

# 7 Characteristics and Dimensions 1

# Molded Case Circuit Breakers

NF125-SGV NF160-SGV  
 NF250-SGV NF125-LGV  
 NF160-LGV NF250-LGV  
 NF125-HGV NF160-HGV  
 NF250-HGV NF125-RGV  
 NF250-RGV



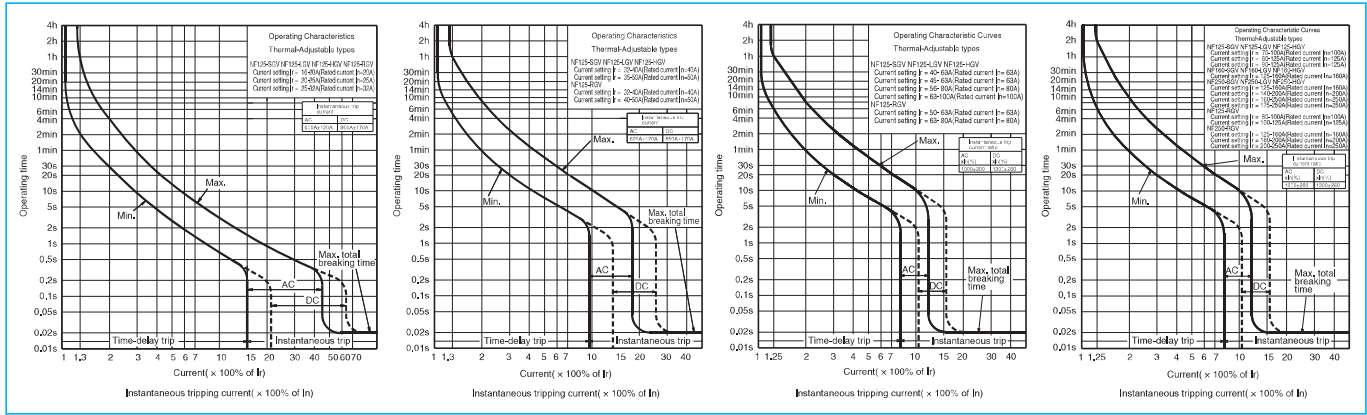
NF250-SGV

Model	NF125-SGV	NF160-SGV	NF250-SGV	NF125-LGV	NF160-LGV	NF250-LGV
Rated current I <sub>n</sub> (A)	16-20, 20-25, 25-32 32-40, 35-50, 45-63 56-80, 70-100, 90-125	125-160	125-160 140-200 175-250	16-20, 20-25, 25-32 32-40, 35-50, 45-63 56-80, 70-100, 90-125	125-160	125-160 140-200 175-250
Number of poles	2 3 4	2 3 4	2 3 4	2 3 4	2 3 4	2 3 4
Rated insulation voltage U <sub>i</sub> (V)	690	690	690	690	690	690
Rated short-circuit breaking capacity (kA) IEC 60947-2 (I <sub>cu</sub> /I <sub>cs</sub> )	AC	AC	AC	AC	AC	AC
	690V	8/8	8/8	8/8	8/8	8/8
	500V	30/30	30/30	36/36	36/36	36/36
	440V	36/36	36/36	36/36	50/50	50/50
	415V	36/36	36/36	36/36	50/50	50/50
	400V	36/36	36/36	36/36	50/50	50/50
	380V	36/36	36/36	36/36	50/50	50/50
	230V	85/85	85/85	85/85	90/90	90/90
DC (*)	300V	20/20	20/20	20/20	20/20	20/20
Standard attached parts (front connection)	Mounting screw: M4x0.7x55 (2 and 3P: 2pcs, 4P: 4pcs) Insulation barrier: (2P: 2pcs, 3P: 4pcs, 4P: 6pcs)					

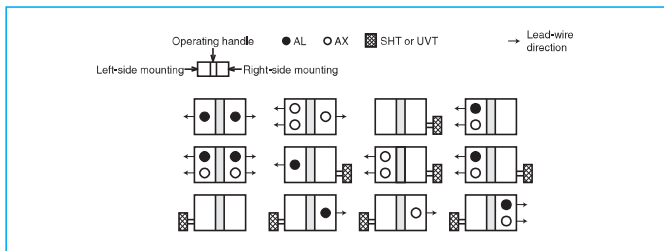
Model	NF125-HGV	NF160-HGV	NF250-HGV	NF125-RGV	NF250-RGV
Rated current I <sub>n</sub> (A)	16-20, 20-25, 25-32 32-40, 35-50, 45-63 56-80, 70-100, 90-125	125-160	125-160 140-200 175-250	16-20, 20-25, 25-32 32-40, 40-50, 50-63 63-80, 80-100, 100-125	125-160 160-200 200-250
Number of poles	2 3 4	2 3 4	2 3 4	2 3	2 3
Rated insulation voltage U <sub>i</sub> (V)	690	690	690	690	690
Rated short-circuit breaking capacity (kA) IEC 60947-2 (I <sub>cu</sub> /I <sub>cs</sub> )	AC	AC	AC	AC	AC
	690V	10/8	10/8	—	—
	500V	50/38	50/38	—	—
	440V	65/65	65/65	65/65	125/125
	415V	70/70	70/70	70/70	150/150
	400V	75/75	75/75	75/75	150/150
	380V	75/75	75/75	75/75	150/150
	230V	100/100	100/100	100/100	150/150
DC (*)	300V	40/40	40/40	—	—
Standard attached parts (front connection)	Mounting screw: M4x0.7x55 (2 and 3P: 2pcs, 4P: 4pcs) Insulation barrier: (2P: 2pcs, 3P: 4pcs, 4P: 6pcs)				

Note \*1 When wired as shown at the bottom of page 14, three-pole models can be used for up to 500VDC, and four-pole models for up to 600VDC.

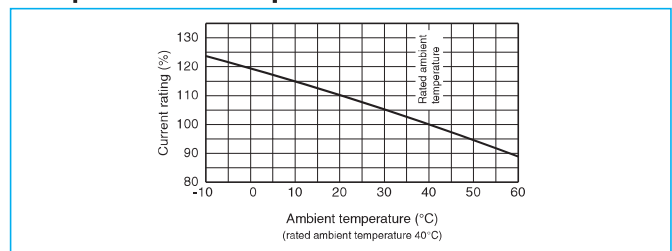
## Operating Characteristics



## Internal Accessories



## Temperature Compensation Curve



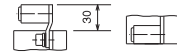
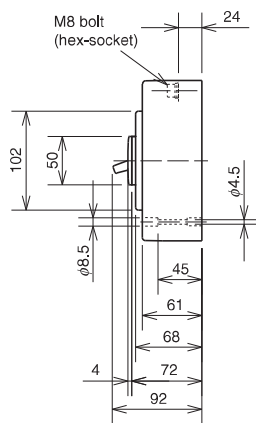
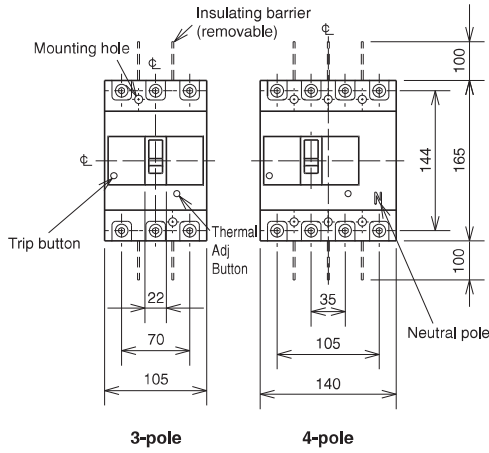
## External Accessories

Accessories	Type name	Reference page	Accessories	Type name	Reference page	
Operating handle	F	F-2SV	Mechanical interlock	MI	2, 3P MI-05SV3	
	V	V-2SV		4P MI-2SV4	131	
Handle lock device	LC	LC-05SV	Terminal cover	Small	TC-S	2, 3P TCS-2SV3
	HL(*)	HLF-05SV		2, 3P TCL-2SV3	123	
		HLN-05SV		4P TCL-2SV3L		
	HLS-2SV	2, 3P TCL-2SV4				
				Skeleton	TTC	2, 3P TTC-2SV3
			Rear	BTC	2, 3P BTC-2SV3	
			Plug-in	PTC	2, 3P PTC-2SV3	
			Electrical operation device	(*)2	135	

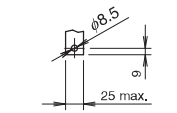
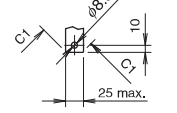
Notes \*1 HLF types are used for OFF lock and HLN types for ON lock.  
 \*2 Specify the working voltage. Refer to the reference page for type name.

Outline Drawing

Front connection

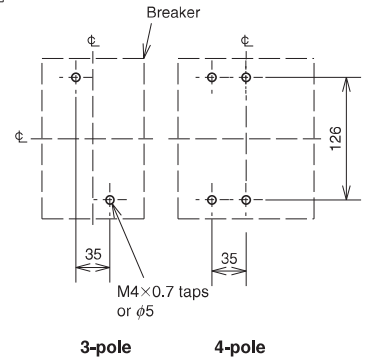


Solderless terminal for wire size  
125-175A 14-95mm<sup>2</sup>  
200-250A 70-125mm<sup>2</sup>  
Wire connection



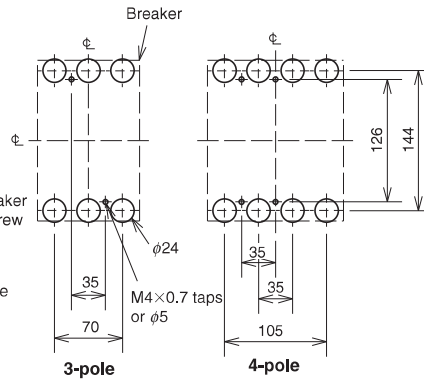
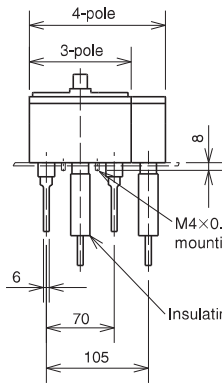
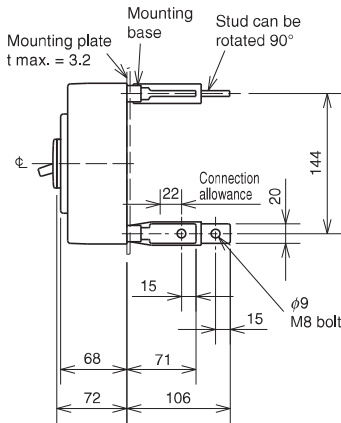
(Conductor thickness t=7 max.)

Conductor drilling for direct connection

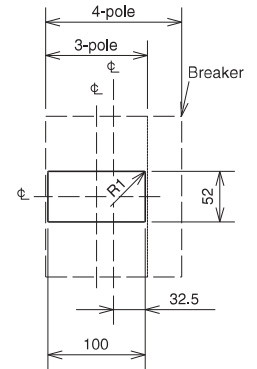


Drilling plan

Rear connection



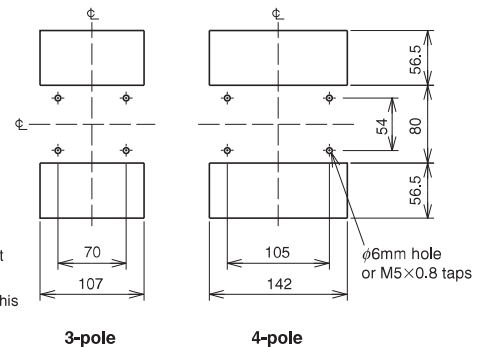
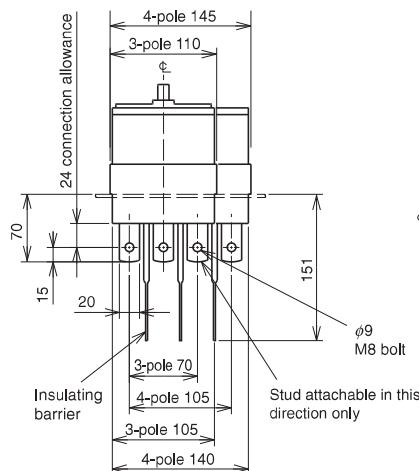
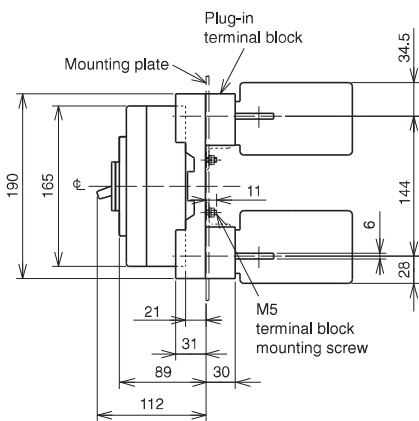
Drilling plan



1mm clearance on each side of the handle frame

Front-panel cutout

Plug-in



Drilling plan

Remark: 1. 2-pole models are 3-pole models with the central pole removed.