

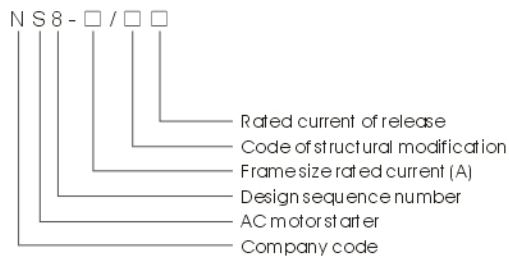


## NS8 AC Motor Starter

### 1. General

- 1.1 Certificates: CE;
- 1.2 Electric ratings: AC690V, 25A, 80A;
- 1.3 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(NS8-25)  
10 (NS8-80B)
- 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.



4.2 Technical Parameters

Model		NS8-25					NS8-25				
Picture											
Rated insulation voltage $U_i$ (V)		690					690				
Rated operational voltage $U_e$ (V)		230/240, 400/415, 440, 500, 690					230/240, 400/415, 440, 500, 690				
Rated impulse withstand voltage $U_{imp}$ (V)		8000					8000				
Regulating range of setting current (A)		0.1~0.16	0.16~0.25	0.25~0.4	0.4~0.63	0.63~1	1~1.6	1.6~2.5	2.5~4	4~6.3	6~10
Rated current of release		0.16	0.25	0.4	0.63	1	1.6	2.5	4	6.3	10
Rated ultimate short-circuit breaking capacity $I_{cu}$ (kA)	230/240V	100	100	100	100	100	100	100	100	100	100
	400/415V	100	100	100	100	100	100	100	100	100	100
	440V	100	100	100	100	100	100	100	100	50	15
	500V	100	100	100	100	100	100	100	100	50	10
	690V	100	100	100	100	100	100	3	3	3	3
Rated service short-circuit breaking capacity $I_{cs}$ (kA)	230/240V	100	100	100	100	100	100	100	100	100	100
	400/415V	100	100	100	100	100	100	100	100	100	100
	440V	100	100	100	100	100	100	100	100	50	15
	500V	100	100	100	100	100	100	100	100	50	10
	690V	100	100	100	100	100	100	2.25	2.25	2.25	2.25
Arcing distance (mm)		40	40	40	40	40	40	40	40	40	40
Standard rated power of three-phase motor (kW)	230/240V	-	-	-	-	-	-	0.37	0.75	1.1	2.2
	400V	-	-	-	-	-	0.37	0.75	1.5	2.2	4
	415V	-	-	-	-	-	-	0.75	1.5	2.2	4
	440V	-	-	-	-	0.37	0.55	1.1	1.5	3	4
	500V	-	-	-	-	0.37	0.75	1.1	2.2	3.7	5.5
	690V	-	-	-	0.37	0.55	1.1	1.5	3	4	7.5
Current setting value of instantaneous electromagnetic release $I_r$ (A)		1.5	2.4	5	8	13	22.5	33.5	51	78	138
Current rating of fuse-link of back-up fuse, which is only needed in case of $I_{cc} > I_{cu}$ ( $I_{cc}$ : prospective short-circuit breaking current)	230/240V	aM A	★	★	★	★	★	★	★	★	★
		gI/gG A	★	★	★	★	★	★	★	★	★
	400/415V	aM A	★	★	★	★	★	★	★	★	★
		gI/gG A	★	★	★	★	★	★	★	★	★
	440V	aM A	★	★	★	★	★	★	★	★	50
		gI/gG A	★	★	★	★	★	★	★	★	63
	500V	aM A	★	★	★	★	★	★	★	★	50
		gI/gG A	★	★	★	★	★	★	★	★	63
	690V	aM A	★	★	★	★	★	★	16	25	32
		gI/gG A	★	★	★	★	★	★	20	32	40
★: fuse is not required											
Degree of Protection		IP20	IP20	IP20	IP20	IP20	IP20	IP20	IP20	IP20	IP20

Model		NS8-25				NS8-80B				
Picture										
Rated insulation voltage $U_i$ (V)		690				690				
Rated operational voltage $U_e$ (V)		230/240, 400/415, 440, 500, 690				230/240, 400/415, 440, 500, 690				
Rated impulse withstand voltage $U_{imp}$ (V)		8000				8000				
Regulating range of setting current (A)		9~14	13~18	17~23	20~25	16~25	25~40	40~63	50~80	
Rated current of release		14	18	23	25	25	40	63	80	
Rated ultimate short-circuit breaking capacity $I_{cu}$ (kA)	230/240V	100	100	50	50	100	100	100	100	
	400/415V	15	15	15	15	100	35	35	35	
	440V	8	8	6	6	25	25	25	25	
	500V	6	6	4	4	8	8	8	8	
Rated service short-circuit breaking capacity $I_{cs}$ (kA)	230/240V	100	100	50	50	75	75	75	75	
	400/415V	7.5	7.5	6	6	50	17.5	17.5	17.5	
	440V	4	4	3	3	12.5	12.5	12.5	12.5	
	500V	4.5	4.5	3	3	4	4	4	4	
Arcing distance (mm)	230/240V	40	40	40	40	50	50	50	50	
	400V	3	4	5.5	5.5	5.5	11	15	22	
	415V	5.5	7.5	11	11	11	18.5	30	40	
	440V	5.5	9	11	11	11	22	33	45	
Standard rated power of three-phase motor (kW)	440V	7.5	9	11	11	11	22	33	45	
	500V	7.5	9	11	15	15	25	40	55	
	690V	9	11	15	18.5	18.5	33	55	63	
	690V	9	11	15	18.5	18.5	33	55	63	
Current setting value of instantaneous electromagnetic release $I_r$ (A)		170	223	327	327	327	480	756	960	
Current rating of fuse-link of back-up fuse, which is only needed in case of $I_{cc} > I_{cu}$ ( $I_{cc}$ : prospective short-circuit breaking current)	230/240V	aM A	★	★	80	80	★	★	★	★
		gI/gG A	★	★	100	100	★	★	★	★
	400/415V	aM A	63	63	80	80	★	250	315	315
		gI/gG A	80	80	100	100	★	315	400	400
	440V	aM A	50	50	63	63	200	250	315	315
		gI/gG A	63	63	80	80	250	315	400	400
	500V	aM A	50	50	50	50	125	160	200	200
		gI/gG A	63	63	63	63	160	200	250	250
	690V	aM A	40	40	40	40	125	160	200	200
		gI/gG A	50	50	50	50	160	200	250	250
★: fuse is not required										
Degree of Protection		IP20	IP20	IP20	IP20	IP20	IP20	IP20	IP20	

## 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% $U_e$	NS8-UV110	110~115V 50Hz
690	35%~70% $U_e$	NS8-UV110	127V 60Hz
690	35%~70% $U_e$	NS8-UV220	220~240V 50Hz
690	35%~70% $U_e$	NS8-UV380	380~400V 50Hz
690	35%~70% $U_e$	NS8-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% $U_e$	NS8-SH110	110~115V 50Hz
690	70%~110% $U_e$	NS8-SH110	127V 60Hz
690	70%~110% $U_e$	NS8-SH220	220~240V 50Hz
690	70%~110% $U_e$	NS8-SH380	380~400V 50Hz
690	70%~110% $U_e$	NS8-SH380	440V 60Hz



### 5.3 Instantaneous auxiliary contact (NS8-AE20, NS8-AE11)

Type, model and specification of instantaneous auxiliary contact

Rated insulation voltage $U_i(V)$	Conventional heating current $I_{th}(A)$	Model	Specification
250	2.5	NS8-AE20	2NO
250	2.5	NS8-AE11	1NO+1NC



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

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

### Instantaneous auxiliary contact (NS8-AU20, NS8-AU11)

Type, model and specification of instantaneous auxiliary contact

Rated insulation voltage $U_i(V)$	Conventional heating current $I_{th}(A)$	Model	Specification
690	6	NS8-AU20	2NO
690	6	NS8-AU11	1NO+1NC

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	Specification
	Instantaneous auxiliary contact	Fault signal contact		
690	6	2.5	NS8-FA0110	1NC+1NO
690	6	2.5	NS8-FA0101	1NC+1NC
690	6	2.5	NS8-FA1010	1NO+1NO
690	6	2.5	NS8-FA1001	1NO+1NC

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

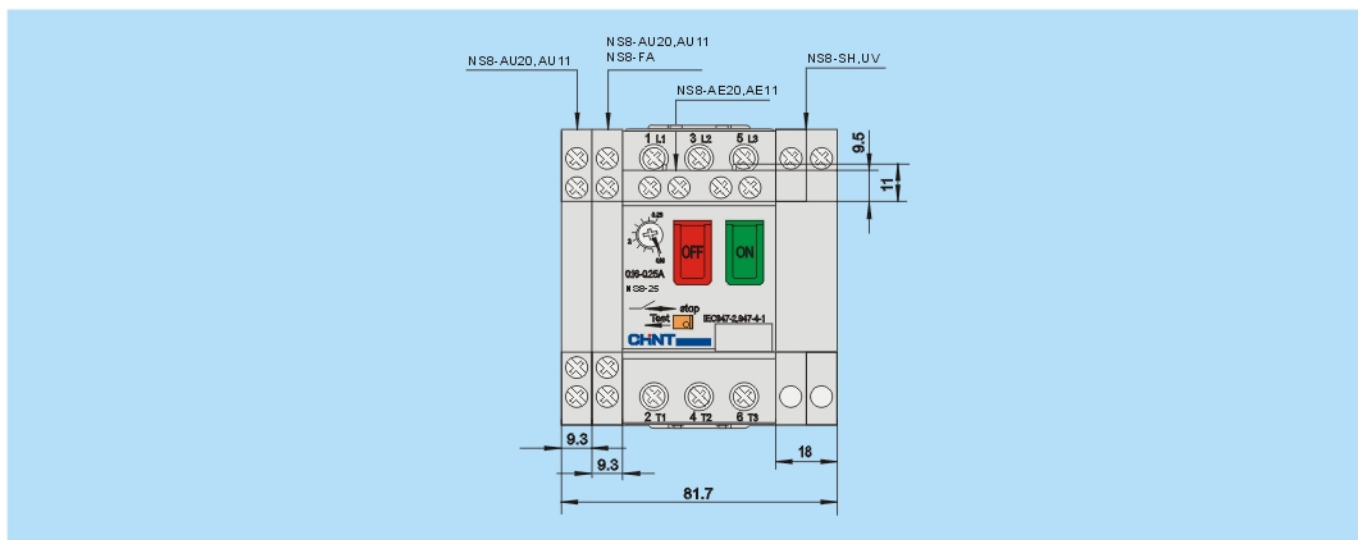
Application class	AC-15						
Rated operational voltage $U_e(V)$	24	48	110/127	230/240	24	48	60
Rated operational current $I_e(A)$	1.5	1	0.5	0.3	1	0.3	0.15
Normal operational power $P(W)$	36	48	72	72	24	15	9
Operation features (times)	1000	1000	1000	1000	1000	1000	1000

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

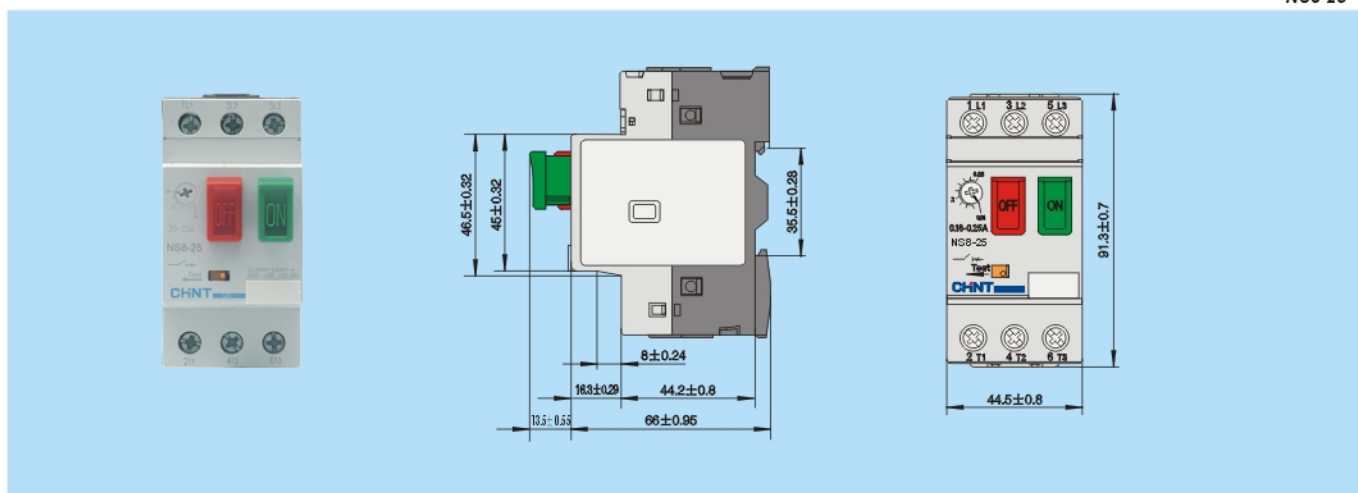
Utilization category	Connection			Disconnection			Number of on/off operation cycles and operation frequency		
	$I/I_e$	$U/U_e$	$\cos \phi$ or $T_{0.95}$	$I/I_e$	$U/U_e$	$\cos \phi$ or $T_{0.95}$	Number of operation cycles	Number of operation cycles per min.	Conduction time
AC-14	6	1.1	0.7	6	1.1	0.7	10	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



NS8-25



NS8-80B

