

How to Mount and Move the Auto Switch

Mounting Bracket	Band Mounting Style
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<Applicable auto switch>

Solid state D-M9N, M9P, M9B, M9NV, M9PV, M9BV,
D-M9NW, M9PW, M9BW, M9NWV, M9PWV, M9BWV,
D-M9NA, M9PA, M9BA, M9NAV, M9PAV, M9BAV

Reed D-A90, A93, A96, A90V, A93V, A96V

Reed D-A90, A93, A96, A90V, A93V, A96V

How to Mount and Move the Auto Switch

Mounting the Auto Switch

1. Mount the auto switch mounting band around the auto switch setting position on the cylinder tube.
2. Place the switch holder in the opening of the auto switch mounting band (1).
3. Make the concave part of the switch bracket faced downward and set the switch bracket on the switch holder (2).
Set the switch bracket so that both ends of the auto switch mounting band enter the portion between the ribs on both side surfaces of the switch bracket.
For the D-M9C(A) type auto switch, do not install the switch bracket on the indicator light.
4. Pass the auto switch mounting screw (M3) supplied with the auto switch mounting band from the through-hole side of the auto switch mounting band and engage it with the M3 female thread of the auto switch mounting band through the through-hole in the switch bracket.
5. Tighten the auto switch mounting screw with the specified tightening torque to secure the switch bracket and switch holder.

Tightening torque for auto switch mounting screw (N·m)

Cylinder series	Tightening torque
CDJ2-Z, CDJ2X-Z, CDJ5, CDLJ2, CDVJ5, CDVJ3	0.8 to 1.0
CDM2, CDM2-Z, CDM3, CDM2Y-Z, CDM2X-Z, CDLM2, CDMVMJ5, CDMVM3, CDG1, CDG1-Z, CDG3, CDG1Y-Z, CDLG1, CDNG, MGG, MGC, MLGC, REC, RHC, RSDG, CDLG1, CHN, CHDM	0.6 to 0.7

6. Insert the auto switch into the auto switch mounting groove of the switch holder (2).
7. After checking the detection position, tighten the set screw (M2.5) supplied with the auto switch to secure the auto switch.
- At this time, the tightening torque for the set screw (M2.5) supplied with the auto switch must be 0.05 to 0.1 N·m.
- When tightening the set screw supplied with the auto switch, use a watchmaker's screw driver with a handle diameter of 5 to 6 mm.

Adjusting the Auto Switch Position

- (1) To make the fine adjustment, loosen the set screw (M2.5) supplied with the auto switch and slide the auto switch inside the auto switch mounting groove to adjust the position.
- (2) To move the auto switch setting position largely, loosen the screw (M3) that secures the auto switch mounting band and slide the auto switch together with the switch holder on the cylinder tube to adjust the position.

Auto Switch Mounting Bracket Part No. (Including a, b, c and d shown in the figure.)

Cylinder series	Bore size (mm)					
	6		10		16	
	D-M9□(V) D-M8□_W(V) D-A9□_V(V)	D-M9A□(V)	D-M9□(V) D-M9□_W(V) D-A9□_V(V)	D-M9□_A(V)	D-M9□_V(V) D-M8□_W(V) D-A9□_V(V)	D-M9□_A(V)
CDJ2-Z, CDJ2-X CDJ2Y-Z CDVJ3, 5 CDBJ2, CDLJ2 CDJ5	BJ6-006	BJ6-006S	BJ6-010	BJ6-010S	BJ6-016	BJ6-016S
	—	—	—	—	—	—
	—	—	—	BJ6-010S	—	BJ6-016S

Note) The products other than those with "-Z" show the cylinders with the part number "-C".

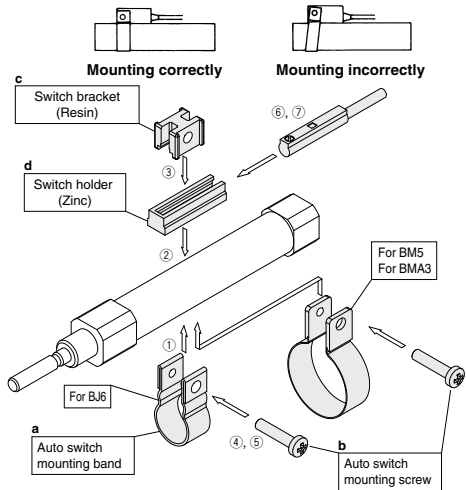
Auto Switch Mounting Bracket Part No. (Including a, b, c and d shown in the figure.)

Cylinder series	Bore size (mm)											
	20		25		32		40		50		63	
	D-M9□(V) D-M9□(W(V)) D-A9□(V)	D-M9□(A(V))	D-M9□(V) D-M9□(W(V)) D-A9□(V)	D-M9□(A(V))	D-M9□(V) D-M9□(W(V)) D-A9□(V)	D-M9□(A(V))	D-M9□(V) D-M9□(W(V)) D-A9□(V)	D-M9□(A(V))	D-M9□(V) D-M9□(W(V)) D-A9□(V)	D-M9□(A(V))	D-M9□(V) D-M9□(W(V)) D-A9□(V)	D-M9□(A(V))
CDM2-Z, CDM2 CDBM2, CDM3 CDM2X-Z, CDM2-Y-Z CDLM2 CDVM3, CDVM5 CDG1-Z, CDG1 CDBG1, CDG3 CDG1-Y, MGG, RHC MGC CDLG1, CDNG MLGC, REC CKG1-Z, CKG1 CLK2GA CLK2GB RSDG	BM5-020	BM5-020S	BM5-025	BM5-025S	BM5-032	BM5-032S	BM5-040	BM5-040S	—	—	—	—
	BMA3-020	BMA3-020S	BMA3-025	BMA3-025S	BMA3-032	BMA3-032S			BMA3-050	BMA3-050S	BMA3-063	BMA3-063S
							BMA3-040	BMA3-040S	—	—	—	—
					BMA3-032	BMA3-032S			—	—	—	—
									BMA3-050	BMA3-050S	BMA3-063	BMA3-063S
							BMA3-040	BMA3-040S			—	—

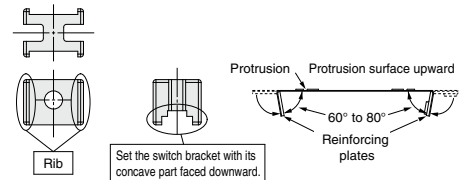
Note) The products other than those with "-Z" show the cylinders with the part number "-C". (Except MGC and MGG)

⚠ Caution

1. Tighten screws with the proper tightening torque.
2. Set the auto switch mounting band perpendicularly to cylinder tube.



<Switch bracket>



The switch brackets have different colors.

For BJ6-006: Transparent blue For BJ6-010/016/BM5-□□□/BMA3-□□□: Transparent
For BJ6-006S: Black For BJ6-010S/016S/BM5-□□□S/BMA3-□□□S: White

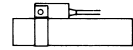
<Precautions on BM5 and BMA3>

When removing the screw connection part with the auto switch mounting screw after the auto switch mounting band has been assembled, be careful not to drop the switch bracket, switch holder, auto switch mounting screw, or auto switch mounting band.

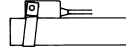
How to Mount and Move the Auto Switch

⚠ Caution

1. Tighten screws with the proper tightening torque.
2. Set the auto switch mounting band perpendicularly to cylinder tube.



Mounting correctly

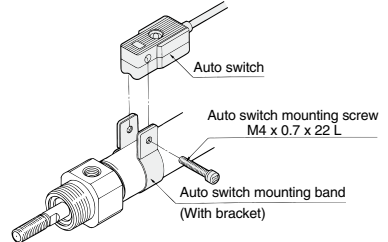


Mounting incorrectly

<Applicable auto switch>

Solid state D-G59, D-G5P, D-K59, D-G5BA,
D-G59W, D-G5PW, D-K59W,
D-G59F, D-G5NT, D-G5NB
Reed D-B53, D-B54, D-B64, D-B59W

How to Mount and Move the Auto Switch



1. Put a mounting band on the cylinder tube and set it at the auto switch mounting position.
2. Put the mounting section of the auto switch between the band mounting holes, then adjust the position of mounting holes of switch to those of mounting band.
3. Lightly thread the auto switch mounting screw through the mounting hole into the thread part of band fitting.
4. After reconfirming the detection position, tighten the mounting screw to secure the auto switch while properly contacting the auto switch bottom part and the cylinder tube.
(The tightening torque of M4 screw should be about 1 to 1.2 N·m.)
5. Modification of the detection position should be made in the condition of 3.

Auto Switch Mounting Bracket Part No. (Including band and screw)

Cylinder series	Applicable bore size (mm)							
	20	25	32	40	50	63	80	100
CDM2-Z, CDM3 CDM2, CDBM2 CDM2X-Z, CDM2Y-Z CDLM2, CDVM3/5	BA2-020	BA2-025	BA2-032	BA2-040	—	—	—	—
CDA2-Z, CDA2, CDBA2 CDNA2	—	—	—	BH2-040	BA5-050	BAF-06	BAF-08	BAF-10
CDA2□□Q, CDA2□□H, CDA2Y-Z CDL1, CE2, CDV3, CDVS1	—	—	—	BA-04	BA-05	BA-06	BA-08	BA-10
CDG1-Z, CDG3 CDG1, CDBG1, CDG1Y-Z MGG, RHC	BA-01	BA-02	BA-32					
MGC								
CDLG1, CDNG								
MLGC, REC								
CKG1-Z, CKG1	—	—	—		BA-05	BA-06	—	—
CLK2GA	—	—	BA-32				—	—
CLK2GB	—	—	—				—	—
CDG5□S	NBA-088S	NBA-106S	BGS1-032S	BAF-04S	BAF-05S	BAF-06S	BAF-08S	BAF-10S

[Mounting screws set made of stainless steel]

The following set of mounting screws made of stainless steel is also available. Use it in accordance with the operating environment. (Please order the auto switch mounting band separately, since it is not included.)

BBA3: For D-B5/B6/G5/K5

"D-G5BA" auto switch is set on the cylinder with the stainless steel screws above when shipped.

When an auto switch is shipped independently, "BBA3" screws are attached.

Stainless Steel Mounting Screw Set

Part no.	Description			Applicable auto switch mounting bracket part no.	Applicable auto switch
	Part	Size	Qty.		
BBA3	Auto switch mounting screw	M4 x 0.7 x 22L	1	BA-01, BA-02, BA-32, BA-04 BA-05, BA-06, BA-08, BA-10	D-B5, B6 D-G5, K5
				BA2-020, BA2-025, BA2-032, BA2-040	
				BA5-050, BHN2-025, BSG1-032	
				BH2-040, BH2-050, BH2-080, BH2-100	
				BAF-32, BAF-04, BAF-05	
				BAF-06, BAF-08, BAF-10	



How to Mount and Move the Auto Switch

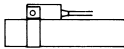
Mounting Bracket Band Mounting Style

<Applicable auto switch>

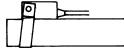
Solid state D-H7A1, D-H7A2, D-H7B,
D-H7BA, D-H7C, D-H7NF,
D-H7NW, D-H7PW, D-H7BW
Reed D-C73, D-C76, D-C80, D-C73C, D-C80C

⚠ Caution

1. Tighten screws with the proper tightening torque.
2. Set the auto switch mounting band perpendicularly to cylinder tube.

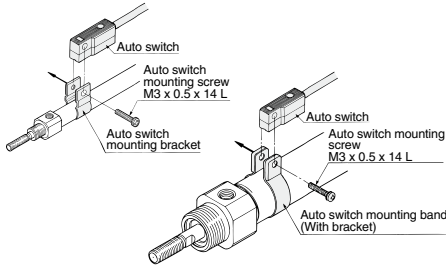


Mounting correctly



Mounting incorrectly

How to Mount and Move the Auto Switch



1. **For Series CDJ2:** Put a mounting bracket on the cylinder tube.
For Series CDM2: Put a mounting band on the cylinder tube and set it at the auto switch mounting position.
2. Put the mounting section of the auto switch between the band mounting holes, then adjust the position of mounting holes of switch to those of mounting band.
3. Lightly thread the auto switch mounting screw through the mounting hole into the thread part of band fitting.
4. After setting the whole body to the detecting position by sliding, tighten the mounting screw to secure the auto switch while properly contacting the auto switch bottom part and the cylinder tube. (The tightening torque of M3 screw should be as below.)
BJ2-□□□: 0.8 to 1.0 N·m
BM2-□□□A: 0.6 to 0.7 N·m
BMA2-□□□A: 0.6 to 0.7 N·m
5. Modification of the detection position should be made in the condition of 3.
6. After auto switch is mounted and fixed, attach a protective tube on the tip of an auto switch mounting screw. (For BJ2-□□□)

Auto Switch Mounting Bracket Part No. (Including band and screw)

Cylinder series	Applicable bore size (mm)								
	6	10	16	20	25	32	40	50	63
CDJ2	BJ2-006			—	—	—	—	—	—
CDJ2-Z, CDJ2X-Z, CDJ2Y-Z, CDVJ3/5	—	BJ2-010	BJ2-016	—	—	—	—	—	—
CDBJ2, CDLJ2	—	—	—	—	—	—	—	—	—
CDM2-Z, CDM3 CDM2, CDBM2 CDM2X-Z, CDM2Y-Z CDLM2, CDVM3/5	—	—	—	Note) BM2-020A BM2-020	Note) BM2-025A BM2-025	Note) BM2-032A BM2-032	Note) BM2-040A BM2-040	—	—
CDG1-Z, CDG3 CDG1, CDBG1 CDG1Y-Z, MGG, RHC	—	—	—	Note) BMA2-020A BMA2-020	Note) BMA2-025A BMA2-025	Note) BMA2-032A BMA2-032	Note) BMA2-040A BMA2-040	Note) BMA2-050A BMA2-050	Note) BMA2-063A BMA2-063
MGC	—	—	—	—	—	—	—	—	—
CDLG1, CDNG	—	—	—	—	—	—	—	—	—
MLGC, REC	—	—	—	—	—	—	—	—	—
CKG1-Z, CKG1	—	—	—	—	—	—	—	—	—
CLK2GA	—	—	—	—	—	BMA2-032	—	Note) BMA2-050A BMA2-050	Note) BMA2-063A BMA2-063
CLK2GB	—	—	—	—	—	—	—	—	—
RSDG	—	—	—	—	—	—	BMA2-040	—	—
CDJ5□S	—	BJ2-010S	BJ2-016S	—	—	—	—	—	—

Note) The upper part numbers show the "Z" products and the lower part numbers show other cylinders. (However, the MGC and MGG use the upper part numbers.)

[Mounting screws set made of stainless steel]

The following set of mounting screws made of stainless steel is also available. Use it in accordance with the operating environment. (Please order the auto switch mounting band separately, since it is not included.)

BBA4: For D-C7/C8/H7

"D-H7BA" switch is set on the cylinder with the stainless steel screws above when shipped.

When only an auto switch is shipped independently, "BBA4" screws are attached.

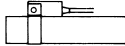
Stainless Steel Mounting Screw Set

Part no.	Description			Applicable auto switch mounting bracket part no.	Applicable auto switch
	Part	Size	Qty.		
BBA4	Auto switch mounting screw	M3 x 0.5 x 14L	1	BJ2-006, BJ2-010, BJ2-016	D-C7, C8 D-H7
				BM2-020(A), BM2-025(A), BM2-032(A), BM2-040(A)	
				BMA2-020(A), BMA2-025(A), BMA2-032(A)	
				BMA2-040(A), BMA2-050(A), BMA2-063(A)	
				BHN3-025A, BHN3-032A, BHN3-040A	

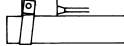
How to Mount and Move the Auto Switch

⚠ Caution

1. Tighten screws with the proper tightening torque.
2. Set the auto switch mounting band perpendicularly to cylinder tube.



Mounting correctly



Mounting incorrectly

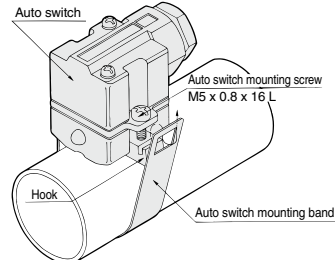
<Applicable auto switch>

Solid state D-G39, D-K39

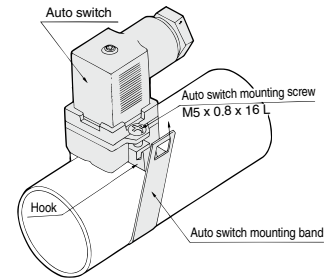
Reed D-A33, D-A34, D-A44

How to Mount and Move the Auto Switch

D-A3□, D-G3/K3 type



D-A44



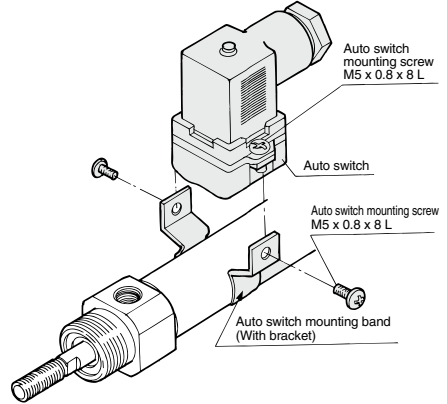
1. Loosen the auto switch mounting screws at both sides to pull down the hook.
2. Put an auto switch mounting band on the cylinder tube and set it at the auto switch mounting position, and then hook the band.
3. Screw lightly the auto switch mounting screw.
4. Set the whole body to the detecting position by sliding, tighten the mounting screw to secure the auto switch. (The tightening torque should be about 2 to 3 N·m.)
5. Modification of the detecting position should be made in the condition of 3.

<Applicable auto switch>

Solid state D-G39A, D-K39A

Reed D-A33A, D-A34A, D-A44A

How to Mount and Move the Auto Switch



1. Tighten completely the auto switch mounting screw on the auto switch body side.
2. Put a mounting band on the cylinder tube and set it at the auto switch mounting position. Put the mounting section of auto switch between the interval of mounting band, then adjust the position of mounting holes of switch to those of mounting band.
3. Lightly thread the auto switch mounting screw through the mounting hole into the thread part of band fitting.
4. After reconfirming the detecting position, tighten the mounting screw to secure the auto switch. (The tightening torque of M5 screw should be about 2 to 3 N·m.)
5. Modification of the detecting position should be made in the condition of 3.

Auto Switch Mounting Bracket Part No. (Including band and screw)

Cylinder series	Applicable bore size (mm)			
	20	25	32	40
CDM3 CDM2-Z, CDBM2 CDLM2, CDM2X-Z CDM2Y-Z	BM3-020	BM3-025	BM3-032	BM3-040

Auto Switch Mounting Bracket Part No. (Band)

Cylinder series	Applicable bore size (mm)												
	20	25	32	40	50	63	80	100	125	140	160	180	200
MDB	—	—	BMB2 -032	BMB2 -040	BMB1 -050	BMB1 -063	BMB1 -080	BMB1 -100	BS1-125	—	—	—	—
MDB-Z, MDBB, MDBY-Z, MDNB	—	—							—	—	—	—	—
CDA2-Z, CDA2 CDBA2, CDNA2	—	—	—	BDS-04M	BDS-05M	—	—	—	—	—	—	—	—
CDA2□Q, CDA2□H CDA2Y-Z, CE2 CDV3, CDVS1	—	—	—	BD1 -04M	BD1 -05M	BD1 -06M	BD1 -08M	BD1 -10M	—	—	—	—	—
CDL1	—	—	—	—	—	—	—	—	BS1 -125	BS1 -140	BS1 -160	—	—
CDS2, CDS2Y	—	—	—	—	—	—	—	—				—	—
CDS1, CDLS	—	—	—	—	—	—	—	—				BS1-180	BS1-200
CDNS	—	—	—	—	—	—	—	—	—	—	—	—	—
RHC	BD1-01M	BD1-02M	BD1-02	BD1 -04M	BD1 -05M	BD1 -06M	BD1-08M	BD1-10M	—	—	—	—	—
CKG1-Z, CKG1	—	—	—				—	—	—	—			
CLK2GA	—	—	—				—	—	—	—			
CLK2GB	—	—	—				—	—	—	—			

How to Mount and Move the Auto Switch

Mounting Bracket Rail Mounting Style

<Applicable auto switch>

Solid state D-M9N(V), D-M9P(V), D-M9B(V),
D-M9NW(V), D-M9PW(V), D-M9BW(V),
D-M9NA(V), D-M9PA(V), D-M9BA(V)
Reed D-A90(V), A93(V), A96(V)

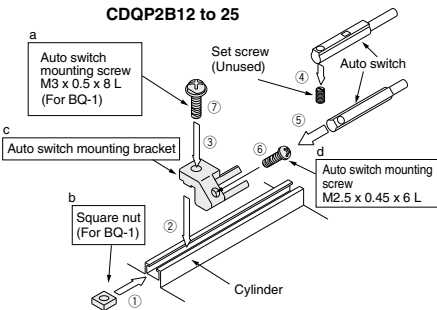
How to Mount and Move the Auto Switch

CDQP2B12 to 25

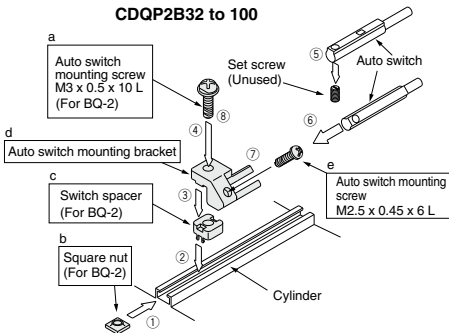
1. Insert the square nut for BQ-1 in the switch mounting rail and set it at the approximate auto switch mounting position.
2. Fit the convex part of the auto switch mounting bracket arm over the concave part of the rail, and slide the arm to the nut position.
3. Push the auto switch mounting screw (M3 for BQ-1) lightly into the square nut through the hole of the auto switch mounting arm.
4. Remove the set screw (M2.5) attached to the auto switch.
5. Insert the auto switch in the auto switch attachment part of the auto switch mounting bracket.
6. Secure the auto switch mounting screw (M2.5). (Tightening torque of M2.5 screw: 0.1 to 0.2 N·m)
7. Secure the auto switch mounting screw (3) after confirming the detecting position. (Tightening torque of M3 screw: 0.5 to 0.7 N·m)
8. Modify the detecting position while the auto switch is secured at the position of (3) in the figure.

CDQP2B32 to 100

1. Insert the square nut for BQ-2 in the switch mounting rail and set it at the approximate auto switch mounting position.
2. Fit the protruding part of the switch mounting spacer over the concave part of the rail, and slide the spacer to the nut position.
3. Fit the convex part of the auto switch mounting bracket arm over the concave part of the switch spacer.
4. Turn the auto switch mounting screw (M3 for BQ-2) lightly into the square nut through the mounting holes of the auto switch mounting arm and switch spacer.
5. Remove the set screw (M2.5) attached to the auto switch.
6. Insert the auto switch in the auto switch attachment part of the auto switch mounting bracket.
7. Secure the auto switch mounting screw (M2.5). (Tightening torque of M2.5 screw: 0.1 to 0.2 N·m)
8. Secure the auto switch mounting screw (4) after confirming the detecting position. (Tightening torque of M3 screw: 0.5 to 0.7 N·m)
9. Modify the detecting position while the auto switch is secured at the position of (4) in the figure.



BQ-1 and BMU1-025 are a set of a and b shown above.
BQ2-012 is a set of c and d shown above.



BQ-2 is a set of a, b and c shown above.
BQ2-012 is a set of d and e shown above.

Auto Switch Mounting Bracket Part No. (Nut, screws, (spacer) and auto switch mounting bracket; two kinds of auto switch mounting brackets are used as a set.)

Cylinder series	Applicable bore size (mm)									
	12	16	20	25	32	40	50	63	80	100
CDQP2B	BQ-1 BQ2-012	BQ-1 BQ2-012	BQ-1 BQ2-012	BQ-1 BQ2-012	BQ-2 BQ2-012	BQ-2 BQ2-012	BQ-2 BQ2-012	BQ-2 BQ2-012	BQ-2 BQ2-012	BQ-2 BQ2-012
CDBQ2, CDQ2X CDLQ, CDQM RDO	—	—	—	—						
RDLQ, RZQ	—	—	—	—						
RSDQ	—	—	BQ-1 BQ2-012	BQ-1 BQ2-012				—	—	—
MK2T	—	—	—	—				BQ-2 BQ2-012	—	—
CE1	BQ-1 BQ2-012	—	BQ-1 BQ2-012	—	—	—	BQ-2 BQ2-012	—	—	—
CXT	—	—	—	—						
CKQ, CLKQ	—	—	—	—						
MDU	—	—	—	BMU1-025 BQ2-012	BMU1-025 BQ2-012	BMU1-025 BQ2-012	BMU1-025 BQ2-012	BMU1-025 BQ2-012	—	—
MDLU	—	—	—	—	—	—	—	—	—	—

Note 1) Color or gloss differences in the metal surfaces have no effect on metal performance.
The special properties of the chromate (trivalent) applied to the main body of the auto switch mounting bracket for BQ2-012 result in differences in coloration depending on the production lot, but these have no adverse impact on corrosion resistance.
Note 2) When installing D-M9C(A)(V)L with BQ2-012 shown above, use BQ2-012S with stainless steel auto switch mounting screws (M2.5 x 0.45 x 6 L).
Note 3) D-A9□ type cannot be mounted on the MDU, MDLU series.

How to Mount and Move the Auto Switch

<Applicable auto switch>

Solid state D-F79, D-F7P, D-J79,

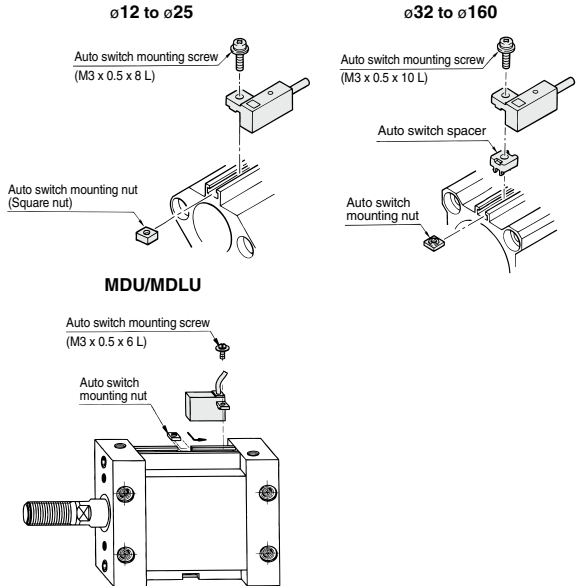
D-F7NV, D-F7PV,
D-F7BV, D-J79C,
D-F79W, D-F7PW,
D-J79W, D-F7NWW,
D-F7BWV, D-F79F,
D-F7BA, D-F7BAV,
D-F7NT

Reed D-A72, D-A73, D-A80,

D-A72H, D-A73H,
D-A76H, D-A80H,
D-A73C, D-A80C, D-A79W

- Slide the auto switch mounting nut inserted into the mounting rail and set it at the auto switch mounting position.
- Fit the convex part of auto switch mounting arm into the concave part of auto switch mounting rail. Then slide the switch over the nut.
(Series CDQ2: Fit the convex part of auto switch mounting arm through the auto switch spacer into the concave part of auto switch mounting rail.)
- Push the auto switch mounting screw lightly into the mounting nut through the hole of auto switch mounting arm.
- After reconfirming the detecting position, tighten the mounting screw to secure the auto switch. (Tightening torque of M3 screw should be 0.5 to 0.7 N·m.)
- Modification of the detecting position should be made in the condition of 3.

How to Mount and Move the Auto Switch



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

Cylinder series	Applicable bore size (mm)												
	12	16	20	25	32	40	50	63	80	100	125	140	160
CDQP2B	BQ-1	BQ-1	BQ-1	BQ-1	BQ-2	BQ-2	BQ-2	BQ-2	BQ-2	BQ-2	—	—	—
CDBQ2, CDQ2X	—	—	—	—	BQ-2	BQ-2	BQ-2	BQ-2	BQ-2	BQ-2	—	—	—
CDLQ, CDQM	—	—	—	—									
RDQ	—	—	—	—									
RDLQ, RZQ	—	—	—	—				BQ-2	—	—	—	—	—
RSDQ	—	—	BQ-1	BQ-1					—	—	—	—	—
MK2T	—	—	—	—					—	—	—	—	—
CE1	BQ-1	—	BQ-1	—				BQ-2	—	—	—	—	—
CXT	—	—	—	—					—	—	—	—	—
MDU (Except Z)	—	—	—	—	BMU1-025	BMU1-025	BMU1-025	BMU1-025	—	—	—	—	—
MDLU	—	—	—	—	—	—	—	—	—	—	—	—	—

[Mounting screws set made of stainless steel]

The set of stainless steel mounting screws (with nuts) described below is available and can be used depending on the operating environment. (Please order the auto switch spacer BQ-2, since it is not included.)

BBA2: For D-A7/A8/F7/J7

"D-F7BA" auto switch is set on the cylinder with the stainless steel screws above when shipped.

When only an auto switch is shipped independently, "BBA2" screws are attached.

Stainless Steel Mounting Screw Set

Part no.	Description				Applicable auto switch mounting bracket part no.	Applicable auto switch
	No.	Part	Size	Qty.		
BBA2	1	Auto switch mounting screw	M3 x 0.5 x 6L	1	BMU1-025	D-A7, A8 D-F7, J7
			M3 x 0.5 x 8L	1	BQ-1	
			M3 x 0.5 x 10L	1	BQ-2	
	2	Auto switch mounting nut (Hexagon nut)	M3 x 0.5	1	BQ-1	
	3	Auto switch mounting nut (Convex shape)	M3 x 0.5	1	BQ-2	

Note 1) A spacer for BQ-2 (black resin) is not included.

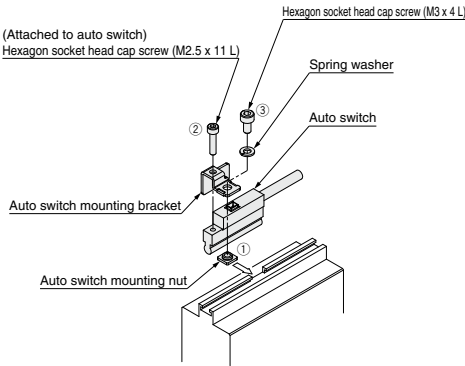
Note 2) When using D-A9□(V)/M9□(V)/M9□W(V)/M9□A(V) auto switches with BQ2-012, use stainless steel screws suitable for the auto switch mounting bracket applicable for each cylinder series.

How to Mount and Move the Auto Switch

Mounting Bracket Rail Mounting Style

<Applicable auto switch>
Solid state D-P3DWA

How to Mount and Move the Auto Switch



1. Insert the auto switch mounting nut into the groove on the auto switch mounting rail.
2. Remove the hexagon socket head cap screw (M2.5) that is attached to the auto switch. Mount the auto switch mounting bracket (pressed stainless steel bracket) on the auto switch and tighten the hexagon socket head cap screw (M2.5) you have removed 3 to 4 turns to temporarily mount the bracket.
3. Put the spring washer through the hexagon socket head cap screw (M3), and then put the screw through the hole in the flange of the auto switch mounting bracket (pressed stainless steel bracket). Screw it into the M3 tapped part of the auto switch mounting nut and tighten it 3 to 4 turns to temporarily mount the auto switch.
4. After checking the detection position, tighten each hexagon socket head cap screw firmly.
5. Modification of the detection position should be made in the condition of 3.

Auto Switch Mounting Bracket Part No. (Including Bracket, Bolt, Nut)

Cylinder series	Bore size (mm)				
	25	32	40	50	63
MDU	BMU4-040S				
MDLU	BMU4-040S				

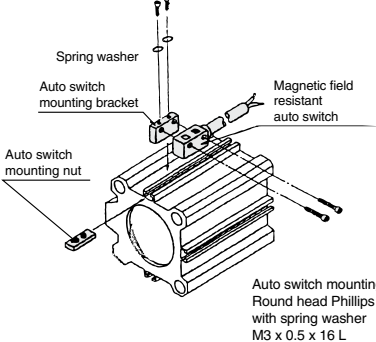
Note 1) The tightening torque for a hexagon socket head cap screw (M2.5) is 0.2 to 0.3 N·m. Hold the shorter side of a hexagon wrench, and turn it to tighten. (Too much tightening may break the switch)

Note 2) The tightening torque for a hexagon socket head cap screw (M3) is 0.5 to 0.7 N·m.

<Applicable auto switch>
Solid state D-P4DW

How to Mount and Move the Auto Switch

Auto switch mounting bracket fixing screw
Hexagon socket head cap bolt
M3 x 0.5 x 14 L



1. Mount the auto switch mounting bracket onto the auto switch mounting nut by tightening bracket fixing screw lightly through the mounting hole on the top of bracket.
2. Insert the auto switch mounting bracket assembly (bracket + nut) into the mounting groove and set it at the auto switch mounting position.
3. Push the auto switch mounting screw lightly into the auto switch through the auto switch mounting hole to secure.
4. After reconfirming the detecting position, tighten the mounting screw to secure the auto switch mounting bracket and the auto switch. (Tightening torque should be 0.5 to 0.7 N·m.)

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

Cylinder series	Applicable bore size (mm)				
	40	50	63	80	100
CDBQ2	BQP1-050	BQP1-050	BQP1-050	BQP1-050	BQP1-050
CDQ2X				BQP1-050	BQP1-050
CDLQ, CDQM				—	—
MK2T				—	—
RZQ	—	—	—	—	—
CKQ, CLKQ	—	—	—	—	—

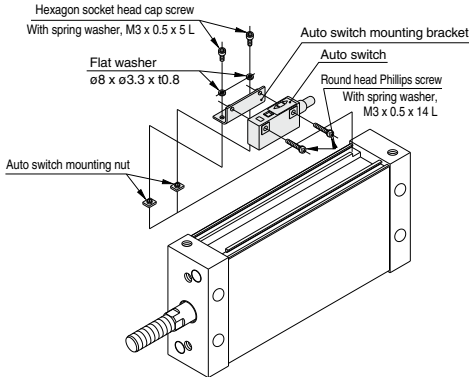
Note) Please consult SMC for mounting on the CDQ2 series.

How to Mount and Move the Auto Switch

<Applicable auto switch>

Solid state D-P4DW

How to Mount and Move the Auto Switch



1. From the cutoff part of the rail on the cylinder body, insert the auto switch mounting nuts (2 pcs.) into the rail groove.
2. Slide the auto switch mounting nuts (2 pcs.) and set into the auto switch mounting position roughly. (25 mm or more should be left for the distance between 2 nuts.)
3. Insert the convex portion of the auto switch mounting bracket into the concave portion of a rail groove. Through-hole for the auto switch mounting bracket should be placed on the auto switch mounting nut.
4. Put a flat washer (ø8 x ø3.3) through a hexagon socket head screw (with spring washer, M3 x 0.5 x 5 L) and passing through the hole of an auto switch mounting bracket, then turning it lightly down to a mounting nut of auto switch. (2 locations)
5. Put a round head Phillips screw (with spring washer, M3 x 0.5 x 14 L) through the auto switch's through-hole (2 locations), and then push it down into the M3 tapped part on the auto switch mounting bracket while turning it tightly.
6. After reconfirming the detecting position, tighten the auto switch mounting screw to secure the auto switch mounting bracket and the auto switch. (Tightening torque of M3 screw should be 0.5 to 0.7 N-m.)

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

Cylinder series	Applicable bore size (mm)		
	40	50	63
MDU	BMU2-040	BMU2-040	BMU2-040
MDLU			—

<Applicable auto switch>

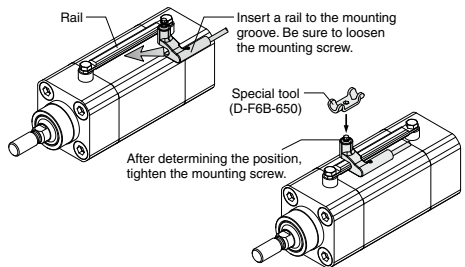
Solid state D-F6N, D-F6P, D-F6B

How to Mount the Auto Switch (For HYQ, HYC, HYG)

Proper tightening torque

When tightening auto switch mounting screws, use a special tool (D-F6B-650) or a torque wrench.

The tightening torque for the auto switch mounting screw (M3) is 0.8 to 1.4 N-m.



Use the tightening torque below when installing the auto switch mounting rail at maintenance.

Screw size	Tightening torque (N-m)
M4	1.1 to 1.9

Use the tightening torque below when mounting an auto switch body on the mounting rail.

Tightening torque (N-m)
0.8 to 1.4

How to Mount and Move the Auto Switch

Mounting Bracket Tie-rod Mounting Style

<Applicable auto switch>

Solid state D-M9N(V), D-M9P(V), D-M9B(V),
D-M9NW(V), D-M9PW(V), D-M9BW(V),
D-M9NA(V), D-M9PA(V), D-M9BA(V)
Reed D-A90(V), A93(V), A96(V)

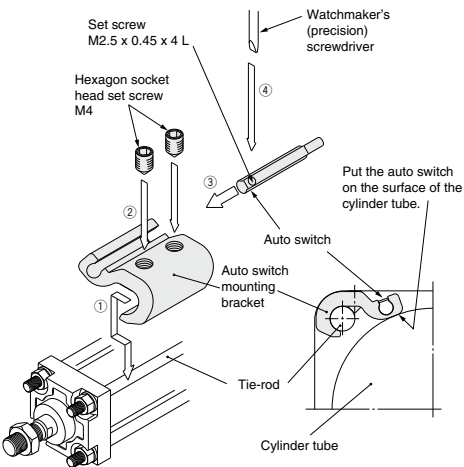
How to Mount and Move the Auto Switch

1. Fix it to the detecting position with a set screw by installing an auto switch mounting bracket in cylinder tie-rod and letting the bottom surface of an auto switch mounting bracket contact the cylinder tube firmly.
2. Fix it to the detecting position with a set screw (M4).
(Use a hexagon wrench.)
3. Fit an auto switch into the auto switch mounting groove to set it roughly to the mounting position for an auto switch.
4. After confirming the detecting position, tighten up the mounting screw (M2.5) attached to an auto switch, and secure the auto switch.
5. When changing the detecting position, carry out in the state of 3.

Note 1) 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.

Note 2) Set the tightening torque of a hexagon socket head set screw (M4) to be 1 to 1.2 N·m.

Note 3) When tightening an auto switch mounting screw (M2.5), use a watchmaker's screwdriver with a grip diameter of 5 to 6 mm.
Also, set the tightening torque to be 0.05 to 0.15 N·m. As a guide, turn 90° from the position where it comes to feel tight.



Auto Switch Mounting Bracket Part No. (Including Bracket, Set Screw)

Cylinder series	Applicable bore size (mm)										
	32	40	50	63	80	100	125	140	160	180	200
MDB	BMB5-032	BMB5-032	BA7-040	BA7-040	BA7-063	BA7-063	BA7-080	—	—	—	—
MDB-Z, MDBB, MDBY-Z, MDNB	—	—	—	—	—	—	—	—	—	—	—
CDA2-Z	—	BA7-040	BA7-040	BA7-063	BA7-080	BA7-080	—	—	—	—	—
CDA2, CDBA2											
CDA2□Q, CDA2□H											
CDA2Y-Z, CDNA2											
CE2, CDV3, CDVS1											
CDL1	—	—	—	—	—	—	BS5-125	BS5-125	BS5-160	—	—
CDS1, CDLS	—	—	—	—	—	BS5-180				BS5-200	
CDS2, CDS2Y	—	—	—	—	—	—				—	
CDNS	—	—	—	—	—	—				—	

Note 1) When using type D-M9□A(V)L, please order stainless steel screw set BBA1 separately (page 1663), and use the stainless steel set screws, after selecting set screws of the appropriate length for the cylinder series—as shown in the table above.

Note 2) Color or gloss differences in the metal surfaces have no effect on metal performance.
The special properties of the chromate applied to the main body of the auto switch mounting bracket for BA7-□, BMB5-□ and BS5-□ result in differences in coloration depending on the production lot, but these have no adverse impact on corrosion resistance.

Note 3) D-A9□ type cannot be mounted on ø50 of the CDA2□Q, CDA2□H, CDA2Y, CDL1, CE2, CDV3, and CDVS1 series.

How to Mount and Move the Auto Switch

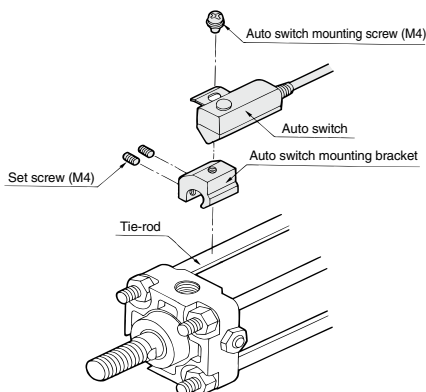
<Applicable auto switch>

Solid state D-F59, D-F5P,
D-J59, D-F5BA,
D-F59W, D-F5PW, D-J59W,
D-F59F, D-F5NT

Reed D-A53, D-A54, D-A56, D-A64,
D-A67, D-A59W

1. Fix the auto switch on the auto switch mounting bracket with the auto switch mounting screw (M4) and install the set screw.
2. Fit the auto switch mounting bracket into the cylinder tie-rod and then fix the auto switch at the detecting position with the hexagonal wrench. (Be sure to put the auto switch on the surface of cylinder tube.)
3. When changing the detecting position, loosen the set screw to move the auto switch and then re-fix the auto switch on the cylinder tube. (Tightening torque of M4 screw should be 0.6 to 0.8 N·m.)

How to Mount and Move the Auto Switch



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

Cylinder series	Applicable bore size (mm)										
	32	40	50	63	80	100	125	140	160	180	200
MDB	BT-03	BT-03	BT-05	BT-05	BT-06	BT-06	BT-08	—	—	—	—
MDB-Z, MDBB, MDBY-Z, MDNB							—	—	—	—	
CDA2-Z	—	BT-04	BT-04	BT-06	BT-08	BT-08	—	—	—	—	—
CDA2, CDBA2											
CDA2□Q, CDA2□H											
CDA2Y-Z											
CDNA2, CE2											
CDV3, CDVS1	—	—	—	—	—	—	—	—	—	—	—
CDL1	—	—	—	—	—	—	BT-12	BT-12	BT-16	—	—
CDS1, CDLS	—	—	—	—	—	—				BT-18A	BT-20
CDS2, CDS2Y	—	—	—	—	—	—				—	—
CDNS	—	—	—	—	—	—				—	—

[Mounting screws set made of stainless steel]

The following set of mounting screws made of stainless steel is also available. Use it in accordance with the operating environment.
(Please order the auto switch mounting band separately, since it is not included.)

BBA1: For D-A5/A6/F5/J5

"D-F5BA" auto switch is set on the cylinder with the stainless steel screws above when shipped.
When an auto switch is shipped independently, "BBA1" screws are attached.

Stainless Steel Mounting Screw Set

Part no.	Description				Applicable auto switch mounting bracket part no.	Applicable auto switch
	No.	Part	Size	Qty.		
BBA1	1	Auto switch mounting screw	M4 x 0.7 x 8L	1	BT-□□	D-A5, A6 D-F5, J5
	2	Set screw	M4 x 0.7 x 6L	2	BT-03, BT-04, BT-05 BT-06, BT-08, BT-12	D-Z7, Z8 D-Y5, Y6, Y7
					BA4-040, BA4-063, BA4-080 BMB4-032, BMB4-050	D-A9 D-M9
					BMB5-032 BA7-040, BA7-063, BA7-080	D-A5, A6 D-F5
	3	Set screw	M4 x 0.7 x 8L	3	BT-16, BT-18A, BT-20	D-Z7, Z8 D-Y5, Y6, Y7
					BS4-125, BS4-160 BS4-180, BS4-200	D-A9 D-M9

Note 1) A spacer for BQ-2 (black resin) is not included.

Note 2) When using D-A9□(V)/M9□(V)/M9□W(V)/M9□A(V) auto switches with BQ2-012, use stainless steel screws suitable for the auto switch mounting bracket applicable for each cylinder series.

How to Mount and Move the Auto Switch

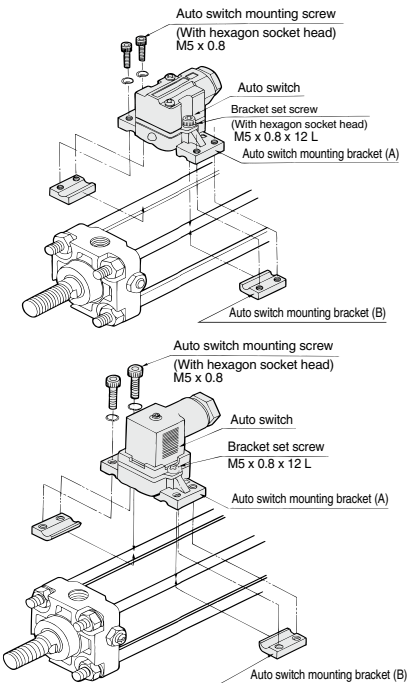
Mounting Bracket

Tie-rod Mounting Style

<Applicable auto switch>
Solid state D-G39C, D-K39C
Reed D-A33C, D-A34C, D-A44C

- 1. Fix the auto switch mounting bracket (A) on the auto switch with the set screw.
- 2. Fit the concave part of auto switch mounting bracket into tie-rod and set the auto switch at the mounting position.
- 3. Insert the auto switch mounting bracket (B) from the underneath and put tightly in the tie-rod with the mounting screw.
- 4. Set the whole body to the detecting position by sliding, tighten the mounting screw to secure the auto switch. (Tightening torque of M5 screw should be 2 to 3 N·m.)
- 5. Modification of the detecting position should be made in the condition of 3.

How to Mount and Move the Auto Switch



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

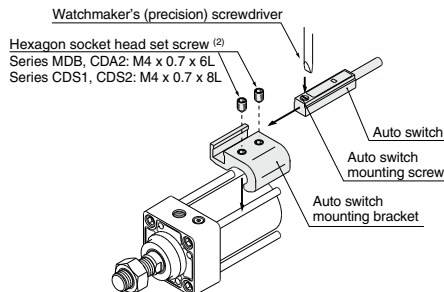
Cylinder series	Applicable bore size (mm)				
	40	50	63	80	100
CDA2-Z, CDA2, CDBA2 CDV3, CDVS1, CDL1, CE2, CNA2	BA3-040	BA3-050	BA3-063	BA3-080	BA3-100

How to Mount and Move the Auto Switch

<Applicable auto switch>

Solid state D-Y59^Δ, D-Y69^Δ, D-Y7P(V),
D-Y7NW(V), D-Y7PW(V),
D-Y7BW(V), D-Y7BA
Reed D-Z73, D-Z76, D-Z80

How to Mount and Move the Auto Switch



1. Fix it to the detecting position with a set screw by installing an auto switch mounting bracket in cylinder tie-rod and letting the bottom surface of an auto switch mounting bracket contact the cylinder tube firmly.
(Use hexagon wrench)
2. Fit an auto switch into the auto switch mounting groove to set it roughly to the auto switch 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.

Note 1) 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.

Auto Switch Mounting Bracket Part No. (Including Bracket, Set Screw)

Cylinder series	Applicable bore size (mm)										
	32	40	50	63	80	100	125	140	160	180	200
MDB	BMB4-032	BMB4-032	BMB4-050	BMB4-050	BA4-063	BA4-063	BA4-080	—	—	—	—
MDB-Z, MDBB, MDBy-Z, MDNB							—	—	—	—	—
CDA2-Z	—	BA4-040	BA4-040	BA4-063	BA4-080	BA4-080	—	—	—	—	—
CDA2, CDBA2											
CDA2□Q, CDA2□H											
CDA2Y-Z											
CDNA2, CE2											
CDL1	—										
CDS1, CDLS	—	—	—	—	—	—	BS4-125	BS4-125	BS4-160	BS4-180	BS4-200
CDS2, CDS2Y	—	—	—	—	—	—				—	
CDNS	—	—	—	—	—	—				—	

Note 2) When using type D-Y7BA please order stainless steel screw set BBA1 separately (page 1663), and use the stainless steel set screws, after selecting set screws of the appropriate length for the cylinder series—as shown in the table above.

How to Mount and Move the Auto Switch

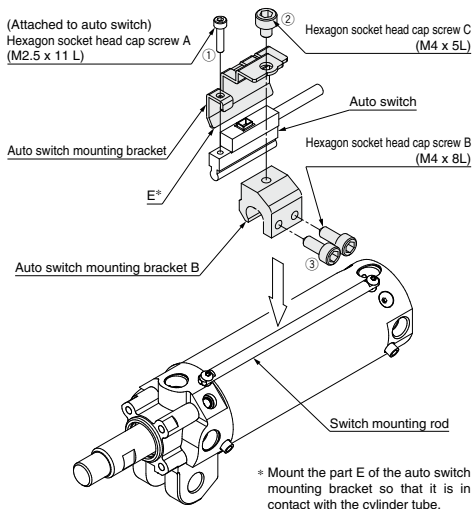
Mounting Bracket	Tie-rod Mounting Type
	

<Applicable auto switch>

Solid state D-P3DWA

Applicable cylinder/actuator		
Clamp cylinder	CKG1-Z	ø40 to ø63
	CKGA	ø80, ø100
Clamp cylinder with lock	CLK2G	ø40 to ø63
	CDA2-Z	
Air cylinder	CDA2Y-Z	ø40, ø50
	CDA2	
Air cylinder with lock	CDNA2	ø40, ø50

How to Mount and Move the Auto Switch



1. Remove the hexagon socket head cap screw A (M2.5) that is attached to the auto switch. Mount the auto switch mounting bracket (pressed stainless steel bracket) on the auto switch and tighten the hexagon socket head cap screw A (M2.5) you have removed 3 to 4 turns to temporarily mount the bracket.
2. Put the hexagon socket head cap screw C (M4) through the hole in the flange (partially circular arc shape) of the auto switch mounting bracket (pressed stainless steel bracket), screw it into the M4 tapped part on the top of the auto switch mounting bracket B (aluminum), and tighten it 3 to 4 turns to temporarily mount the bracket.
3. Screw the hexagon socket head cap screws B (M4) into two M4 tapped parts on the side of the auto switch mounting bracket B (aluminum) to the extent that the tips of the hexagon socket head cap screw B (M4) do not protrude to the inside of the U-shape of the auto switch mounting bracket B (aluminum).
4. Fit the U-shape part of the auto switch mounting bracket B (aluminum) that has been assembled in step 3 to the switch mounting rod of the cylinder, and then put the part E of the auto switch mounting bracket (pressed stainless steel bracket) in contact with the cylinder tube. After checking the detection position, tighten the hexagon socket head cap screws A, C, B in order. At this time, tighten the hexagon socket head cap screws B evenly.
5. Modification of the detection position should be made in the condition of 4.

Note 1) The tightening torque for a hexagon socket head cap screw (M2.5) is 0.2 to 0.3 N·m. Hold the shorter side of a hexagon wrench, and turn it to tighten. (Too much tightening may break the switch)

Note 2) Tighten the hexagon socket head cap screws B and C (M4) with a tightening torque of 1 to 1.2 N·m.

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

Cylinder/Actuator series	Bore size (mm)				
	40	50	63	80	100
CKG1-Z, CLK2G	BK7-040S			—	
CKGA	—			BK7-080S	

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

Cylinder/Actuator series	Bore size (mm)				
	40	50	63	80	100
CDA2-Z, CDA2Y-Z CDA2, CDNA2	BK7-040S		—		

How to Mount and Move the Auto Switch

Mounting Bracket Tie-rod Mounting Type

<Applicable auto switch>

Solid state D-P3DWA

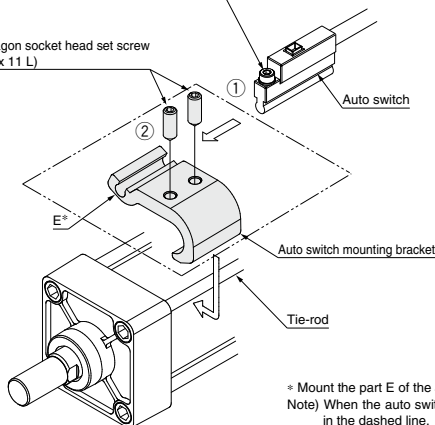
Applicable cylinder/actuator		
Air cylinder	MDB-Z	ø40 to ø100
	MDBY-Z	
	MDB	ø40 to ø125
	CDA2-Z	
	CDA2Y-Z	ø63 to ø100
	CDA2	
Air cylinder with lock	CDS1	ø125 to ø200
	CDS2	ø125 to ø160
	MDNB	ø32 to ø100
	CDNA2	ø63 to ø100
	CDLS	ø125 to ø200
	CDNS	ø125 to ø160

How to Mount and Move the Auto Switch

(Attached to auto switch)

Hexagon socket head cap screw (M2.5 x 11 L)

Hexagon socket head set screw
(M4 x 11 L)



1. Insert the auto switch into the auto switch mounting groove on the auto switch mounting bracket and tighten the hexagon socket head cap screw (M2.5) attached to the auto switch.
2. Install the auto switch mounting bracket to the cylinder tie-rod so that the part E of the bracket is in contact with the cylinder tube.
3. After checking the detection position, tighten the hexagon socket head cap screws (M4).
Tighten the hexagon socket head set screws evenly.
4. Modification of the detection position should be made in the condition of 2.

Note 1) The tightening torque for a hexagon socket head cap screw (M2.5) is 0.2 to 0.3 N·m. Hold the shorter side of a hexagon wrench, and turn it to tighten. (Too much tightening may break the switch)

Note 2) The tightening torque for a hexagon socket head set screw (M4) is 1 to 1.2 N·m.

* Mount the part E of the auto switch mounting bracket so that it is in contact with the cylinder tube.

Note) When the auto switch mounting bracket is ordered by its part number, it includes the bracket and screws in the dashed line.

Auto Switch Mounting Bracket Part No. for Series MB/CA/CS (Including bracket, screw)

Applicable cylinder	Applicable bore size							
	40	50	63	80	100	125	140	160
MDB	BA10-040S	BA10-050S	BA10-063S	BA10-080S	—	—	—	—
MDNB	BA10-040S	BA10-050S	BA10-063S	—	—	—	—	—
CDA2, CDNA2	BK7-040S <small>Note 1)</small>	BA10-063S	BA10-080S	—	—	—	—	—
CDS1, CDLS	—	—	—	—	—	BS7-125S	BS7-160S	BS7-180S
CDS2, CDNS	—	—	—	—	—	BS7-125S	BS7-160S	—

Note 1) For details about how to mount and move the BK7-040S for ø40 and ø50 of the CDA2/CDNA2 series, refer to the description for the CKG1 series.

* Differences in color and glossiness of the metal surface treatment do not affect the performance.

Due to the characteristics of the chromate treatment applied to the whole body of the auto switch mounting bracket, the color may be slightly different between manufacturing lots. However, this will not reduce the corrosion resistance.

How to Mount and Move the Auto Switch

Mounting Bracket

Tie-rod Mounting Type

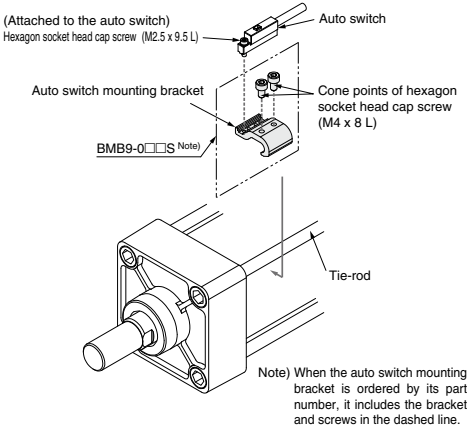
<Applicable auto switch>
Solid state D-P3DW

Applicable cylinder/actuator		
Air cylinder	MDB-Z	ø32
	MDB	
Air-hydro cylinder	CDA2□H(W)	ø40, ø50
Air cylinder with lock	MDNB	ø32

How to Mount and Move the Auto Switch

1. Fix the auto switch firmly with the hexagon socket head cap screw (M2.5 x 9.5 L).
2. Install the mounting bracket on which the auto switch is mounted to the switch mounting rod, and move it to find the detecting position while keeping firm contact between the bottom of the auto switch mounting bracket and the cylinder tube.
3. After checking the detecting position, fix the auto switch mounting bracket to the detecting position with the cone points of hexagon socket head cap screw (M4 x 8 L).
4. If the detecting position is changed, go back to step 2.

Note 1) When tightening the cone points of hexagon socket head cap screw (M4 x 8 L), keep the tightening torque within 1 to 1.2 N·m.
Note 2) The torque for tightening the hexagon socket head cap screw (M2.5 x 9.5 L) is 0.2 to 0.3 N·m.
Note 3) Tighten the hexagon socket head cap screws evenly.



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

Cylinder/ Actuator series	Bore size (mm)	
	32	40 to 125
MDB-Z MDB MDNB (32 to 100)	BMB9-032S	—

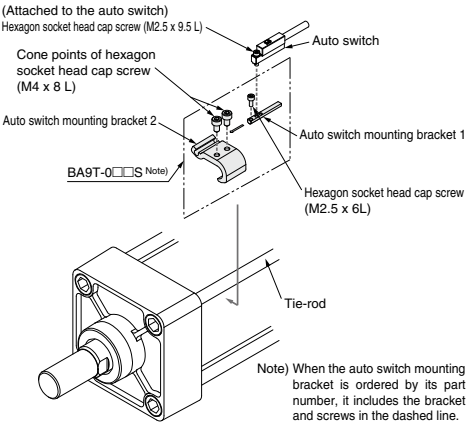
<Applicable auto switch>
Solid state D-P3DW

Applicable cylinder/actuator		
Air-hydro cylinder	CDA2□H(W)	ø63 to ø100

How to Mount and Move the Auto Switch

1. Install the auto switch mounting bracket 2 to the tie-rod, and fix it to the approximate mounting position with the cone points of hexagon socket head cap screw (M4 x 8 L) while keeping firm contact between the bottom of the auto switch mounting bracket 2 and the cylinder tube.
2. Fix the auto switch and the auto switch mounting bracket 1 temporarily by tightening the attached hexagon socket head cap screw (M2.5 x 9.5 L) 1 to 2 turns.
3. Insert the temporarily tightened mounting bracket 1 to the mating groove of the mounting bracket 2, and fix the auto switch by tightening the hexagon socket head cap screw (M2.5 x 6 L and M2.5 x 9 L) after checking the detecting position. To insert the auto switch onto the auto switch mounting bracket 2 through the groove, first hold the back of the auto switch (lead wire side) and the back of the auto switch mounting bracket 1 together.
4. If the detecting position is changed, go back to step 1 or 3.

Note 1) Ensure that the auto switch is covered with the mating groove by a minimum of 15 mm to protect the auto switch.
Note 2) When tightening the cone points of hexagon socket head cap screw (M4 x 8 L), keep the tightening torque within 1 to 1.2 N·m.
Note 3) The torque for tightening the hexagon socket head cap screw (M2.5 x 6 L, M2.5 x 9 L) is 0.2 to 0.3 N·m.
Note 4) Tighten the hexagon socket head cap screws evenly.



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

Cylinder/ Actuator series	Bore size (mm)			
	40	50	63	80 100
CDA2□H(W)	BMB9-050S	BA9T-063S	BA9T-080S	

* Differences in color and glossiness of the metal surface treatment do not affect the performance. Due to the characteristics of the chromate treatment applied to the whole body of the auto switch mounting bracket, the color may be slightly different between manufacturing lots. However, this will not reduce the corrosion resistance.

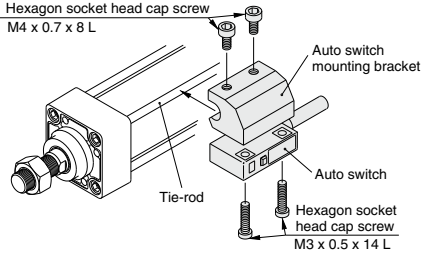
How to Mount and Move the Auto Switch

Mounting Bracket Tie-rod Mounting Type

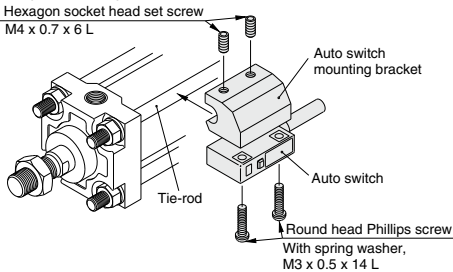
<Applicable auto switch>
Solid state D-P4DW

How to Mount and Move the Auto Switch

MDB-Z, MDB, MDBB, MDBY-Z, MDNB



CDA2-Z, CDA2, CDBA2, CDA2Y-Z, CDNA2, CDL1 (ø40 to ø100)



1. (For MDB-Z, MDB, MDBY-Z)

Slightly screw the hexagon socket head cap screw (M4 x 0.7 x 8 L) into the M4 tapped portion of auto 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 auto switch mounting bracket.

(For CDA2-Z, CDA2)

Slightly screw the hexagon socket head cap screw (M4 x 0.7 x 6 L) into the M4 tapped portion of auto switch mounting bracket. (2 locations). Use caution that the tip of the hexagon socket head set screw should not stick out to the concave portion of auto switch mounting bracket.

2. (For MDB-Z, MDB, MDBY-Z)

Put a hexagon socket head cap screw (M3 x 0.5 x 14 L) through the auto switch's through-hole (2 locations), and then push it down into the M3 tapped part on the auto switch mounting bracket while turning it lightly.

(For CDA2-Z, CDA2)

Put a hexagon socket head cap screw (with spring washer M3 x 0.5 x 14 L) through the auto switch's through-hole (2 locations), and then push it down into the M3 tapped part on the auto switch mounting bracket while turning it lightly.

3. Place the concave part of the auto switch mounting bracket into the cylinder tie-rod, and slide the auto 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 auto switch mounting bracket to secure the auto 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)						125
	32	40	50	63	80	100	
MDB							BAP2T-080
MDB-Z, MDBB	BMB3T-040	BMB3T-040	BMB3T-050	BMB3T-050	BMB3T-080	BMB3T-080	—
MDBY-Z, MDNB							
CDA2-Z, CDA2, CDBA2	—	BAP2-040	BAP2-040	BAP2-063	BAP2-080	BAP2-080	—
CDA2Y-Z, CDL1, CDNA2							

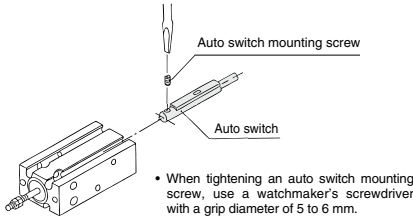
How to Mount and Move the Auto Switch

Mounting Bracket Direct Mounting Style

<Applicable auto switch>

Solid state D-M9N(V), M9P(V), M9B(V),
D-M9NW(V), M9PW(V), M9BW(V),
D-M9NA(V), M9PA(V), M9BA(V)
Reed D-A90(V), A93(V), A96(V)

How to Mount and Move the Auto Switch

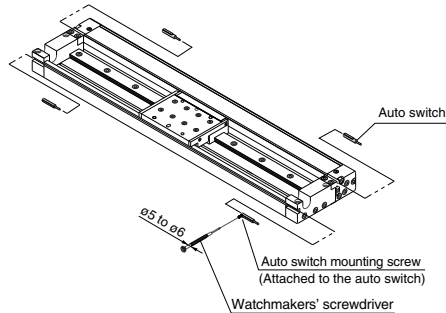


Auto Switch Mounting Screw Tightening Torque (N·m)

Auto switch model	Tightening torque
D-A9□(V)	0.10 to 0.20
D-M9□(V)	
D-M9□W(V)	0.05 to 0.15
D-M9□A(V)	

Series MY2

When mounting auto switches, insert them into the cylinder's switch groove from the direction shown in the drawing. After setting in the mounting position, use a flat head watchmaker's screwdriver to tighten the provided set screw.

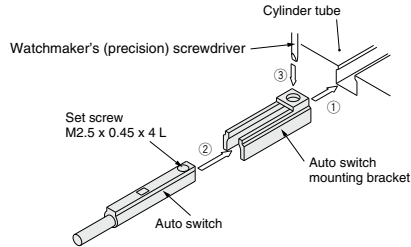


(Note) When tightening an auto switch mounting screw, use a watchmaker's screwdriver with a grip diameter of 5 to 6 mm. The tightening torque should be about 0.05 to 0.1 N·m.

<Applicable auto switch>

Solid state D-M9N(V), M9P(V), M9B(V),
D-M9NW(V), M9PW(V), M9BW(V),
D-M9NA(V), M9PA(V), M9BA(V)
Reed D-A90(V), A93(V), A96(V)

How to Mount and Move the Auto Switch



1. Insert the auto switch mounting bracket into the auto switch mounting groove to set it roughly to the auto switch mounting position.
2. Insert the auto switch into the attachment part of the auto switch mounting bracket.
3. After confirming the detecting position, secure the auto switch by tightening the set screw (M2.5) attached to the auto switch.
4. When changing the detecting position, carry out in the state of 2.

Note 1) When tightening a set screw (M2.5), use a watchmaker's screwdriver with a grip diameter of 5 to 6 mm. Also set the tightening torque to be 0.1 to 0.15 N·m. As a guide, turn 90° from the position where it comes to feel tight.

Auto Switch Mounting Bracket Part No.

Cylinder series	Applicable bore size (mm)									
	12	16	20	25	32	40	50	63	80	100
MY1B	—	—	—	—	—	—	BMG2	BMG2	BMG2	BMG2
MY1M, MY1MW	—	—	—	—	BMG2	—	-012	-012	—	—
MY1C, MY1CW	—	—	—	BMG2-012	-012	—	—	—	—	—
MY1H	—	—	—	—	—	—	—	—	—	—
CY3R	—	—	—	BMG2	BMG2	BMG2	BMG2	BMG2	—	—
REAR	—	—	—	-012	-012	-012	-012	-012	—	—
REBR	—	—	—	—	—	—	—	—	—	—
MGPS	—	—	—	—	—	—	—	—	—	—
MGP, MGPA	BMG2	BMG2	BMG2	BMG2	BMG2	—	BMG2	—	BMG2	—
MGQ, MVGQ	-012	-012	-012	-012	-012	—	-012	—	-012	—
MGP□-□A	—	—	—	—	—	—	—	—	—	—
MLGP	—	—	—	—	—	—	—	BMG2	—	BMG2
MGF	—	—	—	—	—	—	—	-012	—	-012
MGT	—	—	—	—	—	—	—	—	BMG2	—
RSH	—	—	BMG2	—	BMG2	—	—	—	—	—
RS1H	—	—	—	—	—	—	BMG2	BMG2	BMG2	—
	—	—	—	—	—	—	-012	-012	-012	—

Note 2) Color or gloss differences in the metal surfaces have no effect on metal performance.

The special properties of the chromate applied to the main body of the auto switch mounting bracket for BMG2-012 result in differences in coloration depending on the production lot, but these have no adverse impact on corrosion resistance.

Note 3) The D-A9□(V) type cannot be mounted on the product series shown below.
Series MY1B, MY1M, MY1C, MY1MW and MY1CW with ϕ 25 or more.
Series MGF, RSH and RS1H

How to Mount and Move the Auto Switch

<Applicable auto switch>

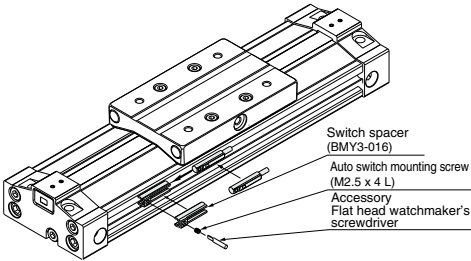
Solid state D-M9N(V), M9P(V), M9B(V),
D-M9NW(V), M9PW(V), M9BW(V),
D-M9NA(V), M9PA(V), M9BA(V)
Solid state D-A90(V), A93(V), A96(V)

How to Mount and Move the Auto Switch

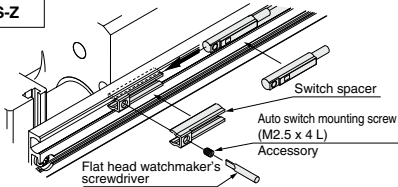
When attaching an auto switch, first take a switch spacer between your fingers and press it into a switch mounting groove. When doing this, confirm that it is set in the correct mounting orientation, or reattach if necessary. Next, insert an auto switch into the groove and slide it until it is positioned under the switch spacer.

After establishing the mounting position, use a watchmaker's flat head screwdriver to tighten the switch mounting screw which is included.

(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.



CY1S-Z



Switch Spacer No.

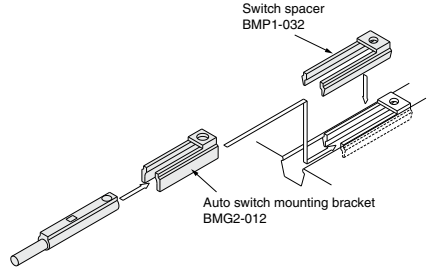
Cylinder series	Applicable bore size (mm)			
	6	10	16	20
MY1B-Z	—	—	—	—
MY1H-Z	—	—	—	—
MY3A, MY3B	—	—	—	—
MY3M	—	—	—	—
CY1S-Z	BMY3-016	BMY3-016	—	—
MGZ, MGZR	—	—	—	—

Cylinder series	Applicable bore size (mm)			
	32	40	50	63
MY1B-Z	—	—	—	—
MY1H-Z	—	—	—	—
MY3A, MY3B	—	—	—	—
MY3M	—	—	—	—
CY1S-Z	—	—	—	—
MGZ, MGZR	—	—	—	—

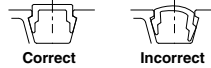
<Applicable auto switch>

Solid state D-M9N(V), M9P(V), M9B(V),
D-M9NW(V), M9PW(V), M9BW(V),
D-M9NA(V), M9PA(V), M9BA(V)
Reed D-A90(V), A93(V), A96(V)

How to Mount and Move the Auto Switch



1. After picking up a switch spacer between your fingers, push it in the cylinder tube groove.
2. Confirm that it is set in the correct mounting orientation.



3. Insert an auto switch into the groove of the auto switch mounting bracket.
4. While keeping the condition in (3) above, insert the auto switch mounting bracket into the auto switch mounting groove of the cylinder to set it roughly to the auto switch mounting position.
5. After confirming the detecting position, secure the auto switch by tightening the auto switch mounting screw (M2.5).

(Note 1) When tightening an auto switch mounting screw (M2.5), use a watchmaker's screwdriver with a grip diameter of 5 to 6 mm. Also, set the tightening torque to be 0.1 to 0.15 N·m. As a guide, turn 90° from the position where it comes to feel tight.

Auto Switch Mounting Bracket Part No.

(Switch spacer and auto switch mounting bracket; two kinds of auto switch mounting brackets are used as a set.)

Cylinder series	Applicable bore size (mm)				
	20	25	32	40	50
MDB1-Z	—	—	BMP1-032 BMG2-012	BMP1-032 BMG2-012	BMP1-032 BMG2-012
MGZ, MGZR	—	—	—	—	—

Cylinder series	Applicable bore size (mm)			
	63	80	100	125
MDB1-Z	BMP1-032 BMG2-012	BMP1-032 BMG2-012	BMP1-032 BMG2-012	BMP1-032 BMG2-012
MGZ, MGZR	—	—	—	—

(Note 2) Color or gloss differences in the metal surfaces have no effect on metal performance.

The special properties of the chromate applied to the main body of the auto switch mounting bracket for BMG2-012 result in differences in coloration depending on the production lot, but these have no adverse impact on corrosion resistance.

How to Mount and Move the Auto Switch

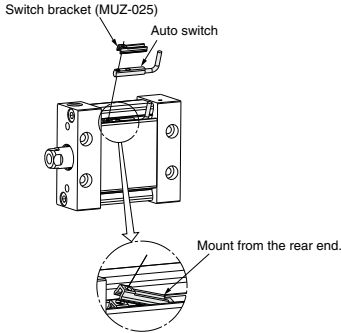
Mounting Bracket Direct Mounting Style

<Applicable auto switch>

Solid state D-M9N(V), M9P(V), M9B(V),
D-M9NW(V), M9PW(V), M9BW(V),
D-M9NA(V), M9PA(V), M9BA(V)
Reed D-A90(V), A93(V), A96(V)

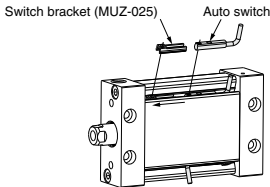
How to Mount and Move the Auto Switch

A 20 strokes or less



1. First, insert the auto switch inside the switch groove.
2. Next, push the switch bracket from a position above the auto switch into the groove.
3. After setting the mounting position, use a flat blade screwdriver to tighten the mounting screw supplied with the auto switch so as to secure the auto switch.

B 25 strokes or more



1. First, push the switch bracket into the switch groove.
2. Next, after the auto switch has been inserted into the groove, slide it sideways to overlap it with the switch bracket.

* Insert the auto switch so that its top end slides into a portion under the switch bracket.

3. After setting the mounting position, use a flat blade screwdriver to tighten the mounting screw supplied with the auto switch so as to secure the auto switch.

Note 1) Even for 25 strokes or more, the auto switch can be mounted in the same manner as described in A.

Note 2) 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.

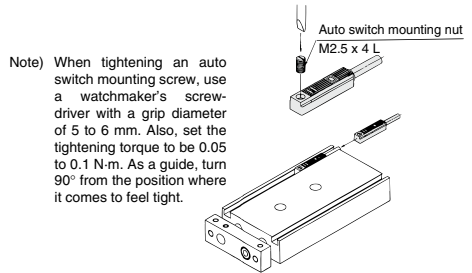
Switch Bracket No.

Cylinder series	Applicable bore size (mm)				
	25	32	40	50	63
MU□-□Z	MUZ-025				

<Applicable auto switch>

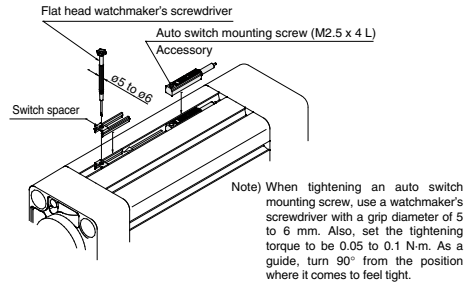
Solid state D-Y59^A, Y69^A, D-Y7P(V),
D-Y7NW(V), Y7PW(V), Y7BW(V),
D-Y7BA
Reed D-Z73, Z76, Z80

How to Mount and Move the Auto Switch

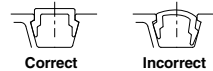


1. Insert the auto switch into the mounting groove and set it at the auto switch mounting position.
2. After reconfirming the detecting position, tighten the mounting screw to secure the auto switch.
3. Modification of the detecting position should be made in the condition of 1.

How to Mount and Move the Auto Switch



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 watchmaker's flat head screwdriver to tighten the auto switch mounting screw which is included.



Switch Spacer No.

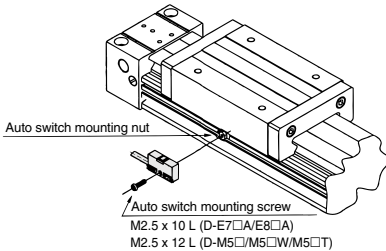
Cylinder series	Applicable bore size (mm)					
	32	40	50	63	80	100
MDB1-Z	BMP1-032					

How to Mount and Move the Auto Switch

<Applicable auto switch>

Solid state D-M5N, M5P, M5B,
D-M5NW, M5PW, M5BW,
D-M5NT, M5PT
Reed D-E73A, E76A, E80A

How to Mount and Move the Auto Switch



1. Insert the auto switch mounting nut into the auto switch mounting groove and then set the auto switch at the mounting position by sliding.
2. Put the convex part of auto switch into the auto switch mounting groove and slide it over the nut.
3. Push the auto switch mounting screw tightly into the switch mounting nut through the auto switch 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.)

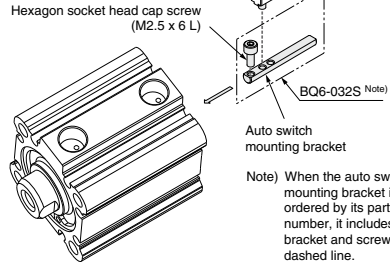
Auto Switch Mounting Bracket Part No. (Including nut, screw)

Cylinder series	Applicable bore size (mm)		
	25	32	40
ML1	M2.5 x 12 L	BM2.5-025	BM2.5-025
	M2.5 x 10 L	BM2.5-025	BM2.5-025

<Applicable auto switch>

Solid state D-P3DW

(Attached to the auto switch)
Hexagon socket head cap screw (M2.5 x 9.5 L)



Note) When the auto switch mounting bracket is ordered by its part number, it includes the bracket and screws in the dashed line.

Caution for the Cylinder/Actuator Mounting

- * When mounting the D-P3DW onto a cylinder/actuator with $\phi 32$ to $\phi 50$, to avoid mutual interference, use a fitting with width across flats 12 mm or less for $\phi 32$ and $\phi 40$, and use a fitting with width across flats 14 mm or less for $\phi 50$. Also, if the corner of the fitting interferes with the housing of the auto switch, adjust the tightening of the fitting to eliminate the interference. In the case of interference with an elbow type fitting, direct the port of the fitting away from the auto switch. Such interference must be avoided especially when a speed controller and speed exhaust controller with a fitting are selected.
- * In the CDQSe25 and CDLQe25, the auto switch will interfere with the fitting if mounted onto the face with the port, so it needs to be mounted on a different face.

How to Mount and Move the Auto Switch

1. Fix the auto switch and the auto switch mounting bracket temporarily by tightening the attached hexagon socket head cap screw (M2.5 x 9.5 L) 1 to 2 turns.
 2. Insert the temporarily tightened mounting bracket into the mating groove of the cylinder/actuator, and slide the auto switch onto the cylinder/actuator through the groove.
To insert the auto switch onto the cylinder/actuator through the groove, first hold the back of the auto switch (lead wire side) and the back of the auto switch mounting bracket together.
 3. Check the detecting position of the auto switch and fix the auto switch firmly with the hexagon socket head cap screw (M2.5 x 6 L, M2.5 x 9.5 L).*
 4. If the detecting position is changed, go back to step 2.
- * The hexagon socket head cap screw (M2.5 x 6 L) is used to fix the mounting bracket and cylinder/actuator.
This enables the replacement of the auto switch without adjusting the auto switch position.

Note 1) Ensure that the auto switch is covered with the mating groove to protect the auto switch.

Note 2) The torque for tightening the hexagon socket head cap screw (M2.5 x 6 L, M2.5 x 9.5 L) is 0.2 to 0.3 N·m.

Note 3) Tighten the hexagon socket head cap screws evenly.

Direct Mounting to the Round Groove

Applicable cylinder/actuator		Auto Switch Mounting Bracket Part No.
Compact cylinder	CDQS $\phi 25$ CDQ2-Z $\phi 32$ to $\phi 100$	BQ6-032S
Compact cylinder with lock	CDLQ $\phi 25$ to $\phi 100$	
Pin clamp cylinder	CKQG $\phi 50$	
Pin clamp cylinder with lock	CLKQG $\phi 50$	
Compact guide cylinder	MGP-Z $\phi 32$ to $\phi 100$	
Compact guide cylinder/Wide type	MGPW $\phi 32$ to $\phi 63$	
Rotary clamp cylinder	MK-Z	

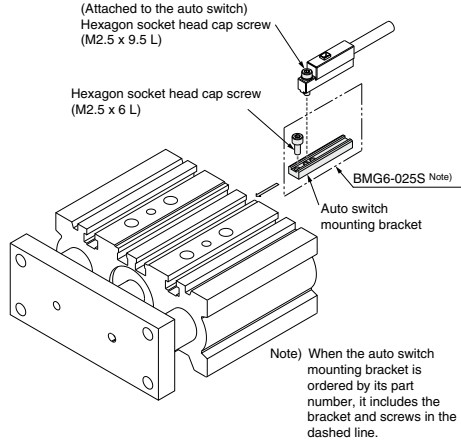
Note) When the auto switch is mounted onto the CDBQ2 end lock type, please contact SMC.

How to Mount and Move the Auto Switch

Mounting Bracket Direct Mounting Style

<Applicable auto switch>
Solid state D-P3DW

How to Mount and Move the Auto Switch



1. Fix the auto switch and the auto switch mounting bracket temporarily by tightening the attached hexagon socket head cap screw (M2.5 x 9.5 L) 1 to 2 turns.
 2. Insert the temporarily tightened mounting bracket into the mating groove of the cylinder/actuator, and slide the auto switch onto the cylinder/actuator through the groove.
To insert the auto switch onto the cylinder/actuator through the groove, first hold the back of the auto switch (lead wire side) and the back of the auto switch mounting bracket together.
 3. Check the detecting position of the auto switch and fix the auto switch firmly with the hexagon socket head cap screw (M2.5 x 6 L, M2.5 x 9.5 L).*
 4. If the detecting position is changed, go back to step 2.
- * The hexagon socket head cap screw (M2.5 x 6 L) is used to fix the mounting bracket and cylinder/actuator.
This enables the replacement of the auto switch without adjusting the auto switch position.

Note 1) Ensure that the auto switch is covered with the mating groove to protect the auto switch.

Note 2) The torque for tightening the hexagon socket head cap screw (M2.5 x 6 L, M2.5 x 9.5 L) is 0.2 to 0.3 N·m.

Note 3) Tighten the hexagon socket head cap screws evenly.

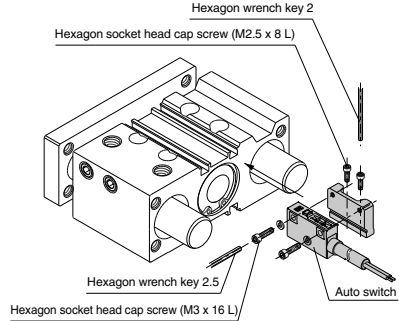
Direct Mounting to the Square Groove

Applicable cylinder/actuator		Auto Switch Mounting Bracket Part No.
Compact guide cylinder	MGP $\phi 25$ to $\phi 100$ MGPS $\phi 50$, $\phi 80$	
Compact guide cylinder with lock	MLGP $\phi 25$ to $\phi 100$	BMG6-025S

Note) For the MGP end lock type, as the auto switch cannot be mounted onto the lock mechanism face, mount it to the groove on the bottom of the lock mechanism face.

<Applicable auto switch>
Solid state D-P4DW

How to Mount and Move the Auto Switch



1. Insert the hexagon socket head cap screw (M2.5 x 0.45 x 8 L) down lightly to the M2.5 tapped portion of the lower part of auto switch mounting bracket's concave part. (2 locations) Use caution to avoid the tip of a screw from sticking out of the auto switch mounting bracket's bottom surface.
2. Install a spring washer in the hexagon socket head cap bolt (M3 x 0.5 x 16 L), then put it through the part of through-holes (2 locations) of an auto switch.
3. As for auto switch mounting bracket, slightly thread the hexagon socket head cap screw w into M3 tapped portion. (2 locations)
4. Fit the auto switch mounting bracket into the auto switch mounting groove on the cylinder body, and then slide it to the detection position roughly.
5. After reconfirming the detecting position, tighten the mounting screw to secure the auto switch.

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

Cylinder series	Applicable bore size (mm)					
	32	40	50	63	80	100
MGP, MLGP	BMG1-040	BMG1-040	BMG1-040	BMG1-040	BMG1-040	BMG1-040
MGT	—	—	—	—	—	—

⚠ Caution

Auto Switch Mounting Tool

- When tightening hexagon socket head cap screw of an auto switch, use a hexagon wrench key 2 and 2.5, depending on the case.

Tightening Torque

- As a guide, set approximately 0.3 to 0.5 N·m for M2.5, 0.5 to 0.7 N·m for M3 respectively.

How to Mount and Move the Auto Switch

<Applicable auto switch>

Solid state D-F79, D-F7P, D-J79, D-F7NV
D-F7PV, D-F7BV, D-J79C
D-F79W, D-F7PW, D-J79W
D-F7NWX, D-F7BWX
D-F79F, D-F7BA, D-F7BAV
D-F7NT

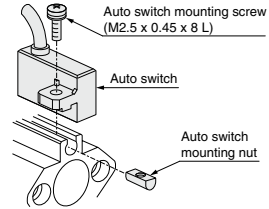
Reed D-A72, D-A73, D-A80, D-A72H
D-A73H, D-A76H, D-A80H
D-A73C, D-A80C, D-A79W

How to Mount and Move the Auto Switch

ø12 to ø25

1. Insert the nut into the auto switch mounting slot on the cylinder tube, and place it in the roughly estimated setting position.
2. Engage the ridge on the auto switch mounting arm with the recess in the cylinder tube rail, and slide it to the position of the nut.
3. Gently screw the auto switch mounting screw into the thread of the auto switch mounting nut through the mounting hole on the auto switch mounting arm.
4. Confirm where the mounting position is, and tighten the auto switch mounting screw to fix the auto switch. The tightening torque of the M2.5 screw must be 0.25 to 0.35 N·m.
5. The detection position can be changed under the conditions in step 3.

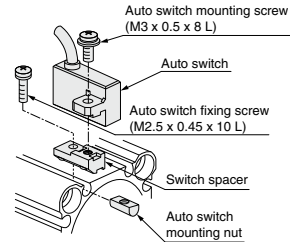
ø12 to ø25



ø32 to ø160

1. Insert the nut into the auto switch mounting slot on the cylinder tube, and place it in the roughly estimated setting position.
2. With the lower tapered part of the auto switch spacer facing the outside of the cylinder tube, line up the M2.5 through hole with the M2.5 female thread of the auto switch mounting nut.
3. Gently screw the auto switch mounting nut fixing screw (M2.5) into the thread of the auto switch mounting nut through the mounting hole.
4. Engage the ridge on the auto switch mounting arm with the recess in the auto switch spacer.
5. Tighten the auto switch mounting screw (M3) to fix the auto switch. The tightening torque of the M3 screw must be 0.35 to 0.45 N·m.
6. Confirm where the mounting position is, and tighten the auto switch fixing screw (M2.5) to fix the auto switch mounting nut. The tightening torque of the M2.5 screw must be 0.25 to 0.35 N·m.
7. The detection position can be changed under the conditions in step 5.

ø32 to ø160



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

Cylinder series	Applicable bore size (mm)												
	12	16	20	25	32	40	50	63	80	100	125	140	160
CDQ2-Z	BQ4-012	BQ4-012	BQ4-012	BQ4-012	BQ5-032	BQ5-032	BQ5-032	BQ5-032	BQ5-032	BQ5-032	BQ5-032	BQ5-032	BQ5-032
CDQ2Y-Z	BQ4-012	BQ4-012	BQ4-012	BQ4-012	BQ5-032	BQ5-032	BQ5-032	BQ5-032	BQ5-032	BQ5-032	BQ5-032	BQ5-032	BQ5-032
MK-Z	—	—	BQ4-012	BQ4-012	BQ5-032	BQ5-032	BQ5-032	BQ5-032	—	—	—	—	—