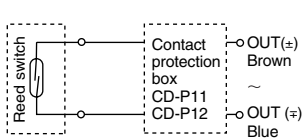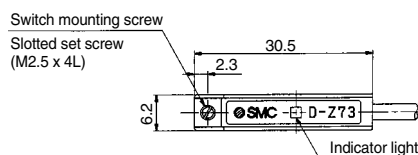Note 2) Regarding the lead wire length, refer to page 6-16-7.
Note 3) Under 5 mA, the strength of the indicator light is poor. In some cases, visibility of the indicator light will not be possible where the output signal is less than 2.5 mA. However, there is no problem in terms of contact output, when an output signal exceeds 1 mA or more.

Weight

(g)

Auto switch model		**D-Z73**	**D-Z76**	**D-Z80**
Lead wire length (m)	0.5	7	10	9
	3	31	55	49
	5	50	—	—

Dimensions

D-Z73

D-Z76, Z80
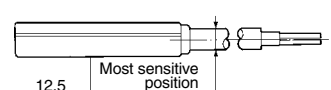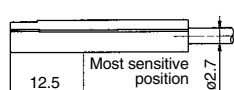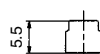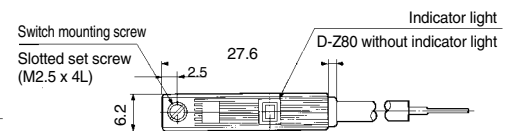
Technical Data 2:
How to Mount and Move the Auto Switch

Mounting Bracket | Tie-rod Mounting Style

<Applicable auto switch>
Reed switch ·············· D-Z73/Z76/Z80
Solid state switch ····· D-Y59$_B^A$/Y69$_B^A$, D-Y7P(V)
D-Y7NW(V)/Y7PW(V)/Y7BW(V)
D-Y7BAL

How to Mount and Move the Auto Switch

Watchmakers' (precision) screwdriver
Hexagon socket head set screw
Series MB, CA1: M4 x 0.7 x 6ℓ
Series CS1: M4 x 0.7 x 8ℓ
Auto switch
Auto switch mounting screw
Switch mounting bracket
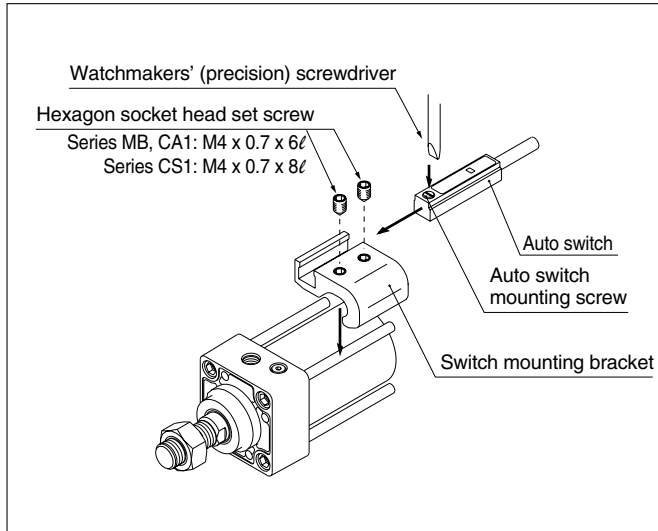
Note) **When tightening an auto switch mounting screw, use a watchmaker's screwdriver with a grip diameter of 5 to 6 mm. Also, set the tightening torque to be 0.05 to 0.1 N·m.**
As a guide, turn 90° from the position where it comes to feel tight. Set the tightening torque of a hexagon socket head set screw (M4 x 0.7) to be 1 to 1.2 N·m.

1. Fix it to the detecting position with a set screw by installing a mounting bracket in cylinder tie-rod and letting the bottom surface of a mounting bracket contact the cylinder tube firmly.
   (Use hexagon wrench)
2. Fit an auto switch into the switch mounting groove to set it roughly to the mounting position for an auto switch.
3. After confirming the detecting position, tighten up the mounting screw attached to an auto switch, and secure the switch.
4. When changing the detecting position, carry out in the state of 2.

＊ To protect auto switches, ensure that main body of an auto switch should be embedded into auto switch mounting groove with a depth of 15 mm or more.
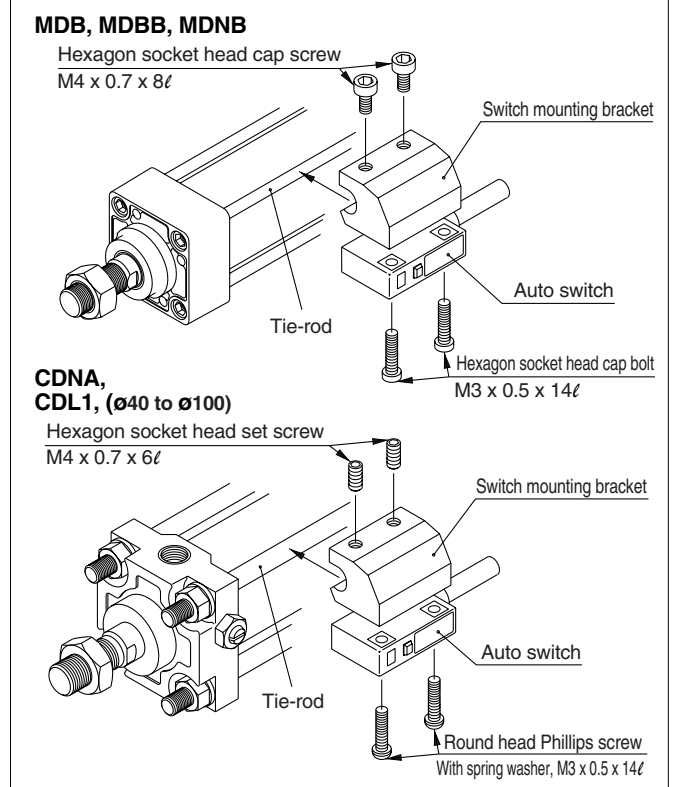
Auto Switch Mounting Bracket Part No.

Applicable cylinder	Bore size (mm)	Mounting	Accessory
MDB, MBB, MDNB	32, 40	BMB4-032	Hexagon socket head set screw (M4 x 0.7 x 6ℓ) Quantity: 2
	50, 63	BMB4-050	
	80, 100	BA4-063	
CDL1, CDNA	40, 50	BA4-040	
	63	BA4-063	
	80, 100	BA4-080	
CDS1, CDL1, CDLS	125, 140	BS4-125	Hexagon socket head set screw (M4 x 0.7 x 8ℓ) Quantity: 2
	160	BS4-160	
	180	BS4-180	
	200	BS4-200	

<Applicable auto switch>
Solid state switch ······ D-P5DWL

How to Mount and Move the Auto Switch

MDB, MDBB, MDNB
Hexagon socket head cap screw
M4 x 0.7 x 8ℓ
Switch mounting bracket
Tie-rod
Auto switch
Hexagon socket head cap bolt
M3 x 0.5 x 14ℓ

CDNA, CDL1, (ø40 to ø100)
Hexagon socket head set screw
M4 x 0.7 x 6ℓ
Switch mounting bracket
Auto switch
Tie-rod
Round head Phillips screw
With spring washer, M3 x 0.5 x 14ℓ

1. (For MDB)
   Slightly screw the hexagon socket head cap screw (M4 x 0.7 x 8ℓ) into the M4 tapped portion of switch mounting bracket. (2 locations) Use caution that the tip of the hexagon socket head cap screw should not stick out to the concave portion of switch mounting bracket.
2. (For MDB)
   Put a round head Phillips screw (M3 x 0.5 x 14ℓ) through the auto switch's through-hole (2 locations), and then push it down into the M3 tapped part on the switch mounting bracket while turning it lightly.
3. Place the concave part of the switch mounting bracket into the cylinder tie-rod, and slide the switch mounting bracket in order to set roughly to the detecting position.
4. After reconfirming the detecting position, tighten the M3 mounting screw to secure the auto switch by making the bottom face of auto switch attached to the cylinder tube. (Tightening torque of M3 screw should be 0.5 to 0.7 N·m.)
5. Tighten up M4 screw of switch mounting bracket to secure the switch mounting bracket. (Ensure that tightening torque of M4 screw should be set 1.0 to 1.2 N·m.)

Auto Switch Mounting Bracket Part No.
(Including bracket, screw)

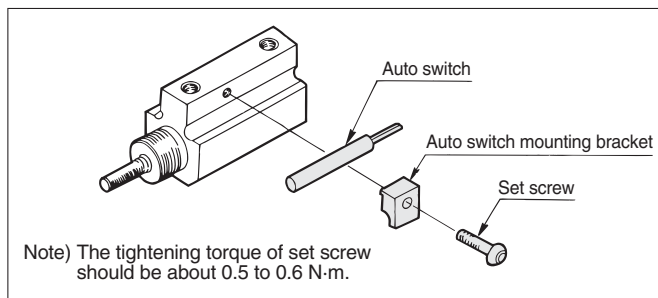| Cylinder series	Applicable bore size (mm)					
	32	**40**	**50**	**63**	**80**	**100**
MDB, **MDBB**, **MDNB**	BMB3T-040	BMB3T-040	BMB3T-050	BMB3T-050	BMB3T-080	BMB3T-080
CDL1, **CDNA**	—	BAP2-040	BAP2-040	BAP2-063	BAP2-080	BAP2-080

SMC

Technical Data 2:
How to Mount and Move the Auto Switch

Mounting Bracket Tie-rod Mounting Style

<Applicable auto switch>
Reed switch······D-90/97, D-90A/93A
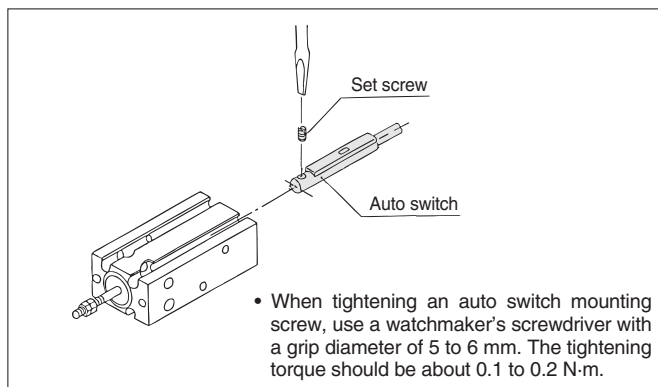
How to Mount and Move the Auto Switch

Auto switch

Auto switch mounting bracket

Set screw

Note) The tightening torque of set screw
should be about 0.5 to 0.6 N·m.

Auto Switch Mounting Bracket Part No.
(Including bracket, screw)

Cylinder	Applicable bore size (mm)		
series	6	10	15
CDJP-□D	BP-1	BP-1	BP-1

<Applicable auto switch>
Reed switch··············D-A90(V)/A93(V)/A96(V)
Solid state switch········D-M9N(V)/M9P(V)/M9B(V)
F9NW(V)/F59W/F9BW(V)
F9BAL

How to Mount and Move the Auto Switch

Set screw

Auto switch

• When tightening an auto switch mounting
screw, use a watchmaker's screwdriver with
a grip diameter of 5 to 6 mm. The tightening
torque should be about 0.1 to 0.2 N·m.

<Applicable auto switch>
Reed switch··············D-E73A/E76A/E80A
Solid state switch······D-M5N/M5P/M5B
D-M5NW/M5PW/M5BW
D-M5NTL/M5PTL

How to Mount and Move the Auto Switch

Auto switch mounting nut

Auto switch mounting screw
M2.5 x 10ℓ (D-E7□A/E8□A)
M2.5 x 12ℓ (D-M5□/M5□W/M5□T)
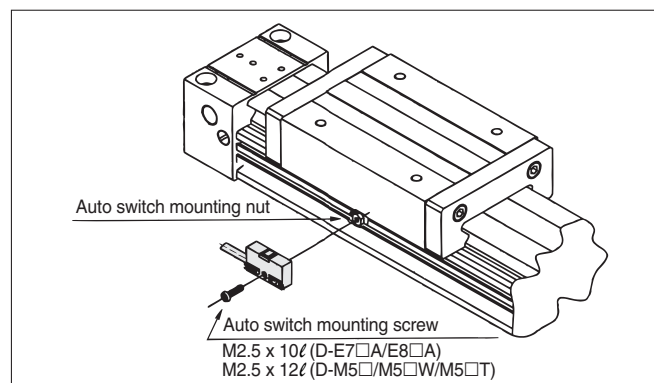
1. Insert the auto switch mounting nut into the auto switch mounting groove and then set the switch at the mounting position by sliding.
2. Put the convex part of auto switch into the mounting groove and slide it over the nut.
3. Push the auto switch mounting screw lightly into the mounting nut through the mounting hole.
4. After reconfirming the detecting position, tighten the mounting screw to secure the auto switch. (Tightening torque of M2.5 screw should be 0.1 to 0.2 N·m.)
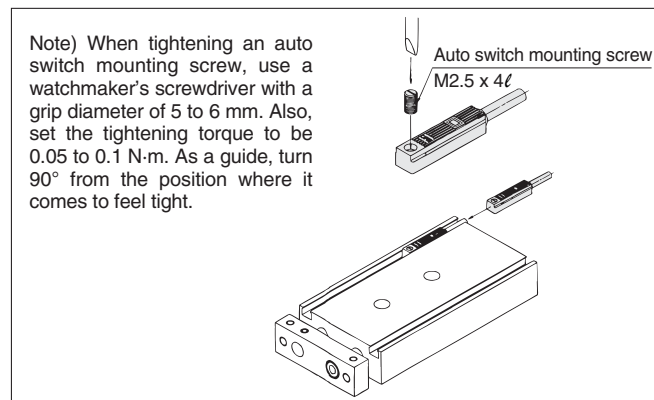
Auto Switch Mounting Bracket Part No. (Including nut, screw)

Cylinder		Applicable bore size (mm)		
series		25	32	40
ML1	M2.5 x 12ℓ	BMY2-025	BMY2-025	BMY2-025
	M2.5 x 10ℓ	BMY1-025	BMY1-025	BMY1-025

<Applicable auto switch>
Reed switch··············D-Z73/Z76/Z80
Solid state switch······D-Y59 ^A_B/Y69 ^A_B , D-Y7P(V)
D-Y7NW(V)/Y7PW(V)/Y7BW(V)
D-Y7BAL

How to Mount and Move the Auto Switch

Note) When tightening an auto switch mounting screw, use a watchmaker's screwdriver with a grip diameter of 5 to 6 mm. Also, set the tightening torque to be 0.05 to 0.1 N·m. As a guide, turn 90° from the position where it comes to feel tight.

Auto switch mounting screw
M2.5 x 4ℓ

1. Insert the auto switch into the mounting groove and set it at the auto switch mounting position.
2. After reconfirming the detecting position, tighten the mounting screw to secure the auto switch.
3. Modification of the detecting position should be made in the condition of 1.

Technical Data 2:
How to Mount and Move the Auto Switch

Mounting Bracket | Direct Mounting Style

<Applicable auto switch>
Reed switch·············· **D-Z73/Z76/Z80**
Solid state switch······ **D-Y59$_B^A$/Y69$_B^A$, D-Y7P(V)**
D-Y7NW(V)/Y7PW(V)/Y7BW(V)
D-Y7BAL

How to Mount and Move the Auto Switch

Flat head watchmakers' screwdriver
Switch mounting screw (M2.5 x 4ℓ)
Accessory
ø5 to ø6
Switch spacer

Note) When tightening an auto switch mounting screw, use a watchmaker's screwdriver with a grip diameter of 5 to 6 mm. Also, tighten with a torque of about 0.05 to 0.1 N·m
As a guide, it should be turned about 90° past the point at which tightening can be felt.

When attaching an auto switch, first take a switch spacer between your fingers and press it into a switch mounting groove. When doing this, confirm that it is set in the correct mounting orientation, or reattach if necessary. Next, insert an auto switch into the groove and slide it until it is positioned under the switch spacer.
After establishing the mounting position, use a watchmakers flat head screwdriver to tighten the switch mounting screw which is included.

Correct   **Incorrect**
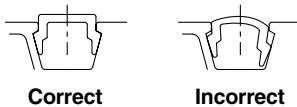
Switch Spacer No.

Cylinder series	Applicable bore size (mm)					
	32	40	50	63	80	100
MDB1	BMP1-032					

SMC