

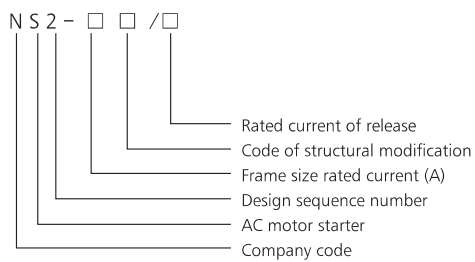


## NS2 Motor Starter

### 1. General

- 1.1 Electric ratings: AC690V, 25A, 80A;
- 1.2 Standard: IEC60947-2, IEC60947-4-1.

### 2. Type Designation



### 3. Operating Conditions

- 3.1 Temperature:  $-5^{\circ}\text{C} \sim +40^{\circ}\text{C}$ , average temperature in 24 hours not exceed  $+35^{\circ}\text{C}$ .
- 3.2 Altitude: not exceed 2000m
- 3.3 Air conditions:
  - At mounting site, relative humidity not exceed 50% at the max temperature of  $+40^{\circ}\text{C}$ , higher relative humidity is allowable under lower temperature, For example, RH could be 90% at  $+20^{\circ}\text{C}$ .
- 3.4 Pollution grade: Grade III
- 3.5 Release grade:
  - 10A(NS2-25)
  - 10 (NS2-80B)
- 3.6 Rated operational system:
  - Continuous operational system
- 3.7 Mounting conditions:
  - The indination between the mounting plane and the vertical plane shall not exceed  $5^{\circ}$ .
  - The product shall be installed and operated at a place without obvious shake, impact and vibration.



## 4. Technical Data

### 4.1 Protection Properties Over-load Protection Properties

Series No.	Multiple of setting current	Initial status	Time		Expected results	Ambient temperature
1	1.05	Cold status	$t \geq 2h$		Non-tripping	$+20^{\circ}\text{C} \pm 2^{\circ}\text{C}$
2	1.20	Heat status (right after test.1)	$t < 2h$		Tripping	$+20^{\circ}\text{C} \pm 2^{\circ}\text{C}$
3	1.50	Heat status (right after test.1)	Tripping class	10A $t < 2\text{min}$	Tripping	$+20^{\circ}\text{C} \pm 2^{\circ}\text{C}$
		10 $t < 4\text{min}$				
4	7.20	Cold status	Tripping class	10A $2s < t \leq 10s$	Tripping	$+20^{\circ}\text{C} \pm 2^{\circ}\text{C}$
		10 $4s < t \leq 10s$				

### Phase failure protection properties

Series No.	Multiple of setting current		Initial status	Time	Expected results	Ambient temperature
	Any 2 phase	The other phase				
1	1.0	0.9	Cold status	$t \geq 2h$	Non-tripping	$+20^{\circ}\text{C} \pm 2^{\circ}\text{C}$
2	1.15	0	Heat status (right after test.1)	$t < 2h$	Tripping	$+20^{\circ}\text{C} \pm 2^{\circ}\text{C}$

### Temperature compensation properties

Series No.	Multiple of setting current	Initial status	Time	Expected results	Ambient temperature
1	1.0	Cold status	$t \geq 2h$	Non-tripping	$+40^{\circ}\text{C} \pm 2^{\circ}\text{C}$
2	1.2	Heat status (right after test.1)	$t < 2h$	Tripping	$+40^{\circ}\text{C} \pm 2^{\circ}\text{C}$
3	1.05	Cold status	$t \geq 2h$	Non-tripping	$-5^{\circ}\text{C} \pm 2^{\circ}\text{C}$
4	1.3	Heat status (right after test.3)	$t < 2h$	Tripping	$-5^{\circ}\text{C} \pm 2^{\circ}\text{C}$





## 5. Accessories

### 5.1 Under-voltage release

Type, model and specification of under-voltage release

Rated insulation voltage $U_i$ (V)	Voltage range of operation	Model	Specification
690	35%~70% $U_e$	NS2-UV110	110~115V 50Hz
690	35%~70% $U_e$	NS2-UV110	127V 60Hz
690	35%~70% $U_e$	NS2-UV220	220~240V 50Hz
690	35%~70% $U_e$	NS2-UV380	380~400V 50Hz
690	35%~70% $U_e$	NS2-UV380	440V 60Hz

### 5.2 Shunt release

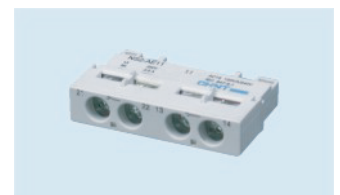
Type, model and specification of under-voltage release

Rated insulation voltage $U_i$ (V)	Voltage range of operation	Model	Specification
690	70%~110% $U_e$	NS2-SH110	110~115V 50Hz
690	70%~110% $U_e$	NS2-SH110	127V 60Hz
690	70%~110% $U_e$	NS2-SH220	220~240V 50Hz
690	70%~110% $U_e$	NS2-SH380	380~400V 50Hz
690	70%~110% $U_e$	NS2-SH380	440V 60Hz

### 5.3 Instantaneous auxiliary contact (NS2-AE20, NS2-AE11 )

Type, model and specification of instantaneous auxiliary contact

Rated insulation voltage $U_i$ (V)	Conventional heating current $I_{th}$ (A)	Model	Configuration
250	2.5	NS2-AE20	2N/O
250	2.5	NS2-AE11	1N/O+1N/C



Application class, rated operational voltage and rated operational current of instantaneous auxiliary contact

Utilization category	AC-15				DC-13		
	Rated operational voltage $U_e$ (V)	24	48	110/127	230/240	24	48
Rated operational current $I_e$ (A)	2	1.25	1	0.5	1	0.3	0.15
Normal operational power P(W)	48	60	127	120	24	15	9

### Instantaneous auxiliary contact (NS2-AU20, NS2-AU11 )

Type, model and specification of instantaneous auxiliary contact

Rated insulation voltage $U_i$ (V)	Conventional heating current $I_{th}$ (A)	Model	Configuration
690	6	NS2-AU20	2N/O
690	6	NS2-AU11	1N/O+1N/C



Application class, rated operational voltage and rated operational current of instantaneous auxiliary contact

Utilization category	AC-15						
Rated operational voltage $U_e(V)$	48	110/127	230/240	380/415	440	500	690
Rated operational current $I_e(A)$	6	4.5	3.3	2.2	1.5	1	0.6
Normal operational power $P(W)$	300	500	720	850	650	500	400

Utilization category	DC-13				
Rated operational voltage $U_e(V)$	24	48	60	110	220
Rated operational current $I_e(A)$	6	5	3	1.3	0.5
Normal operational power $P(W)$	140	240	180	140	120

Fault signal contact and instantaneous auxiliary contact

Type, model and specification of fault signal contact and instantaneous auxiliary contact

Rated insulation voltage $U_i(V)$	Conventional heating current $I_{th}(A)$		Model	Configuration
	Instantaneous auxiliary contact	Fault signal contact		
690	6	2.5	NS2-FA0110	1N/C + 1N/O
690	6	2.5	NS2-FA0101	1N/C + 1N/C
690	6	2.5	NS2-FA1010	1N/O + 1N/O
690	6	2.5	NS2-FA1001	1N/O + 1N/C



Application class, rated working voltage and rated operational current of fault signal contact

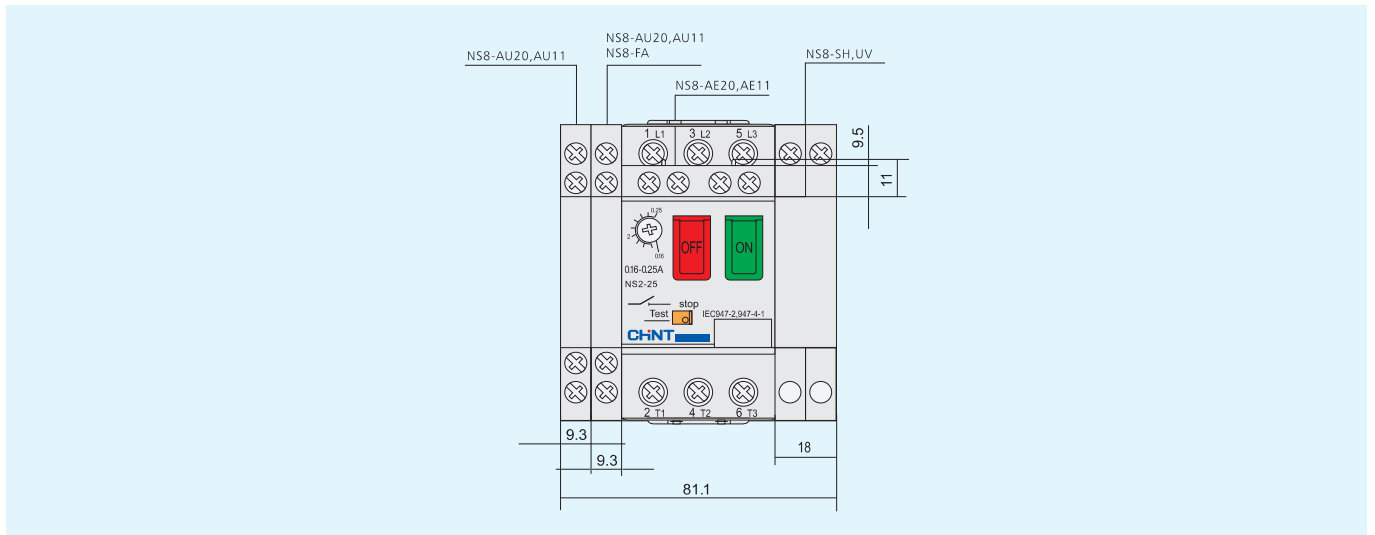
Application class	AC-14				DC-13		
Rated operational voltage $U_e(V)$	24	48	110/127	230/240	24	48	60
Rated operational current $I_e(A)$	1.5	1	0.5	0.3	1	0.3	0.15
Normal operational power $P(W)$	36	48	72	72	24	15	9
Operation features (times)	1000	1000	1000	1000	1000	1000	1000

Capacity of abnormal connection and disconnection of fault signal contact and instantaneous auxiliary contact

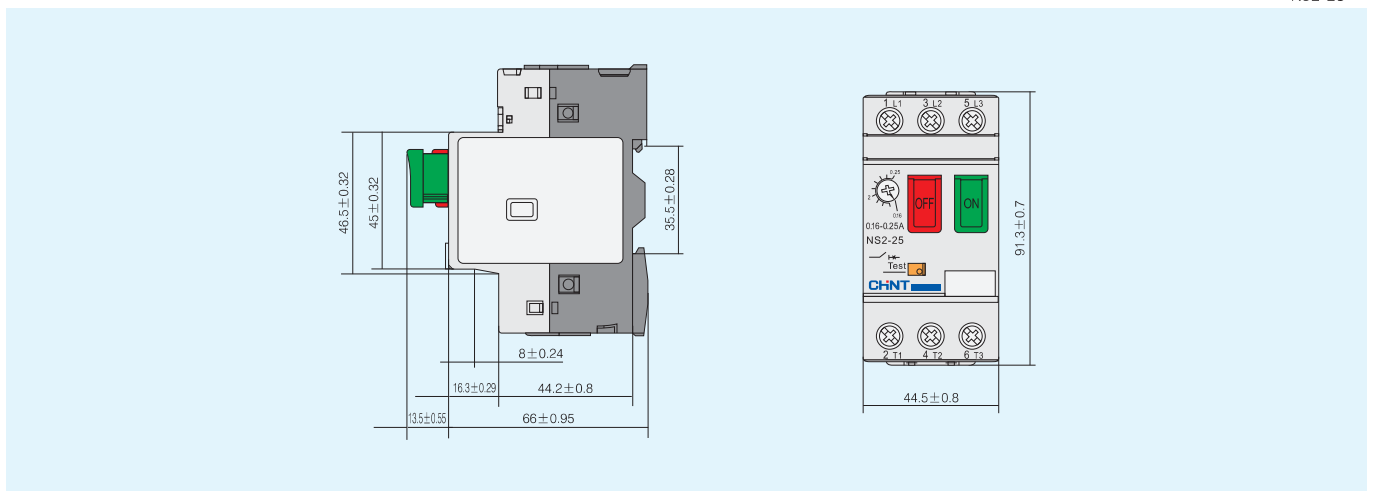
Utilization category	Connection			Disconnection			Number of on/off operation cycles and operation frequency		
	$I/I_e$	$U/U_e$	$\cos \phi$ or $t_{0.95}$	$I/I_e$	$U/U_e$	$\cos \phi$ or $t_{0.95}$	Number of operation cycles	Number of operation cycles per min.	On power time
AC-14	6	1.1	0.7	6	1.1	0.7	10	2	0.05
AC-15	10	1.1	0.3	10	1.1	0.3	10	2	0.05
DC-13	1.1	1.1	6Pe	1.1	1.1	6Pe	10	2	0.05

Note:  $P_e \geq 50W$ , upper limit of  $T_{0.95} \sim 6$   $P_e \leq 300ms$ .

## 6. Overall and Mounting Dimension



NS2-25



NS2-80B

