

## NOM3 (ABB-S) Series >>>

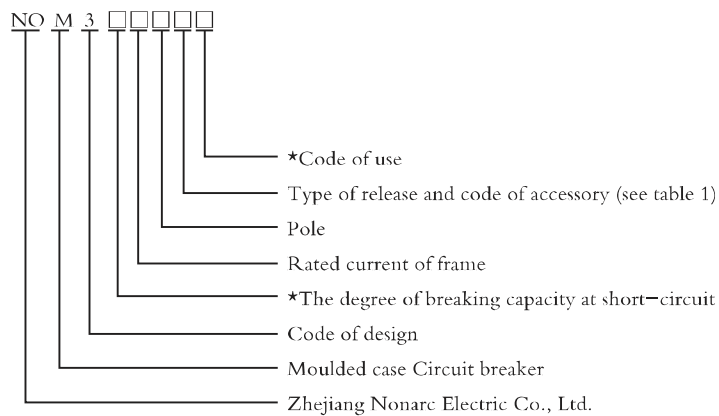


### 1. Suitable range

NOM3(ABB-S) series moulded case breaker ( named breaker below) is applicable to the distribution network of AC 50Hz, rated insulation voltage 690V (400V for the frame with rated current of 125A), max 690V or less, and max 800A as the distribution of electric energy, the breakers with 400A or less may be applied to protect the motor. Under normal condition, the breaker may be applied as unfrequent change-over of circuit and unfrequent start of motor.

This product accordance with the standards of IEC947-2-1989 and GB14048.2-1994.

### 2. Model and Meaning



#### Remark:

\* The breaker for distribution has no code, the one for motor protection is indication with " 2 " .

\* L-standard type, H-high breaking type.

table 1

Name of accessory	Code of accessory	The type of release	
		Instantaneous release	Duplex release
No		200	300
Warning contact		208	308
Shunt release		210	310
Shunt release warning contact		218	318
Auxiliary contact		220	320
Auxiliary contact warning contact		228	328
Under-voltage release		230	330
Under-voltage release warning contact		238	338
Shunt release auxiliary contact		240	340
Shunt release auxiliary contact warning contact		248	348
Two groups of contacts		260	360
Two groups of contacts and warning contact		268	368
Under-voltage release auxiliary contact		270	370
Under-voltage release auxiliary contact warning contact		278	378

Remark: two groups of auxiliary contacts and warning contact 268/368 effective only for the breaker with Inm equal to 630A or 800A.

### 3.Main technical parameters

See table 2 for basic parameters

table 2

Type	Rated current of frame(A)	Rated operating voltage(V)	Rated frequency (Hz)	Rated current (A)	Pole
NOM3L、H-125	125	400 690	50	12.5,16,20,25,32,40,50,63,80,100,125	3、4
NOM3L、H-160	160		50	16,20,32,40,50,63,80,100,125,160	3、4
NOM3L、H-250	250		50	100,125,160,180,200,225,250	3、4
NOM3L、H-400	400		50	200,225,250,315,350,400	3、4
NOM3L、H-630	630		50	400,500,600	3、4
NOM3L、H-800	800		50	500,630,700,800	3、4

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See table 3 for the breaking capacity

table 3

Rated current of frame	Rated ultimate short-circuit Icu (kA)		Rated service short-circuit breaking capacity Ics (kA)	
	AC400V	AC690V	AC400V	AC690V
NOM3L-125	16	8*	8	4*
NOM3H-125	25	12*	12.5	6*
NOM3L-160	16	6	12	4
NOM3H-160	35	8	17.5	6
NOM3L-250	35	14	26	11
NOM3H-250	65	8	48	13.5
NOM3L-400	35	20	26	15
NOM3H-400	65	25	48	25
NOM3L-630	50	20	30	20
NOM3H-630	80	25	60	25
NOM3L-800	50	20	30	20
NOM3H-800	80	25	60	25

Remark: "\*"indication the breaking capacity at short-circuit under 500V.

See table 4 for the protection characteristic of short-circuit.

The setting value of short-circuit protection current reaches the precise degree of  $\pm 20\%$ .

table 4

Type	Rated current In (A)	For distribution	For motor protection
NOM3L、H-125	12.5、16、20、25、32、40	500A	500A
	50、63、80、100、125	10In	12In
NOM3L、H-160	16、20、32、40	500A	500A
	50、63、80、100、125、160	10In	12In
NOM3L、H-250	100、125、160、180、200、225、250	10In	12In
NOM3L、H-400	200、225、250、315、350、400	10In	12In
NOM3L、H-630	40、500、630	10In	
NOM3L、H-800	500、630、700、800	10In	

See table 5 for the characteristic of inverse time-delay opening of breaker for distribution (under the ambient temperature of +40)

table 5

Name of trial current	The multiple of setting current	Conventional time (h)		Start-off state
		In $\geq 63A$	In $> 63A$	
Conventional no tripping current	1.05	$\geq 1$	$\geq 2$	Cold state
Conventional tripping current	1.30	$< 1$	$< 2$	Heat state

See table 6 for the characteristic of inverse time-delay opening of breaker for motor-protection (under the ambient temperature of +40)

table 6

Name of trial current	The multiple of setting current	Conventional time (h)	Start-off state
Conventional no tripping current	1.0	$\geq 2$	Cold state
	1.20	$< 2$	Heat state
Conventional tripping current	1.50	$\leq 2\text{min}$	Heat state
	7.20	$2s < T_p \leq 10s$	Cold state

### The technical parameters of accessory

1) The action value of shunt release: the shunt release makes reliable action under rated control voltage of 70% to 110%

2) The action value of under-voltage release: when the voltage drops to between 35% and 70% as much as rated work voltage of under-voltage release, the under-voltage release makes the reliable action. When the voltage is less than 35% of rated work voltage of under-voltage release, the under-voltage release can prevent the breaker from closing. When the voltage is 85% or more of rated work voltage of under-voltage release, it can ensure the breaker closing reliably.

3) The action value of electric operation mechanism: when operation by motor, can ensure the breaker reliable action under any voltage between 85% and 110% of rated control voltage.

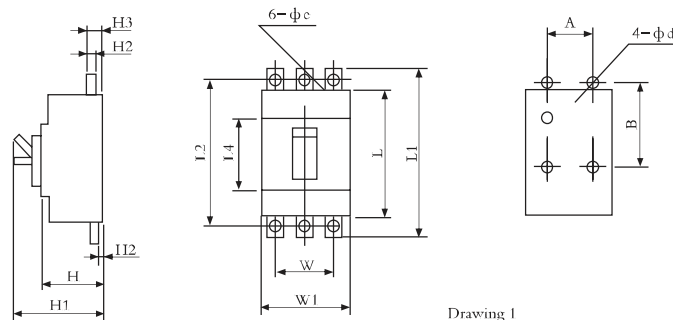
4) See table 7 for auxiliary contact, warning contact and rated value.

table 7

Conventional thermal current $I_{th}$ (A)	Rated insulation voltage $U_i$ (V)	Rated operating current $I_e$ (A)			Applicable rated current of frame $I_{nm}$ (A)
		AC400V	AC230V	DC250V	
4	230	—	3	—	125、160
6	400	3	6	0.15	250、400
6	400	3	6	0.20	630、800

### 4.Contour and installation dimension

See drawing 1 and table 8 for contour dimension (plate-front wiring)



Drawing 1

table 8

Type	Contour dimension							Installation dimension						
	W	L	H	L1	H1	H2	H3	A	B	W1	ød	L2	øe	L4
NOM3L、H-125	78	120	70		91	25.5		25	100	50	5			45
NOM3L、H-160	90	120	70		93	27.5		30	100	60	5			45
NOM3L、H-250	105	170	103.5	235	135	25	31	35	139	70	6	210	8.5	105
NOM3L、H-400	140	254	103.5	310	135	25	31	44	214	87.5	6	285	11	105
NOM3L、H-630	210	268	103.5	365	167.5	36.5	41.5	70	237	140	6	309	11	105
NOM3L、H-800	210	268	103.5	365	167.5	36.5	41.5	70	237	140	6	355	11	105

See drawing 2 and table 9 for plate-back screw terminal

table 9

Type	N	P	M	L3
NOM3L、H-125	42	75	M8	102
NOM3L、H-160	42	75	M8	102
NOM3L、H-250	55	100	M12	143
NOM3L、H-400	62	108	M16	248
NOM3L、H-630	68	68	M24×2	241
NOM3L、H-800	68	68	M2×2	241

