

# 2 Detailed Specifications

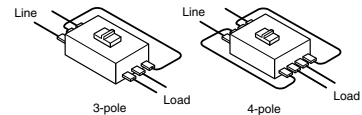
## 1 Molded Case Circuit Breakers

2





1 Detailed Specifications

NF-C (Economy class)														
Frame (A)	30			50		60		63		100			125	
Model	NF30-CS					NF63-CV				NF125-CV				
Image														
Rated current In (A)	3 5 10 15 20 30			3 4 (5) 6 10 (15) 16		(60)		63		50 (60) 63 (75) 80 100			125	
Rated ambient temperature 40°C (45°C for marine use)														
Number of poles	2 3			2 3		2 3		2 3		2 3			2 3	
Rated insulation voltage Ui (V)	500			600		600		600		600			600	
Rated short-circuit breaking capacity (kA)	AC	690V	-			-		-		-			-	
		500V	-			2.5/2.5		2.5/2.5		2.5/2.5			7.5/4	
		440V	-			2.5/2.5		2.5/2.5		2.5/2.5			10/5	
		415V	1.5/1.5			2.5/2.5		2.5/2.5		2.5/2.5			10/5	
		400V	1.5/1.5			5/5		5/5		5/5			10/5	
		380V	1.5/1.5			5/5		5/5		5/5			10/5	
		230V	2.5/2 (240V)			7.5/7.5		7.5/7.5		7.5/7.5			30/15	
DC	200V	2.5/2 (240V)			7.5/7.5		7.5/7.5		7.5/7.5			30/15		
	250V	-			2.5/2.5 (*7)		2.5/2.5 (*7)		2.5/2.5 (*7)			7.5/4 (*4)		
Rated impulse withstand voltage Uimp (kV)	4			8		8		8		8			8	
Current (*1)	AC			AC/DC compatible		AC/DC compatible		AC/DC compatible		AC/DC compatible			AC/DC compatible	
Suitability for isolation	-			Compatible		Compatible		Compatible		Compatible			Compatible	
Reverse connection	-			Possible		Possible		Possible		Possible			Possible	
Number of operating cycles	Without current			10,000		10,000		10,000		10,000			10,000	
	With current (440VAC)			6,000 (AC415V)		6,000		6,000		6,000			6,000	
Utilization category	A			A		A		A		A			A	
Pollution degree	2			3		3		3		3			3	
EMC environment condition (environment A or B)	N/A			N/A		N/A		N/A		N/A			N/A	
Overall dimensions (mm)														
	a	45 67.5		50 75		50 75		50 75		60 90			60 90	
	b	96		130		130		130		130			130	
	c	52		68		68		68		68			68	
ca	67		90		90		90		90			90		
Mass of front-face type (kg)	0.25 0.35		0.45 0.65		0.5 0.7		0.5 0.7		0.6 0.9		0.6 0.9			
Isolation and connections	Front connection (F)	●Screw terminal			●Screw terminal		●Screw terminal		●Screw terminal		●Screw terminal		●Screw terminal	
	Solderless (BOX) terminal (SL)	-			-		-		-		-		-	
	Rear (B)	●Round stud (assembled in)			●Round stud		●Round stud		●Round stud		●Bar stud		●Bar stud	
Cassette-type accessories	Plug-in (PM)	-			-		-		-		-		-	
	Alarm switch (AL)	●(*5)			●(*6)		●(*6)		●(*6)		●(*6)		●(*6)	
	Auxiliary switch (AX)	-			●(*6)		●(*6)		●(*6)		●(*6)		●(*6)	
	Shunt trip (SHT)	-			●(*6)		●(*6)		●(*6)		●(*6)		●(*6)	
	Undervoltage trip (UVT)	-			●(*6)		●(*6)		●(*6)		●(*6)		●(*6)	
	With lead-wire terminal block (SLT)	-			-		-		-		-		-	
	Pre-alarm (PAL)	-			-		-		-		-		-	
External accessories	Enclosure	Closed (S)		-		-		-		-		-		
	Dustproof (I)	-		-		-		-		-		-		
		Waterproof (W)		-		-		-		-		-		
	Electrical operation device (NFM)	-		-		-		-		-		-		
	Mechanical interlock (MI) (*10)	Panel mounting		-		-		-		-		-		
		Breaker mounting		-		-		-		-		-		
	Handle lock device	LC		-		-		-		-		-		
		HL-S		-		-		-		-		-		
	External operating handle	(F)		-		-		-		-		-		
		(V)		-		-		-		-		-		
Terminal cover (TC-L, TC-S, TTC, BTC, PTC)	-		-		-		-		-		-			
Rear stud (B-ST)	-		-		-		-		-		-			
Plug-in (PM)	-		-		-		-		-		-			
IEC 35mm rail mounting adapters	-		-		-		-		-		-			
CE marking	TUV approval			Self-declaration		Self-declaration		Self-declaration		Self-declaration			Self-declaration	
CCC recognition	Recognition in process			Recognition in process		Recognition in process		Recognition in process		Recognition in process			Recognition in process	
Marine use approval (NK, LR, ABS, GL)	☆ (NK, LR, ABS)			☆		☆		☆		☆			☆	
Automatic tripping device	Hydraulic magnetic			Thermal-magnetic		Thermal-magnetic		Thermal-magnetic		Thermal-magnetic			Thermal-magnetic	
Trip button	- (*2)			Equipped		Equipped		Equipped		Equipped			Equipped	
Page of Characteristics and dimensions	140			142		142		142		144			144	

- Notes: \*1 The trip action characteristics differ between AC and DC for products that are compatible with both AC and DC.  
 \*2 It is attached with the alarm switch.  
 \*3 In case of a current rating of 100A, it does not specify NK rating.  
 \*4 Use two poles for three- and four-pole products. In this case, do not use the neutral pole of the four-pole products. If wired as shown on the right, three and four poles can be used for up to 400 and 500VDC, respectively.  
 \*5 The standard lead drawing is performed laterally. Load drawing is also available.  
 \*6 The cassette type design makes it easy for customer to install. Available for installation on side below 250A frame (excluding UVT).  
 \*7 Use two poles for three- and four-pole products. In this case, do not use the neutral pole of the four-pole products. Not available for use with connection as shown on the right.  
 \*8 Place an order of other models in conjunction with the circuit breaker.  
 \*9 Solid state relay output is option. Please specify if other output is necessary. (Standard type is thus SLT equipped).  
 \*10 Not isolation compatible, excluding 400 to 800A frame.



NF-C (Economy class)

	225	250	400	600	630	800
	NF250-CV		NF400-CW	NF630-CW		NF800-CEW
						
	(100) 125 150 175 200 225 (*3)	250	250 300 350 400	500 600	630	Adjustable 400 450 500 600 700 800
	2 3	2 3	2 3	2 3	2 3	3
	600	600	690	690	690	690
	-	-	-	-	-	-
	10/8	10/8	15/8	18/9	18/9	18/9
	15/12	15/12	25/13	36/18	36/18	36/18
	25/19	25/19	36/18	36/18	36/18	36/18
	25/19	25/19	36/18	36/18	36/18	36/18
	25/19	25/19	40/20	40/20	40/20	40/20
	36/27	36/27	50/25	50/25	50/25	50/25
	36/27	36/27	50/25	50/25	50/25	50/25
	15/12 (*4)	15/12 (*4)	20/10 (*4)	20/10 (*4)	20/10 (*4)	-
	8	8	8	8	8	8
	AC/DC compatible	AC/DC compatible	AC/DC compatible	AC/DC compatible	AC/DC compatible	AC
	Compatible	Compatible	Compatible	Compatible	Compatible	Compatible
	Possible	Possible	Possible	Possible	Possible	Possible
	8,000	8,000	6,000	6,000	6,000	4,000
	4,000	4,000	1,000	1,000	1,000	500
	A	A	A	A	A	B
	3	3	3	3	3	3
	N/A	N/A	N/A	N/A	N/A	A
	105	105	140	140	140	210
	165	165	257	257	257	275
	68	68	103	103	103	103
	92	92	134	134	134	155
	1.3 1.5	1.3 1.5	4.4 5.0	5.2 6.0	5.2 6.0	10.9
	●Screw terminal	●Screw terminal	●Busbar terminal	●Busbar terminal	●Busbar terminal	●Busbar terminal
	●	●	-	-	-	-
	●Bar stud	●Bar stud	●Bar stud	●Bar stud	●Bar stud	●Bar stud
	●	●	●	●	●	●
	●(*6)	●(*6)	●(*6)	●(*6)	●(*6)	●(*6)
	●(*6)	●(*6)	●(*6)	●(*6)	●(*6)	●(*6)
	●(*6)	●(*6)	●	●	●	●
	●(*6)	●(*6)	●	●	●	●
	-	-	-	-	-	●(*9)
	●	●	●	●	●	●
	●	●	●	●	●	●
	-	-	●(*8)	●(*8)	●(*8)	●(*8)
	●	●	●	●	●	●
	●	●	●	●	●	●
	●	●	●	●	●	●
	●	●	●	●	●	●
	●	●	●	●	●	●
	●	●	●	●	●	●
	●	●	●	●	●	●
	●	●	●	●	●	●
	●	●	●	●	●	●
	●	●	●	●	●	●
	-	-	●	●	●	●
	-	-	●	●	●	●
	TUV approval	TUV approval	Self-declaration	Self-declaration	Self-declaration	Self-declaration
	Recognition in process	Recognition in process	Recognition in process	Recognition in process	Recognition in process	Recognition in process
	☆	☆	☆	☆	☆	☆
	Thermal-magnetic	Thermal-magnetic	Thermal-magnetic	Thermal-magnetic	Thermal-magnetic	Electronic (effective value detection)
	Equipped	Equipped	Equipped	Equipped	Equipped	Equipped
	148		156		162	166

Remarks: 1. Products with rated current parenthesized are produced when an order is placed.  
 2. Specify "P-LT" when using a plug-in product with a lead-wire terminal block.  
 3. The circuit breaker has the rated short-circuit breaking capacity specified in the shaded cells.