

9.2.4 Motor-driven mechanism

Protection degree: IP40

Functions:

Reliable insulation;

Isolation function indication;

0(breaking), 1(making) and free tripping indication;

Free releasing of circuit breaker;

Making and breaking the breaker manually or automatically

Manual operation

Turn "manual/auto" switch to "auto" position and then turn the handle to make and break the breaker.

Automatic operation:

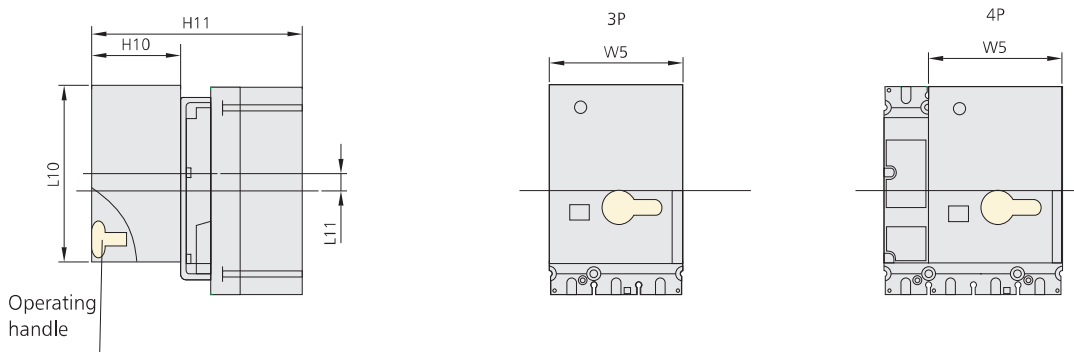
Turn "manual/auto" switch to "manual" position and then push the button to make and break the breaker remotely.

The make/break operation is carried out via pulse or self-retaining type signal control.

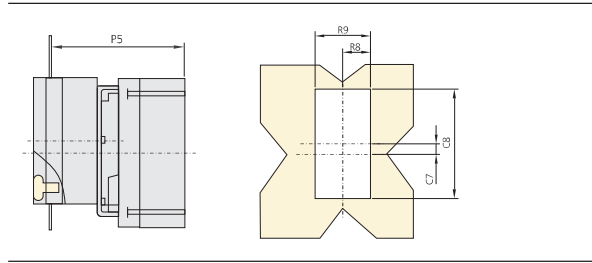
Operational range: 85%Un~110%Un.



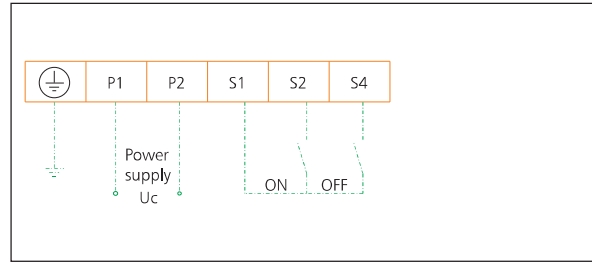
NM8 circuit breaker	Rated control voltage	Electrical life	Operational current	Power consumption
NM8-125	100-240V AC	10,000 operations	≤ 0.5 A	14VA
	100-220V DC			14W
	24V DC			14W
NM8S-125	100-240V AC	10,000 operations	≤ 0.5 A	14VA
NM8-250	100-220V DC			14W
NM8S-250	24V DC			14W
NM8-400	230V AC	5,000 operations	≤ 2 A	35VA
NM8S-400	110V AC			35VA
NM8-630	220V DC			35W
NM8S-630	110V DC			35W
NM8S-630	24V DC			35W
NM8-800	230V/400V AC	3,000 operations	≤ 7.5 A	200W
NM8S-800				
NM8-1250				
NM8S-1250, 1600				



Front boring(fixed or plug-in circuit breaker)



Wiring diagram



(mm)

Model	W5	H10	H11	L10	L11	R8	R9	P5	C7	C8
NM8-125	90	77	164	117	17.3	46.5	93	144	17.3	120
NM8S-125, NM8-250, NM8S-250	90	77	175	117	14.5	46.5	93	155	14.5	120
NM8-400, NM8S-400	107	115	250	174	19	64	128	225	19	177
NM8-630, NM8S-630	107	115	250	174	19	64	128	225	19	177
NM8-800, NM8S-800	-	-	-	-	-	-	-	-	-	-
NM8-1250, NM8S-1250, 1600	-	-	-	-	-	-	-	-	-	-

9.3 Locking system

Locking the breaker at status of making or breaking.
The system can be fitted with 1~3 padlocks with a diameter of 5~8mm (by customer).

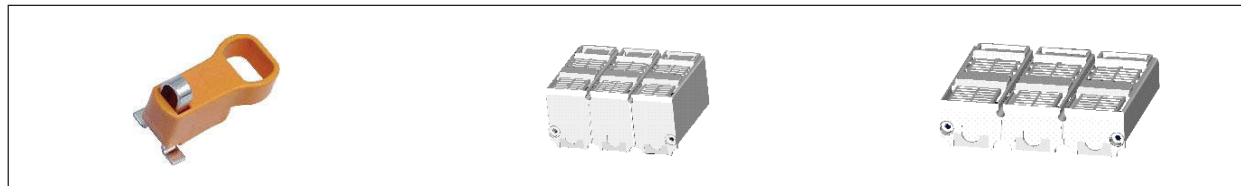
9.4 Terminal cover

Protection degree: IP40
Protect from being contacted with main circuit.
Selection of terminal cover:
Fixed breaker (front connection): Long terminal cover;
Fixed breaker (rear connection): Short terminal cover;
Plug-in breaker: short terminal cover;
When voltage is $\geq 500V$, terminal cover selected for definite connection mode

Locking system

Long terminal cover

Short terminal cover



10. Complementary technical information

10.1 Isolation function

Isolation functions of all the circuit breakers as per IEC60947/EN60947-2; Isolating position of contactors is at 0 (OFF) status. The operating handle will correctly indicate the status of 0(OFF), only if the contactor breaks.

Padlocks could be mounted after the contacts breaks;
Operation of isolation functions will realize following points:

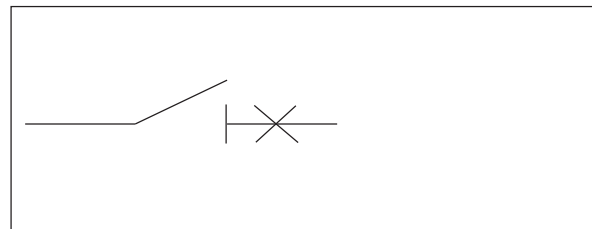
- Contacts operation correctly indicates:
 - operating reliability of interior mechanism;
- No residual current;
- Higher impulse withstands voltage for terminals at the power supply side and on-load side.

10.2 Current-limiting

10.2.1 Current-limiting capacity

The current-limiting capacity of a circuit breaker is its aptitude to limit short-circuits current. By occurring of short-circuit, the breaker is able to limit I^2t in time so as to protect circuits and switchgear at downstream.

The exceptional limiting capacity of NM8 series is due to the rotating double-break technique, which is characterized by very rapid natural repulsion of contacts and the appearance of two arc voltages in series with a very steep wave front.



- a. Exceptional current-limiting capacity is able to greatly reduce power caused by fault current so as to enhance breaking capacity of breaker to $I_{cs}=100\%I_{cu}$;
- b. The capacity has greatly released damages, which short-circuit current lay to apparatus;
- c. The capacity has greatly lowered temperature-rise so as to lengthen service life of the cable;
- d. The capacity has greatly reduced power so as to lessen distortion of contacts and bus bar;
- e. The capacity has greatly decreased interruptions to apparatus nearby.