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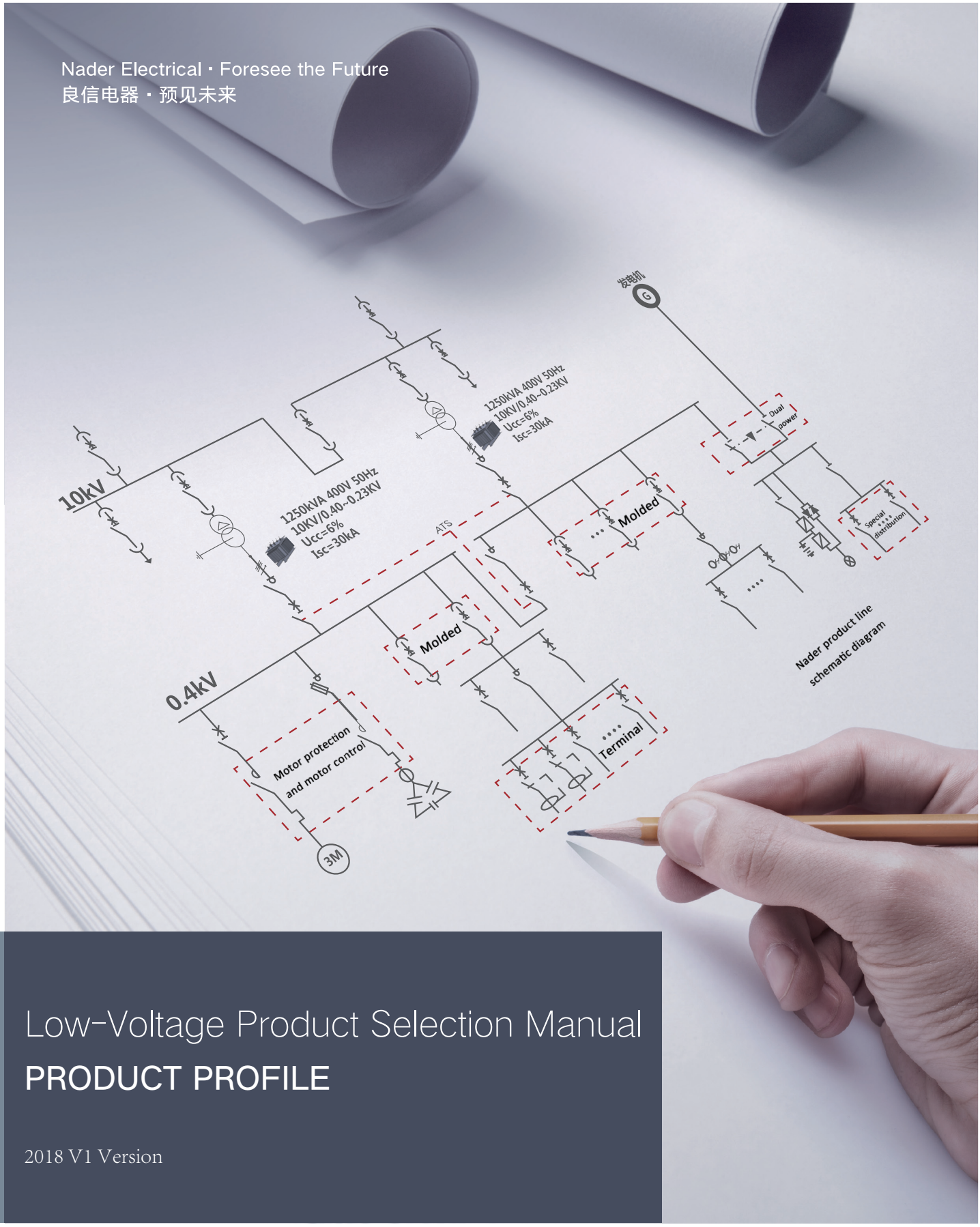


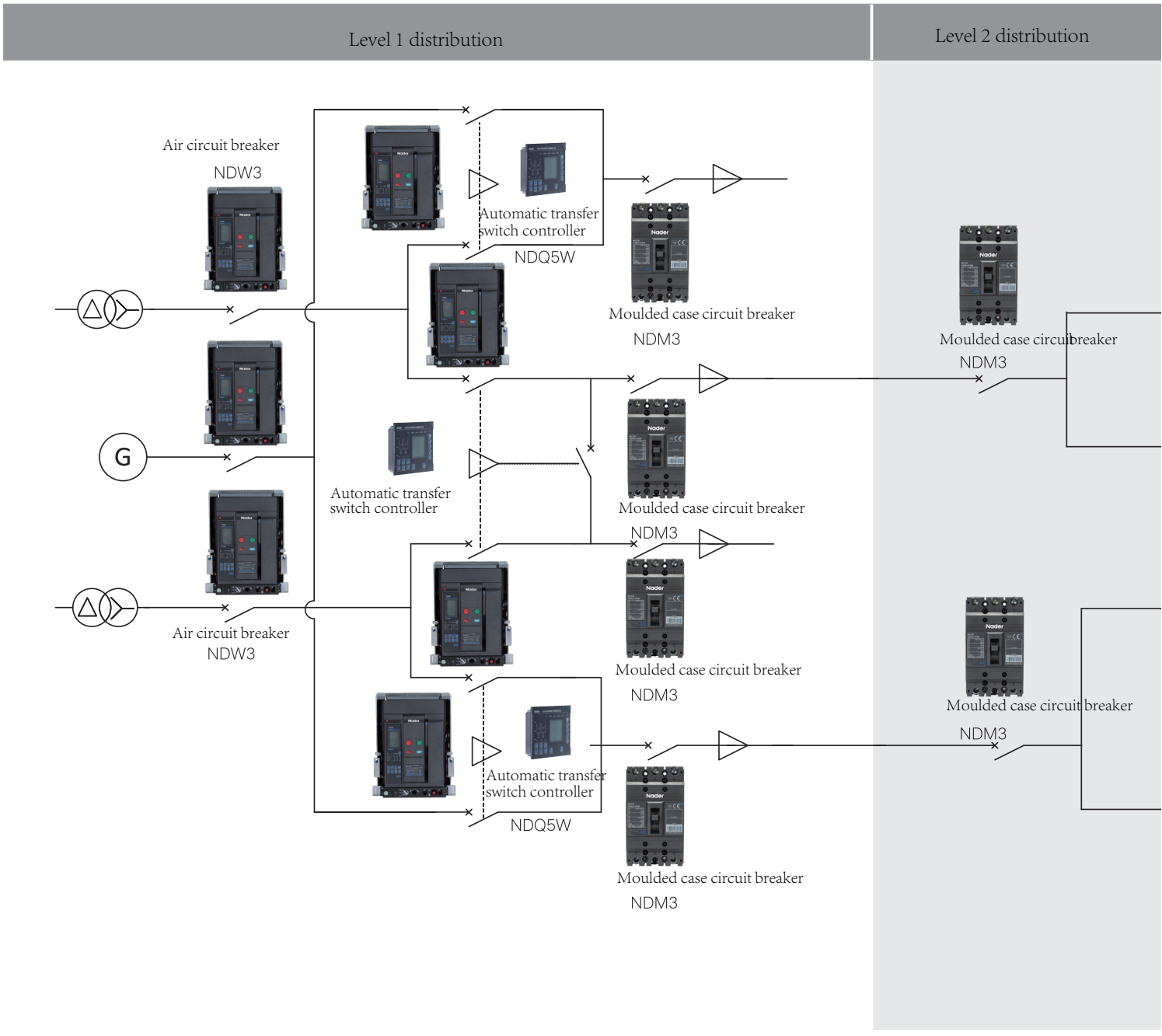
Low-Voltage Product Selection Manual

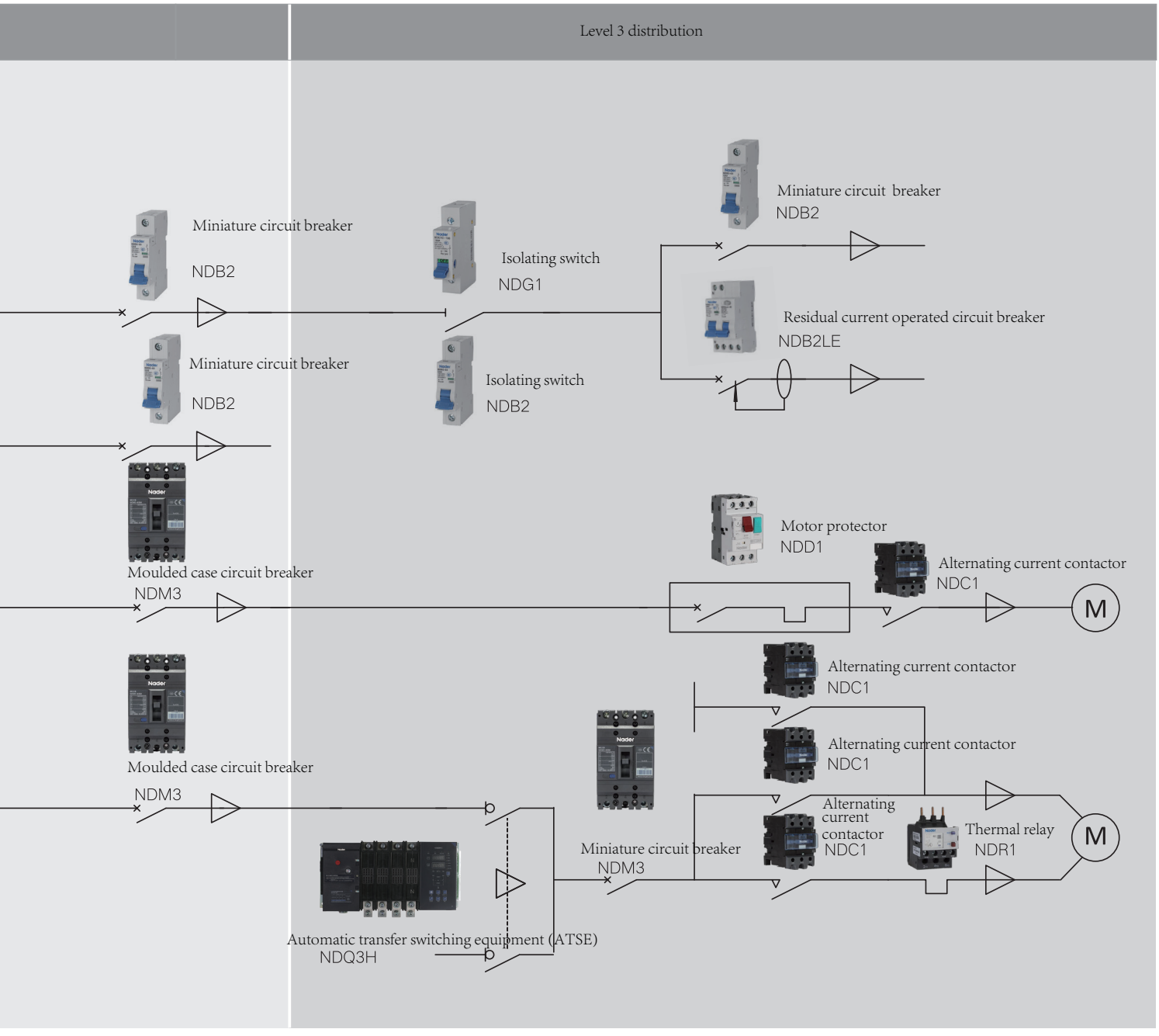
PRODUCT PROFILE

2018 V1 Version

Nader 良信电器

Power Distribution Scheme




Level 3 distribution
Miniature circuit breaker
NDB2
Isolating switch
NDG1
Miniature circuit breaker
NDB2
Residual current operated circuit breaker
NDB2LE
Miniature circuit breaker
NDB2
Isolating switch
NDB2
Moulded case circuit breaker
NDM3
Motor protector
NDD1
Alternating current contactor
NDC1
M
Alternating current contactor
NDC1
Moulded case circuit breaker
NDM3
Alternating current contactor
NDC1
Alternating current contactor
NDC1
Thermal relay
NDR1
M
Miniature circuit breaker
NDM3
Automatic transfer switching equipment (ATSE)
NDQ3H

Nader 良信电器

NDW2-1600~6300 Series Air Circuit Breaker (ACB) Quick Selection Table

NDW2-1600 C 200/4 K3M D1 F1 B1 Q10 A4 optional accessories

ND → Enterprise code: Nader

W → Product code: Air circuit breaker

2 → Design serial number: 2

1600 → Frame size: 1600, 2000, 3200, 4000, 6300

C → Installation method: fixed type (unmarked) C-drawout type

200 → Rated current: refer to parameter table

4 → Number of poles
3-3 pole
4-4 pole
5-3 P + N
(3P+N product standard configuration with external N-phase mutual inductor)

K3M → Controller type: KM, K3M

D1 → Electric energy storage mechanism:
D1: AC380/400V
D2: AC220/230V
D3: DC220V
D4: DC110V

F1 → Shunt release:
F1: AC380/400V
F2: AC220/230V
F3: DC220V
F4: DC110V

B1 → Closed electromagnet:
B1: AC380/400V
B2: AC220/230V
B3: DC220V
B4: DC110V

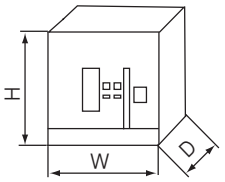
Q10 → Under-voltage release:
Q1-AC380/400V
Q2-AC220/230V
Q3-DC220V
Q4-DC110V
Delay time:
0- instantaneous
1-delay 1s
3-delay 3s
5-delay 5s

A4 → Contact combination: refer to note B

Optional accessories
M: door frame
G: phase partition
F: dust cover
R:ST201 relay module
P:ST power module
(AC380/400V, AC220/230V)
J: wiring mode.
(Unmarked -horizontal wiring,
1- lengthened horizontal wiring.
2- L connection.
3- vertical wiring.
4- extended vertical wiring
5- hybrid wiring (horizontal on the top, vertical in the bottom).
6- Hybrid wiring (horizontal on the top, vertical in the bottom).
TH: product usage type
(Unmarked-conventional FD-wind power
TH- damp & heat
ATS-R/S/F- power automatic switching device products)

Note A:
2/!KM: digital screen;KY:LCD screen; K3M:LCD screen
3/!1600 shell frame controller KM , K3M controller (KM voltage 1-AC380/400V,2-AC220/230V,3-DC220V 4-DC110V)
(K3 voltage 1- AC 380/400V, 2- AC 220/230V, 3- DC220V, 4- DC110V)
4/!2000, 3200 and 6300 shell frame controller choose KM (NWK21), KY (NWK22) controller (KM voltage 1-AC380/400V, 2-AC220/230V, 3-DC220V, 4-DC110V, 5-DC24V) (KY voltage 1-AC380/400V, 2-AC220/230V, 3-DC220V, 4-DC110V, 5-DC24V)
5/!Optional function of the controller: protection type: unmarked - traditional, V voltage measurement and protection, P-measurement and protection type!!
5. 1600 shell frame communication function: 3M (communication protocol 2-Profibus, 3-Modbus, 4-Devicenet)
2000-6300 shell frame communication function: H (communication protocol: Modbus) signal unit: S1-4DO; S2-3DO, 1DI; S3-2DO, 2DI
Remote reset function: Z2 (AC220V/AC230V), Z3 (DC220V), Z4 (DC110V)
Single N phase protection function: N (including N mutual inductor, and supporting use) contact wear equivalent, query for the number of operations (NWK21 optional): J controller without optional function omitted NWK2121 controller only S1-4DO
NDW2-1600 without remote reset

Note B:
Auxiliary contact combination 1600 shell frame; unmarked - four sets of switch, A6 - six sets of switch; shell frame 2000, 3200 and 6300: unmarked - four sets normally open and four sets normally closed, A5 - five sets normally open and five sets normally closed, A6 - six-normally open and six-normally closed, and shell frame 4000: unmarked - four-sets of switch, A6 - six sets of switch, A44 - four sets normally open and four sets normally closed



Overall dimension:WxDxH(mm)

NDW2 Series Main Performance Parameters

Model of circuit breaker	Rated current In (A)	Rated insulation voltage Ui (V)	Rated impulse withstand voltage Uimp (kV)	Number of poles	Rated Ultimate short circuit breaking capacity Icu (effective value) kA		Rated service short circuit breaking capacity Ics (effective value) kA		Rated short circuit making capacity Icm (peak value) kA		Rated short-time withstand current Icw (effective value) 1s kA		Boundary dimension: W×D×H (mm)			
					AC415V	AC690V	AC415V	AC690V	AC415V	AC690V	AC415V	AC690V	Fixed type 3P	Fixed type 4P	Drawout type 3P	Drawout type 4P
NDW2-1600	200、400、630、800、1000、1250、1600	1000	12	3、4	65	42	55	35	143	88	42	35	260×253×319	330×253×319	282×354×350	352×354×350
NDW2-2000	400、630、800、1000、1250、1600、2000	1000	12	3、4	80	65	80	65	176	143	60	50	362×332×398	457×332×398	375×430×432	470×430×432
NDW2-3200	2000、2500、2900、3200	1000	12	3、4	100	80	85	65	220	176	85	55	422×332×398	537×332×398	435×430×432	550×430×432
NDW2-4000	800、1000、1250、1600、2000、2500、3200、4000	1000	12	3、4	100	75	100	75	220	165	85	75	422×339×394	537×339×394	435×450×432	550×450×432
NDW2-6300	4000、5000、6300	1000	12	3、4	120	85	120	85	264	187	100	85	/	/	895×497×432	895×497×432

NDW3-4000 Series Air Circuit Breaker Quick Selection Table

NDW3-4000 S 800/C 4 KM D1 F1 B1 Q10 A4 optional accessories

ND
Enterprise code: Nader

W
Product code: Air circuit breaker

3
Design serial number: 3

4000
Frame size:
1600A,
2500A,
4000A,
6300A

S
Breaking type:
S-normal breaking
H-high breaking
HU- high voltage breaking

800
Rated current: See parameter table

C
Installation mode: Unmarked-stationary type
C - drawer type

4
Number of poles:
3-3 pole
4-4pole
5-3P+N
(3P+N product standard configuration with external N-phase mutual inductor

KM
Type of controller:
KM、KY
(see note A)

D1
Electric energy storage mechanism:
D1: AC380/400V
D2: AC220/230V
D3: DC220V
D4: DC110V

F1
Shunt release:
F1: AC380/400V
F2: AC220/230V
F3: DC220V
F4: DC110V

B1
Closed electromagnet:
B1: C380/400V
B2: AC220/230V
B3: DC220V
B4: DC110V

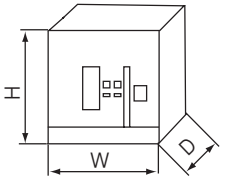
Q10
Under-voltage release:
Q1-AC380/400V
Q2-AC220/230V
Q3-DC220V
Q4-DC110V
Delay time:
0- instantaneous
1-delay 1s
3-delay 3s
5-delay 5s

A4
Contact combination:
Please refer to note A

Optional accessories
M: door frame
F: dust cover
TH, etc. : types of products used (unmarked - conventional FD-wind power, plateau TH-hot and humid, ATS-R/F power supply automatic switching device, KV-AC 1000V, DL-power)

Note A:
KM (NWK21) : digital screen、KY (NWK22) : LCD controller
(KMvoltage 1-AC380/400V 2-AC220/230V 3-DC220V 4-DC110V 5-AC24V/DC24V)
(KY voltage 1-AC380/400V 2-AC220/230V 3-DC220V 4-DC110V 5-AC24V/DC24V)

Note B:
Auxiliary contact combination: unmarked - four sets of switch, A6 - six sets of switch, A44 - four sets normally open and four sets normally closed



Overall dimension: WxDxH(mm)

NDW3 Series Main Performance Parameters

Type of circuit breaker	Rated current In(A) 40℃	Rated isolation voltage Ui(V)	Rated impulse withstand voltage Uimp (kV)	Number of poles	Rated Ultimate short circuit breaking capacity Icu (effective value) KA			Rated service short circuit breaking capacity Ics (effective value) KA			Rated short circuit breaking capacity Icm (effective value) KA			Rated short time withstand current Icw (effective value) KA			Boundary dimension：W×D×H（mm）			
					AC220V~ AC415V	AC440V~ AC690V	AC800V~ AC1140V	AC220V~ AC415V	AC440V~ AC690V	AC800V~ AC1140V	AC220V~ AC415V	AC440V~ AC690V	AC800V~ AC1140V	AC220V~ AC415V	AC440V~ AC690V	AC800V~ AC1140V	Fixed type 3P	Fixed type 4P	Drawout type 3P	Drawout type 4P
NDW3-1600	200、400、630、800、1000、1250、1600、	1000	12	3、4	66	50	/	55	42	/	145	105	/	50	42	/	259×195×318	329×195×318	248×297×351.5	318×297×351.5
NDW3-2500	630、800、1000、1250、1600、2000、2500	1000	12	3、4	S:66 H:85	S:55 H:66	HU:50	S:66 H:85	S:55 H:66	HU:50	S:145.2 H:187	S:121 H:145.2	HU:110	S:66 H:85	S:55 H:66	HU:50	368×292×394	463×292×349	375×393×432	470×393×432
NDW3-4000	800、1000、1250、1600、2000、2500、3200、4000	1000	12	3、4	S:85 H:100 注a	S:75 H:85	HU:50	S:85 H:100 注b	S:75 H:85	HU:50	S:187 H:220 注c	S:165 H:187	HU:110	S:85 H:100 注d	S:75 H:85	HU:50	428×300×392	543×300×392	435×432×401	550×432×401
NDW3-6300	4000、5000、6300、	1000	12	3、4	S:120 H:135	S:85 H:100	HU:50	S:120 H:135	S:85 H:100	HU:50	S:264 H:297	S:187 H:220	HU:110	S:120 H:135	S:85 H:100	HU:50	259×195×318	329×195×318	248×297×351.5	318×297×351.5

Note a: the Icu (effective value) of AC415V-AC440V of NDW3-400 product is S:75KA and H:85KA

Note b: the Ics (effective value) of AC415V-AC440V of NDW 3-4000 product is S:85KA and H:100KA

Note c: the Icm (peak value) of AC415V-AC440V of NDW3-4000 product is S:165KA and H:187KA

Note d: the Icw (effective value) of AC415V-AC440V of NDW 3-4000 product for 1s is: S:75KA and H:85KA

NDM3 Series Moulded Case Circuit Breaker (MCCB) Quick Selection Table

NDM3-125 H P/4 3 18 2 A P 100A

ND → Enterprise code: Nader

M → Product code: Moulded case circuit breaker

3 → Design serial number: 3

125 → Frame size level: 100, 125, 160, 250, 400, 630, 800

H → Breaking type
C: basic type
L: standard type
M: relatively high breaking type
H: high breaking type

P → Operation mode:
No code: operate directly with handles
P: electric operation
Z: rotary handle

4 → Number of poles:
3-three poles
4-four poles

3 → Release:
Release: 0-Release (none)
2-Instantaneous release only
3-Complex release

18 → Accessory code: Please refer to accessory table

2 → Application code:
No code: power distribution type
2: protection motor

A → N-pole (neutral pole) type of the 4P product: Please refer to note A

P → Wiring type code: Please refer to note B

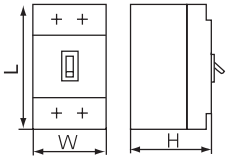
100A → Rated current: Please refer to parameter table

Note A:
There are three types of neutral pole (N pole) in four poles products:
Type A: over-current release is not installed in N pole, and the N pole is always connected
Type B: over-current release is not installed in N pole, and the N pole is combined and shared with the other three poles
Type C: current release is installed in N pole, and the N pole is combined and shared with others

Note B:
No code name: general
P: extended busbar
JK type: incoming terminal wiring: wiring frame type
Outgoing terminal wiring: front-plate wiring

CK type: incoming terminal wiring: front-plate wiring
Outgoing terminal wiring: wire frame type

Type K: incoming / outgoing terminal wiring: wire frame type
Z1: rear-plate wiring
Z2Q: plug-in front-plate wiring
Z2H: plug-in rear-plate wiring
Z3Q: plug-in front-plate integrated wiring
Z3H: plug-in rear-plate integrated wiring



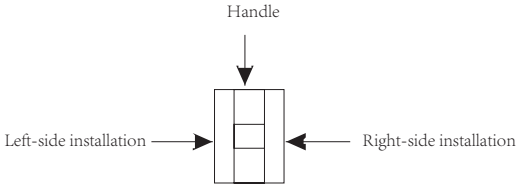
Overall dimension(mm)

NDM3 Series Moulded Case Circuit Breaker Main Performance Parameters

Model of circuit breaker	Shell frame grading current Inm(A)	Rated current In(A)	Rated isolation voltage Ui(V)	Rated impulse withstand voltage Uimp(kV)	Number of poles	Rated limit short circuit breaking capacity grade	Rated ultimate short circuit breaking capacity Icu（kA）			Rated service short circuit breaking capacity Ics(kA)			Overall dimension（mm）			Connection mode
							AC380/400/415V	AC 500V	AC 660/690V	AC380/400/415V	AC 500V	AC 660/690V	L	W	H	
NDM3-63	63	10、16、20、25、32、40、50、63	1000	8000	3	L	36	/	/	36	/	/	130	70	65	Conventional、P、Z1、Z2Q、Z2H
					3	M	55	20	12	40	15	10	130	70	65	
					4	/	55	20	12	40	15	10	130	100	65	
NDM3-100	100	10、16、20、25、32、40、50、63、80、100	800	8000	3	C	35(AC400V)	10	10(AC690V)	22(AC400V)	10	6(AC690V)	130	75	65	Conventional、P、Z1、Z2Q、Z2H
NDM3-125	125	16、20、25、32、40、50、63、80、100、125	1000	8000	3	L	40	/	/	30	/	/	150	92	68	Conventional、P、JK、CK、K、Z1、Z2Q、Z2H、Z3Q、Z3H
					3	M	70	40	20	50	40	10	150	92	86	
					3	H	100	/	/	70	/	/	150	92	86	
					4	/	70	40	20	50	40	10	150	122	86	
NDM3-160	160	125、140、160	1000	8000	3	C	35	/	/	25	/	/	139	92	75.5	Conventional、P、Z1、Z2Q、Z2H
					3	L	40	/	/	30	/	/	150	92	74.5	
					3	M	70	/	20	50	/	10	150	92	92.5	
					4	/	70	/	20	50	/	10	150	122	92.5	
NDM3-250	250	100、125、140、160、180、200、225、250	1000	8000	3	C	35(AC400V)	/	/	25(AC400V)	/	/	165	105	63.4	Conventional、P、Z1、Z2Q、Z2H、Z3Q、Z3H
					3	L	40	/	/	30	/	/	165	107	88.5	Conventional、P、JK、CK、K、Z1、Z2Q、Z2H、Z3Q、Z3H
					3	M	70	40	20	50	40	10	165	107	105.5	
					3	H	100	/	/	70	/	/	165	107	105.5	
					4	/	70	40	20	50	40	10	165	142	105.5	
NDM3-400	400	225、250、315、350、400	1000	8000	3	C	35	/	/	35	/	/	257	150	104.4	Conventional、P、Z1、Z2Q、Z2H、Z3Q、Z3H
					3	L	50	/	/	50	/	/	257	150	104.5	
					3	M	70	50	20	70	50	15	257	150	104.5	
					3	H	100	/	/	75	/	/	257	150	104.5	
					4	/	70	50	20	70	50	15	257	198	104.5	
NDM3-630	630	400、500、630	1000	8000	3	C	35	/	/	35	/	/	270	182	108.5	Conventional、P、Z1、Z2Q、Z2H、Z3Q、Z3H
					3	L	50	/	/	50	/	/	270	182	108.5	
					3	M	70	30	20	70	30	15	270	182	108.5	
					3	H	100	/	/	75	/	/	270	182	108.5	
					4	/	70	30	20	70	30	15	270	240	108.5	
NDM3-800	800	630、700、800	1000	8000	3	M	70	/	20	70	/	15	280	210	112	Conventional、P、Z1、Z2Q、Z2H、Z3Q、Z3H
					3	H	100	/	/	75	/	/	280	210	112	
					4	/	70	/	20	70	/	15	280	280	112	

NDM3 Series Moulded Case Circuit Breaker Accessories Selection Table

Accessory code / Name of accessory / Installation position / Number of poles / Model		00 Non	10 Shunt release	20 Double auxiliary contact	21 Single auxiliary contact	30 Under-voltage release	40 Shunt release, double auxiliary contact	41 Shunt release, single auxiliary contact	50 Single auxiliary contact, under-voltage release	60 Two sets of double auxiliary contact	61 Two sets of single auxiliary contact	62 Double auxiliary contact, single auxiliary contact	70 Under-voltage release, single auxiliary contact	71 Under-voltage release, single auxiliary contact	08 Alarm contact	18 Shunt release, alarm contact	28 Double auxiliary contact, alarm contact	38 Under-voltage release, alarm contact	48 Shunt release, alarm contact	58 Auxiliary contact	68 Double auxiliary contact, auxiliary contact	78 Under-voltage release, auxiliary contact
NDM3-100	3	–	□ ●	◧ □	◧ □	○ □	◧ ●	◧ ●	○ ●	◧ ◧	◧ ◧	◧ ◧	○ ◧	○ ◧	□ □	□ ●	□ ◧	○ □	◧ ●	◧ □	◧ ◧	○ ◧
NDM3-125	3 4	–	□ ●	◧ □	◧ □	○ □	◧ ●	◧ ●	○ ●	◧ ◧	◧ ◧	◧ ◧	○ ◧	○ ◧	□ □	□ ●	□ ◧	○ □	◧ ●	◧ □	◧ ◧	○ ◧
NDM3-160	3 4	–	● □	◧ □	◧ □	○ □	–	● ◧	–	–	◧ ◧	–	○ ◧	○ ◧	□ □	–	□ ◧	–	–	◧ □	–	–
NDM3-250C	3	–	□ ●	◧ □	◧ □	□ ○	◧ ●	◧ ●	● ○	◧ ◧	◧ ◧	◧ ◧	◧ ○	◧ ○	□ □	□ ●	□ ◧	□ ○	◧ ●	◧ □	◧ ◧	–
NDM3-250L/M/H	3	–	□ ●	◧ □	◧ □	○ □	◧ ●	◧ ●	○ ●	◧ ◧	◧ ◧	◧ ◧	○ ◧	○ ◧	□ □	□ ●	□ ◧	○ □	◧ ●	◧ □	◧ ◧	○ ◧
NDM3-250	3	–	□ ●	◧ □	◧ □	○ □	◧ ●	◧ ●	○ ●	◧ ◧	◧ ◧	◧ ◧	○ ◧	○ ◧	□ □	□ ●	□ ◧	○ □	◧ ●	◧ □	◧ ◧	○ ◧
NDM3-400	3 4	–	□ ●	◧ □	◧ □	○ □	◧ ●	◧ ●	○ ●	◧ ◧	◧ ◧	◧ ◧	○ ◧	○ ◧	□ □	□ ●	□ ◧	○ □	◧ ●	◧ □	◧ ◧	○ ◧
NDM3-630	3 4	–	□ ●	◧ □	◧ □	○ □	◧ ●	◧ ●	○ ●	◧ ◧	◧ ◧	◧ ◧	○ ◧	○ ◧	□ □	□ ●	□ ◧	○ □	◧ ●	◧ □	◧ ◧	○ ◧
NDM3-800	3 4	–	□ ●	◧ □	◧ □	○ □	◧ ●	◧ ●	○ ●	◧ ◧	◧ ◧	◧ ◧	○ ◧	○ ◧	□ □	□ ●	□ ◧	–	◧ ●	◧ □	◧ ◧	–



Graphic symbol :

- ◧ Single auxiliary contact
- ◨ Double auxiliary contact
- □ Alarm contact
- ● Shunt release
- ○ Under-voltage release
- ◩ Auxiliary alarm contact (single accessory combining auxiliary and alarm function))

Drop Capacity Coefficient Table of Moulded Case Circuit Breaker Temperature

Serial number	Frame size rated current(A)	The temperature corresponds to the drop capacity coefficient of the product						
		40℃	45℃	50℃	55℃	60℃	65℃	70℃
1	100/125/160	1	0.977	0.954	0.931	0.907	0.883	0.858
2	250	1	0.982	0.963	0.944	0.924	0.904	0.882
3	400	1	0.981	0.962	0.942	0.922	0.901	0.879
4	630	1	0.979	0.958	0.937	0.915	0.893	0.871
5	800	1	0.980	0.960	0.939	0.918	0.897	0.877

Note: when the ambient temperature is lower than 40℃, the product can be used normally without any drop capacity。

NDM3A Series Moulded Case Circuit Breaker Quick Selection Table

NDM3A-250 M P/3 3 18 0 P 250A

ND → Enterprise code Nader

M → Product code: Moulded case circuit breaker

3A → Design serial number: 3

250 → Frame size level: 250, 400, 630

M → Breaking grade code: relatively high breaking type

P → Mode of operation
P: electric operation
Z: rotary handle
Direct operation no code name

3 → Number of poles:
3: three poles

3 → Release :
0-Release(none)
2- instantaneous Release only
3- Complex release

18 → Accessory code: Please refer to attachment

0 → Application code:
No code: distribution type

P → Wiring type code
No code: front-plate wiring
P: extended busbar
Z1: rear-plate wiring
Z2Q: plug-in front-plate wiring (NDM3A-630 non)
Z2H: plug-in rear-plate wiring

250A → Rated current:
Please refer to parameter table

NDM3A Series Moulded Case Circuit Breaker Main Performance Parameters

Model	frame size current Inm(A)	Rated current In(A)	Rated insulation voltage Ui(V)	Rated impulse withstand voltage Uimp(V)	Power frequency withstand voltage U (1minute) (V)	Application category	Number of poles	Rated ultimate short circuit breaking capacity	Rated ultimate short circuit breaking capacity Icu (kA)					Rated service short circuit breaking capacity Ics (kA)					Electrical life					Mechanical life	Overall dimensions:			Arcing distance(mm)	Terminal cover	Connection mode
									AC 550V	AC 600V	AC 690V	AC 800V	AC 1000V	AC 550V	AC 600V	AC 690V	AC 800V	AC 1000V	AC 550V	AC 600V	AC 690V	AC 800V	AC 1000V		L	W	H			
NDM3A-250	250	63、80、100、125、140、160、180、200、225、250	1140	8000	3000	A	3	M	50	42	35	30	12	50	42	35	23	12	5000	3000	2000	1500	1000	20000	165	107	103	≤50	Standard / 1 piece	Non, P, Z1, Z2Q, Z2H
NDM3A-400	400	225、250、315、350、400	1140	8000	3000	A	3	M	50	42	35	30	12	50	42	35	23	12	4000	2500	2000	1500	1000	10000	257	150	104.5	≤100	Standard / 1 piece	Non, P, Z1, Z2Q, Z2H
NDM3A-630	630	400、500、630	1140	8000	3000	A	3	M	50	42	35	30	12	50	42	35	23	12	4000	2500	2000	1500	1000	10000	270	182	108.5	≤100	Standard / 1 piece	Non, P, Z1, Z2H

Note: for higher parameters, please contact the manufacturer

NDM3Z Series Moulded Case Circuit Breaker Quick Selection Table

NDM3Z-250 V P 4/3 18 LC 250A P

ND → Enterprise code: Nader

M → Product code: moulded case type circuit breaker

3 → Design serial number: 3

Z → Derived code:
Z: DC moulded case circuit breaker
ZF: DC moulded case circuit breaker with integrated electric operating mechanism

250 → Frame size level: refer to Table 1

V → Breaking grade:
Non: conventional product
V: high voltage breaking

P → Operation mode:
P: electric operation
Z: rotary handle
Direct operation: no code

4 → Number of poles:
2 - two poles
3 - three poles
4 - four poles

3 → Release:
0-no release (None)
2- only instantaneous release only
3- complex release

18 → Accessory code: Please refer to attachment

LC → Special applications:
LC: DC leakage current detection module (for 2P products only)

250A → Rated current: Please refer to parameter table

P → Wiring type code:
2P no code: conventional product
3P no code: conventional product, J0 (free wiring)
4P: conventional product J0, J1, J2, J3, parallel

Note 1: NDM3Z-250V has only a complex release

Note 2: NDM3ZF-250V has only 4-pole products and the wiring form is J1

NDM3Z Series Moulded Case Circuit Breaker Main Performance Parameters

Table 1 Main performance technical parameters of circuit breaker

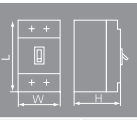
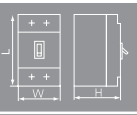
Model	Frame size grading current Inm(A)	Rated current In(A)	Rated insulation voltage Ui (V)	Rated impulse withstand voltage Uimp(V)	Power frequency withstand voltage U (1 minute) (V)	Utilization category	Poles	Rated working voltage Ue DC(V)	Rated ultimate short-circuit breaking capacity Icu(kA)	Rated service short-circuit breaking capacity Ics (kA)	Operating performance		Overall dimension: 			Arcing distance (mm)	Connection mode
											Electrical life	Mechanical life	L	W	H		
NDM3Z-125	125	16、20、25、32、40、50、63、80、100、125	1000	8000	3500	A	2	500	20	20	5000	20000	150	92	87	≤50	Conventional
							3	750	20	20			150	92	87		Conventional, J0
							4	1000	20	20			150	122	87		J0, J1, J2
NDM3Z-250	250	125、140、160、180、200、225、250	1200	8000	3500	A	2	500	35	35	5000	20000	165	107	104.5	≤50	Conventional
							3	750	40	25			165	107	104.5		Conventional, J0
							4	1000	40	25			165	142	104.5		J0, J1, J2, J3
							4	1200	10	10			165	142	104.5		J0, J1, J2, J3
NDM3ZF-250	250	125、140、160、180、200、225、250	1200	8000	3500	A	4	1000	40	25	5000	12000	165	142	165	≤50	J1
							4	1200	10	10	3000		165	142	165		
NDM3Z-250V	250	160、200、250	1500	12000	2000	A	2	1000	20	16	2000	10000	200	90	104.5	≤50	Conventional
					3820	A	3	1500	20	16	2000	10000	200	135	104.5		

Table 1 Main performance technical parameters of circuit breaker (continued)

Model	Frame size grading current Inm(A)	Rated current In(A)	Rated insulation voltage Ui (V)	Rated impulse withstand voltage Uimp(V)	Power frequency withstand voltage U (1 minute) (V)	Utilization category	Poles	Rated working voltage Ue DC(V)	Rated ultimate short-circuit breaking capacity Icu(kA)	Rated service short-circuit breaking capacity Ics (kA)	Operating performance		Overall dimension: 			Arcing distance (mm)	Connection mode
											Electrical life	Mechanical life	L	W	H		
NDM3Z-400	400	225、250、315、350、400	1000	8000	3500	A	2	500	35	35	1000	5000	257	150	104.5	≤100	Conventional
							3	750	40	40			257	150	104.5		Conventional, J0
							4	1000	40	40			257	198	104.5		J0,J1,J2,J3
NDM3Z-630	630	400、500、630	1000	8000	3500	A	2	500	35	35	1000	5000	270	182	108.5	≤100	Conventional
							3	750	40	40			270	182	108.5		Conventional, J0
							4	1000	40	40			270	240	108.5		Note 1
		1000、1250（Parallel）	1000	8000	3500	A	4	500	30	30	1000	5000	270	240	108.5		Parallel
NDM3Z-800	800	630、700、800	1000	8000	3500	A	2	500	35	35	1000	5000	280	210	112	≤100	Conventional
							3	750	40	40			280	210	112		Conventional, J0
							4	1000	40	40			280	280	112		Note 2
		1250、1440（Parallel）	1000	8000	3500	A	4	500	30	30	500	5000	280	280	112		Parallel

Note 1: 400/500A: J0, J1, J2, J3. 630A: J0 (short connector optional)

Note 2: 630A: J0, J1, J2, J3. 700/800A: J0 (short connector optional)

NDM3Z DC moulded case circuit breaker temperature variation lineup coefficient table

The serial number	Rated current of frame size level (A)	Temperature corresponds to product lineup coefficient						
		40℃	45℃	50℃	55℃	60℃	65℃	70℃
1	125	1	1	1	0.96	0.91	0.85	0.78
2	250	1	1	1	0.95	0.93	0.91	0.88
3	400	1	1	1	0.93	0.91	0.89	0.85
4	630	1	1	1	0.92	0.90	0.89	0.83
5	800	1	1	1	0.92	0.89	0.85	0.80

Note: when the ambient temperature is lower than 50 ℃, the product can be normally used, no need to be derated.

NDM3Z DC moulded case circuit breaker elevation variation lineup coefficient table

Altitude (m)	Working current correction factor	Working voltage correction factor	Power frequency voltage correction coefficient
2000	In	Ue	U
3000	0.97In	Ue	U
4000	0.93In	Ue	U
5000	0.89In	Ue	U

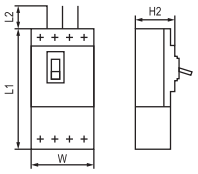
NDM3L Series Moulded Case Circuit Breaker Quick Selection Table

NDM3L-250 P/4 3 18 2 A 250A

ND	M	3	L	250	P	4
Enterprise code: Nader	Product code: moulded case circuit breaker	Design serial number: 3	Electric leakage protection	Frame size: 125, 250, 400, 630	Operation mode: P: electric operation Z: rotary handle Direct operation: no code	Number of poles: 3-three poles 4-four poles

3	18	2	A	250A
Release: 0-no release 2- only instantaneous release available 3- complex release	Accessory code: See attachment	Application code: No code: distribution type 2: motor protection type	Form of N-pole (neutral pole) in 4P products: See Note a	Rated current: see parameter table

Note A:
There are three types of N-pole (neutral line) in four poles products:
Type A: over-current release shall not be installed in N-pole, and N-pole is always connected
Type B: over-current release shall not be installed in N-pole, and N-pole shall be combined with the other three poles
Type C: over-current release shall be installed in N-pole, and N-pole shall be combined with the others three poles



Overall dimension (mm)

NDM3L Series Moulded Case Circuit Breaker Main Performance Parameters

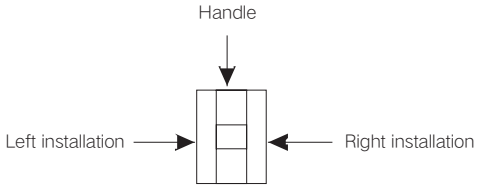
Model	Shell frame grading current In(A)	Rated current In(A)	Rated insulation voltage Ui(V)	Rated impulse withstand voltage Uimp(kV)	Number of poles	Rated ultimate short circuit breaking capacity Icu (effective value) kA	Rated ultimate short circuit breaking capacity Ics (effective value) kA	Rated residual operating current In（mA）					Rated residual non-operating current I△n(mA)	Rated residual short circuit switching (breaking) capacity I△m（kA）	Overall dimensions W×D×H（mm）				Connection mode	Operating characteristics of residual current with DC component (type AC, type A)
								No time delay			time delay									
						AC380/400V/415V	AC380/400V/415V	Type AC		Type A	Type AC	Type A			L1	L2	W	H2		
NDM3L-125	125	16、20、25、32、40、50、63、80、100、125	1000	8000	3	70	50	30	100/300/500	/	100/300/500	/	1/2 I△n	1/4 Icu	225	50	92	87	Conventional, P	AC
					4	70	50	30	100/300/500	30/100/300/500/1000	100/300/500	100/300/500/1000			225	50	122	87		AC、A
NDM3L-250	250	100、125、140、160、180、200、225、250	1000	8000	3	70	50	30	100/300/500	/	100/300/500	/	1/2 I△n	1/4 Icu	225	65	107	105.5	Conventional, P	AC
					4	70	50	30	100/300/500	30/100/300/500/1000	100/300/500	100/300/500/1000			225	65	142	105.5		AC、A
NDM3L-400	400	225、250、315、350、400	1000	8000	3	70	70	300/500/1000		/	300/500/1000	/	1/2 I△n	1/4 Icu	257	108	150	104.5	Conventional, P	AC
					4	70	70	300/500/1000		/	300/500/1000	/			257	108	198	104.5		
NDM3L-630	630	400、500、630	1000	8000	3	70	70	300/500/1000		/	300/500/1000	/	1/2 I△n	1/4 Icu	280	108	210	112	Conventional, P	AC
					4	70	70	300/500/1000		/	300/500/1000	/			280	108	280	112		

NDM3L Series Moulded Case Circuit Breaker Accessories Selection Table

Model	Number of poles	Accessory code: 00	10	20	21	30	40	41	60	61	62	70	71	08	28	58	68
	Accessory name	Non	Shunt release	Dual auxiliary contact	Single auxiliary contact	Undervoltage release	Shunt release, dual auxiliary contact	Shunt release, single auxiliary contact	Two sets of Dual auxiliary contact	Two sets of single auxiliary contact	Dual auxiliary contact, single auxiliary contact	Undervoltage release, dual auxiliary contact	Undervoltage release, single auxiliary contact	Alarm contact	Dual auxiliary contact, alarm contact	Auxiliary contact	Dual auxiliary contact, auxiliary contact
NDM3L-125	3	–	●	◨	◧	○	● ◨	● ◨	◨ ◨	◧ ◧	◨ ◨	○ ◨	○ ◨	□	□ ◨	▣	▣ ◨
	4																
NDM3L-250	3	–	●	◨	◧	○	● ◨	● ◨	◨ ◨	◧ ◧	◨ ◨	○ ◨	○ ◨	□	□ ◨	▣	▣ ◨
	4																
NDM3L-400	3	–	●	◨	◧	○	● ◨	● ◨	◨ ◨	◧ ◧	◨ ◨	○ ◨	○ ◨	□	□ ◨	▣	▣ ◨
	4																
NDM3L-630	3	–	●	◨	◧	○	● ◨	● ◨	◨ ◨	◧ ◧	◨ ◨	○ ◨	○ ◨	□	□ ◨	▣	▣ ◨
	4																

Note: 1. 3P products of NDM3L series can only use left-mounted single accessory, that is, accessory code: 10, 20, 21, 30, 08, 58

2. When double accessories are used for 4P products, N (neutral pole) must be Type B or Type C



Graphic symbol:

- ◧ Single auxiliary contact
- ◨ Dual auxiliary contact
- □ Alarm contact
- ● Shunt release
- ○ Undervoltage release
- ▣ Auxiliary alarm contact (single accessory set with auxiliary and alarm functions)

Moulded Case Circuit Breaker High Altitude Derating Coefficient Table

Altitude (m)	Working current correction factor	Working voltage correction factor	Power frequency withstand voltage correction factor
2000	In	Ue	U
2500	In	Ue	U
3000	0.98In	0.83Ue	0.89U
3500	0.97In	0.77Ue	0.85U
4000	0.96In	0.71Ue	0.80U
4500	0.95In	0.67Ue	0.77U
5000	0.94In	0.63Ue	0.73U

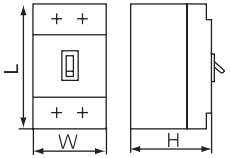
NDM3E Series Moulded Case Circuit Breaker Quick Selection Table

NDM3EX-125 H P G/3 18 2 C P 20

ND	M	3	E	X	125	H
Enterprise code: Nader	Product code: moulded case circuit breaker	Design serial number: 3	Electronic type	This code is only available for 1600 frame size product	Frame size level: 125, 250, 400, 630, 800, 1600	Breaking capacity: M: relatively high breaking type H: high breaking type

P	G	3	18	2	C	P	20
Operation mode: No code: Operate directly with handles P: Electric operation Z: Rotary handle	Intelligent release derived code: Basic type: no code name G: ground protection type T: communication type GT: ground protection communication type	Number of poles: 3-3P 4-4P	Accessory code: Please refer to accessory table	Application code: No code: distribution type 2: motor protection type	Form of N-pole (neutral pole) in 4-pole products: Type C: N pole is combined with other three poles/open at the same time. Type D: N pole is combined with other three poles and N pole is always closed	Wiring type: Please refer t o note A	Setting current Ir: Please refer to parameter table

Note A: wiring type
No code name: conventional
P: extended busbar
Z1: rear-plate connection
Z2Q: plug-in front-plate connection
Z2H: plug-in rear-plate connection
Z3Q: integrated plug-in front-plate connection
Z3H: integrated plug-in rear-plate connecton



Overall dimensions(mm)

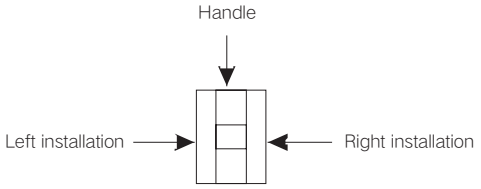
NDM3E Series Moulded Case Circuit Breaker Main Performance Parameters

Type of circuit breaker	Frame size level current Inm (A)	Release setting current Ir(A)	Rated insulation voltage Ui(V)	Rated impulse withstand voltage Uimp(kV)	Short-time withstand current Icw (KA/1s)	Number of poles	Level of rated ultimate short circuit breaking capacity	Rated ultimate short circuit breaking capacity Icu (effective value) kA			Rated service short circuit breaking capacity Ics (effective value) kA			Overall dimensions (mm)			Wiring type
								AC380/400/415V	AC 500V	AC 660/690V	AC380/400/415V	AC 500V	AC 660/690V	L	W	H	
NDM3E-125	125	16、20、25、32	800	8000	1	3	M	70	/	20	50	/	15	150	92	93	Conventional, P, Z1, Z2Q, Z2H, Z2Q, Z3H
						3	H	85	/	/	65	/	/	150	92	93	
						4	/	70	/	20	50	/	15	150	122	93	
		40、50、63、70、80、90、100、125	8000	8000	1	3	M	70	/	20	50	/	15	150	92	93	
						3	H	85	/	/	65	/	/	150	92	93	
						4	/	70	/	20	50	/	15	150	122	93	
NDM3E-250	250	100、125、140、160、180、200、225、250	1000	8000	2.5	3	M	70	/	20	50	/	15	165	107	90	Conventional, P, Z1, Z2Q, Z2H, Z2Q, Z3H
						3	H	85	/	/	65	/	/	165	107	90	
						4	/	70	/	20	50	/	15	165	107	90	
NDM3E-400	400	200、225、250、280、315、350、400	1000	8000	5	3	M	70	/	20	65	/	15	257	150	104.5	Conventional, P, Z1, Z2Q, Z2H, Z2Q, Z3H
						3	H	100	/	/	70	/	/	257	150	104.5	
						4	/	70	/	20	65	/	15	257	198	104.5	
NDM3E-630	630	280、315、350、400、450、500、550、600、630	1000	8000	5	3	M	70	/	20	65	/	15	280	210	112	Conventional, P, Z1, Z2Q, Z2H, Z2Q, Z3H
						3	H	100	/	/	70	/	/	280	210	112	
						4	/	70	/	20	65	/	15	280	280	112	
NDM3E-800	800	400、450、500、550、600、630、700、750、800	1000	8000	10	3	M	70	/	20	65	/	15	280	210	112	Conventional, P, Z1, Z2Q, Z2H, Z2Q, Z3H
						3	H	100	/	/	70	/	/	280	210	112	
						4	/	70	/	20	65	/	15	280	280	112	

NDM3E Series Moulded Case Circuit Breaker Accessories Selection Table

Model / Number of poles	Accessory code	300	310	320	321	330	340	341	350	360	361	362	370	371	308	318	328	338	348	358	368	378
	Accessory name	Non	Shunt release	Dual auxiliary contact	Single auxiliary contact	Undervoltage release	Shunt release, dual auxiliary contact	Shunt release, single auxiliary contact	Shunt release, undervoltage trip	Two sets of dual auxiliary contact	Two sets of single auxiliary contact	Dual auxiliary contact, single auxiliary contact	Undervoltage release, dual auxiliary contact	Undervoltage release, single auxiliary contact	Alarm contact	Shunt release, alarm contact	Dual auxiliary contact, alarm contact	Undervoltage release, alarm contact	Shunt release, auxiliary contact	Auxiliary contact	Dual auxiliary contact, auxiliary contact	Undervoltage release, auxiliary contact
NDM3E-125	3	–	●	◧◨	◧	○	●◨	●◨	–	◨◨	◧◧	◨◧	○◨	○◧	□	–	□◧	–	◧●	◧	◧◨	○◧
	4																					
NDM3E-250	3	–	●	◧◨	◧	○	●◨	●◨	–	◨◨	◧◧	◨◧	○◨	○◧	□	–	□◧	–	◧●	◧	◧◨	○◧
	4																					
NDM3E-400	3	–	●□	◧◨	◧	○	◧●	◧●	○●	◨◨	◧◧	◨◧	○◨	○◧	□	□●	□◧	○□	◧●	◧	◧◨	○◧
	4																					
NDM3E-630	3	–	●□	◧◨	◧	○	◧●	◧●	○●	◨◨	◧◧	◨◧	○◨	○◧	□	□●	□◧	–	◧●	◧	◧◨	–
	4																					
NDM3E-800	3	–	●□	◧◨	◧	○	◧●	◧●	○●	◨◨	◧◧	◨◧	○◨	○◧	□	□●	□◧	–	◧●	◧	◧◨	–
	4																					

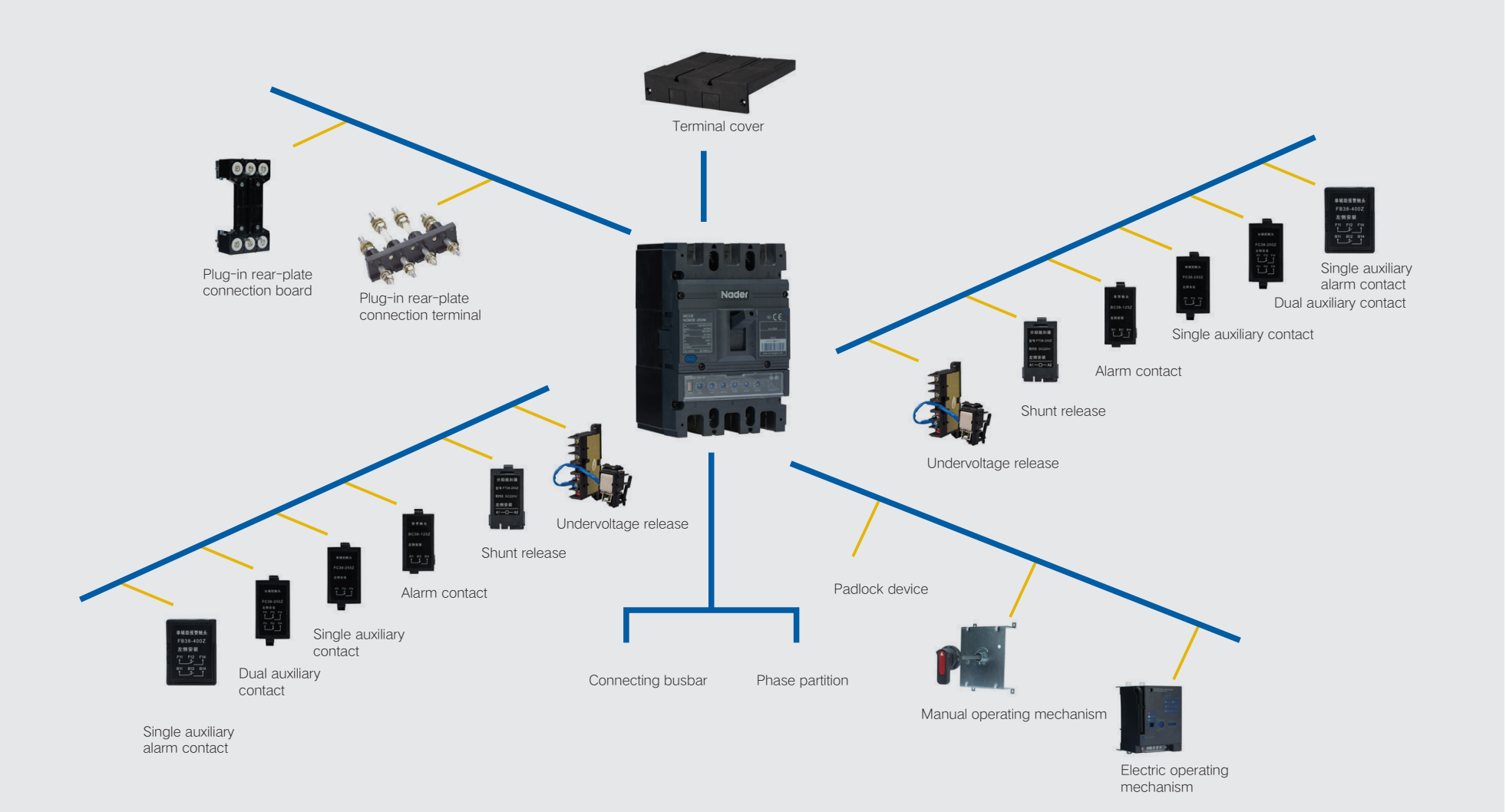
Note: accessory code of release mode: the first digit "3" represents the the intelligent controller with three section of protection, and the last two digits represent the internal accessory code



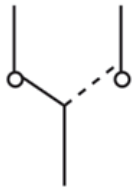
Graphic symbol:

- ◧ Single auxiliary contact
- ◨ Dual auxiliary contact
- □ Alarm contact
- ● Shunt release
- ○ Undervoltage release
- ◩ Auxiliary alarm contact (single accessory with auxiliary and alarm functions)

NDM3E Accessory List



NDQ3H Series Automatic Transfer Switch (ATS) Quick Selection Table



Two-position PC level TSE (special type)

Three-position PC level TSE (special type)

NDQ3H-250 A 160/3 Z III

NDQ3H

Automatic transfer switch equipment

250

Frame size(A):
63/125/250/400/630/800/1250/3150/5000

A

Controller:
A-basic type,
B-advanced type,
C-communication type,
D-intelligent type

160

Rated current (A)

63A frame size：16、20、25、32、40、50、63

125A frame size：80、100、125

250A frame size：160、180、200、225、 250

400A frame size：315、 350、400

630A frame size：500、 630

800A frame size：700、 800

1250A frame size：800、1000、1250

3150A frame size：1600、2000、2500、3150

5000A frame size：4000、 5000

3

Number of poles:
2-2P,
3-3P,
4-4P

Z

Structure type:
Z-integral type,
F-separated type

III

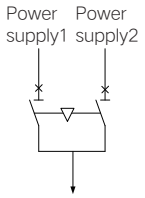
Switch position:
II two-position type,
III three-position type

NDQ3H Series Automatic Transfer Switch Main Performance Parameters

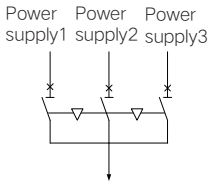
Specifications and model	Frame size rated current (A)	Rated insulation voltage Ui (V)	Rated impulse withstand voltage Uimp (kV)	Rated working voltage Ue (V)	Contact changeover time max (ms)	Changeover operating time max (ms)	Rated limit short circuit current Iq (kA)	Rated short time withstand current (kA) Icw	Rated short circuit making capacity (kA) Icm	Mechanical life (number of times)	Electrical life (number of times)	Electrical level	Application category	Number of poles	Control voltage (V)	Connection mode	Switch position	Structure style
NDQ3H	63	AC800V	8	AC230V (2P) AC400V (3P、4P)	II:≤100 III:≤140	II:≤360 III:≤400	100	—	—	25000	8000	Dedicated PC type	AC-33A	2P、3P、4P	AC230	Front-plate connection	Section II Section III	Integral type, Seperated type
	125						120											
	250									20000	6000							
	400							10					AC-33B					
	630							12.6		15000	3500			3P、4P				
	800							16					AC-33iB				Section III	
	1250	AC1000V	12		≤200	≤500	—	32		10000	2500					Rear-plate connection	Section II	Seperated type
	3150							50	67.2									
	5000								105		2000							

NDQ5W Series Automatic Transfer Switch Quick Selection Table

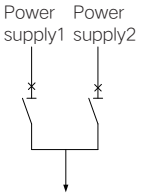
Figure a



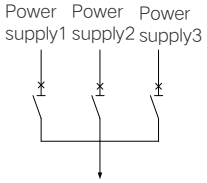
Type 2L controller



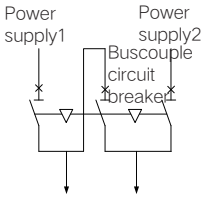
Type 3L controller



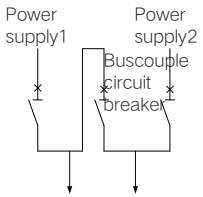
Type 2LB controller



Type 3LB controller



Type QL controller



Type QLB controller

NDQ5W-1600 1250 C/4/K1/2L

NDQ5W → Automatic transfer switch equpment

1600 → Frame size level (A): 1600/2500/4000

1250 → Rated currentIn(A)
1600A frame size: 200/400/630/800/1000/1250/1600
2500A frame size: 630/800/1000/1250/1600/2000/2500
4000A frame size: 800/1000/1250/1600/2000/2500/3200/4000

C → Installation method: C: drawer type

4 → Number of poles: 3-3P 4-4P

K1 → Rated working voltage: K1: AC380、400/415V (T1/TN) K2: AC380/400/415(IT)

2L → The type of controller (associated with rated operating current selection) is shown in Figure a

NDQ5W Series Automatic Transfer Switch Equipment Main Performance Parameters

Model	Number of poles	Rated working current Ie (A) 40℃	N-pole rated working current (A)	Rated working voltage Ue(V)	Rated insulation voltage Ui(V)	Rated impulse withstand voltage Uimp (kV)	Rated working frequency f(Hz)	Rated short circuit breaking capacity Icn (kV)	Rated short circuit switching capacity Icw (kV 1s	Rated short-time withstand current Icw(kA1s)	Electrical life	Mechanical life		Contact conversion time (ms)	Switching operation time (ms)	Power off time	Isolating function	Electrical level	Application category	Product certification
												Without maintenance	With maintenance							
NDQ5W-1600	3、4	200、400、630、800、1000、1250、1600	100%Ie	AC220/230/240 AC380/400/415	AC1000	12	50/60	55	121	50	6500	15000	30000	200	500	200ms+ Delay time (0.1~ 640s)	■	CB level	AC-33iB	CCC、CB
NDQ5W-2500	3、4	630、800、1000、1250、1600、2000、2500	100%Ie	AC220/230/240 AC380/400/415	AC1000	12	50/60	85	187	85	11000	15000	30000	200	500	200ms+ Delay time (0.1~ 640s)	■	CB level	AC-33iB	CCC、CB
NDQ5W-4000	3、4	800、1000、1250、1600、2000、2500、3200、4000	100%Ie	AC220/230/240 AC380/400/415	AC1000	12	50/60	100	220	100	6000	10000	15000	200	500	200ms+ Delay time (0.1~ 640s)	■	CB level	AC-33iB	CCC、CB

Note：■standard configuration

NDG(R)2 Series Disconnecting Switch Quick Selection Table

NDG2-125/3 F1 125A

ND	G2	125	3	F1	125A
Enterprise code: Nader	Model: G2- Disconnecting switch GR2- isolating switch with fuse	Specifications: Disconnecting switch specifications: 125、160、200、400、630、1000、1250、1600 Disconnecting switch with fuse specifications: 63、125、160、250、400、630、800、1000、1250	Number of poles: 3 - three poles 4 - four ples	Auxiliary switch type: F1- with one auxiliary switch (1NO 1NC) F2- with two auxiliary switches (2NO 2NC) No code - no auxiliary switch	Rated current of the adapted fuse link, applicable to the isolating switch with fuse

Note: 4P is not available for the disconnecting switch 1250 and 1600 as well as the disconnecting switch with fuse 1000 and 1250.

NDG2 Series Disconnecting Switch Main Performance Parameters

Specifications	Number of poles	Rated isolation voltage Ui(V)	Rated impulse withstand voltage Uimp (kV)	Rated working voltage Ue（V）		Rated working current Ie（A）/ DC		Rated working current Ie（A）/ DC		Rated short circuit making capacity AC 690V kA	Rated short time withstand current AC 690V kA/1s	Rated short circuit making capacity DC 500V kA	Rated short time withstand current DC 500V kA/1s	Rated short circuit making capacity DC 1000V kA	Rated short time withstand capacity DC 1000V kA/1s	Rated making-breaking capacity			Connection	
				AC 50Hz	DC	400V AC-23B A/kW	690V AC-23B A/kW	500V L/R=15ms DC-23B（A）	1000V L/R=2.5ms DC-22B（A）							Rated making capacity 690V AC-23B（A）	Rated breaking capacity 690V AC-23B（A）	Rated making-breaking capacitive load capacity 400V（kVAr）	Minimum copper cable cross section mm²	Maximum copper cable cross section mm²
NDG2-125	3、4	1000	12	400/690	500	125/75	125/110	/	/	20	4	20	4	/	/	1250	1000	131	70	20x5
NDG2-160	3、4	1000	12	400/690	500	160/90	160/150	/	/	20	4	20	4	/	/	1600	1280	131	120	40x16
NDG2-200	3、4	1000	12	400/690	500	200/110	160/150	/	/	20	4	20	4	/	/	1600	1280	131	150	40x16
NDG2-400	3、4	1000	12	400/690	500	400/200	250/375	400	/	50	15	50	15	/	/	4000	3200	251	240	40x16
NDG2-630	3、4	1000	12	400/690	500	630/355	400/375	630	/	50	15	50	15	/	/	4000	3200	251	2x150	40x16
NDG2-1000	3、4	1000	12	400/690	1000	1000/500	800/710	/	500	85	50	/	/	50	15	8000	6400	540	2x240	40x16
NDG2-1250	3、4	1000	12	400/690	/	1250/515	1000/890	/	/	85	50	/	/	/	/	12500	10000	820	/	70x14
NDG2-1600	3、4	1000	12	400/690	/	1600/660	1250/1110	/	/	85	50	/	/	/	/	12500	10000	820	/	70x14

Nader 良信电器

NDGR2 Series Disconnecting Switch Main Performance Parameters

Specifications	Number of poles	Fuse link size	Maximum fuse protector	Rated insulation voltage Ui(V)	Rated impulse withstand voltage Uimp(kV)	Rated working voltage Ue（V）	Rated operating current Ie(A)/ power AC		Rated limit short circuit current Ka			Rated making-breaking capacity		
						AC 50Hz	400V AC-23B A/kW	690V AC-23B A/kW	AV 380V	AV 690V	DC 500V	Rated making capacity 690V AC-23B（A）	Rated breaking capacity 690V AC-23B（A）	Rated making-breaking capacitive load capacity 400V（kVAr）
NDG2-63	3、4	000	100	1000	12	380	63/30*	63/55*	100	/	/	630*	504*	131
NDG2-125	3、4	00	160	1000	12	380	125/75	125/110	100	/	/	1250	1000	131
NDG2-160	3、4	00	160	1000	12	380/690	160/90	160/150	100	50	/	1600	1280	251
NDG2-250	3、4	1-2	400	1000	12	380/690	250/132	250/220	100	50	/	2500	2000	251
NDG2-400	3、4	1-2	400	1000	12	380/690	400/200	400/375	100	50	/	4000	3200	251
NDG2-630	3、4	3	800	1000	12	400/415/690	630/333	630/560	100	50	50	6300	5040	540
NDG2-800	3、4	3	800	1000	12	400/415/690	800/425	800/710	100	50	50	8000	6040	540
NDG2-1000	3	4	1250	1000	12	400/415/690	1000/515	1000/910	100	50	50	10000	8000	830
NDG2-1250	3	4	1250	1000	12	400/415/690	1250/660	1250/1110	100	50	50	12500	10000	830

NDGR2 Series Disconnecting Switch Main Performance Parameters

Specifications	Carrying capacity				Connection				Others		
	Environment temperature i40 ℃ (A)	Environment temperature 45 ℃ (A)	Environment temperature 50 ℃ (A)	Environment temperature 55 ℃ (A)	Minimum copper cable cross section mm²	Maximum copper cable cross section mm²	Maximum copper cable width mm	Terminal tightening torque Nm	Neutral pole current A/A	Auxiliary switch 380V AC-15A	Auxiliary switch 220V DC-13A
NDG2-63	63	63	63	63	35	20x5	20	7-10	63/63	4	0.4
NDG2-125	125	125	125	125	70	20x5	20	7-10	125/125	4	0.4
NDG2-160	160	150	145	140	120	40x16	20	15-22	160/160	4	0.4
NDG2-250	250	250	250	240	150	40x16	25	15-22	250/250	4	0.4
NDG2-400	400	380	360	340	240	40x16	25	35-45	400/400	4	0.4
NDG2-630	630	610	590	570	2x150	40x16	40	35-45	630/630	6	0.6
NDG2-800	800	770	740	710	2x240	70x14	40	35-45	800/800	6	0.6
NDG2-1000	1000	970	940	910	2x240	70x14	70	35-45	1000/1000	6	0.6
NDG2-1250	1250	1200	1150	1100	/	70x14	70	35-45	1250/1000	6	0.6

NDG3-125~160 Series Disconnecting Switch Quick Selection Table

NDG3-125/3 A Z K S

ND	G	3	125	3	A	Z	K	S
Enterprise code: Nader	Product code: Disconnecting switch	Design serial number:3	Rated current(A): 125,160	Number of poles: 125:3,4,6,8 160:3,4	Pole type: A : neutral pole with the contact parallel breaking at the same time B : with straight through type neutral pole No code:no neutral pole	Installation method: Z-din rail and screw installation M-cabinet door installation (no operation inside the cabinet)	Handle type: D:short handle in cabinet (only applicable to NDG3-125) K:long handle in cabinet No code:no handle (fitting handle at the outside of the cabinet, additional order needed)	Derived code: S:interlock (manual dual power supply) L:interlocking

Note: The derivation code is only applicable to NDG3-125

NDG3-200~400 Series Disconnecting Switch Quick Selection Table

NDG3-200/4 A Z K

ND	G	3	200	4	A	Z	K
Enterprise code: Nader	Product code: Disconnecting switch	Design serial number:3	Rated current (A):200/250/315/400	Number of poles: refer to note	Pole type: A: neutral pole with the contact prarallel breaking at the same time B: with straight type neutral pole W:wide phase spacing product No code: no neutral pole	Installation method: Z: front operation C: side operation	Handle type: P:handle and shaft shall be installed outside the cabinet (please refer to "specifications of common handle" for further orders) K:handle shall be installed in the cabinet

Note:
1. The type of side operating products and handle should be installed in the cabinet K. The products are limited to 03 and 04 pole
2. Type A or Type B products with neutral pole as the pole type are only limited to the 04 pole
3. Side operating products are only applicable to handle K in the cabinet

Number of poles:
03:3(the mechanism is at the left end of the switch)
13:3 (the mechanism is between the switch poles and is suitable for front operation)
04:4 (the mechanism is on the left end of the switch)
22:4 (the mechanism is between the switch poles, suitable for direct operation and DC product)

NDG3-125~400 Series Disconnecting Switch Main Performance Parameters

Specifications	Number of poles	Rated insulation voltage Ui(V)	Rated impulse withstand voltage Uimp(kV)	Rated working current（A）									Rated short-time withstand current Icw (kA)	Rated short-circuit making capacity Icm (kA)	Wiring capacity (mm2) (bare copper cable)	Installation method
NDG3-125	3、4、6、8	750	8	Application type	AC-21A AC-22A				AC-23A			DC-22A		2.5/1s	3.6	Main products:10-70 Auxiliary:0.75-2.5	Din rail and screw installation; Cabinet door installation
				Rated voltage	80/400/415V	500V	660/690V		380/400/415V	500V	660/690V	110V	250V				
				Rated current	25				90	70	50	125/2	80/4				
NDG3-160	3、4	1000	12	Application type	AC-21A AC-22A			AC-21B	AC-23A			DC-21A	DC-22A	4/1s	12	Main products:10-70 Auxiliary:0.75 to 2.5	Din rail and screw installation; Cabinet door installation
				Rated voltage	380/400/415V	500V	660/690V	1000V	380/400/415V	500V	660/690V	750V	500V				
				Rated current	160				135	125	80	160/4	160/3				
NDG3-250	3、4	1000	12	Application type	AC-23A							DC-21B		8/1s	30	Main products:120-150 Auxiliary:0.75 to 2.5	Baseboard installation
				Rated voltage	380/400/415V		500V			660/690V		500V	1000V				
				Rated current	250							250/3	250/4				
NDG3-400	3、4	1000	12	Application type	AC-23A							DC-21B		15/1s	50	Main products: 240(1piece)-150(2pieces) Auxiliary:0.75 to 2.5	Baseboard installation
				Rated voltage	380/400/415V		500V		660/690V		1000V	500V	1000V				
				Rated current	400							400/3	400/4				

NDG3-500~1250 Series Disconnecting Switch Quick Selection Table

NDG3-1250/4/Z

ND	G	3	1250	4	Z
Enterprise code: Nader	Product code: Disconnecting switch	Specifications:3	Specifications of Disconnecting switch: 500, 630,800, 1000,1250	Number of poles: 3,4	Current type: No code: Conventional product Z: DC photovoltaic products

Note: DC photovoltaic products need to order short connector MX1/G3-, please contact the local dealer.

NDG3-500~1250 Series Disconnecting Switch Main Performance Parameters

Specifications	Rated current In（A）	Conventional thermal current Ith（A）	Number of poles	Insulation voltage Ui（V）	Rated impulse withstand voltage Uimp（KV）	Rated working current Ie(A)								Rated short-time withstand current Icw (Ka 1s)	Rated short-circuit making capacity Icm (kA)	Section area of connecting copper busbar (mm2)	Installation method
						AC22B		AC23B		DC21B		DC22B					
						380/400/415V	660/690V	380/400/415V	660/690V	750V	1000V	750V	1000V				
NDG3	500	800	3、4	1000	12	500	400	400	315	500/3	500/4	/	/	AC:16 DC:10	AC:32 DC:17	2 pieces of 30* 5	M6 screw mounting
	630	800	3、4	1000	12	630	500	500	315	630/3	630/4	/	/	AC:16 DC:10	AC:32 DC:17	2 pieces of 40* 5	M6 screw mounting
	800	800	3、4	1000	12	800	500	/	/	800/3	800/4	/	/	AC:16 DC:10	AC:32 DC:17	2 pieces of 50* 5	M6 screw mounting
	1000	1250	3、4	1000	12	1000	800	800	500	/	/	1000/3	1000/4	AC:35 DC:10	AC:50 DC:17	2 pieces of 60* 5	M8 screw mounting
	1250	1250	3、4	1000	12	1250	800	1000	500	/	/	1250/3	1250/4	AC:50 DC:10	AC:50 DC:17	2 pieces of 80* 5	M8 screw mounting

NDG3-125 Accessory Type

Serial number	Name	Note
1	Auxiliary switch NGF1-01	It shall be installed on both sides of the product, with a maximum of 2 pieces on each side. The cabinet door shall be installed on the same side of N-phase, and the auxiliary switch shall be connected to the wire before it is installed on the product, and the maximum wiring shall not exceed 1mm2
2	Auxiliary switch NGF1-10	It shall be installed on both sides of the product, with a maximum of 2 pieces on each side. The cabinet door shall be installed on the same side of N-phase, and the auxiliary switch shall be connected to the wire before it is installed on the product, and the maximum wiring shall not exceed 1mm2
3	Auxiliary switch NGF1-11	It shall be installed on both sides of the product, with 1 piece on each side and not on the side of N-phase; the auxiliary switch shall be connected to the wire before it is installed on the product, and the maximum wiring shall not exceed 1mm2
4	Terminal coverN GZ1-125/3	Installed at both ends of the incoming and outgoing line of the main switch
5	Terminal coverN GZ1-125/1	Installed at both ends of the incoming and outgoing line of N-pole product
6	Cabinet handle NGSB1-B	Cabinet door installation product is used, 1 for each. Before installation, the installation hole shall be selected and the knock-down hole shall be opened
7	Cabinet handle NGSB1-06C	Axis length optional 130, 150, 161, 210, 290

NDG3-160 Accessory Type

Serial number	Name	Note
1	Auxiliary switchNGF2-01	It must be used in conjunction with NGA1-2/160 and installed on the surface of the product, with a maximum of 2 pieces on each side. The handle inside the cabinet cannot be used
2	Auxiliary switchNGF2-10	It must be used in conjunction with NGA1-2/160 and installed on the surface of the product, with a maximum of 2 pieces on each side. The handle inside the cabinet cannot be used
3	Auxiliary switchNGF1-11	It must be used in conjunction with NGA1-1/160 and installed on the surface of the product with a maximum of 2 pieces on each side. This auxiliary cannot be used for screw installation
4	Terminal cover NGZ1-160/1	It is installed at both ends of the product's incoming and outgoing line and cannot be used at the same time with the secondary wiring termin
5	NDG3-160(short) short connector	Installed between adjacent poles
6	NDG3-160(long) short connector	Installed between the poles of the spacer operating mechanism
7	Secondary wiring terminalNGXTG1-160	Installed at both ends of products,each pole and do not use with the terminal cover at the same time
8	Mounting baseNGA1-1/160	Installed on both sides of the product and used together with NGF1-11
9	Cabinet handleNGSB1-06C	130, 150, 161, 210, 290 are optional for shaft length (only 130 for cabinet door)
10	Mounting baseNGA1-2/160	Installed at the top of the product, and used along with NGF2-01, NGF-02, meanwhile the cabinet handle is not optional

NDG3-250 Accessory Type

Serial No.	Name	Note
1	Auxiliary switch NGF1-01	Installed under the cover of the mechanism, up to 1 up and down, and the auxiliary switch should be connected to the cable before installing on the product
2	Auxiliary switch NGF1-10	Installed under the cover of the mechanism, up to 1 up and down, and the auxiliary switch should be connected to the cable before installing on the product
3	Auxiliary switch NGF1-11	Must be used in conjunction with NGA1-1/250, and installed on both sides of the product, up to 2 on each side
4	Terminal cover NGZ1-250/1s	It is installed at both ends of the product's incoming and outgoing line
5	Terminal cover NGZ1-250/1L	It is installed at both ends of the product's incoming and outgoing line
6	NDG3-250 short bonding bar	Installed between adjacent poles
7	NDG3-250 long bonding bar	Installed between the poles of the spacer operating mechanism
8	Mounting baseNGA1-1/250	Installed on both sides of the product and used together with NGF1-11
9	Cabinet handleNGSB1-06C	130,150,161,210,290 are optional for shaft length

NDG3-400 Accessory Type

Serial No.	Name	Note
1	Auxiliary switch NGF1-01	Installed under the cover of the mechanism, up to 2 up and down, and the auxiliary switch should be connected to the cable before installing on the product
2	Auxiliary switch NGF1-10	Installed under the cover of the mechanism, up to 2 up and down, and the auxiliary switch should be connected to the cable before installing on the product
3	Auxiliary switch NGF1-11	Must be used in conjunction with NGA1-1/250, and installed on both sides of the product, up to 2 on each side
4	Terminal cover NGZ1-400/1s	It is installed at both ends of the product's incoming and outgoing line
5	Terminal cover NGZ1-400/1L	It is installed at both ends of the product's incoming and outgoing line
6	NDG3-400 short bonding bar	Installed between adjacent poles
7	NDG3-400 long bonding bar	Installed between the poles of the spacer operating mechanism
8	Mounting baseNGA1-1/250	Installed on both sides of the product and used together with NGF1-11
9	Cabinet handleNGSB1-10J	166,185,250,280,325,395,465,535 are optional for shaft length

NDG3-500, NDG3-630, NDG3-800 Accessory Type

Serial No.	Name	Note
1	Cabinet handle	Installed on the cabinet door, one piece for each; 200mm, 400mm are optional for shaft length
2	Auxiliary switch	Installed on the front left side of main switch, up to 2 pieces
3	Short connector	Installed on the wiring board of the main switch

NDG3-1000, NDG3-1250 Accessory Type

Serial No.	Name	Note
1	Cabinet handle	Installed on the cabinet door, one piece for each; 200mm, 400mm are optional for shaft length
2	Auxiliary switch	Installed on the front left side of main switch, up to 2 pieces
3	Short connector	Installed on the wiring board of the main switch

NDB1Series Isolating Switch Quick Selection Table

NDB1-63 C 32/4

ND	B	1	63	C	32	4
Enterprise code: Nader	Product code: Miniature circuit breaker	Design serial number: 1	Frame size level: 63A	Tripping characteristics: B: 3In~5In, C: 5In~10In, D:10In~14In	Rated working current 1:1A,2:2A, 3:3A,4:4A, 5:5A,6:6A, 10:10A, 16:16A, 20:20A, 25:25A, 32:32A, 40:40A, 50:50A, 63:63A	Number of poles: 1P,1PN, 2P,3P, 3PN,4P

NDB1-63 Series Miniature Circuit Breaker Main Performance Parameters

Number of poles (P)	Rated working voltage (V)	Frequency (Hz)	Rated insulation voltage (V)	Rated impulse withstand voltage (kV)	Rated working current (A)	Rated short circuit breaking capacity (kA)	Instantaneous trippig characteristics	Mechanical life (times)	Electrical life (times)	Wiring capacity (mm^2)	Maximum wiring torque (N. m)
1PN、2P、3P、3PN、4P	AC230/240(1P、1PN)、AC400/415 (2P、3P、3PN、4P)	50/60	500	6	1、2、3、4、5、6、10、16、20、25、32、40、50、63	6	B: 3In~5In、C: 5In~10In、D: 10In~14In	20000	10000	1~25	3.0

NDG1 Series Disconnecting Switch Quick Selection Table

NDG1-125/32/2 OF1

ND	G	1	125	32	2	OF1
Enterprise code: Nader	Product code: Disconnecting switch	Design serial number: 1	Frame size level: 125	Rated current (A) : 16、20、25、32、40、50、63、80、100、125	Number of poles: 1、2、3、4	Electrical accessories available: OF1: auxiliary contact

For example:
Product model: NDG1-125/32/2+OF1
It signifies: NDG1 series disconnecting switch, rated current 32A, 2-pole, with auxiliary contact

NDG1-100+NCJ1 Series Disconnecting Switch + Conversion Operation Accessories Quick Selection Table

NDG1-100/32/3 NCJ1-3G1Z

ND	G	1	100	32	3	NCJ1-3G1Z
Enterprise code: Nader	Product code: Isolating switch	Design serial number: 1	Frame size level: 100	Rated current (A) : 32, 63, 100	Number of poles: 3, 4	Accessory: NCJ1-3G1Z Corresponding to 3-pole NCJ1-4G1Z Corresponding to 4-pole

Description:
The handle has 3 positions: common power supply making position, standby power supply making position, dual-tripping position.

For example:
Product model: NDG1-100 100A / A+NCJ1-4G1Z
Represent: two sets of NDG1-100 100A disconnecting switches plus one set of NCJ1-4G1Zs, forming a manual transfer switch.

NDM1-63 Series Miniature Circuit Breaker Quick Selection Table

NDM1-63C32/1+NGQ1A+OF

ND → Enterprise code: Nader

M → Product code: Miniature circuit breaker

1 → Design model: 1

63 → Frame size level: 63

C → Tripping characteristics:
Type B: 3In~5In
Type C: 5In~10In
Type D: 10In~14In

32 → Rated current (A) : 1,2,3,4, 6,10,16, 20,25,32, 40,50,63

1 → Number of poles: 1,2,3,4

NGQ1A → Accessories such as overvoltage, undervoltage can be equipped (Please refer to the attachment for details)

OF → Electrical accessories available:
OF: auxiliary contact
SD: alarm contact
MX+OF: shunt release

Description:

1. 50A and 63A products are not available for the NDM1-63 series Type D product.
2. The breaking capacity of Type B and C products in the NDM1-63 series with the rated current of 1-40A is 6kA, while that of 50A, 63A and Type D product is 4.5kA.
3. Only one type of protection accessories can be assembled on the right side; see the accessory for the specific model and parameters.
4. A maximum of 3 OFs or SDs can be assembled on the left side of each product with the recommended number of assembly no more than 2.
5. If the shunt release accessory is assembled on the right side, the residual current protection accessory or overvoltage/undervoltage accessory can't be assembled.
6. The NDM1-63 product has passed the 3C certification.

For example:

Product model: NDM1-63 C16/2+NGQ1A+SD

Represent: NDM1-63 series miniature circuit breaker, 6kA breaking, Type C curve, rated current of 16A, assembled with the overvoltage/undervoltage protection accessory, provided with the auxiliary and alarm contacts.

NDM1-125 Series Miniature Circuit Breaker Quick Selection Table

NDM1-125C63/1+NGQ1A+OF

ND → Enterprise code: Nader

M → Product code: Miniature circuit breaker

1 → Design model: 1

125 → Frame size level: 125

C → Tripping characteristics:
C：
8In（1±20%）
D：
12In（1±20%）

63 → Rated current (A)：
50, 63, 80, 100, 125

1 → Number of poles:
1, 2, 3, 4

NGQ1A → Accessories such overvoltage, undervoltage can be equipped (Please refer to the attachment for details)

OF → Electrical accessories available:
OF: auxiliary contact
SD: alarm contact
MX+OF: shunt release

Description:
1. The NDM1-125 circuit breaker has an isolating function with the practical indication of the contact position.
2. Only one type of protection accessories can be assembled on the right side; see the accessory for the specific model and parameters.
3. A maximum of 3 OFs or SDs can be assembled on the left side of each product with the recommended number of assembly no more than 2.
4. If the shunt release accessory is assembled on the right side, the residual current protection accessory or overvoltage/undervoltage protection accessory can't be assembled.
5. The NDM1-125 product has passed the 3C, CE, TUV, UL1077 certification.

For example:
Product model: NDM1-125 C80/4+OF+SD
Represent: NDM1-125 series miniature circuit breaker, 10kA breaking, Type C curve, rated current of 80A, provided with the auxiliary and alarm contacts.

NDM1-32, 50, 100 Series RCBO Quick Selection Table

NDM1L-50/C16GQ3P

ND → Enterprise code: Nader

M → Product code: Miniature circuit breaker

1 → Design model: 1

L → Electric leakage protection

50 → Frame size level: 32, 50, 100

C → Tripping characteristics:
32 A, 50 A:
B: 3In~5In
C: 5In~10In
D: 10In~14In
100A:
C:
8In（1±20%）
D:
12In（1±20%）

16 → Rated current (A):
32A: 1, 2, 3, 4, 5, 6, 10, 16, 20, 25, 32
50A: 6, 10, 16, 20, 25, 32, 40, 50 ((50 not available for Type D)
100A: 50, 63, 80, 100

GQ → Over-/under-voltage code: GQ

3P → Number of poles: 1P+N, 2P, 3P, 3P+N, 4P

Description:

1. The residual action current 32A and 50A frame sizes include 30mA, 50mA, 100mA, 300mA and other specifications while the 100A frame size includes the 100mA specifications.
2. The body of NDM1L-32 and NDM1L-50 products is the NDM1-63 product.
3. The body of NDM1L-100 product is the NDM1-125 product.
4. Type B tripping curve is not available for the NDM1L-100 product.
5. NDM1L-50 and NDM1L-100 products provide the optional overvoltage/undervoltage protection function; when this function is selected, the 3P product is not available.

For example:

Product model: NDM1-50 C40 GQ/4 30mA

Represent: NDM1L-50 series residual current action circuit breaker, 6kA breaking, Type C curve, rated current of 40A, 4P with the current leakage and overvoltage/undervoltage protection function, residual current of 30mA.

NDB1-40 Series (Phase Line + Neutral Line) Miniature Circuit Breaker Quick Selection Table

NDB1-40 C16

ND	B	1	40	C	16	OF1
Enterprise code: Nader	Product code: Miniature circuit breaker	Design model: 1	Frame size level: 40	Tripping characteristics: Type B: 3In~5In Type C: 5In~10In Type D: 10In~14In	Rated current (A) : 6, 10, 16, 20, 25, 32, 40	Electrical accessories available: OF:1 auxiliary contact SD1: alarm contact MX+OF1: shunt release

Description:
1. NDB1-40 series products are 1P+N combination, Type B, Type C and Type D tripping curves, and the breaking capacity of whole series of products is 6kA
2. NDB1-40 series products can be assembled with accessory OF1, SD1, MX+OF1
3. The width of NDB1-40 series products is 18mm

For example:
Product model: NDB1-40C16
Represent: NDB1-40C series miniature circuit breaker, 6kA breaking, Type C curve, rated current 16A

NDB1-125 Series Miniature Circuit Breaker Quick Selection Table

NDB1-125 C63 OF

ND	B	1	125	C	63	OF
Enterprise code: Nader	Product code: Miniature circuit breaker	Design model: 1	Frame size level: 125	Tripping characteristics: Type C: 5In~10In Type D: 10In~14In	Rated current (A) : 50, 63, 80, 100, 125	Electrical accessories available: OF: auxiliary contact SD: alarm contact MX+OF: shunt release

Description:
1. The NDB1-125 series product has two types of tripping curves, Type C and D.
2. The NDB1-125 product has passed the GB10963.1 and GB14048.2 certification with the rated short-circuit capacity of the whole series products Icn=10kA, and the operating short-circuit capacity Ics=7.5kA.
3. A maximum of 3 OFs or SDs can be assembled on the left side of each product with the recommended number of assembly no more than 2.

For example:
Product model: NDB1-125 C80
Represent: NDB1-125 series miniature circuit breaker, 10kA rated short-circuit breaking capacity, Type C curve, rated current of 80A.

NDB2-63 Series Miniature Circuit Breaker Quick Selection Table

NDB2-63 C63/4 NGQ2A OF2

ND
Enterprise code:
Nader

B
Product code:
Miniature circuit breaker

2
Design model: 2

63
Frame size level: 63

C
Tripping characteristics:
B: 3In~5In
C: 5In~10In
D: 10In~14In

63
Rated current（A）:
1, 2, 3, 4, 5, 6, 8, 10, 12, 13, 16, 20, 25, 32, 40, 50, 63

4
Number of poles:
1, 2, 3, 4

NGQ2A
Accessories such as overvoltage, undervoltage can be equipped (Please refer to the attachment for details)

OF2
Electrical accessories available:
OF2: auxiliary contact
SD2: alarm contact
MX+OF2: shunt release
FF2:
Dual auxiliary contact
FS2:
Auxiliary and alarm contact group
Tm2:
Remote control accessory
ATm:
Reclosing control accessory
Busbar: NDH1, NDH2

Description:
The NDB2-63 series has passed the IEC60898-1 (GB10963.1) UL1077 certification with the practical indication function of the contact position.
The breaking capacity of the whole NDB2-63 series is 10kA.
Only one type of protection accessory can be assembled; see the attachment for the specific model and parameters.
A maximum of 3 OF2s or SD2s can be assembled for each product.
If the accessory ATM is used, it shall be used together with TM2 and SD2, but TM2 can be used separately.

For example:
Product model: NDB2-63 C16/2+NGQ2A+OF2+SD2
Represent: NDB2-63 series miniature circuit breaker, 10kA breaking, Type C curve, rated current 16A, 2-pole over-/under-voltage protection accessory (voltage loss will not lead to voltage loss non-tripping), with auxiliary and alarm contacts

NDB2 Series Product Quick Selection Table

Product type	Product name	Rated voltage (V)	Breaking capacity Icu/Icn (kA)	Number of poles	Rated current (A)	Tripping curve	Product standard	Residual current operation type	Rated residual operating current (mA)	Overvoltage protection (V)	Undervoltage protection (V)	Modulus (multiple of 9mm)
Residual current operation circuit breaker	NDB2-63	AC230/240/400/415/（1P） AC400/415（2P、3P、4P） DC80（1P、2P）	10	1P 2P 3P 4P	1，2，3，4，5，6，8，10，12，13，16，20，25，32，40，50，63	B，C，D	IEC60898-1 GB10963.1 UL1077					2，4，6，8
	NDB2T-63	AC230/240（1P） AC400/415（2P、3P、4P） DC60/80（1P） DC80/125（2P）	10	1P 2P 3P 4P	1，1.2，1.5，1.6，2，3，4，5，6，7，8，10，12，13，15，16，20，25，30，32，40，50，60，63	B，C，D	IEC60947-2 GB14048.2 UL489 (Optional)					2，4，6，8
	NDB2-63K	AC230	6	1P+N	1，2，4，6，10，16，20，25，32，40，50，63	C	IEC60898-1 GB10963.1					4
	NDB2-40	AC230/240	6	1P+N	2，4，6，10，16，20，25，32，40 (2A not available for Type B)	B，C	IEC60898-1 GB10963.1 UL1077					2
	NDB2Z-63	DC125/220/250（1P） DC250/440/500（2P） DC750（3P） DC1000（4P）	10（DC125 /220 / 250/440/500） 5（DC750,DC1000）	1P 2P 3P 4P	1，1.2，1.5，1.6，2，3，4，5，6，7，8，10，12，13，15，16，20，25，30，32，35，40，50，63	B（6In±20%） C（12In±20%）	GB 14048.2 UL1077					2，4，6，8
	NDB2ZB-40	DC250（2P）	10	2P	16，20，25，32，40	Three segment protection	GB14048.2-2008					5
	NDB2LE-63	AC230/240（1P+N，2P） AC380/400/415 （3P，3P+N，4P）	10	1P+N， 2P，3P， 3P+N，4P	1，2，4，6，10，16，20，25，32，40，50，63	B，C，D	IEC61009-1 GB16917.1	AC，electronic type	30，50， 100，300			6，8，13，15，15
Overvoltage/ Undervoltage protection Accessory	NGQ2	AC230	/	1P 2P 3P 4P						AC280±12	AC170±7	2
	NGQ2A	AC230	/	1P 2P 3P 4P						AC280±12	AC170±7	2
	Tm2 Tm2GQ	AC230/DC220 AC110/DC110 DC48 DC24 DC12	/	1P 2P 3P 4P						AC270±5	AC170±5	2 3
	JS1-11Y/B2-63											

Nader 良信电器

NDB1LE(G)-40 Series Residual Leakage (with Overvoltage) Action Circuit Breaker (Phase Line+Neutral Wire) Quick Selection Table

NDB1LE(G)-40 C32

ND	B	1	LE(G)	40	C	32
Enterprise code: Nader	Product code: Miniature circuit breaker	Design model: 1	LE: electronic leakage protection G: optional overvoltage protection	Frame size level: 40	Tripping characteristics: Type B: 3In~5In Type C: 5In~10In Type D: 10In~14In	Rated current (A) : 6, 10, 16, 20, 25, 32, 40

Description:
1.1. The NDB1L(G)-40 series product adopts the 1P+N combination with Type C tripping curve and the breaking capacity of the whole series products of 6kA.
2. The NDB1L(G)-40 series product can't be assembled with accessories.
3. The width of the NDB1L(G)-40 series product is 36mm, equivalent to the width of the 2P NDM1-63.
4. The residual action current is 10mA and 30mA (10mA not available for Type G)
5. Overvoltage action value: 280V±12V, breaking time: 0.1s.

For example:

Product model: NDB1LE (G)-40 C16

Represent: NDB1LG-40 C16 series miniature circuit breaker, 6kA breaking, Type C curve, rated current of 16A, with the current leakage and overvoltage protection.

NDB1LE-40 Series Electronic RCBO Quick Selection Table

NDB2LE-63 C25/2 NGQ2A OF2

ND	B	2	L	E	63
Enterprise code: Nader	Product code: Miniature circuit breaker	Design model: 2	Leakage function code	Electronic release	Frame size level: 63

C	25	2	NGQ2A	OF2
Tripping characteristics: Type B: 3In~5In Type C: 5In~10In Type D: 10In~14In	Rated current (A) : 1, 2, 4, 6, 10, 16, 20, 25, 32, 40, 50, 63	Number of poles: 1P+N, 2P, 3P, 3P+N, 4P	Protection accessory available: Over-/under-voltage protection accessories(see the specific attachment for details	Electrical accessory available: OF2: auxiliary contact SD2: alarm contact MX + OF2: Shunt release FF2: Dual auxiliary contact FS2: Auxiliary and alarm contact group Tm2: Remote control accessory ATm: Reclosing control accessory Busbar: NDH1, NDH2

Description:
The residual action current of the NDB2LE series is 30mA, 50mA, 100mA and 300mA that can be customized.
A maximum of 3 OF2s or SD2s and 1 NGQ2A can be assembled for each product.
If the accessory ATM is used, it shall be used together with TM2 and SD2, but TM2 can be used separately.

For example:
Product model: NDB2LE-63 C40/4P
Represent: NDB2LE-63 series electronic RCBO, 10kA breaking, Type C curve, rated current of 40A, 4P, leakage current of 30mA.

Self-reset Over-/Under-voltage Protector Quick Selection Table

NDGQ1Z-32

ND	G	Q	1	Z	32
Enterprise code: Nader	Overvoltage protection	Undervoltage protection	Design serial number: 1	Automatic reset function	Rated current (A) : 32, 40, 50, 63, 80

Description:

NDGQ1Z is installed vertically in series with the load circuit with the upper as the inlet wire and the lower as the outlet wire end.

The rated current of 220V or 230V shall be stated when ordering. Operating value parameter table:

For example:

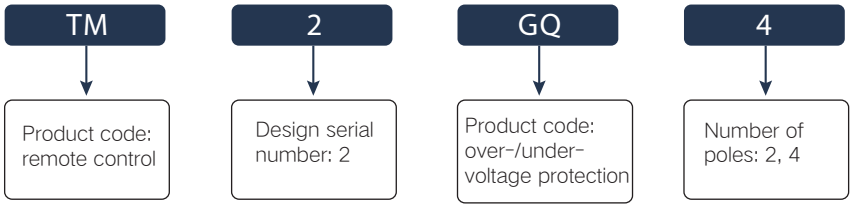
Product model: NDGQ1Z-63 220V

Represent: Self-reset over-/under-voltage protector with rated current of 63A and rated voltage of 220V.

Model	Rated voltage (V)	Overvoltage		Under-voltage		Overvoltage operating time	Undervoltage operating time	Undervoltage reset time
		Operating value	Recovery value	Operating value	Recovery value			
NDGQ1Z	220	270V±5V	250V±5V	170V±5V	190V±5V	0.05s≤t≤0.1s	0.05s≤t≤0.1s	60s±10V
NDGQ1Z	**230**	280V±5V	250V±5V	170V±5V	190V±5V	0.05s≤t≤0.1s	0.05s≤t≤0.1s	60s±10V

TM2GQ Series Over-/Under-Voltage Automatic Reclosing Device Quick Selection Table

TM2GQ/4



Description:

The Tm2GQ overvoltage/undervoltage automatic reclosing accessory (Tm2GQ for short) belongs to the NDB2 accessory, which is used in the circuit with the control voltage of AC230V, AC400V (230V relative to the neutral wire voltage) and the frequency of 50/60Hz for the automatic detection of the line voltage, automatic disconnection of the fault line in case of the line overvoltage or undervoltage, manual operation of the circuit breaker via the handle after the voltage restores to the normal range and padlock opening state locking function of the circuit breaker via the accessory, thus ensuring the on-site safe operation.

For example:

Product model: NDB2-63 C20/4+TM2GQ-4P

NDB2-63 series miniature circuit breaker, 10kA breaking, Type C curve, rated current of 20A, 4P, for the overvoltage/undervoltage automatic reclosing control.

NDB3-30, 50, 100 Series Circuit Breaker For Equipment

Rated current 0.1A--250A (multi-pole in parallel)

◆ Rated working voltage: DC80V, AC230/400V, DC125V, AC125/250V, AC120/240V

◆ Mechanical and electrical life: 10000 times (electrical life: 6,000 times)

◆ Power frequency withstand voltage: main circuit 3000V, auxiliary circuit 1000V

◆ Certification: CCC, CE, TUV, UL1077, UL489A, UL489, KC, CRCC

◆ Parameters of auxiliary contact/intermediate trigger alarm contact: AC250V 5A

◆ Remote control (RB) product technical parameters:

Description:

The wiring mode can be selected as follows: welding type/connecting piece type wiring, insertion type binding post wiring, screw type wiring, top flip lug screw type wiring, screw type wiring, flip lug screw type wiring.

Please refer to the full version of the selection manual for more details

NDB5 Series Circuit Breaker For Equipment

- Standards: IEC60934, EN60934, IEC60947-2, EN60947-2, GB17701, GB14048.2, UL1077, UL489A;
- Rated working voltage: DC80V, AC230/400V, AC250V, AC480/277V;
- Frequency: 50/60hz;
- Mechanical and electrical life: 10000 times (electrical life: 6,000 times);
- Certification: CCC, UL1077, UL489A, TUV, CE;
- Wiring capacity: 0.5 ~ 25mm^2, two-pole parallel: 35mm^2 and below, three-pole parallel: 70mm^2 and below;

Rated current: 0.5A -- 150A (multi-pole in parallel)

Main Parameters

Product type	1P		1N	2P		3P	3N	2PU	3PU
Rated voltage (V)	AC230 AC250	DC80	AC230 AC250	AC230/400 AC480/277	DC80	AC230/400 AC480/277		DC80	
Rated current (A)	0.5, 0.6, 0.7, 0.8, 0.9, 1, 1.5, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7, 7.5, 8, 8.5, 9, 9.5, 10, 12, 15, 16, 20, 24, 25, 30, 32, 35, 40, 45, 50, 55, 60, 63		0.5, 0.6, 0.7, 0.8, 0.9, 1, 1.5, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7, 7.5, 8, 8.5, 9, 9.5, 10, 12, 15, 16, 20, 24, 25, 30, 32, 35, 40, 45, 50					20, 30, 40, 50, 60, 63, 70, 80, 90, 100	105, 110, 120, 125, 135, 150
Installation method	35mm standard guide rail, miniature guide rail								
Releasing curve	J2, J4, J6	Z2, Z4, Z6	Z2, Z4, Z6	Z2, Z4, Z6	Z2, Z4, Z6	Z2, Z4, Z6		Z2, Z4, Z6	

NDU1 (10kA-65kA) Series Surge Protective Device Quick Selection Table

NDU1-65/255/1/S

ND	U	1	65	255	1	S
Enterprise code: Nader	Product code: Surge Protective device	Design serial number: 1	Maximum discharge current: 10kA、20kA、40kA、65kA	Maximum continuous working voltage: Uc：include 255V、275V、320V、385V、440V、661W	Number of poles: 1P , 1P+N , 2P , 3P , 3P+N , 4P	Remote communication Blank: without Remote communication function S: with Remote communication function NPE: N-PE poles products H: replaceable module

NDU1 (80kA-120kA) Series Surge Protective Device Quick Selection Table

NDU1-80/275/1/S

ND	U	1	80	275	1	S
Enterprise code: Nader	Product code: Surge Protective device	Design serial number: 1	Maximum discharge current: 80kA、100kA、120kA	Maximum continuous working voltage: Uc：275V、440V	Number of poles: 1P , 1PN , 2P , 3P , 3PN , 4P	Remote communication Blank: without remote communication function

NDU1 (10kA-65kA) Series Surge Protective Device Main Parameters

Model	Specifications	Maximum continuous working voltage Uc（V）	Frequency（Hz）	Maximum discharge current Imax（8/20us）（kA）	Nominal discharge current In（8/20us）（kA）	Voltage protection level Up（kV）	Environment temperature（℃）	Response time（ns）	Protection grade	Working parameters of remote communication contact (maximum)	Section of the connecting wire（mm²）	Section of the connecting wire
NDU1-10	NDU1-10/275	275	50/60	10	5	≤1.0	-40 ~ +85	≤25	IP 20	1.5A 250VAC	SPD connection line: BVR-16; Ground wire: BVR-25	Type test report of Beijing Lightning Protection Equipment Test Center
	NDU1-10/320	320				≤1.2						
	NDU1-10/385	385				≤1.35						
	NDU1-10/NPE	255				≤1.2						
NDU1-20	NDU1-20/275	275	50/60	20	10	≤1.1	-40 ~ +85	≤25	IP 20	1.5A 250VAC	SPD connection line: BVR-16; Ground wire: BVR-25	Type test report of Beijing Lightning Protection Equipment Test Center
	NDU1-20/320	320				≤1.2						
	NDU1-20/385	385				≤1.35						
	NDU1-20/440	440				≤1.8						
	NDU1-20/NPE	255				≤1.5						
NDU1-40	NDU1-40/275	275	50/60	40	20	≤1.3	-40 ~ +85	≤25	IP 20	1.5A 250VAC	SPD connection line: BVR-16; Ground wire: BVR-25	Type test report of Beijing Lightning Protection Equipment Test Center
	NDU1-40/320	320				≤1.5						
	NDU1-40/385	385				≤1.8						
	NDU1-40/440	440				≤2.2						
	NDU1-40/550	550				≤2.8						
	NDU1-40/NPE	255				≤1.5						
NDU1-65	NDU1-65/275	275	50/60	65	30	≤1.3	-40 ~ +85	≤25	IP 20	1.5A 250VAC	SPD connection line: BVR-16; Ground wire: BVR-25	Type test report of Beijing Lightning Protection Equipment Test Center
	NDU1-65/320	320				≤1.8						
	NDU1-65/385	385				≤2						
	NDU1-65/440	440				≤2.5						
	NDU1-65/550	550				≤3						
	NDU1-65/NPE	255				≤1.5						

NDU1-I (15kA-120kA) Series Surge Protective Device Quick Selection Table

NDU1-I/15/320/1/S

ND → Enterprise code: Nader

U → Product code: Surge Protective device

1 → Design serial number: 1

I → Category I test (10/350ms)

15 → Impact current: 15kA、25KA、50kA

320 → Maximum continuous working voltage: Uc : 275V（Only 50kA）、320V（Only15kA）、385V

1 → Number of poles: 1P , 2P , 3P , 4P

S → Remote communication Blank:without remote communication function

Main Parameters of NDU1-I Series Surge Protective Device

Specifications	Rated working voltage Ue(VAC)	Maximum continuous working voltage Uc(VAC)	frequency Hz	Impact current Iimp(kA) 10/350μs	Quantity of electric charge Q (As)	Nominal discharge current (kA) 8/20μs	Voltage protection level Up (kV)	Response time (ns)	Rated interrupting capacity (kA)	Protection grade	Protection mode	Cover material	Working environment	Port number	Over current protection function	Remote communication function	Wiring capability (mm²)	Number of poles	Backup protection	Product certification
NDU1-I15/320	220/380	320	50/60	15	7.5	50	2.2	≤25	Not applicable	IP20	L/N-PE	Flame retardant material PA6	Temperature: -40℃~+70℃; Relative humidity: <95%	One port	Non	Yes	4-25	1, 2, 3, 4	Fuse: 125AgL Circuit breaker: NDM3-125 125	Type test report of Beijing Lightning Protection Equipment Test Center
NDU1-I15/385	220/385	385	50/60	15	7.5	50	2.5	≤25	Not applicable	IP20	L/N-PE	Flame retardant material PA6	Temperature: -40℃~+70℃; Relative humidity: <95%	One port	Non	Yes	4-25	1, 2, 3, 4	Fuse: 125AgL Circuit breaker: NDM3-125 125	Type test report of Beijing Lightning Protection Equipment Test Center
NDU1-I50/275	220/380	275	50/60	50	25	50	2.5	≤100	3	IP20	L/N-PE	Flame retardant material PA6	Temperature: -40℃~+70℃; Relative humidity: <95%	One port	Non	Yes	4-35	1, 2, 3, 4	Fuse: 125AgL Circuit breaker: NDM3-125 125	Type test report of Beijing Lightning Protection Equipment Test Center
NDU1-I50/385	220/385	385	50/60	50	25	50	2.5	≤100	3	IP20	L/N-PE	Flame retardant material PA6	Temperature: -40℃~+70℃; Relative humidity: <95%	One port	Non	Yes	4-35	1, 2, 3, 4	Fuse: 125AgL Circuit breaker: NDM3-125 125	Type test report of Beijing Lightning Protection Equipment Test Center

SPD Selection

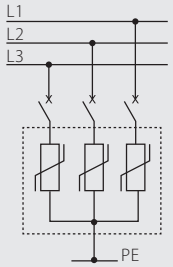
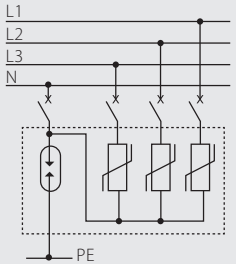
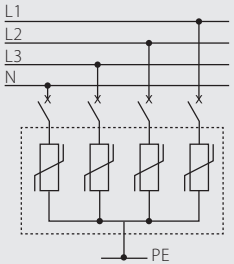
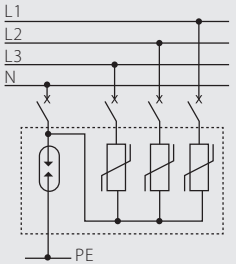
① Lightning Protection Level Chart

Lightning protection level	Building type
A	▪ Electronic information systems for important common facilities in cities, such as national computing centers, national communication hubs, special-level and Level I financial facilities, large and medium-sized airports, national and provincial radio and television centers, hub ports, train hub stations, and provincial-level water, electricity and heat centers ▪ Level I security and prevention units, such as the state cultural relics, CCTV monitoring of archives and the alarm system ▪ Level III hospital electronic medical equipment
B	▪ Electronic information systems for medium-sized computing centers, Level II financial facilities, medium-sized communication hubs, mobile communication base stations, large stadiums (pavilions), small airports, large ports and large railway stations ▪ Level II security units, such as provincial cultural relics, CCTV monitoring of archives and alarm system ▪ Radar station, microwave station electronic information system, highway monitoring and charging system ▪ Level II hospital electronic medical equipment ▪ Electronic information system for five-star and higher star hotels
C	▪ Electronic information system for level II financial facilities, small communication hubs ▪ Medium and large cable TV system ▪ Electronic information system for four star and below hotels
D	Electronic information equipment to be protected for general use other than Class A, B and C shown above

② Determine according to lightning protection grade of the building electronic information system and the lightning protection subdivision of the installation place.

Protection level	Junction of Zone LPZ0 and Zone LPZ1		Junction of Zone LPZ1 and Zone LPZ2	Boundary of the subsequent protection area
	Total distribution box		Distribution box	Distribution box of equipment room
	10/350ms	8/20ms	8/20ms	8/20ms
	Iimp(kA)	In(kA)	In(kA)	In(kA)
A	≥50	≥80	≥40	≥5
	NDU1-I 50		NDU1-80	NDU1-10
B	≥15	≥60	≥30	≥5
	NDU1-I 15	NDU1-120	NDU1-65	NDU1-10
C	≥15	≥50	≥20	≥3
	NDU1-I 15	NDU1-100	NDU1-40	
D	≥15	≥50	≥10	≥3
	NDU1-I 15	NDU1-100	NDU1-20	

③ Select the number of poles for the surge protective device based on the grounding system

TN-C		TN-S				TT	
Single phase 1P	Three phase 3P	Single phase 1P+N	Three phase 3P+N	Single phase 2P	Three phase 4P	Single phase 1P+N	Three phase 3P+N
Schematic diagram 							

*The schematic diagram takes the three-phase circuit as an example

NDC1(z)-09~95 Series AC Contactor Quick Selection Table

NDC1Z-09 10 DC 220

ND → Enterprise code: Nader

C → Product code: AC contactor

1 → Design serial number: 1

Z → Control loop operation type:
"Blank" represents AC operations
"Z" represents DC operation

09 → Rated current: current under the condition of AC-3 load and voltage of 415V

10 → Main circuit pole type:
Type of auxiliary head represented by Level III contactor:
"10" represents a pair of normally open auxiliary contacts;
"01" represents a pair of normally closed auxiliary contacts
Number of main contacts represented by Level IV contactor:
"40" represents four pairs of normally open main contacts;
"08" represents two normally open and two normally closed main contacts

DC → Coil type code: AC and DC

220 → Coil voltage specifications: For example, 220V represents the rated voltage of 220V

For example: NDC1Z-0910 DC 220V represents the three poles C contactor operated by 9A DC in the main loop; the control coil voltage is DC 220V, with a pair of normally open auxiliary contacts

Note: ”TH” could be chosen as additional function means that the product could be applicable in specially hot and humid environment.

NDC1(Z)-09~95 Series Main Performance Parameters

Model	Rated working current (Ie/A)				Control power (kW) AC-3						Conventional free air thermal current (Ith/A) (θ≤60℃)	Rated insulation voltage (Ui/V)	Rated working voltage (Ue/V)	short-time withstand current, starting from cold state with ambient temperature being around 40 ℃ or less, and no current lasting 30 min/A				Each pole impedance (Max, mΩ)	Auxiliary contact				Coil					Contact switching time (ms)	
	AC-3		AC-4																Conventional free air thermal current (Ith/A)	Electrical life/time		Minimum available load	Rated control voltage (Us/V)	Pull-in voltage range	Release voltage range	50Hz AC coil power (VA)			
	415V	690V	415V	690V	220/230V	380/400V	415V	440V	500V	600/690V				1s	10s	60s	10min			AC-15 (360VA)	AC-13 (33VA)					Starting	Suction	Close "C"	Open "O"
NDC1(Z)-09	9	6.6	3.5	1.5	2.2	4	4	4	5.5	5.5	25	1000	220/240、380/415、660/690	210	105	61	30	2.5	10	100×10^4		17 V 5mA	AC(50/60Hz); 24、36、48、110、220/230、380/400、415、DC: 24、48、110、220	65%Us ~120%Us (≤40℃); 80%Us ~110%Us (≤60℃); 100%Us (≤70℃)	25%Us ~60%Us (AC)、10%Us ~110%Us (DC)	65	8	12~20	4~12
NDC1(Z)-12	12	8.9	5	2	3	5.5	5.5	5.5	7.5	7.5	25	1000		210	105	61	30	2.5	10	100×10^4		17 V 5mA				65	8	12~20	4~12
NDC1(Z)-18	18	12	7.7	3.8	4	7.5	9	9	10	10	32	1000		240	145	84	40	2.5	10	100×10^4		17 V 5mA				65	8	12~20	4~12
NDC1(Z)-25	25	18	8.5	4.4	5.5	11	11	11	15	15	40	1000		380	240	120	50	2.5	10	100×10^4		17 V 5mA				100	11	12~20	4~12
NDC1(Z)-32	32	21	12	7.5	7.5	15	15	15	18.5	18.5	50	1000		430	260	138	60	2	10	80×10^4		17 V 5mA				100	11	15 ~24	5 ~15
NDC1(Z)-38	38	21.5	13.9	8	9	18.5	18.5	18.5	18.5	18.5	50	1000		430	310	150	60	2	10	80×10^4		17 V 5mA				100	11	15 ~24	5 ~15
NDC1(Z)-40	40	34	18.5	9	11	18.5	22	22	22	30	60	1000		720	320	165	72	2	10	80×10^4		17 V 5mA				200	20	20 ~25	8 ~12
NDC1(Z)-50	50	39	24	12	15	22	25	30	30	33	80	1000		810	400	208	84	2.5	10	60×10^4		17 V 5mA				200	20	20 ~25	8 ~12
NDC1(Z)-65	65	42	28	14	18.5	30	37	37	37	37	80	1000		900	520	260	110	2.5	10	60×10^4		17 V 5mA				200	20	20 ~25	8 ~12
NDC1(Z)-80	80	49	37	17.3	22	37	45	45	55	45	125	1000		900	640	320	135	2.5	10	60×10^4		17 V 5mA				200	20	20 ~35	6 ~20
NDC1(Z)-95	95	49	44	21.3	25	45	45	45	55	45	125	1000		1100	800	400	135	0.8	10	60×10^4		17 V 5mA				200	20	20 ~35	6 ~20

NDC1-115 ~ 2650 Series AC Contactor Quick Selection Table

NDC1-115 3 AC 220

ND	C	1	115	3	AC	220
Enterprise code: Nader	Product code: AC contactor	Design serial number: 1	Rated current: current under the condition of AC-3 load and the voltage of 415V	Number of poles: 3: 3P (default, no remarks required) 4: 4P	Coil type: AC: AC operating coil DC: DC operating coil AC/DC: wide voltage coil for AC/DC	Coil voltage specifications: 220V represents the rated voltage of 220V

Note:

a. NDC 1-115-800 series products represent LE value under AC-3 condition when the rated voltage is 415V
NDC1-1250-2650 series products represent the LE value of AC when the rated voltage is 690V

b. 1250A or above do not have 4P products

C. For accessories, select the NF1 auxiliary contact set, NS1 air delay auxiliary contact set and F1-11DS/C1 main pipe auxiliary contact set

NDC1-115 ~ 2650 Main Performance Parameters

Model	Rated working current (Ie /A)					Conventional free air thermal current (Ith/A)	Rated insulation voltage (Ui/V)	Rated working voltage (Ue/V)	Rated impulse withstand voltage (Uimp/kV	Rated making capacity	Rated breaking capacity	Mechanical life (times)	Maximum mechanical operation frequency (times/hour) (AC-3)	AC-1 electrical life (times)		Average impedance of each pole is LTH and 50Hz (mΩ)	Wiring capacity of main circuit (copper bar)		Impact resistance capacity 1/2 sine wave = 11ms		Anti-vibration performance 5...300Hz	
	AC-3		AC-4		AC-1																	
	415V	690V	415V	690V	690V									≤690V	Operating frequency (h^{-1})		Root number	Size	Contactor on (gn)	Contactor suction (gn)	Contactor on (gn)	Contactor suction (gn)
NDC1-115	115	86	52	49	200	200	1000	380/415 660/690	/	/	/	/	/	/	/	0.37	/	20x3	9	15	2	6
NDC1-150	150	107	60	57	250	250	1000	380/415 660/690	/	10xIe (AC-3)	8xIe (AC-3)	$300x10^4$	/	/	/	0.35	/	25x3	9	15	2	6
NDC1-185	185	118	79	69	275	275	1000	380/415 660/690	/	/	/	/	600	$40x10^4$	300	0.33	/	25x3	7	15	2	6
NDC1-225	225	135	85	82	315	315	1000	380/415 660/690	12	12xIe (AC-4)	10xIe (AC-4)	/	/	/	/	0.32	/	32x4	7	15	2	6
NDC1-265	265	170	105	98	350	350	1000	380/415 660/690	/	/	/	/	/	/	/	0.3	/	32x4	6	15	2	5
NDC1-330	330	225	117	107	500	500	1000	380/415 660/690	/	15xIe (AC-1)	15xIe (AC-1)	/	/	$35x10^4$	200	0.28	/	30x5	6	15	2	5
NDC1-400	400	305	138	135	600	600	1000	380/415 660/690	/	/	/	/	300	$30x10^4$	200	0.26	/	30x5	6	15	1.5	5
NDC1-500	500	335	147	145	750	750	1000	380/415 660/690	/	/	/	$100x10^4$	/	$20x10^4$	200	0.18	/	40x5	9	15	2	4
NDC1-630	630	460	188	170	900	900	1000	380/415 660/690	/	/	/	/	/	$20x10^4$	150	0.12	/	60x5	9	15	2	4
NDC1-800	800	470	195	175	1050	1050	1000	380/415 660/690	/	/	/	/	/	$20x10^4$	100	0.12	/	60x5	6	15	2	4
NDC1-1250	1250[3)]					1250[3)]	1000	380/415 660/690 1000	12	1.5×Ie (AC-1)	1.5×Ie (AC-1)	$80×10^4$	600	$15×10^4$	150 times per hour	0.12	2	500x2	6	15	2	4
NDC1-1350	1350					1350	1000	380/415 660/690 1000	12	/	/	$80×10^4$	600	$9×10^4$	150 times per hour	0.1	2	/	6	15	2	4
NDC1-1450(L)	1450					1450	1000	380/415 660/690 1000	12	1.5×Ie (AC-1)	1.5×Ie (AC-1)	$80×10^4$	600	$8×10^4$	150 times per hour	0.1	2	100x5	6	15	2	4
NDC1-1700(L)	1700					1700	1000	380/415 660/690 1000	12	1.5×Ie (AC-1)	1.5×Ie (AC-1)	$80×10^4$	600	$7×10^4$	150 times per hour	0.1	3	500x3	6	15	2	4
NDC1-2100(L)	2100					2100	1000	380/415 660/690 1000	12	/	/	$80×10^4$	600	$5×10^4$	150 times per hour	0.1	4	500x4	6	15	2	4
NDC1-2650(L)	2650[4)]					2650[4)]	1000	380/415 660/690 1000	12	5000	4000	$80×10^4$	600	$3×10^4$	150 times per hour	0.1	6	500x6	6	15	2	4

NDJ1(Z) Series Contactor Type Relay Quick Selection Table

NDJ1Z-11

ND	J	1	Z	11
Enterprise code: Nader	Product code: Contactor type relay	Design serial number: 1	Z: DC operation No code: AC operation	Number of contacts: See Note a

Note:
a: it is represented by two digits, the tens digit is the logarithm of the normally open contact and the ones digit is the logarithm of the normally closed contact. There are altogether three specifications 40, 31 and 22.
b: if you want to choose thermal-humidity type, you can add "TH" after the product model.

NDJ1 Series Main Performance Parameters

Model	Rated working current Ie（AC-3）A		Conventional heating current（Ith/ A）	Rated working voltage（Ue/ V）	Rated insulation voltage（Ui/ V）	Available minimum load	Rated operating frequency (h-1)	Coil					Insulation and voltage resistance（AC 50Hz）	Normally on and off switching time（ms）	Instantaneous overcurrent allowable value（A）			Wiring capacity of terminal（mm²）	
	AC-15（380V）	AC-13（220V）						Rated control voltage（Us/V）	Pull-in voltage	Release voltage	Starting power	Holding power/ power consumption			1s	500ms	100ms	1 or 2 soft wire	1 or 2 hard wire
NDJ1-40、31、22	0.95	0.15	10	AC380 DC220	690	17V 5mA	2400	AC：50/60Hz，24、48、110、220、380	0.85Uc～1.1Uc	0.20Uc～0.75Uc	65 VA	8 VA	1890V/ minute	4	100	120	180	2.5	4
NDJ1Z-40、31、22	0.95	0.15	10	AC380 DC220	690	17V 5mA	2400	DC：24、48、110、220	0.85Uc～1.1Uc	0.1Uc～0.75Uc	11W	11W	1890V/ minute	4	100	120	180	2.5	4

NDK1 Series Switching Capacitor Contactor Quick Selection Table

NDK1-2511TH

ND	K	1	25	11	TH
Enterprise code: Nader	Product code: Switching capacitor contactor	Design serial number: 1	Product code and the specifications	Number of contacts: See Note a	Blank: conventional product TH: thermal-humidity type

Note a:
The number of auxiliary heads of the three-pole contactor is represented by two digits, the tens digit is the logarithm of the normally open contact, and the ones digit is the logarithm of the normally closed contact.

NDK1 Series Main Performance Parameters

Model	Conventional free thermal current (Ith/A)	Rated working current Ie (AC-6b 400V) /A	Controllable capacity AC-6b Kvar		Surge suppression (multiples)	Electrical life (times)	Mechanical life (times)	Maximum operating frequency (h^{-1})	Rated insulation voltage (Ui / V)	Contactor specifications	Auxiliary contact				Current-limiting resistance input time (ms)	Coil				Rated control power supply voltage Us/V	Response time (ms)	Release time (ms)	Pull-in voltage	Release voltage	wiring capacity of terminal		
			200~240V	400~440V							Conventional free thermal current (Ith/A)	Electrical life (times) AC-15 (360VA)	Electrical life (times) DC-13 (33W)	Available minimum load		50Hz Starting	50Hz Suction and close	60Hz Starting	60Hz Suction and close						Number of wires	Soft wire mm^2	Hard wire mm^2
NDK1-25	32	18	6.7	12.5	20	30×10^4	300×10^4	200	690	NDK1-2520、2511、2502	10	12×10^4		24V 10mA	7~9	70	8	80	8	AC (50Hz、50Hz/60Hz): 24、48、110、220、380、400	12~22	4~12	85%~110%Us	30%~55%Us	1	4	6
																									2	4	6
NDK1-32	40	24	8.5	16.7	20	30×10^4	300×10^4	200	690	NDK1-3220、3211、3202	10	12×10^4		24V 10mA	7~9	110	11	115	11		15~24	5~9	85%~110%Us	30%~55%Us	1	4	6
																									2	4	6
NDK1-40	50	29	10	20	20	30×10^4	300×10^4	200	690	NDK1-4020、4011、4002	10	12×10^4		24V 10mA	7~9	110	11	115	11		15~24	5~9	85%~110%Us	30%~55%Us	1	6	10
																									2	6	10
NDK1-50	60	36	15	25	20	30×10^4	300×10^4	200	690	NDK1-5021、5012	10	12×10^4		24V 10mA	7~9	200	20	220	20		20~26	8~12	85%~110%Us	30%~60%Us	1	16	25
																									2	16	16
NDK1-60	80	48	20	33.3	20	30×10^4	300×10^4	200	690	NDK1-6021、6012	10	12×10^4		24V 10mA	7~9	200	20	220	20		20~26	8~12	85%~110%Us	30%~60%Us	1	16	25
																									2	16	16
NDK1-80	80	58	25	40	20	30×10^4	300×10^4	200	690	NDK1-8021、8012	10	12×10^4		24V 10mA	7~9	200	20	220	20		20~26	8~12	85%~110%Us	30%~60%Us	1	16	25
																									2	16	16
NDK1-125	125	87	40	60	20	30×10^4	300×10^4	200	690	NDK1-12521、12512	10	12×10^4		24V 10mA	7~9	200	20	220	20		20~35	6~20	85%~110%Us	30%~60%Us	1	50	50
																									2	25	25

Note:

1. Due to voltage fluctuations and harmonic waves, the circuit of the capacitor will generally work up to 1.3 times of the rated current of the capacitor;
2. The manufacturing error of capacitors is generally -5%-+10%, so the actual circuit current may reach I=1.3 ×1.1 ×In=1.43In, so this situation must be taken into account when selecting contactor.

Nader 良信电器

NDR1 Series Electronic Thermal Overload Relay Quick Selection Table

NDR1-38 A22/ auxiliary power supply voltage

ND	R	1	38	A	22	
Enterprise code: Nader	Product code: Electronic overload relay	Design serial number: 1	Product base type code: 38、95	Reset mode code: A: automatic reset M: manual reset	Setting current code	Auxiliary power supply voltage 50Hz/60Hz、110V、220V、380V

NDR1Series Main Performance Parameters

Parameter selection

Matching contactor	Model code	Code of setting current specifications Setting current regulation range (A)		(SCPD) RT16 fuse (A)	
				aM	gG
NDC1-09~38	38	11	0.1～0.16	0.25	2
		12	0.16～0.25	0.5	2
		13	0.25～0.40	1	2
		14	0.40～0.63	1	2
		15	0.63～1	2	4
		16	1～1.6	2	4
		17	1.6～2.5	4	6
		18	2.5～4	6	10
		21	4～6	8	16
		22	5.5～8	12	20
		23	7～10	12	20
		24	9～13	16	25
		25	12～18	20	35
		26	17～25	25	50
		27	23～32	40	63
		28	30～40	40	80
NDC1-40~95	95	31	23～32	40	63
		32	30～40	40	100
		33	37～50	63	100
		34	48～65	63	100
		35	55～70	80	125
		36	63～80	80	125
		37	80～95	100	160

NDR1 Series Main Performance

Specifications	Setting current range	Rated insulation voltage (Ui) / V	Rated working voltage (Ui) / V	Rated working system	Releasing grade	Protection feature			Reset			LED light status refers to	Wiring capacity			Tightening torque (N.m)	EMC radiation level		EMC anti-interference level			
					Comply with GB14048.4	Overload protection	Phase unbalance protection	Open-phase protection	Reset type	Reset time			1 soft wire with terminal	1 soft wire with terminal	1 hard wire with terminal		Conducted radiofrequency radiation	Radioactive radiation	Electrostatic discharge	Electromagnetic field radio frequency	Fast transient state	Surge transient state
													Minimum/maximum cross-sectional area (mm²)									
NDR1-38 series	0.1 ~ 40A	AC690	AC400、AC690	8-hour work schedule; Continuous work; Intermittent periodic duty type (operating frequency: 30 times /h, load factor: 40%)	10	In line withGB 14048.4 standard	When the three-phase current is greater than or equal to 0.4n and the phase unbalance rate is greater than or equal to 50%, the releasing occurs within 8s.	When the two-phase current is greater than or equal to 0.4n and the other phase current is 0, the releasing occurs within 8s.	Manual or automatic reset	Manual reset: press the reset button to reset immediately	Automatic reset: reset within 90s after fault releasing	LED lights are used to indicate the on-off of the control power supply (usually on when connected), as well as the overload warning of the main circuit (>105 s, LED flashing).	1.5/10	1/6	1/6	1.5	In line withGB 14048.4, GB4824	In line withGB 14048.4, GB4824	In line withGB 14048.4, GB17626.2	In line withGB 14048.4, GB17626.3	In line withGB 14048.4, GB/T 17626.4	In line withGB 14048.4, GB/T 17626.5
NDR1-95 series	23 ~ 95A	AC690	AC400、AC690	8-hour work schedule; Continuous work; Intermittent periodic duty type (operating frequency: 30 times / h, load factor: 40 %	10	In line withGB 14048.4 standard	When the three-phase current is greater than or equal to 0.4n and the phase unbalance rate is greater than or equal to 50%, the releasing occurs within 8s.	When the two-phase current is greater than or equal to 0.4n and the other phase current is 0, the releasing occurs within 8s.	Manual or automatic reset	Manual reset: press the reset button to reset immediately	Automatic reset: reset within 90s after fault releasing	LED lights are used to indicate the on-off of the control power supply (usually on when connected), as well as the overload warning of the main circuit (> 105s, LED flashing).	4/35	4/35	4/35	8	In line withGB 14048.4, GB4824	In line withGB 14048.4, GB4824	In line withGB 14048.4, GB17626.2	In line withGB 14048.4, GB17626.3	In line withGB 14048.4, GB/T 17626.4	In line withGB 14048.4, GB/T 17626.5

Auxiliary Contact Characteristics

Technical parameter name	Conventional heating current (Ith/A)	Application category and control capacity			Wiring capacity			Tightening torque (N.m)
		AC-15		DC-13	1 or 2 soft wire without terminal	1 or 2 soft wire with terminal	1 or 2 hard wire with terminal	
					Minimum/maximum cross-sectional area (mm^2)			
Technical parameter	2.5	AC400V，0.47A	AC230V，0.75A	DC230V，0.1A	1/2.5	1/2.5	1/2.5	0.8

Auxiliary Power Supply Characteristics

Technical parameter name	Auxiliary power supply voltage (V)	Wiring capacity			Tightening torque（N.m）
		1 or 2 soft wire without terminal	1 or 2 soft wire with terminal	1 or 2 hard wire with terminal	
		Minimum/maximum cross-sectional area（mm^2）			
Technical parameters	AC（50/60Hz）、110、220/230、380/400	1/2.5	1/2.5	1/2.5	0.8

NDD1 Motor Protection Circuit Breaker Quick Selection Table

NDD1-32 A 1

ND	D	1	32	A	1
Enterprise code: Nader	Product code: Motor protection switch	Design serial number: 1	Frame size current: 32、80	A: Push-button operation	Specifications and code: 01、02、03、04、05、06、07、08、10、14、16、20、21、22、32、40、63、80

Note: the product has only three poles.

NDD1Series Main Performance Parameters

Main Performance Index

Model	Application category		Rated working voltage (V)	Rated insulation voltage (V)	Rated working frequency (Hz)	Rated impulse withstand voltage (kV)	Single-pole power consumption (W)	Operation frequency (times/h)	Releasing level
	GB14048.2	GB14048.4							
NDD1-32A	A	AC-3	380、400、415、690	690	50/60	6	2.5	120	10A
NDD1-80A	A	AC-3	380、400、415、690	690	50/60	6	8	120	10A

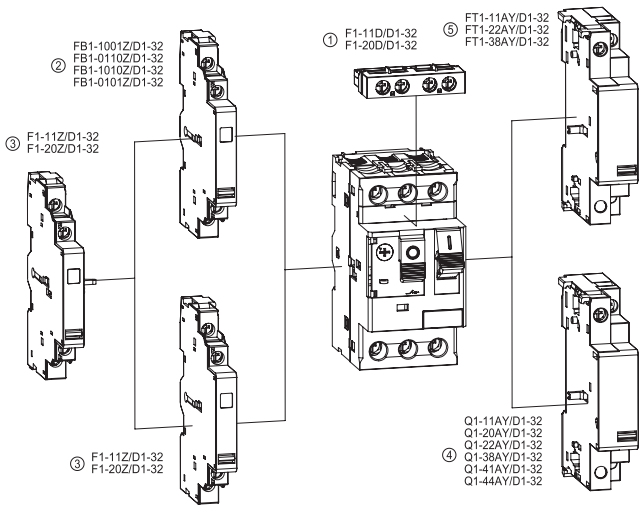
Releasing Characteristics and Releasing Curve

Characteristic project	Serial number	Test current	Scheduled time	Initial state	Expected results	Note
Delay protection characteristic 20±2℃	a	1.05In	t≥2h	Cold state	No releasing	Non
	b	1.2In	t＜2h	Hot state	Releasing	Immediately after test item a, the current in 5s rises steadily to the specified value
	c	1.5In	t≤2min	Hot state	Releasing	1-time setting current reaches the heat balance and starts
	d	7.2In	2s＜t≤10s	Cold state	Releasing	Releasing grade 10A
Instantaneous protection characteristic	e	7.68In	t≤0.2s	Cold state	No releasing	In ≤ 0.25A
		11.52In	t＜0.2s	Cold state	Releasing	
	f	9.6In	t≥0.2s	Cold state	No releasing	In>0.25A
		14.4In	t＜0.2s	Cold state	Releasing	
Open phase protection 20±2℃	g	Two-pole1.0In , One-pole0.9In	t≥2h	Cold state	No releasing	Non
	h	Two-pole1.15In One-pole with no electricity	t＜2h	Hot state	Releasing	Immediately after the 9 tests, the current steadily rises to the specified value in 5s

Short-Circuit Breaking Capacity

Product model	Current setting range	Breaking capacity（KA）380V/400V/415V		Breaking capacity (KA) 690V	
		Rated ultimate short circuit breaking capacity Icu	Rated service short circuit breaking capacity Ics	Rated ultimate short circuit breaking capacity Icu	Rated service short circuit breaking capacity Ics
NDD1-32A01	0.1～0.16A	80	80	80	80
NDD1-32A02	0.16～0.25A	80	80	80	80
NDD1-32A03	0.25～0.4A	80	80	80	80
NDD1-32A04	0.4～0.63A	80	80	80	80
NDD1-32A05	0.63～1A	80	80	80	80
NDD1-32A06	1～1.6A	80	80	80	80
NDD1-32A07	1.6～2.5A	80	80	3	2.25
NDD1-32A08	2.5～4A	80	80	3	2.25
NDD1-32A10	4～6.3A	80	80	3	2.25
NDD1-32A14	6～10A	80	80	3	2.25
NDD1-32A16	9～14A	15	7.5	3	2.25
NDD1-32A20	13～18A	15	7.5	3	2.25
NDD1-32A21	17～23A	15	6	3	2.25
NDD1-32A22	20～25A	15	6	3	2.25
NDD1-32A32	24～32A	10	5	3	2.25
NDD1-80A40	25～40A	35	18	4	3
NDD1-80A63	40～63 A	35	18	4	3
NDD1-80A80	56～80 A	15	8	2	2

NDD1Series Accessories Selection Table

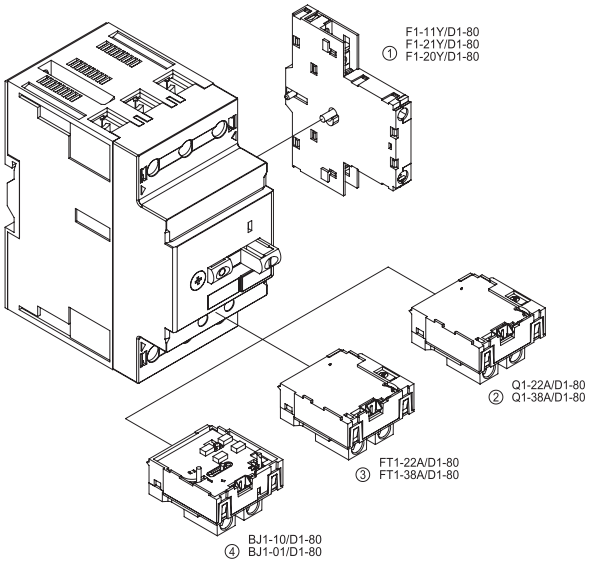


NDD1-32 accessory installation schematic

Serial numbe	Accessory name	Installation position	Accessory code	Structure specification	Note
①	Top installation auxiliary	Top installation	F1-11D/D1-32	One normally on and normally off	Installed on the upper side of NDD1-32, and only one can be installed
			F1-20D/D1-32	2 normally open	
②	Alarm and auxiliary contacts	Left installation	FB1-1010Z/D1-32	Alarm -- normally on, auxiliary -- normally on	Installed on the left side of NDD1-32, only one can be installed
			FB1-1001Z/D1-32	Alarm -- normally on, auxiliary -- normally off	
			FB1-0110Z/D1-32	Alarm -- normally off, auxiliary -- normally on	
			FB1-0101Z/D1-32	Alarm -- normally off, auxiliary -- normally off	
③	Left installation auxiliary	Left installation	F1-11Z/D1-32	One normally on and normally off	Installed on the left side of NDD1-32, maximum 2 pieces
			F1-20Z/D1-32	2 normally on	
④	Undervoltage release	Right installation	Q1-11AY/D1-32	Rated working voltage 110v-127V AC 50Hz	Installed on the right side of NDD1-32, only one can be installed
			Q1-20AY/D1-32	Rated working voltage 200V AC 50Hz, 220-220 V AC 60Hz	
			Q1-22AY/D1-32	Rated working voltage 220v-240 V AC 50Hz, 240-265 V AC 60Hz	
			Q1-38AY/D1-32	Rated working voltage: 380v-415V AC 50Hz, 400-440V AC 60Hz	
			Q1-41AY/D1-32	Rated working voltage: 415V-440V AC 50Hz, 400-480V AC 60	
			Q1-44AY/D1-32	Rated working voltage 440V AC 50Hz, 440-480V AC 60Hz	
⑤	Shunt release	Right installation	FT1-11AY/D1-32	Rated working voltage 110V-127V AC 50Hz	Installed on the right side of NDD1-32, only one can be installed
			FT1-22AY/D1-32	Rated working voltage 220V-240V AC 50Hz	
			FT1-38AY/D1-32	Rated working voltage 380V-415V AC 50Hz	

Note: one accessory product F1 and FB1 can be installed on the left side of the circuit breaker at the same time. FB1 should be installed first and F1 should be installed later

NDD1-80 Accessory Installation Schematic Diagram



Serial numbe r	Accessory name	Installation position	Accessory code	Structure specification	Note
①	Auxiliary contact	Right installation	F1-11Y/D1-80	One normally on and one normally off	Installed on the right side of NDD1-80, only one can be installed
			F1-20Y/D1-80	Two normally on	
			F1-21Y/D1-80	Two normally on and one normally off	
②	Undervoltage release	Internal	Q1-22A/D1-80	Rated working voltage 220v-240v ac 50Hz	Installed inside NDD1-80, only one can be installed
			Q1-38A/D1-80	Rated working voltage 380V-415V AC 50Hz	
③	Shunt release	Internal	FT1-22A/D1-80	Rated working voltage 220V-240V AC 50Hz	Installed inside NDD1-80, only one can be installed
			FT1-38A/D1-80	Rated working voltage 380V-415V AC 50Hz	
④	Alarm contact	Internal	BJ1-10/D1-80	One normally on	Installed inside NDD1-80, only one can be installed
			BJ1-01/D1-80	One normally off	

Accessory Function Description

Accessory type	Functional purposes
Auxiliary contact	Connection indicator light can be used to indicate the on and off of circuit breaker.
Alarm contact	Used to indicate the breaking of a circuit breaker at a fault current.
Alarm auxiliary contact	The product has alarm contact and auxiliary contact to realize the above two functions of auxiliary and alarm contact and save space.
Shunt release	The circuit breaker can break under the condition of 70% to 110% of rated working voltage and can be used for remote control.
Undervoltage release	The circuit breaker can break at 70% to 35% of the rated voltage. The circuit breaker can be prevented from closing when the rated working voltage is lower than 35%. Under the condition of 85%-110% of rated working voltage, the closure of the circuit breaker will not be affected.