V-Type Operating Handle

Operating handle of door mount type consisting of operating section to be mounted on circuit breaker body and operating handle on panel door

Appearance (Color: Munsell N1.5)

- The handle provides an isolation function in combination with the circuit breaker body.
- Conforming to the safety regulations of EN Standard (EN 60204-1)
- Protection class (IEC 60529) IP65 as standard
- The handle can be locked only in the OFF position with up to three commercially available padlocks (35 mm or 40 mm).
- The panel door can be opened in the OFF position. In the ON and trip positions, the panel door is locked and cannot be opened. However, the door can be opened even in the ON and trip positions by operating the release part with a tool.

Outline drawings

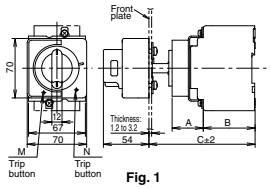


Fig. 1

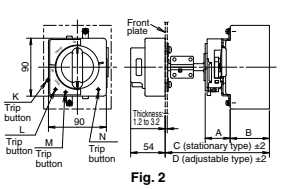


Fig. 2

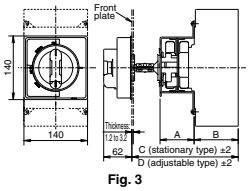
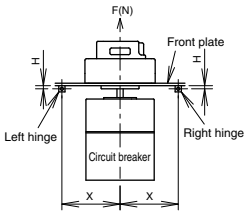


Fig. 3

Note Auxiliary handles (F-HT) are provided for V-4S ~ V-6SUL as option.

Center of hinge and breaker

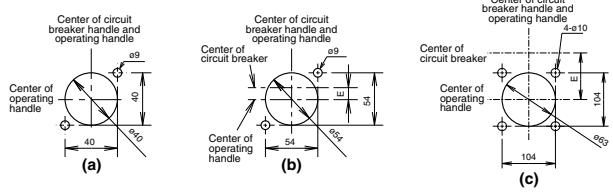


Relationship between hinges and circuit breaker viewed from load side of circuit breaker

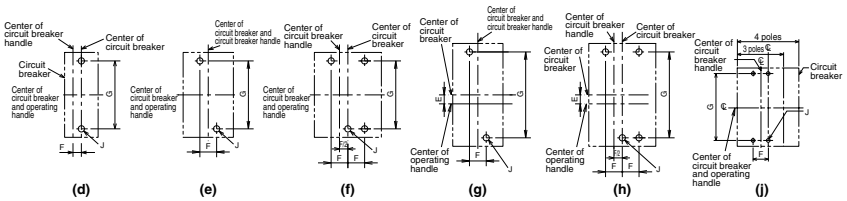
	H	X
For 30 to 250 A frames	0 or more	5H+100 or more
For 400 to 800 A frames		8H+150 or more

* The above figure shows the relationship viewed from the load side.

Dimensional drawings for front plate drilling



Dimensional drawings of circuit breaker mounting holes



Door lock withstand load

	F(N)
30 to 800A frames	200

Table 21 Summary of dimension

Type name: Stationary type	Type name: Adjustable type	Applicable model: MCCB	Number of poles	Applicable model: ELCB	Number of poles	Reference drawing: Dimensional drawing	Reference drawing: Drilling plan		Dimensions (mm): A	B	Stationary type C	Adjustable type(*2) D (min)	Adjustable type(*2) D (max)	E	F	G	J	Trip button position (*5)
V-05SV2 V-05SVE2	(*1) Adjusting unit V-AD3S is mounted on stationary type.	NF32-SV NF63-CV, NF63-SV, NF63-HV	2P	–	–	Fig. 2	b	d	39	61	125	–	–	–	12.5	111	M4 screw or ϕ5	N
V-05SV V-05SVE		NF32-SV NF63-CV, NF63-SV, NF63-HV	3P	NV32-SV NV63-CV, NV63-SV, NV63-HV	2P, 3P			e				162	300	–	25			L
			4P	–	–													
V-1SV2, V-1SVE2		NF125-CV, NF125-SV	2P	–	–			d				–	–	–	15			N
V-1SV V-1SVE		NF125-CV, NF125-SV	3P	NV125-CV, NV125-SV NV125-HV	3P			e				162	300	–	30			L
			4P		4P			f										
		NF125-HV	2P, 3P	–	–			e										
			4P					f										
V-1UV V-1UVE		NF125-UV	2P, 3P	–	–			g	39					30.5	172			
			4P					h										
V-2SV V-2SVE		NF125-SEV, NF125-HEV, NF125-SGV NF125-LGV, NF125-HGV, NF125-RGV NF160-SGV, NF160-LGV, NF160-HGV NF250-CV, NF250-SV, NF250-HV NF250-SGV, NF250-LGV, NF250-HGV NF250-SEV, NF250-HEV, NF250-RGV	2P, 3P	NV125-SEV, NV125-HEV NV250-CV, NV250-SV, NV250-HV NV250-SEV, NV250-HEV	3P			e	41			162	300	–	35	126		K
			4P		4P			f										
V-2UV V-2UVE		NF250-UV	2P, 3P	–	–			g						37.5	201			
			4P					h										
V-03SVUL2	–	NF50-SVFU	2P	NV50-SVFU	2P	Fig. 1	a	d	39	61	125	–	–	–	9	82.5		M
V-03SVUL			3P		3P			e							18			N
V-05SVUL2	(*1) Adjusting unit V-AD3S is mounted on stationary type.	NF100-CVFU	2P	–	–	Fig. 2	b	d	39	61	125	–	–	–	12.5	111	M4 screw or ϕ5	N
V-05SVUL			3P	NV100-CVFU	3P			e				162	300	–	25			L
V-1SVUL		NF125-SVU, NF125-HVU	3P	NV125-SVU, NV125-HVU	3P	Fig. 2	b	g	39	61	125	162	300	6	30	123		L
V-2SVUL		NF250-SVU, NF250-HVU	3P	NV250-SVU, NV250-HVU	3P			e	41					–	35	126		K
V-2SUL		NF225-CWU	3P	–	3P					61	125	162	300		35	126		–
V-4S V-4SE	(*1) Adjusting unit V-AD3L is mounted on stationary type.	NF400-CW/SW/SEW/HEW/REW NF630-CW/SW/SEW/HEW/REW	2P, 3P, 4P	NV400-CW/SW/SEW/HEW/REW NV630-CW/SW/SEW/HEW	3P, 4P	Fig. 3	c	j	76	97	191	233	300	–	44	194	M6 screw or ϕ7	–
V-4U V-4UE		NF400-UEW	3P	–	–			h		194	288	330	397	20		234		
V-8S V-8SE		NF800-CEW/SDW/SEW/HEW/REW	2P, 3P, 4P	NV800-SEW/HEW	3P			j		97	191	233	300	–	70	243		
V-4SUL		NF400-SWU/HWU	3P	–	3P										44	194		
V-6SUL		NF630-SWU/HWU	3P	–	–										70	243		

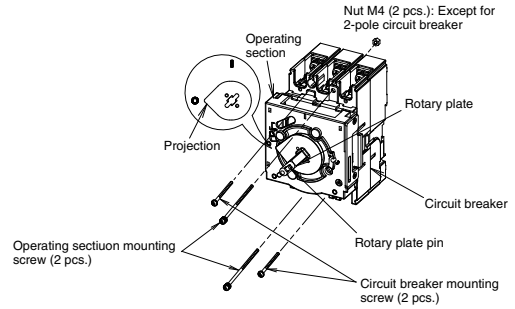
Notes
*1 For the adjustable type, purchase the optional adjusting unit V-AD3S or V-AD3L.
*2 The dimensions of the adjustable type models provided with the adjusting unit V-AD3S or V-AD3L are shown.
*3 When using the operating handle for a plug-in type model with a frame size of 250A or below, specify so.
*4 The dimensions on the front connection type are shown. For the rear connection and plug-in types, separately consult us.
*5 The circuit breaker can be tripped by operating the trip button while the door is open. (The trip button position varies depending on the model.)
*6 The handle cannot be used when the circuit breaker is installed on IEC 35-mm rails.

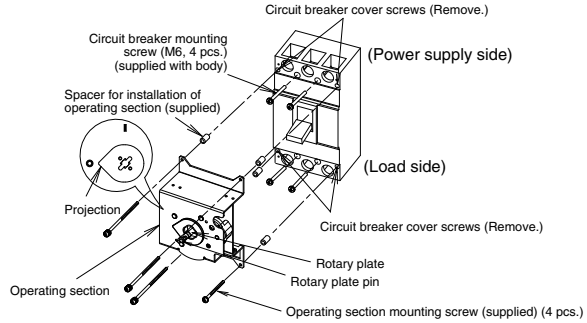
Remarks:
1. The products whose model names contain E are designed for emergency stop. The delivery category is ●. That of V-05SVE is ●.
2. When the operating handle is fitted to NV, the test button cannot be pressed easily. If necessary, use a circuit breaker with TBL or TBM. When using an Earth Leakage Alarm Breaker, use the externally resetting type (ECA-SLT) or automatically resetting type (ARS).

●Installation procedure For details, please refer to Operating Handle Installation Manual supplied with the product.

① Installation to a breaker Install the operating handle to the circuit breaker in accordance with the following procedure.

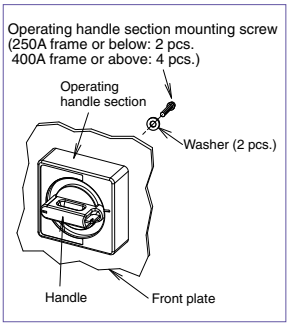
	250A frame and below	400 to 800A frames
Installation procedure	**(Installation procedure)** ① Operating handle for 3- or 4-pole circuit breaker Set the rotary plate of the operating section to the OFF (symbol O) position, and fit the plate to the circuit breaker with the supplied operating section mounting screws and nuts. Install the circuit breaker to the panel with the circuit breaker mounting screws (2 pcs.). ② Operating handle for 2-pole circuit breaker Install the operating section together with the circuit breaker to the panel with the supplied operating section mounting screws (2 pcs.)	**(Installation procedure)** ① Remove the circuit breaker cover screws (4 pcs.) in the same positions as the operating handle mounting holes. ② Install the circuit breaker with the circuit breaker mounting screws (4 pcs.). ③ Fit the supplied operating section mounting spacers (4 pcs.) between the circuit breaker and operating handle. ④ Set the rotary plate to the OFF (symbol O) position, and install the operating section to the circuit breaker with the supplied operating section mounting screws.





② Installation of operating handle section

Drill a hole in the door according to the dimensional drawing for front plate drilling given on the previous page, and install the operating handle section in accordance with the following procedure.

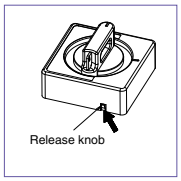


- Tighten the operating handle section from the back of the front plate. Temporarily tighten the screws to center the section in the hole.
- Set the handle of the operating handle section to the OFF state, tighten the front plate, and make sure that the handle can be smoothly turned to the ON and OFF positions.

Turn the handle to the right and left in the OFF state, and make sure that OFF is displayed. If OFF is not displayed, move the operating handle section up and down and to the right and left for adjustment. (Take care that the operating handle section is in parallel with the circuit breaker.) Then, open the front plate, and finally tighten the screws.

●Door locking mechanism

The operating handle is provided with an interlock mechanism to prevent the door opening in the ON and TRIP positions. In the OFF position, the door can be opened. However, the door can be opened in the ON or TRIP position by pressing the release knob in the arrow direction with a tool (3 mm wide and 1.8 mm thick).



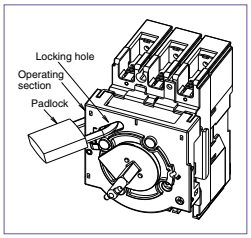
●Operation locking mechanism

① Operating handle section

Operation lock can be set only in the OFF Position. Up to three commercially available padlocks (A = 35 or 40 mm) can be fitted. Lockout hasps (scissors locks) can be used. When the operating handle section is locked with padlocks, also the door is locked.

② Operating section

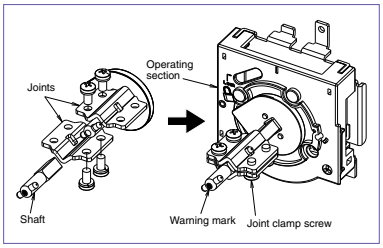
The operating section can be locked so that the circuit breaker will not be turned on carelessly when the inside of the panel is inspected with the panel door open. Fit a padlock through the hole in the operating section of the operating handle.



●Adjusting unit

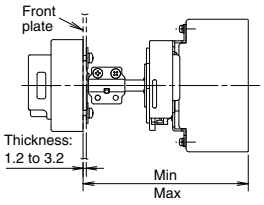
The height from the circuit breaker mounting surface to the panel door can be adjusted by fitting the optional adjusting unit V-AD3S or V-AD3L. Cut the shaft of the adjusting unit according to the height.

Note The adjusting unit is not applicable to 2-pole external type circuit breakers. If it is used on a 2-pole external type circuit breaker, the positions may not be correctly displayed.

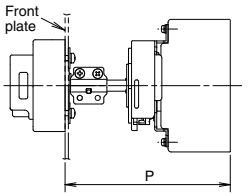


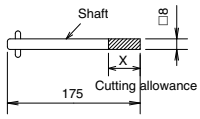
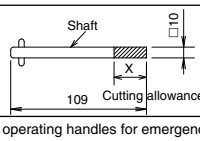
Make adjustments with the adjusting unit as stated below.

①External dimension drawing



②Calculation of shaft cutting allowance



Type name	Dimensions (mm) Min	Dimensions (mm) Max	Cutting allowance	Calculation
V-05SV V-05SVUL V-1SV V-1SVUL V-1SUL V-2SV V-2SVUL V-2SUL	162	300		(Cutting allowance)(P max)(panel size) X = 300 mm - P
V-2SGUL	180	318		
V-4S V-8S	233	300		
V-4SUL V-6SUL				

Note The unit is applicable to operating handles for emergency stop (E).

●Padlocks

The user must prepare padlocks.
The dimensions of the padlocks are the same as those shown on page 752.

●How to order

Specify the model name of the operating handle.
For adjustable type, place an order for the adjustment unit. (One lot includes 1 pc.)
250A frame or below: V-AD3S
400 to 800A frames: V-AD3L

●Interpretation of model name

(1) For 800A frame or below

V	–	1	S	UL	E	2
1)		2)	3)	4)	5)	6)

1) V: Operating handle type name
2) 1: Circuit breaker group (0.5, 1, 2, 4, 6 or 8)
3) S: Classification of circuit breaker (S, SV, H, U, UV)
4) UL: Blank···General product UL···UL 489 listed product
5) E: Blank···Standard E···For emergency stop
6) 2: Blank···3P or 4P 2···2P