



Operation Manual

Parts and Mountings List of Unit

Model name
<i>CRB2BW 10~ 40</i>
<i>CRB1BW 50~100</i>
<i>CRBU2W 10~ 40</i>

Part number / Series

SMC Corporation

Contents

Safety Instructions

Switch Block Unit 1

Auto Switch Unit 3

 Part number of auto switch unit 3

 How to mount auto switch unit 4

Angle Adjusting Unit 6

 Part number of angle adjusting unit 6

 How to mount angle adjusting unit 6

Joint unit for combining switch unit and angle adjusting unit 8

 Part number of joint unit 8

 How to mount joint unit 10



Safety Instructions

These safety instructions are intended to prevent a hazardous situation and/or equipment damage. These instructions indicate the level of potential hazard by labels of "Caution", "Warning" or "Danger". To ensure safety, be sure to observe ISO 4414, JIS B 8370 and other safety practices.



Operator error could result in injury or equipment damage.



Operator error could result in serious injury or loss of life.



In extreme conditions, there is a possible result of serious injury or loss of life.



1. The compatibility of pneumatic equipment is the responsibility of the person who designs the pneumatic system or decides its specifications.

Since the products specified here are used in various operating conditions, their compatibility for the specific pneumatic system must be based on specifications or after analysis and/or tests to meet your specific requirements.

The expected performance and safety assurance will be the responsibility of the person who has determined the compatibility of the system.

This person should continuously review the suitability of all items specified, referring to the latest catalog information with a view to giving due consideration to any possibility of equipment failure when configuring a system.

2. Only trained personnel should operate pneumatically operated machinery and equipment.

Compressed air can be dangerous if an operator is unfamiliar with it.

Assembly, handling or repair of pneumatic systems should be performed by trained and experienced operators.

3. Do not service machinery/equipment or attempt to remove components until safety is confirmed.

1. Inspection and maintenance of machinery/equipment should only be performed once measures to prevent falling or runaway of the driven objects have been confirmed.

2. When equipment is to be removed, confirm the safety process as mentioned above. Cut the supply pressure for this equipment and exhaust all residual compressed air in the system.

3. Before machinery/equipment is restarted, take measures to prevent shooting-out of cylinder piston rod, etc.

4. Contact SMC if the product is to be used in any of the following conditions.

1. Conditions and environments beyond the given specifications, or if product is used outdoors.

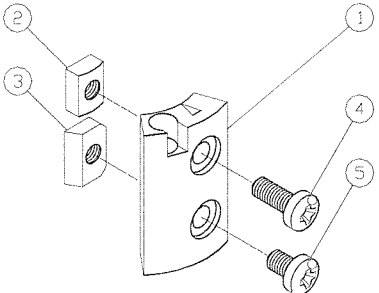
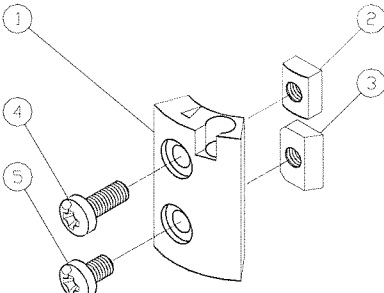
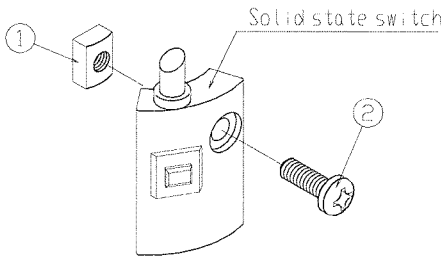
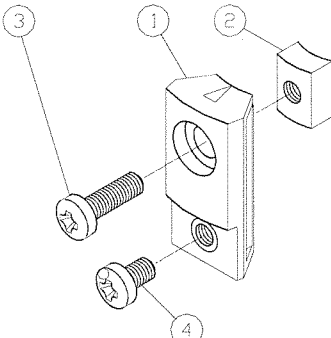
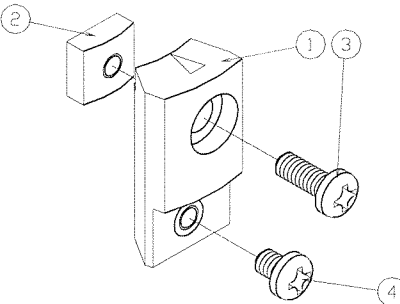
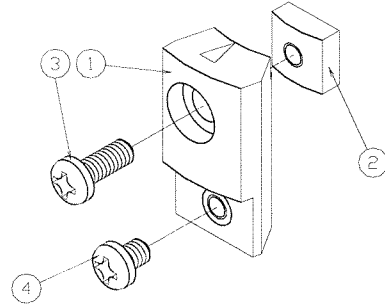
2. Installation on equipment in conjunction with atomic energy, railway, air navigation, vehicles, medical equipment, food and beverages, recreation equipment, emergency stop circuits, clutch and brake circuits in press applications, or safety equipment.

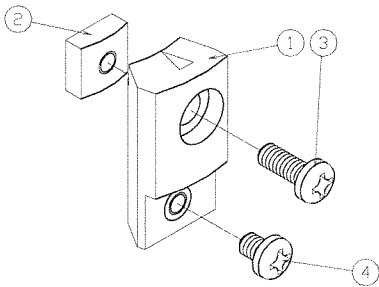
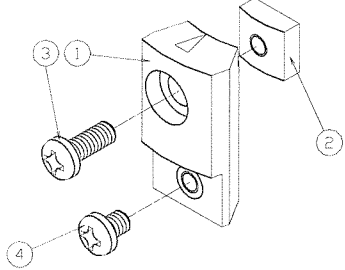
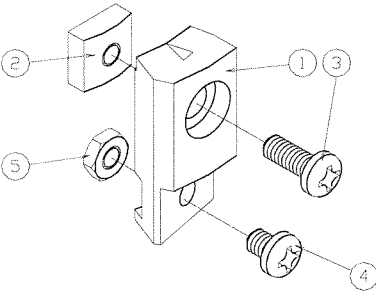
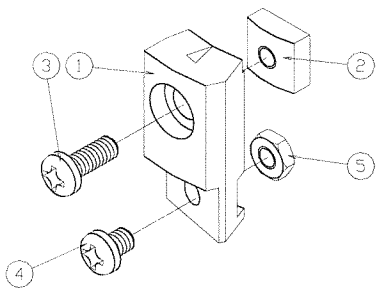
3. An application which has the possibility of having negative effects on people, property, or animals, requiring special safety analysis.

Switch Block Unit

■ When additional auto switch is needed or the switch block is damaged, only the switch block unit can be ordered separately.

■ The solid state switch for CRB2BW10/15 and CRBU2W10/15 is provided in the switch block, and can be mounted by only two parts as shown in P611070-13.

CRB2BW10·15/CRBU2W10·15											
For right hand (Reed switch)				For left -handed (Reed switch)				Common to right-handed and left-handed (Solid state switch)			
Unit part number: P611070-8				Unit part number: P611070-9				Unit part number: P611070-13			
											
<input type="checkbox"/>	Cross recessed round head screw	1	M3×4ℓ	<input type="checkbox"/>	Cross recessed round head screw	1	M3×4ℓ				
<input type="checkbox"/>	Cross recessed round head screw	1	M3×8ℓ	<input type="checkbox"/>	Cross recessed round head screw	1	M3×8ℓ				
<input type="checkbox"/>	Fixing block(B)	1		<input type="checkbox"/>	Fixing block(B)	1					
<input type="checkbox"/>	Fixing block(A)	1		<input type="checkbox"/>	Fixing block(A)	1		<input type="checkbox"/>	Cross recessed round head screw	1	M3×8ℓ
<input type="checkbox"/>	Switch block(A)	1		<input type="checkbox"/>	Switch block(B)	1		<input type="checkbox"/>	Fixing block(A)	1	
No.	Description	Qty.	Remarks	No.	Description	Qty.	Remarks	No.	Description	Qty.	Remarks
CRB2BW20·30/CRBU2W20·30				CRB2BW40/CRBU2W40							
Common to right-handed and left-handed				For right -handed (Reed switch)				For left -handed (Reed switch)			
Unit part number: P611060-8				Unit part number: P611010-8				Unit part number: P611010-9			
											
<input type="checkbox"/>	Cross recessed round head screw	1	M3×4ℓ	<input type="checkbox"/>	Cross recessed round head screw	1	M3×4ℓ	<input type="checkbox"/>	Cross recessed round head screw	1	M3×4ℓ
<input type="checkbox"/>	Cross recessed round head screw	1	M3×8ℓ	<input type="checkbox"/>	Cross recessed round head screw	1	M3×8ℓ	<input type="checkbox"/>	Cross recessed round head screw	1	M3×8ℓ
<input type="checkbox"/>	Fixing block	1		<input type="checkbox"/>	Fixing block	1		<input type="checkbox"/>	Fixing block	1	
<input type="checkbox"/>	Switch block	1		<input type="checkbox"/>	Switch block(A)	1		<input type="checkbox"/>	Switch block(B)	1	
No.	Description	Qty.	Remarks	No.	Description	Qty.	Remarks	No.	Description	Qty.	Remarks

CRB1BW50							
For right-handed				For left-handed			
Unit part number: P411020-8				Unit part number: P411020-9			
							
<input type="checkbox"/>	Cross recessed round head screw	1	M3×4ℓ	<input type="checkbox"/>	Cross recessed round head screw	1	M3×4ℓ
<input type="checkbox"/>	Cross recessed round head screw	1	M3×8ℓ	<input type="checkbox"/>	Cross recessed round head screw	1	M3×8ℓ
<input type="checkbox"/>	Fixing block	1		<input type="checkbox"/>	Fixing block	1	
<input type="checkbox"/>	Switch block(A)	1		<input type="checkbox"/>	Switch block(B)	1	
No,	Description	Qty,	Remarks	No,	Description	Qty,	Remarks
CRB1BW63, 80, 100							
For right-handed				For left-handed			
Unit part number: P411040-8				Unit part number: P411040-9			
							
<input type="checkbox"/>	Hexagon nut	1	Over size M3	<input type="checkbox"/>	Hexagon nut	1	Over size M3
<input type="checkbox"/>	Cross recessed round head screw	1	M3×4ℓ	<input type="checkbox"/>	Cross recessed round head screw	1	M3×4ℓ
<input type="checkbox"/>	Cross recessed round head screw	1	M3×8ℓ	<input type="checkbox"/>	Cross recessed round head screw	1	M3×8ℓ
<input type="checkbox"/>	Fixing block	1		<input type="checkbox"/>	Fixing block	1	
<input type="checkbox"/>	Switch block(A)	1		<input type="checkbox"/>	Switch block(B)	1	
No,	Description	Qty,	Remarks	No,	Description	Qty,	Remarks

Auto Switch Unit

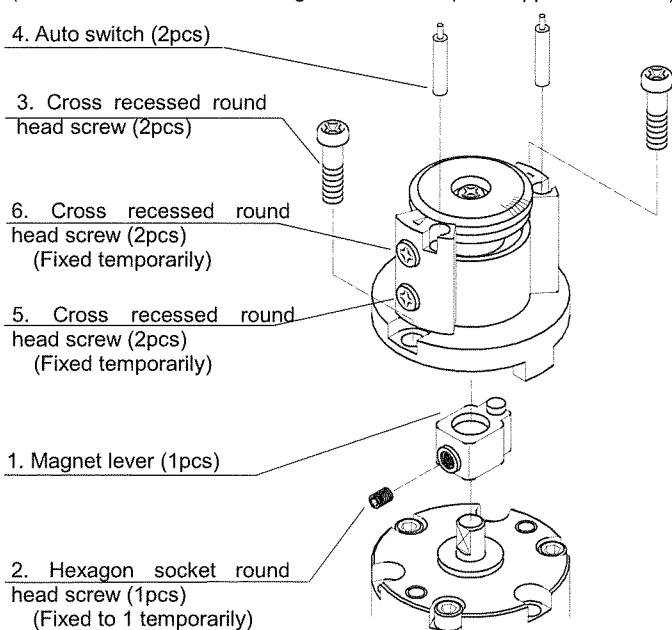
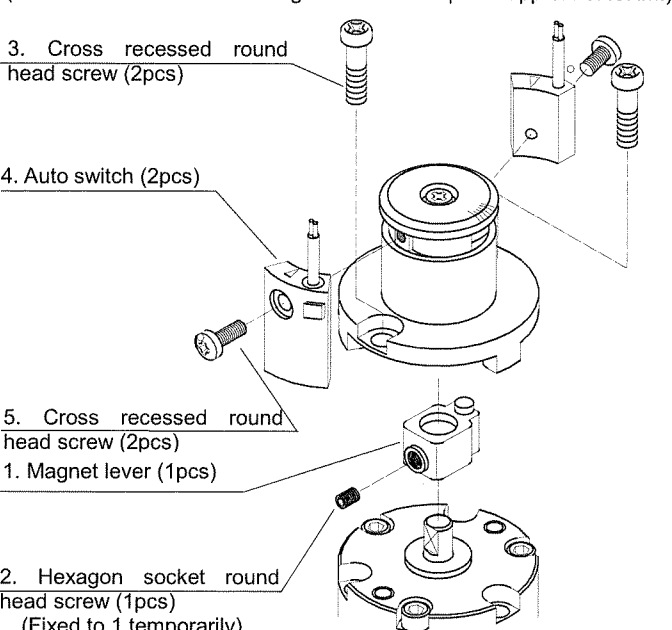
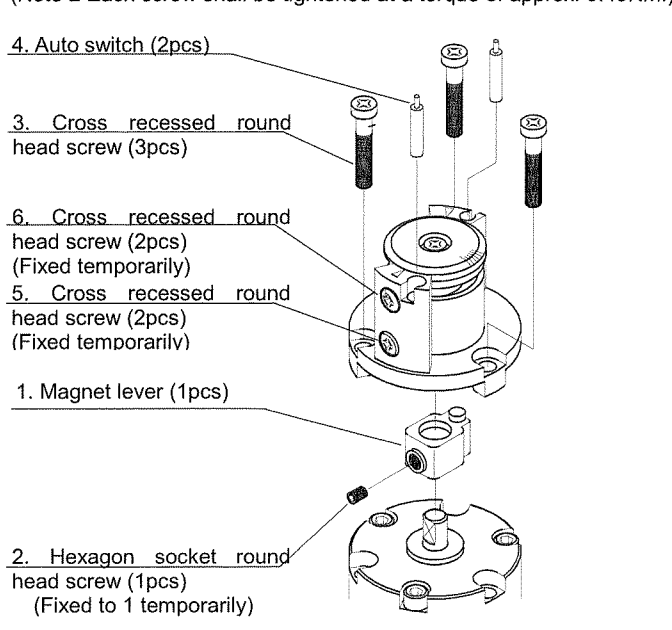
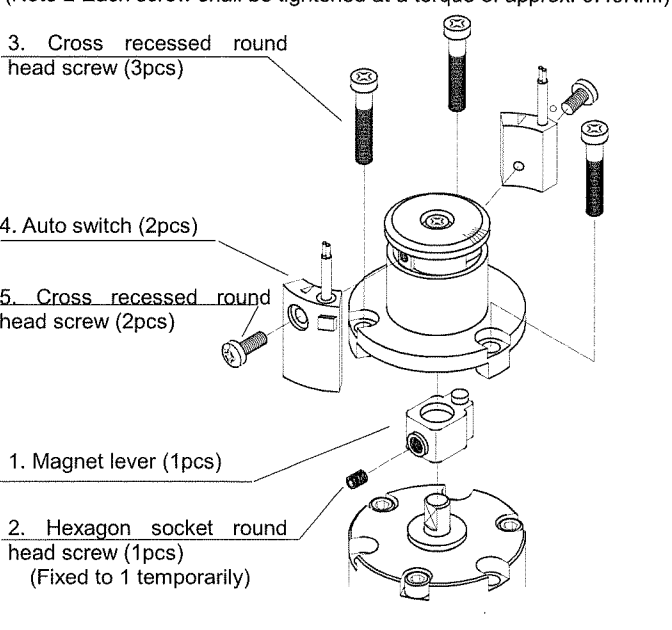
■ Part number of auto switch unit
(The auto switch is not included.)

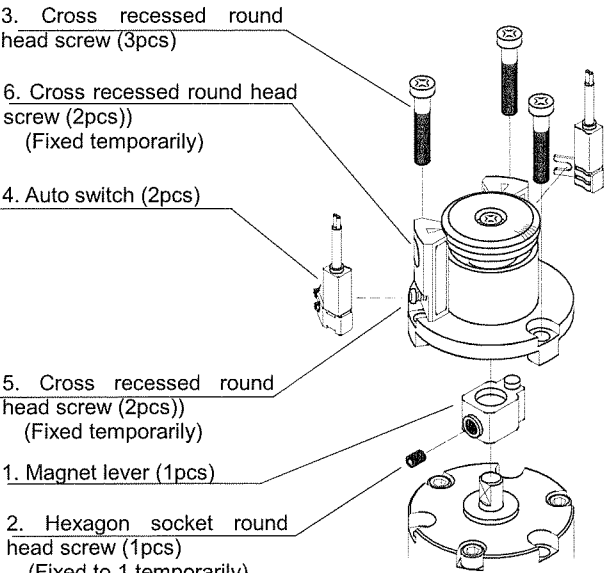
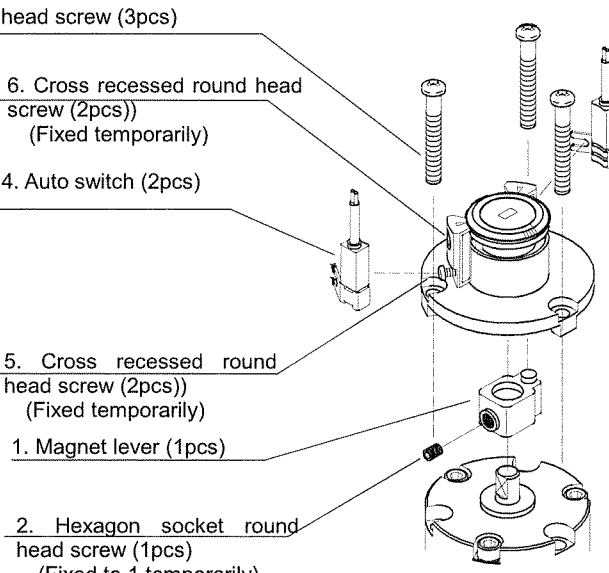
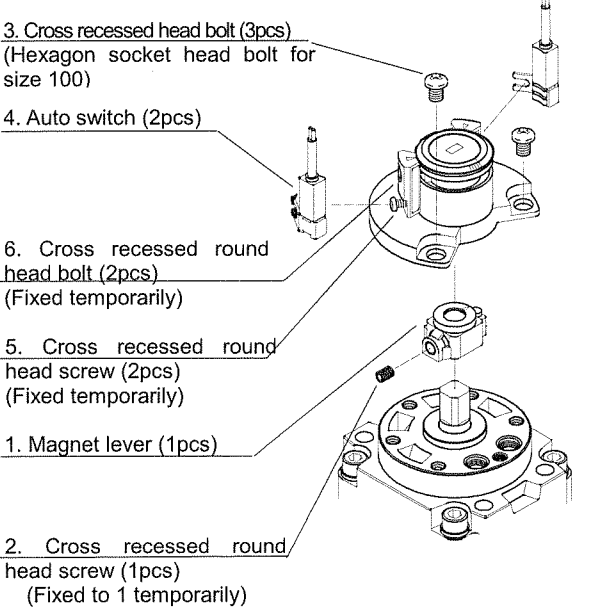
Product series	Applicable model	Unit part number
CRB2 series	CDRB2BW 10	P611070-1
	CDRB2BW 15	P611090-1
	CDRB2BW 20	P611060-1
	CDRB2BW 30	P611080-1
	CDRB2BW 40	P611010-1
CRBU2 series	CDRBUW2BW10	P611070-1
	CDRBUW2BW15	P611090-1
	CDRBUW2BW20	P611060-1
	CDRBUW2BW30	P611080-1
	CDRBUW2BW40	P611010-1
CRB1 series	CDRB1BW 50	P411020-1
	CDRB1BW 63	P411030-1
	CDRB1BW 80	P411040-1
	CDRB1BW100	P411050-1

Each unit can be mounted later on an independent rotary actuator.

If the auto switch becomes necessary after received, the auto switch unit can be added, but the auto switch itself needs to be ordered separately. If the switch block for a solid state auto switch is used for size 10 or 15, a set of parts for the switch block unit for a reed auto switch will become unnecessary.

How to mount auto switch unit

Applicable model CDRB2BW10 and CDRBUW10	
<p>Mounting of reed auto switch unit and auto switch (reed type)</p> <p>For the mounting of auto switch (including a unit), follow the procedure below in order (of the number attached to each part). (Note 1 The auto switch 4 is excluded for the order by unit) (Note 2 Each screw shall be tightened at a torque of approx. 0.49Nm.)</p> <p>4. Auto switch (2pcs)</p> <p>3. Cross recessed round head screw (2pcs)</p> <p>6. Cross recessed round head screw (2pcs) (Fixed temporarily)</p> <p>5. Cross recessed round head screw (2pcs) (Fixed temporarily)</p> <p>1. Magnet lever (1pcs)</p> <p>2. Hexagon socket round head screw (1pcs) (Fixed to 1 temporarily)</p> 	<p>Mounting of solid state auto switch unit and auto switch (solid state type)</p> <p>For the mounting of auto switch (including a unit), follow the procedure below in order (of the number attached to each part). (Note 1 The auto switch 4 is excluded for the order by unit) (Note 2 Each screw shall be tightened at a torque of approx. 0.49Nm.)</p> <p>3. Cross recessed round head screw (2pcs)</p> <p>4. Auto switch (2pcs)</p> <p>5. Cross recessed round head screw (2pcs)</p> <p>1. Magnet lever (1pcs)</p> <p>2. Hexagon socket round head screw (1pcs) (Fixed to 1 temporarily)</p> 
Applicable model: CDRB2BW15 and CDRBU2W15	
<p>Mounting of reed auto switch unit and auto switch (reed type)</p> <p>For the mounting of auto switch (including a unit), follow the procedure below in order (of the number attached to each part). (Note 1 The auto switch 4 is excluded for the order by unit) (Note 2 Each screw shall be tightened at a torque of approx. 0.49Nm.)</p> <p>4. Auto switch (2pcs)</p> <p>3. Cross recessed round head screw (3pcs)</p> <p>6. Cross recessed round head screw (2pcs) (Fixed temporarily)</p> <p>5. Cross recessed round head screw (2pcs) (Fixed temporarily)</p> <p>1. Magnet lever (1pcs)</p> <p>2. Hexagon socket round head screw (1pcs) (Fixed to 1 temporarily)</p> 	<p>Mounting of solid state auto switch unit and auto switch (solid state type)</p> <p>For the mounting of auto switch (including a unit), follow the procedure below in order (of the number attached to each part). (Note 1 The auto switch 4 is excluded for the order by unit) (Note 2 Each screw shall be tightened at a torque of approx. 0.49Nm.)</p> <p>3. Cross recessed round head screw (3pcs)</p> <p>4. Auto switch (2pcs)</p> <p>5. Cross recessed round head screw (2pcs)</p> <p>1. Magnet lever (1pcs)</p> <p>2. Hexagon socket round head screw (1pcs) (Fixed to 1 temporarily)</p> 

Applicable model: CDRB2BW20,30 and CDRBU2W20,30	Applicable model: CDRB2BW40
Mounting of reed auto switch unit and auto switch (reed type)	Mounting of auto switch unit and auto switch (common to reed and solid state type)
<p>For the mounting of auto switch (including a unit), follow the procedure below in order (of the number attached to each part). (Note 1 The auto switch 4 is excluded for the order by unit) (Note 2 Each screw shall be tightened at a torque of approx. 0.49Nm.)</p>  <ol style="list-style-type: none"> 3. Cross recessed round head screw (3pcs) 6. Cross recessed round head screw (2pcs)) (Fixed temporarily) 4. Auto switch (2pcs) 5. Cross recessed round head screw (2pcs)) (Fixed temporarily) 1. Magnet lever (1pcs) 2. Hexagon socket round head screw (1pcs) (Fixed to 1 temporarily) 	<p>For the mounting of auto switch (including a unit), follow the procedure below in order (of the number attached to each part). (Note 1 The auto switch 4 is excluded for the order by unit) (Note 2 Each screw shall be tightened at a torque of approx. 0.49Nm.)</p>  <ol style="list-style-type: none"> 3. Cross recessed round head screw (3pcs) 6. Cross recessed round head screw (2pcs)) (Fixed temporarily) 4. Auto switch (2pcs) 5. Cross recessed round head screw (2pcs)) (Fixed temporarily) 1. Magnet lever (1pcs) 2. Hexagon socket round head screw (1pcs) (Fixed to 1 temporarily)
Applicable model: CDRB1BW50,63,80,100	
Mounting of auto switch unit and auto switch (common to reed and solid state type)	
<p>For the mounting of auto switch (including a unit), follow the procedure below in order (of the number attached to each part). (Note 1 The auto switch 4 is excluded for the order by unit) (Note 2 Each screw shall be tightened at a torque of approx. 0.49Nm.)</p>  <ol style="list-style-type: none"> 3. Cross recessed head bolt (3pcs) (Hexagon socket head bolt for size 100) 4. Auto switch (2pcs) 6. Cross recessed round head bolt (2pcs) (Fixed temporarily) 5. Cross recessed round head screw (2pcs) (Fixed temporarily) 1. Magnet lever (1pcs) 2. Cross recessed round head screw (1pcs) (Fixed to 1 temporarily) 	

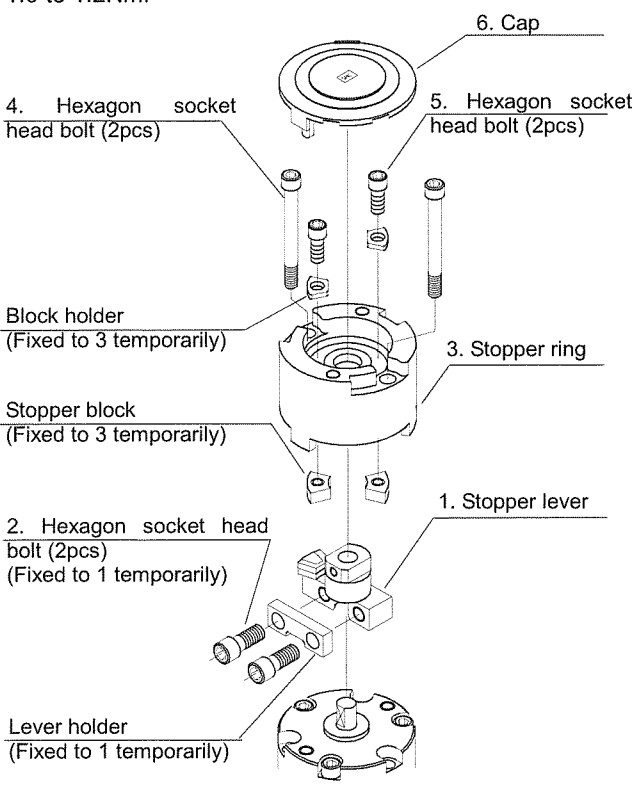
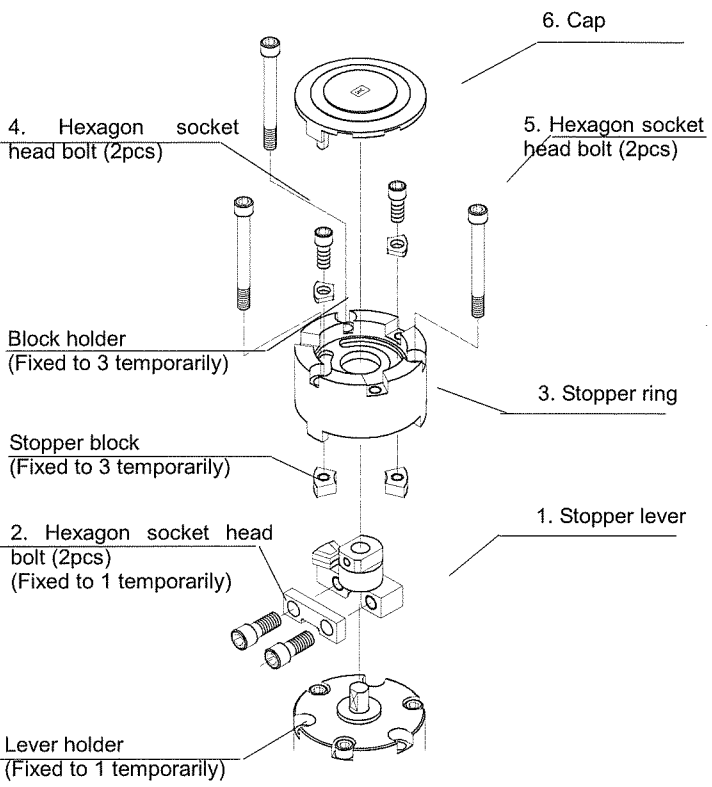
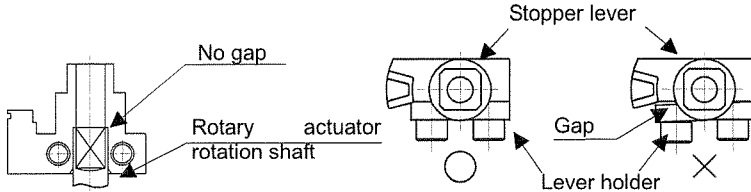
Angle Adjusting Unit

Part number of angle adjusting unit

Product series	Applicable model	Unit part number
CRB2 series	CRB2BWU10	P611070-3
	CRB2BWU15	P611090-3
	CRB2BWU20	P611060-3
	CRB2BWU30	P611080-3
	CRB2BWU40	P611010-3
CRBU2 series	CRBUW2U10	P611070-3
	CRBUW2U15	P612090-3
	CRBUW2U20	P612060-3
	CRBUW2U30	P612080-3
	CRBUW2U40	P611010-3

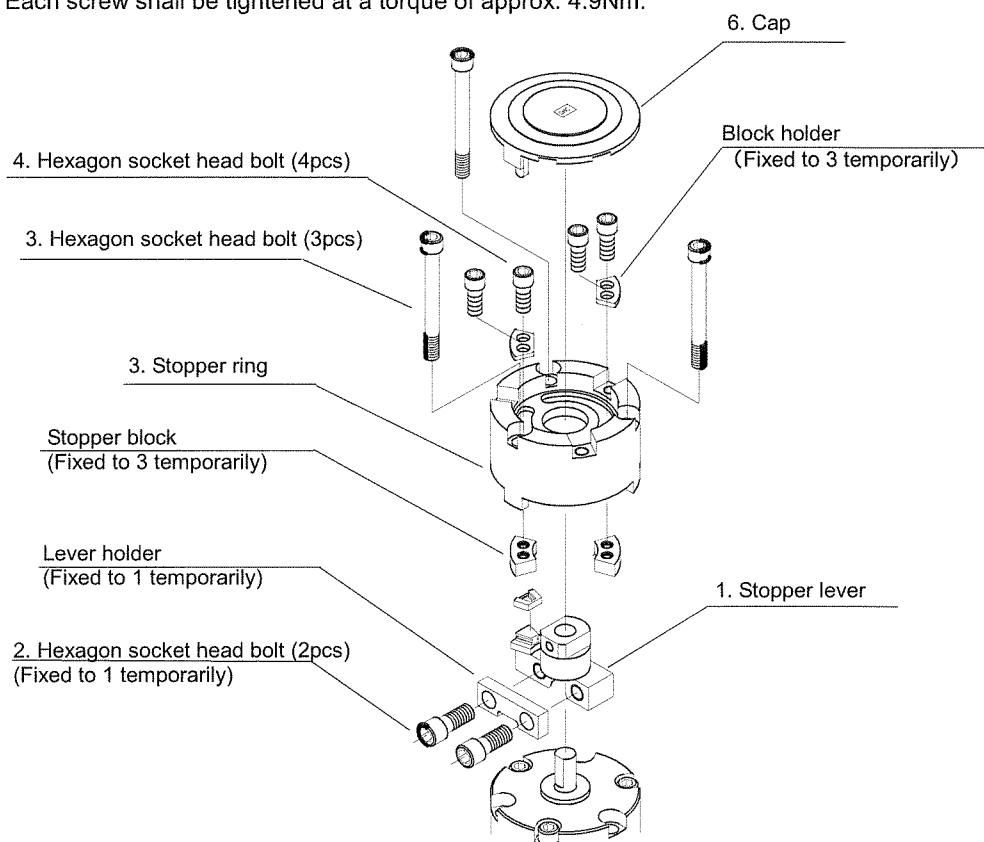
Each unit can be mounted later on an independent rotary actuator.

How to mount angle adjusting unit

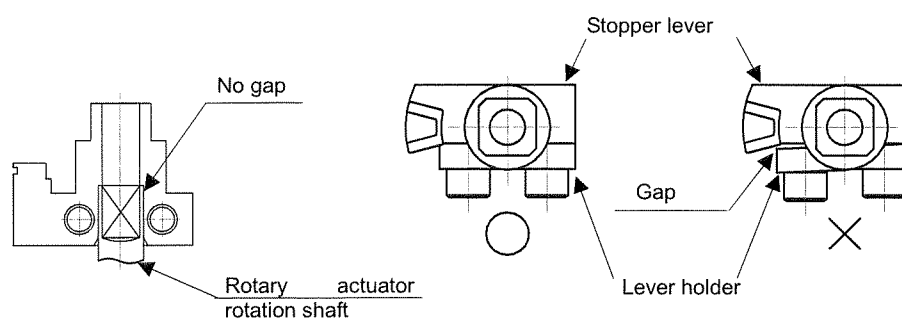
Applicable model: CRB2BWU10	Applicable model: CRB2BWU15,20,30
<p>For the mounting of an angle adjusting unit, follow the procedure below in order (of number attached to each part). Note 1) Each screw shall be tightened at a torque of approx. 1.0 to 1.2Nm.</p> 	<p>For the mounting of an angle adjusting unit, follow the procedure below in order (of number attached to each part). Note 1 Each screw shall be tightened at a torque of approx. Size 15: 1.0 to 1.2Nm. Size 20: 2.5 to 2.9Nm Size 30: 3.4 to 3.9Nm</p> 
<p>Pay attention to the items shown in the right figure for the mounting of stopper lever and lever holder.</p> 	

Applicable model: CRB2BWU40

For the mounting of an angle adjusting unit, follow the procedure below in order (of number attached to each part).
 Note 1) Each screw shall be tightened at a torque of approx. 4.9Nm.



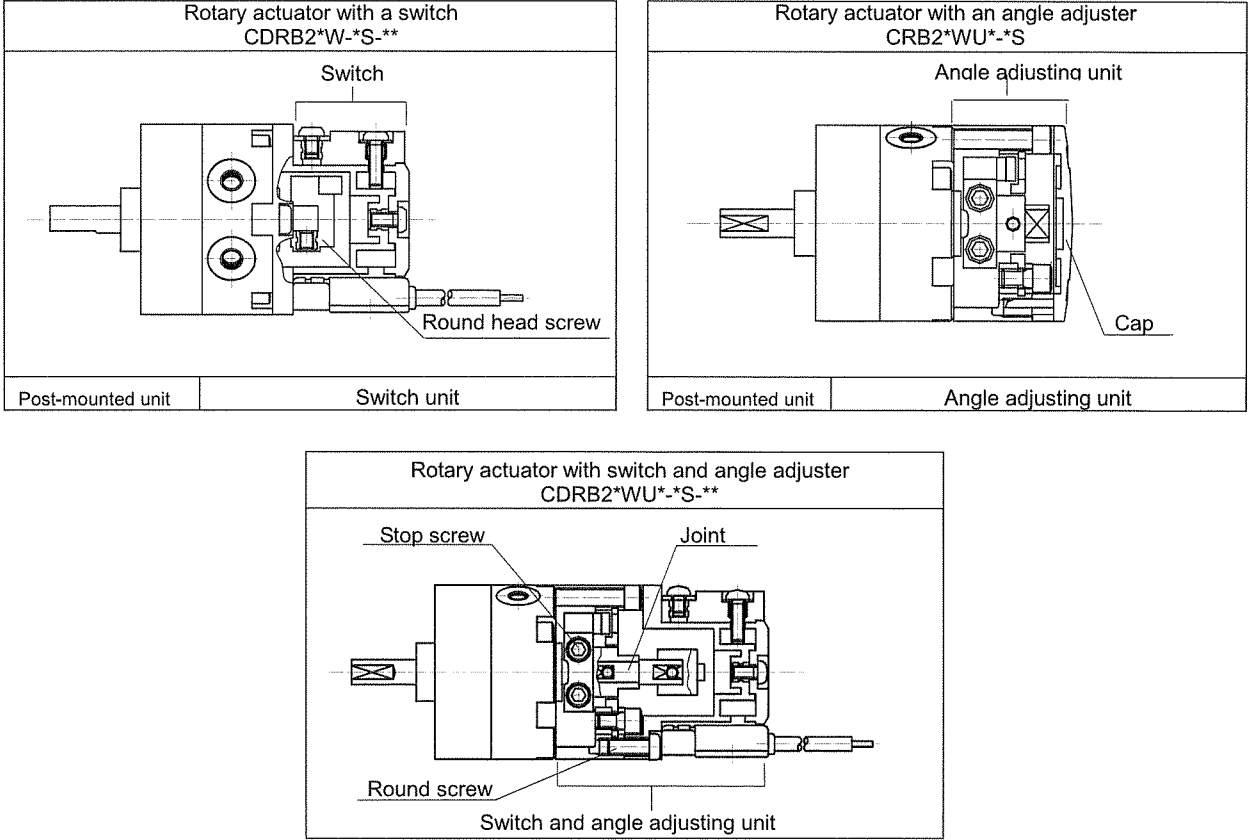
Pay attention to the items shown in the right figure for the mounting of stopper lever and lever holder.



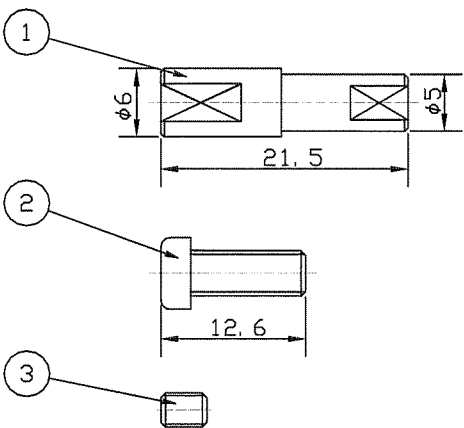
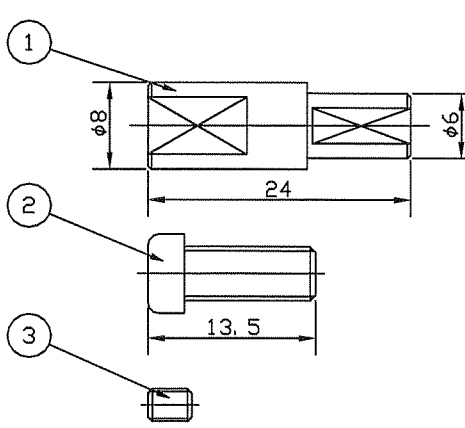
Joint Unit for Combining Switch Unit and Angle Adjusting Unit

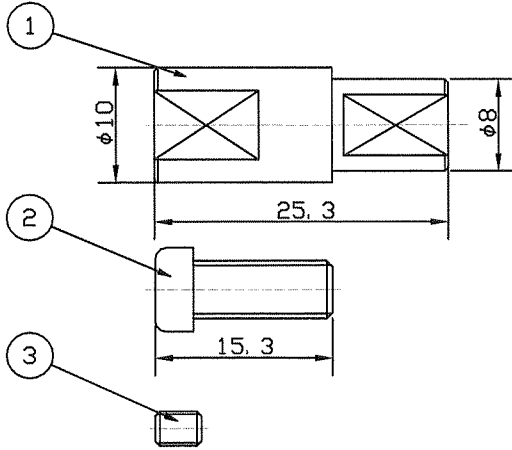
■ Part number of joint unit

The joint unit is required to change the rotary actuator with a switch and angle adjuster to the switch with an angle adjuster.

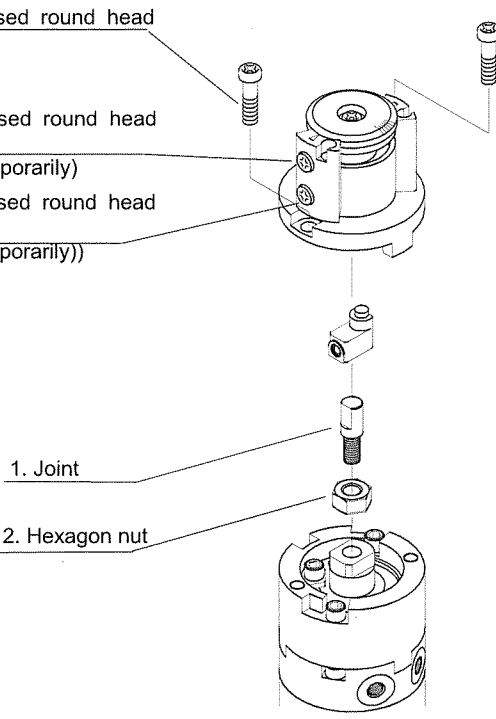


CRB2BW10/CRBU2BW10					CRB2BW15/CRBU2BW15				
P211070-10					P211090-10				
③	Hexagon nut	SUS	1	Class M33	③	Cross recessed head screw	SUS	1	M3×3ℓ
②	Cross recessed round head screw	SUS	2	M3×4ℓ	②	Cross recessed round head screw	SUS	3	M3×12ℓ
①	Joint	Aℓ	1	Chromate	①	Joint	Aℓ	1	Chromate
No.	Description	Material	Qty.	Remarks	No.	Description	Material	Qty.	Remarks

CRB2BW20/CRBU2BW20					CRB2BW30/CRBU2BW30				
P211060-10					P211080-10				
									
③	Cross recessed head screw	SUS	1	M3×4ℓ	③	Cross recessed head screw	SUS	1	M3×4ℓ
②	Cross recessed round head screw	SUS	3	M4×10ℓ	②	Cross recessed round head screw	SUS	3	M5×12ℓ
①	Joint	Al	1	Chromate	①	Joint	Al	1	Chromate
No.	Description	Material	Qty.	Remarks	No.	Description	Material	Qty.	Remarks

CRB2BW40/CRBU2BW40				
P211010-10				
				
③	Cross recessed head screw	SUS	1	M4×4ℓ
②	Cross recessed round head screw	SUS	3	M5×12ℓ
①	Joint	Al	1	Chromate
No.	Description	Material	Qty.	Remarks

■ How to mount joint unit

Applicable model: CDRB2BWU10/CDRBU2WU10	Applicable model: CDRB2BWU15,20,30,40 CDRBU2WU15,20,30,40
<p>For mounting, follow the procedure below in order (of the number attached to each part). (Note 1 Each screw shall be tightened at a torque of approx. 4.9Nm.)</p> <p>Cross recessed round head screw (2pcs)</p> <p>Cross recessed round head screw (2pcs) (Fixed temporarily)</p> <p>Cross recessed round head screw (2pcs) (Fixed temporarily))</p> <p>1. Joint</p> <p>2. Hexagon nut</p> 	<p>For mounting, follow the procedure below in order (of the number attached to each part). (Note 1 Each screw shall be tightened at a torque of approx. 4.9Nm.)</p> <p>Cross recessed round head screw (3pcs)</p> <p>1. Joint</p> <p>2. Cross recessed head screw (1pcs)</p> 