

# Technical Data 2:

## How to Mount and Move the Auto Switch

### Mounting Bracket Band Mounting Type

#### <Applicable auto switch>

Solid state ..... D-M9N, M9P, M9B, M9NV, M9PV, M9BV, D-M9NW, M9PW, M9BW, M9NWW, M9PWW, M9BWW, D-M9NA, M9PA, M9BA, M9NAV, M9PAV, M9BAV, M9NAV

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-M9□A (V) 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, CDJ2X, CDJ5, CDLJ2, CDVJ5, CDVJ3	0.8 to 1.0
CDM2, CDM3, CDM2Y, CDM2X, CDLM2, CDVM3, CDVM3, CDG1, CDG3, CDG1Y, CDLJ1, 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-M9□W(V) D-A9□(V)	D-M9A□(V)	D-M9□(V) D-M9□W(V) D-A9□(V)	D-M9A□(V)	D-M9□(V) D-M9□W(V) D-A9□(V)	D-M9A□(V)
CDJ2, CDJ2X CDJ2Y 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".

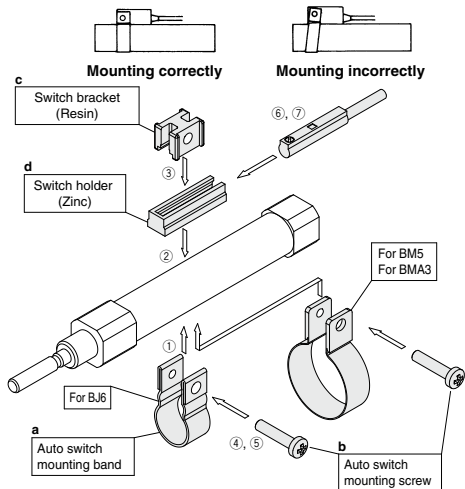
##### Auto Switch Mounting Bracket Part No. (Including a, b, c and d shown in the figure.)

Cylinder series	Bore size (mm)											
	20		25		32		40		50		63	
	D-M9□(V) D-M9□W(V) D-A9□(V)	D-M9A□(V)	D-M9□(V) D-M9□W(V) D-A9□(V)	D-M9A□(V)	D-M9□(V) D-M9□W(V) D-A9□(V)	D-M9A□(V)	D-M9□(V) D-M9□W(V) D-A9□(V)	D-M9A□(V)	D-M9□(V) D-M9□W(V) D-A9□(V)	D-M9A□(V)	D-M9□(V) D-M9□W(V) D-A9□(V)	D-M9A□(V)
CDM2 CDM3 CDM2X, CDM2Y CDLM2 CDVM3, CDVM5 CDG1 CDG3, CDG1Y MGG, RHC MGC CDLG1, CDNG MLGC, REC CKG1 CLK2GA CLK2GB RSDG	BMA3-020	BMA3-020S	BMA3-025	BMA3-025S	BMA3-032	BMA3-032S	BMA3-040	BMA3-040S	—	—	—	—
	—	—	—	—	—	—	—	—	BMA3-050	BMA3-050S	BMA3-063	BMA3-063S
	—	—	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	BMA3-032	BMA3-032S	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	BMA3-050	BMA3-050S	BMA3-063	BMA3-063S
	—	—	—	—	—	—	BMA3-040	BMA3-040S	—	—	—	—

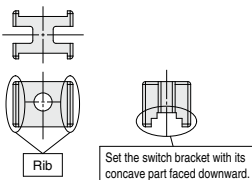
Note) The products other than those with "Z" show the cylinders with the part number "C". (Except MGC and MGG)

#### ⚠ 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

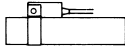
#### <Precautions on BMA5 and BMA3>

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.

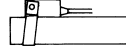
# How to Mount and Move the Auto Switch

## ⚠ Caution

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



Mounting correctly

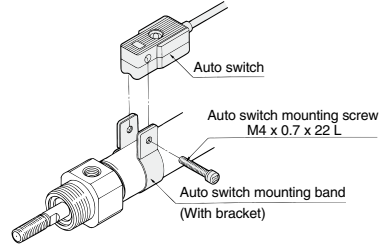


Mounting incorrectly

### <Applicable auto switch>

**Solid state** ..... D-G59, D-G5P, D-K59, D-G5BA,  
D-G59W, D-G5PW, D-K59W,  
D-G59F, D-G5NT  
**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
CDM3 CDM2 CDM2X, CDM2Y CDLM2, CDVM3/5	BA2-020	BA2-025	BA2-032	BA2-040	—	—	—	—
CDA2 CDNA2	—	—	—	BH2-040	BA5-050	BAF-06	BAF-08	BAF-10
CDA2□H, CDA2Y CDL1, CE2, CDV3, CDVS1	—	—	—	BA-04	BA-05	BA-06	BA-08	BA-10
CDG3 CDG1, CDG1Y MGG, RHC	BA-01	BA-02	BA-32					
MGC				—	—	—	—	
CDLG1, CDNG				—	—	—	—	—
MLGC, REC	—	—	—	—	—	—	—	—
CKG1	—	—	—	BA-04	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	D-B5, B6 D-G5, K5
				BA-05, BA-06, BA-08, BA-10	
				BA2-020, BA2-025, BA2-032, BA2-040	
				BA5-050, BH2-025, 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

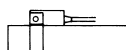
## Mounting Bracket Band Mounting Type

### <Applicable auto switch>

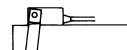
**Solid state** ..... D-H7A1, D-H7A2, D-H7B, D-H7BA, D-H7C, D-H7NF, D-H7NW, D-H7PW, D-H7BW  
**Reed** ..... D-C73, D-C76, D-C80, D-C73C, D-C80C

### ⚠ Caution

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

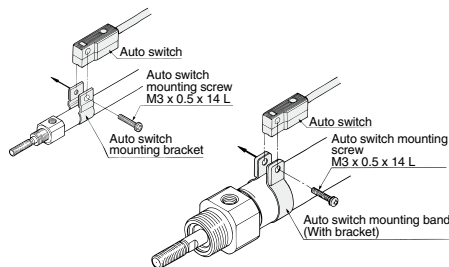


Mounting correctly



Mounting incorrectly

## How to Mount and Move the Auto Switch



1. For **CDJ2 series**: Put a mounting bracket on the cylinder tube.  
 For **CDM2 series**: 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, CDJ2X, CDJ2Y, CDVJ3/5	BJ2-006	BJ2-010	BJ2-016	—	—	—	—	—	—
CDBJ2, CDLJ2	—	—		—	—	—	—	—	—
CDM3 CDM2 CDM2X, CDM2Y CDLM2, CDVM3/5	—	—	—	Note) BM2-020A BM2-020	Note) BM2-025A BM2-025	Note) BM2-032A BM2-032	Note) BM2-040A BM2-040	—	—
CDG3 CDG1, CDG1Y 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	—	—	—	—	—	—	—	—	—
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.)

BBA: 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.



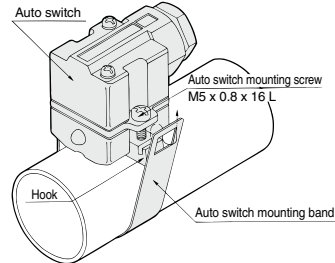
## <Applicable auto switch>

Solid state ..... D-G39, D-K39

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

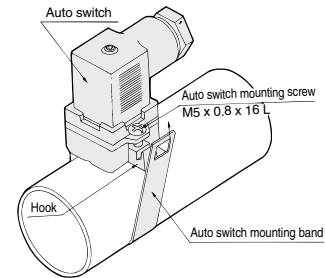
## How to Mount and Move the Auto Switch

### D-A3□, D-G3/K3 type



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.

### D-A44

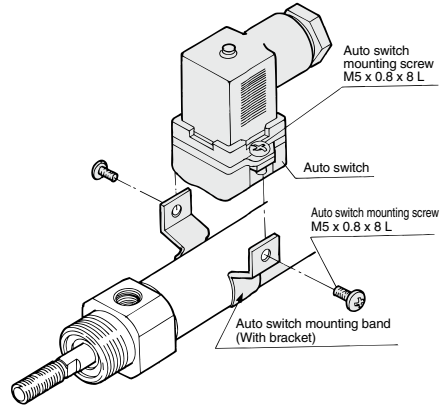


## <Applicable auto switch>

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 CDLM2, CDM2X CDM2Y	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, MDBY MDWB, MDNB	—	—	BMB2-032	BMB2-040	BMB1-050	BMB1-063	BMB1-080	BMB1-100	BS1-125	—	—	—	—
CDA2-Z, CDA2 CDBA2, CDNA2	—	—	—	BDS-04M	BDS-05M	—	—	—	—	—	—	—	—
CDA2□H CDA2Y, CE2 CDV3, CDVS1	—	—	—	BD1-04M	BD1-05M	BD1-06M	BD1-08M	BD1-10M	—	—	—	—	—
CDL1	—	—	—	—	—	—	—	—	—	—	—	—	—
CDS2, CDS2Y	—	—	—	—	—	—	—	—	BS1-125	BS1-140	BS1-160	—	—
CDS1, CDLS	—	—	—	—	—	—	—	—	—	—	—	BS1-180	BS1-200
CDNS	—	—	—	—	—	—	—	—	—	—	—	—	—
RHC	BD1-01M	BD1-02M	BD1-02	—	—	—	BD1-08M	BD1-10M	—	—	—	—	—
CKG1	—	—	—	BD1-04M	—	—	—	—	—	—	—	—	—
CLK2GA	—	—	—	—	BD1-05M	BD1-06M	—	—	—	—	—	—	—
CLK2GB	—	—	—	—	—	—	—	—	—	—	—	—	—



# How to Mount and Move the Auto Switch

## Mounting Bracket Rail Mounting Type

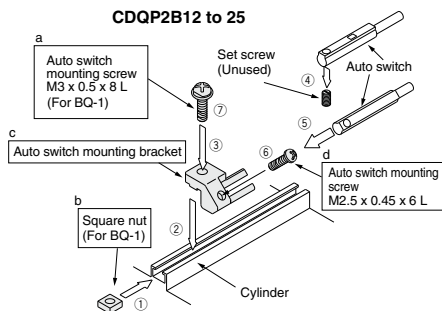
### <Applicable auto switch>

**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

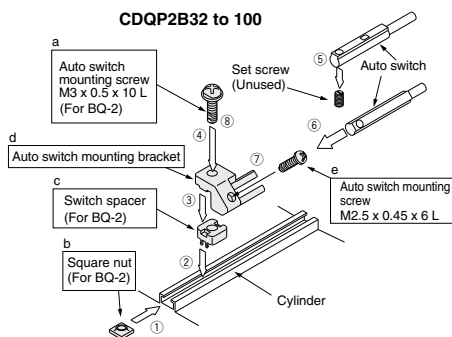
1. Insert the square nut for BQ-1 in the switch mounting rail and set it at the approximate auto switch mounting position.
2. Fit the convex part of the auto switch mounting bracket arm over the concave part of the rail, and slide the arm to the nut position.
3. Push the auto switch mounting screw (M3 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.



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.

#### 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-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	—	—	—	—	—	—	—	—	—	—
MK2T	—	—	—	—	—	—	—	—	—	—
CE1	BQ-1 BQ2-012	—	BQ-1 BQ2-012	—	—	—	—	—	—	—
CXT	—	—	—	—	—	—	—	—	—	—
CKQ, CLKQ	—	—	—	—	—	—	BQ-2 BQ2-012	—	—	—
MDU	—	—	—	—	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-M9□(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.

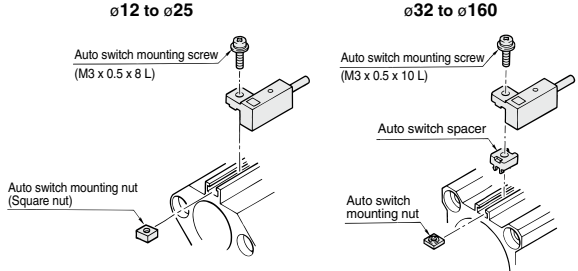
# How to Mount and Move the Auto Switch

## <Applicable auto switch>

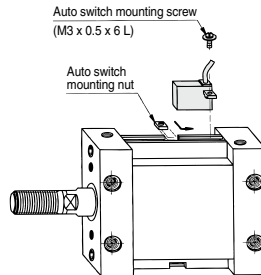
**Solid state** ..... D-F79, D-F7P, D-J79,  
D-F7NV, D-F7PV,  
D-F7BV, D-J79C,  
D-F79W, D-F7PW,  
D-J79W, D-F7NWW,  
D-F7BWV, D-F79F,  
D-F7BA, D-F7BAV,  
D-F7NT

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

## How to Mount and Move the Auto Switch



### MDU/MDLU



- 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.  
(CDQ2 series: 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 connecting 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.

## 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 CDLQ, CDQM RDQ	—	—	—	—	BQ-2	BQ-2	BQ-2	BQ-2	BQ-2	BQ-2	—	—	—
RDLQ, RZQ	—	—	—	—				—	—	—	—	—	—
MK2T	—	—	—	—	—	—	—	BQ-2	—	—	—	—	—
CE1	BQ-1	—	BQ-1	—	—	—	—	—	—	—	—	—	—
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.

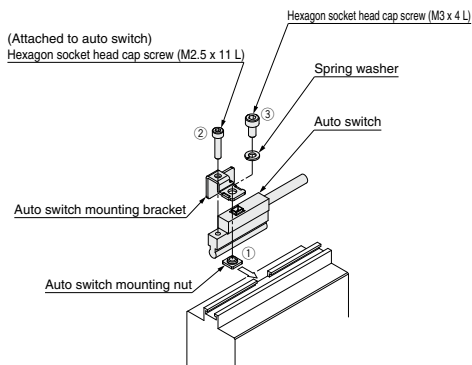
Note 2) When using D-A9□(V)/M9□(V)/M9□A(V) auto switches with BQ2-012, use stainless steel screws suitable for the auto switch mounting bracket applicable for each cylinder series.

# How to Mount and Move the Auto Switch

## Mounting Bracket Rail Mounting Type

<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				

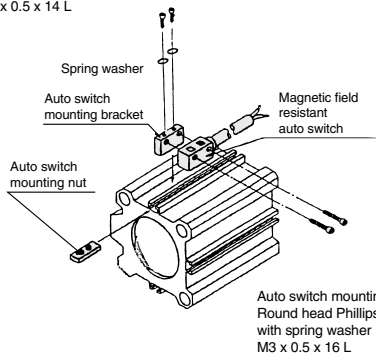
Note 1) The tightening torque for a hexagon socket head cap screw (M2.5) is 0.2 to 0.3 N·m. Hold the shorter side of a hexagon wrench, and turn it to tighten. (Too much tightening may break the switch)

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)

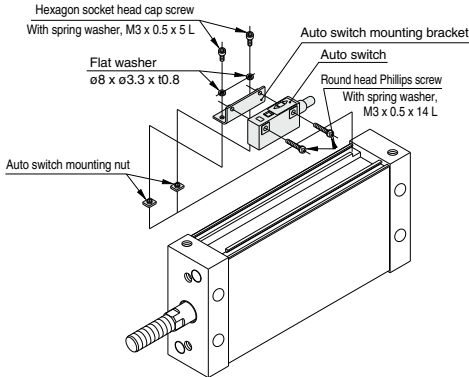
Cylinder series	Applicable bore size (mm)				
	40	50	63	80	100
CDBQ2 CDQ2X CDLQ, CDQM	BQP1-050	BQP1-050	BQP1-050	BQP1-050	BQP1-050
MK2T				—	—
RZQ				—	—
CKQ, CLKQ	—			—	—

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 lightly.
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			—

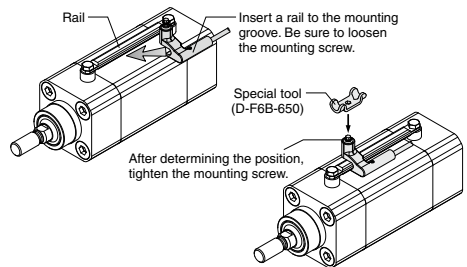
## <Applicable auto switch> Solid state ..... D-F6N, D-F6P, D-F6B

### 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 Type

### <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)

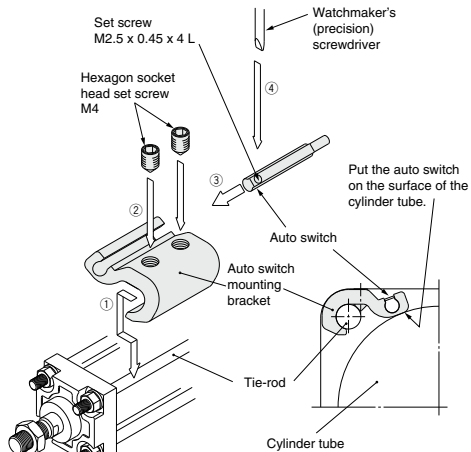
### How to Mount and Move the Auto Switch

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, tighten with a torque of about 0.05 to 0.15 N·m, or about 0.05 to 0.10 N·m for D-M9□A.



### 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
<b>MDB, MDBY</b> <b>MDWB, MDNB</b>	BMB5-032	BMB5-032	BA7-040	BA7-040	BA7-063	BA7-063	BA7-080	—	—	—	—
<b>CDA2</b> <b>CDA2□H</b> <b>CDA2Y, CDNA2</b> <b>CE2, CDV3, CDVS1</b>	—	BA7-040	BA7-040	BA7-063	BA7-080	BA7-080	—	—	—	—	—
<b>CDL1</b>	—	—	—	—	—	—	—	—	—	—	—
<b>CDS1, CDLS</b>	—	—	—	—	—	—	BS5-125	BS5-125	BS5-160	BS5-180	BS5-200
<b>CDS2, CDS2Y</b>	—	—	—	—	—	—	—	—	—	—	—
<b>CDNS</b>	—	—	—	—	—	—	—	—	—	—	—

Note 1) When using type D-M9□A(V)L, please order stainless steel screw set BBA1 separately (page 1689), 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□□, CDA2□H, CDA2Y, CDL1, CE2, CDV3, and CDVS1 series.

# How to Mount and Move the Auto Switch

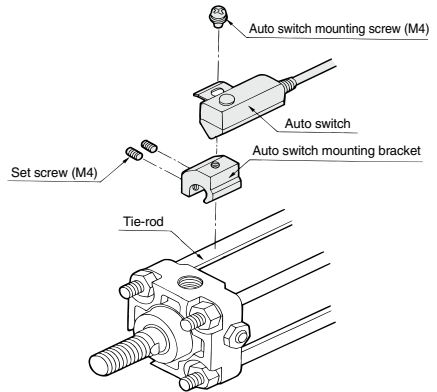
## <Applicable auto switch>

**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
<b>MDB, MDBY</b> <b>MDWB, MDNB</b>	BT-03	BT-03	BT-05	BT-05	BT-06	BT-06	BT-08	—	—	—	—
<b>CDA2</b> <b>CDA2□H</b> <b>CDA2Y</b> <b>CDNA2, CE2</b> <b>CDV3, CDVS1</b>	—	BT-04	BT-04	BT-06	BT-08	BT-08	—	—	—	—	—
<b>CDL1</b>	—	—	—	—	—	—	—	—	—	—	—
<b>CDS1, CDLS</b>	—	—	—	—	—	—	BT-12	BT-12	BT-16	BT-18A	BT-20
<b>CDS2, CDS2Y</b>	—	—	—	—	—	—	—	—	—	—	—
<b>CDNS</b>	—	—	—	—	—	—	—	—	—	—	—

### [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.		
<b>BBA1</b>	1	Auto switch mounting screw	M4 x 0.7 x 8L	1	BT-□□	D-A5, A6 D-F5, J5
					BT-03, BT-04, BT-05 BT-06, BT-08, BT-12	
	2	Set screw	M4 x 0.7 x 6L	2	BA4-040, BA4-063, BA4-080 BMB4-032, BMB4-050	D-Z7, Z8 D-Y5, Y6, Y7
					BMB5-032	D-A9 D-M9
					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-A5, A6 D-F5
BS4-125, BS4-160 BS4-180, BS4-200					D-Z7, Z8 D-Y5, Y6, Y7	
BSS-125, BSS-160 BSS-180, BSS-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□□(V)/M9□□(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 Type

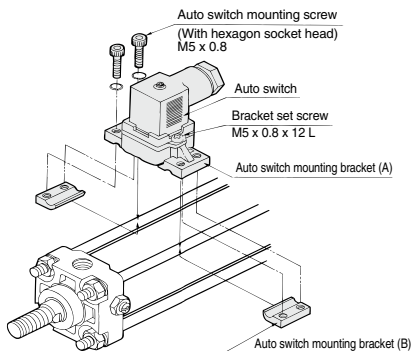
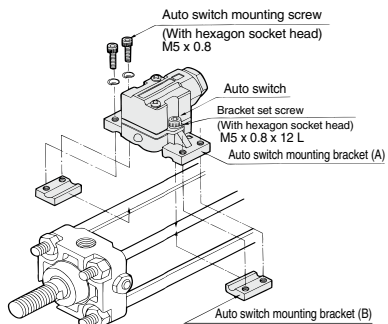
### <Applicable auto switch>

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 lightly 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)

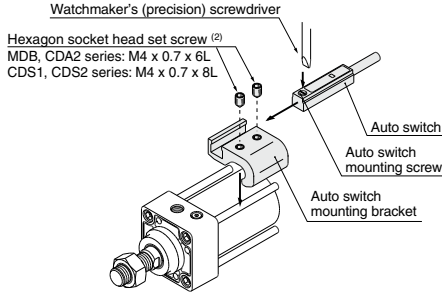
Cylinder series	Applicable bore size (mm)				
	40	50	63	80	100
CDA2, CDV3, CDVS1 CDL1, CE2, CNA2	BA3-040	BA3-050	BA3-063	BA3-080	BA3-100

# How to Mount and Move the Auto Switch

## <Applicable auto switch>

**Solid state** ..... D-Y59<sup>Ⓐ</sup>, D-Y69<sup>Ⓐ</sup>, 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, MDBY MDWB, MDNB	BMB4-032	BMB4-032	BMB4-050	BMB4-050	BA4-063	BA4-063	BA4-080	—	—	—	—
CDA2 CDA2□H CDA2Y CDNA2, CE2	—	BA4-040	BA4-040	BA4-063	BA4-080	BA4-080	—	—	—	—	—
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 1689), 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.

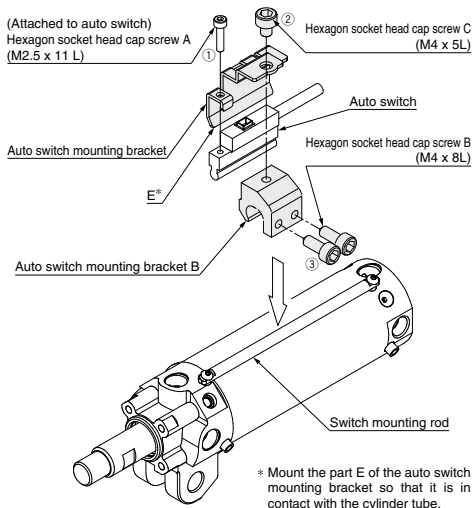
# How to Mount and Move the Auto Switch

## Mounting Bracket Tie-rod Mounting Type

<Applicable auto switch>  
Solid state ..... D-P3DWA

Applicable cylinder/actuator		
Clamp cylinder	CKG1	ø40 to ø63
	CKGA	ø80, ø100
Clamp cylinder with lock	CLK2G	ø40 to ø63
	CDA2Y	
Air cylinder	CDA2	ø40, ø50
	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 CK Series (Including bracket, screw)

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

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

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

# 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
	MDBY
	CDA2
	CDA2Y
	CDA2
Air cylinder with lock	CDS1
	CDS2
	MDWB, MDNB
	CDNA2
	CDLS
	CDS1, CDLS
	CDS2, CDNS
	ø32 to ø125
	ø63 to ø100
	ø125 to ø200
	ø125 to ø160
	ø32 to ø100
	ø63 to ø100
	ø125 to ø200
	ø125 to ø160

## How to Mount and Move the Auto Switch ø32

Hexagon socket head cap screw (M4 x 6 L): 1 pc.

Hexagon socket head cap screw (M2.5 x 11 L): 1 pc.

For securing the switch (supplied with the auto switch)

Switch mounting bracket: 1 pc.

Part E

Auto switch

Screw for securing the switch

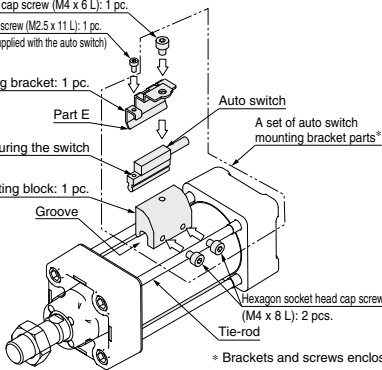
A set of auto switch mounting bracket parts\*

Switch mounting block: 1 pc.

Groove

Hexagon socket head cap screw (M4 x 8 L): 2 pcs.

Tie-rod



\* Brackets and screws enclosed by a dashed line are a set of auto switch mounting bracket parts.

1. Secure the auto switch to the switch mounting bracket with the hexagon socket head cap screw <sup>Note 1)</sup> (M2.5 x 11 L) supplied with the auto switch.
2. Secure the parts assembled in step 1 to the switch mounting block with the hexagon socket head cap screw <sup>Note 2)</sup> (M4 x 6 L).
3. Insert the cylinder tie-rod into the groove on the switch mounting block that has been assembled in step 2 and perform the adjustment so that the part E of the switch mounting bracket is in contact with the cylinder tube.
4. After checking the switch detection position, secure the switch mounting block with the hexagon socket head cap screws <sup>Note 2)</sup> (M4 x 8 L).  
After securing the hexagon socket head cap screws, be sure to check that the part E of the switch mounting bracket is in contact with the cylinder tube.

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.)

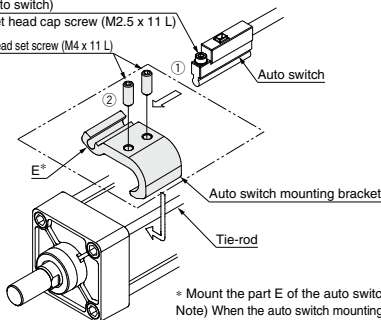
Note 2) The tightening torque for a hexagon socket head cap screw (M4) is 1 to 1.2 N·m.

## ø40 to ø200

(Attached to auto switch)

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

Hexagon socket head set screw (M4 x 11 L)



\* 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.

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.

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

Applicable cylinder	Applicable bore size										
	32	40	50	63	80	100	125	140	160	180	200
MDB	BA10-032S	BA10-040S	BA10-050S		BA10-063S	BA10-080S					
MDWB, MDNB	BA10-032S	BA10-040S	BA10-050S		BA10-063S						
CDA2, CDNA2		BK7-040S <sup>Note 1)</sup>	BA10-063S		BA10-080S						
CDS1, CDLS							BS7-125S		BS7-160S	BS7-180S	BS7-200S
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.



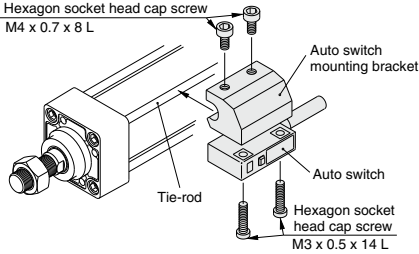
# How to Mount and Move the Auto Switch

## Mounting Bracket Tie-rod Mounting Type

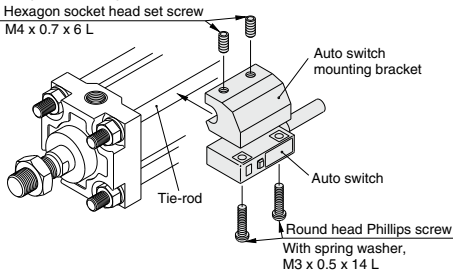
<Applicable auto switch>  
Solid state ..... D-P4DW

### How to Mount and Move the Auto Switch

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



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



- (For MDB-Z, MDB, MDBY)  
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.
- (For MDB-Z, MDB, MDBY)  
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.
- 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.
- 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.)
- 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)						
	32	40	50	63	80	100	125
<b>MDB</b>							BAP2T-080
<b>MDBY, MDWB, MDNB</b>	BMB3T-040	BMB3T-040	BMB3T-050	BMB3T-050	BMB3T-080	BMB3T-080	—
<b>CDA2</b>	—	BAP2-040	BAP2-040	BAP2-063	BAP2-080	BAP2-080	—
<b>CDA2Y, CDL1, CDNA2</b>							



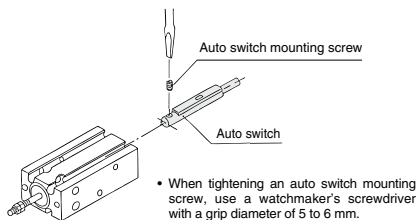
# How to Mount and Move the Auto Switch

## Mounting Bracket Direct Mounting Type

### <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

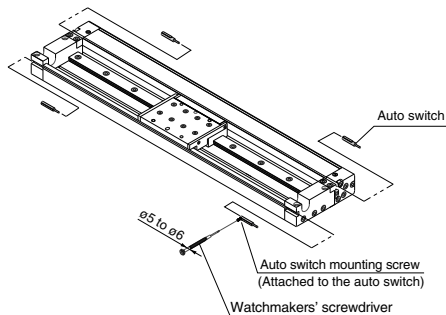


Auto Switch Mounting Screw Tightening Torque (N·m)

Auto switch model	Tightening torque
D-M9□(V)	0.05 to 0.15
D-M9□W(V)	
D-A93	0.10 to 0.20
D-M9□A(V)	
D-A9□(V) (Excludes the D-A93)	

## MY2 Series

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.

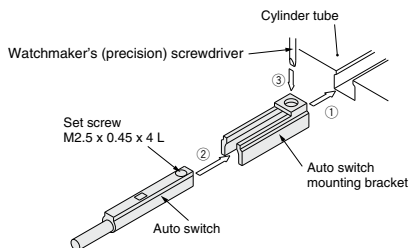


(Note) When tightening an auto switch mounting screw, use a watchmaker's screwdriver with a grip diameter of 5 to 6 mm. Refer to the table above for the tightening torque.

### <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.

## Auto Switch Mounting Bracket Part No.

Cylinder series	Applicable bore size (mm)									
	12	16	20	25	32	40	50	63	80	100
MY1B	—	—	—	—	—	—	—	—	BMG2 -012	BMG2 -012
MY1M, MY1MW	—	—	—	BMG2 -012	BMG2 -012	BMG2 -012	BMG2 -012	—	—	—
MY1C, MY1CW	—	—	—	—	—	—	—	—	—	—
CY3R	—	—	—	BMG2 -012	BMG2 -012	BMG2 -012	BMG2 -012	BMG2 -012	—	—
REAR	—	—	—	—	—	—	—	—	—	—
REBR	—	—	—	—	—	—	—	—	—	—
MGPS	—	—	—	—	—	—	—	—	—	—
MGP, MGPA	BMG2 -012	—	—	—	—	—	—	—	—	—
MGQ, MGVQ	—	BMG2 -012	—	—	—	—	—	—	—	—
MGP□-□A	—	—	BMG2 -012	BMG2 -012	BMG2 -012	BMG2 -012	—	—	BMG2 -012	—
MLGP	—	—	—	—	—	—	—	—	—	BMG2 -012
MGF	—	—	—	—	—	—	—	—	—	—
MGT	—	—	—	—	—	—	—	—	—	BMG2 -012
RSH	—	—	BMG2 -012	—	BMG2 -012	—	—	—	—	—
RS1H	—	—	—	—	—	—	BMG2 -012	BMG2 -012	BMG2 -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. MY1B, MY1M, MY1C, MY1MW and MY1CW series with ø25 or more. MGF, RSH and RS1H series

Note 4) The D-M9□(W)V type cannot be mounted on the product series shown below. MY1B series with ø50, MY1□W series with ø16 and ø20, CY3R, REAR and REBR series

# How to Mount and Move the Auto Switch

## <Applicable auto switch>

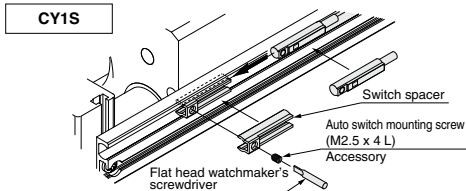
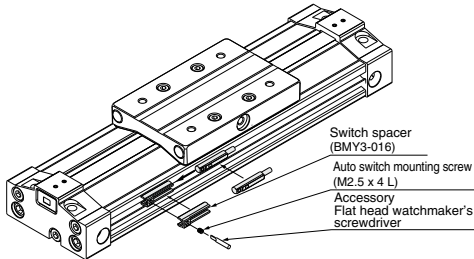
**Solid state** ..... D-M9N(V), M9P(V), M9B(V),  
D-M9NW(V), M9PW(V), M9BW(V),  
D-M9NA(V), M9PA(V), M9BA(V)  
**Solid state** ..... D-A90(V), A93(V), A96(V)

## 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.



## Switch Spacer No.

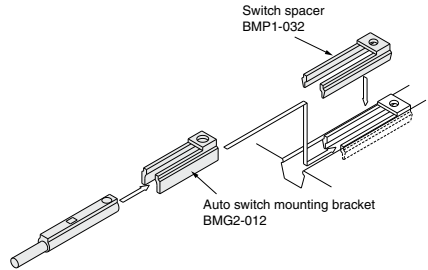
Cylinder series	Applicable bore size (mm)			
	6	10	16	20
MY1B	—	—	—	—
MY1H	—	—	—	—
MY3A, MY3B	—	—	—	—
MY3M	—	—	—	—
CY1S	BMY3-016	BMY3-016	—	—
MGZ, MGZR	—	—	—	—

Cylinder series	Applicable bore size (mm)			
	32	40	50	63
MY1B	—	—	—	—
MY1H	BMY3-016	—	—	—
MY3A, MY3B	BMY3-016	—	BMY3-016	—
MY3M	—	—	—	BMY3-016
CY1S	BMY3-016	—	—	—
MGZ, MGZR	—	—	—	—

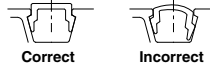
## <Applicable auto switch>

**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 into 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.

## 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)		
	32	40	50
MDB1	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	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

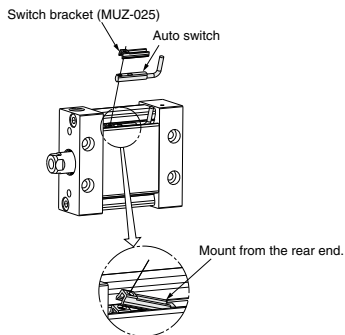
## Mounting Bracket Direct Mounting Type

### <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

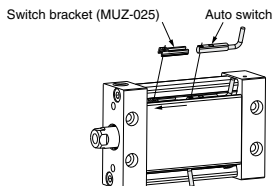
#### A 20 strokes or less



\* It is recommended to mount the switch bracket from the rear end.

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.

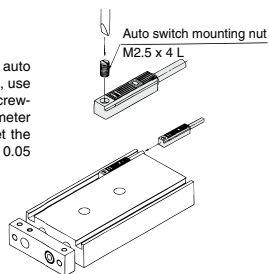
Cylinder series	Applicable bore size (mm)				
	25	32	40	50	63
<b>MU</b>	MUZ-025				

### <Applicable auto switch>

**Solid state** ..... D-Y59<sup>Δ</sup>, Y69<sup>Δ</sup>, D-Y7P(V),  
D-Y7NW(V), Y7PW(V), Y7BW(V),  
D-Y7BA  
**Reed** ..... D-Z73, Z76, Z80

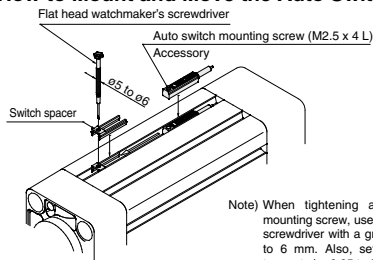
### How to Mount and Move the Auto Switch

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.



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



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.

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.

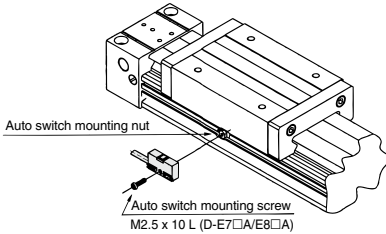
Cylinder series	Applicable bore size (mm)					
	32	40	50	63	80	100
<b>MDB1</b>	BMP1-032					

# How to Mount and Move the Auto Switch

## <Applicable auto switch>

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 lightly 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)

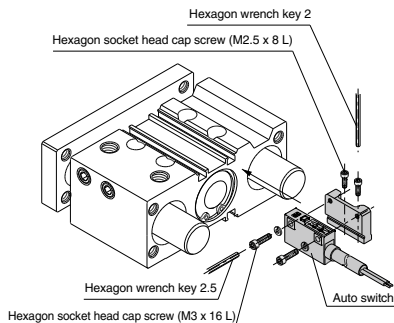
Cylinder series	Applicable bore size (mm)	Applicable bore size (mm)		
		25	32	40
<b>ML1</b>	M2.5 x 10 L	BM Y1-025	BM Y1-025	BM Y1-025

# How to Mount and Move the Auto Switch

## Mounting Bracket Direct Mounting Type

<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
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>

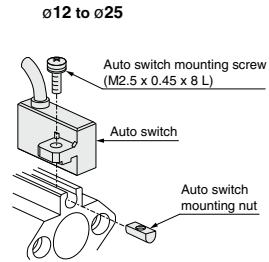
**Solid state** ..... D-F79, D-F7P, D-J79, D-F7NV  
 D-F7PV, D-F7BV, D-J79C  
 D-F79W, D-F7PW, D-J79W  
 D-F7NWV, D-F7BVB  
 D-F79F, D-F7BA, D-F7BAV  
 D-F7NT

**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

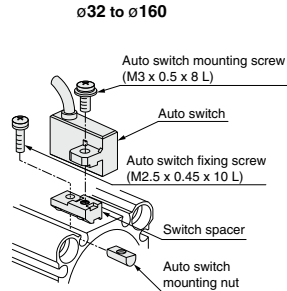
ø12 to ø25

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.



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.



## 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 CDQ2Y	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	—	—	BQ4-012	BQ4-012	BQ5-032	BQ5-032	BQ5-032	BQ5-032	—	—	—	—	—
RSDQ	—	BQ4-012	BQ4-012	—	BQ5-032	BQ5-032	BQ5-032	—	—	—	—	—	—