

Motor Control & Protection

YCP7 Motor protector



General

The YCP7 series AC motor starter is suitable for circuits with AC voltage up to 690V and current up to 32A. It is used for overload, phase failure, short circuit protection, and infrequent starting control of three-phase squirrel cage asynchronous motors. It can be used for distribution line protection and infrequent load switching, and can also be used as an isolator. Standards: IEC 60947-4-1, IEC 60947-4-2

Type designation

YC P 7 - 32 B 0.1-0.16A

Company code	Protector	Current shell frame	Method of operation	Current
YC	P7	- 32	B	0.1-0.16A
Motor Circuit Breaker	protector	32A	Slide left and right	0.1~0.16 4-6.3 0.16-0.25 6-10 0.25-0.4 9-14 0.4-0.63 13-18 0.63-1 17-23 1-1.6 20-25 1.6-2.5 24-32 2.5-4

Operating condition

1. Ambient temperature: $-5^{\circ}\text{C} \sim +40^{\circ}\text{C}$
2. Relative humidity: $\leq 20\%$ at 40°C ; $\leq 90\%$ at 20°C
3. Altitude: $\leq 2000\text{m}$
4. The inclination between the starter and the vertical installation surface shall not exceed $\pm 5^{\circ}$
5. Environmental conditions: no harmful gases and vapors, no conductive or explosive dust, no severe mechanical vibration

Motor Control & Protection

YCP7 Motor protector

Technical data

Rated insulation voltage U_i (V)	690
Rated impulse withstand voltage U_{imp} (V)	8000
Rated working voltage U_e (V)	AC230/240, AC400/415, AC440, AC500, AC690
Rated frequency (Hz)	50/60
usage categories	A, AC-3
The shell protection level	IP20 (front side).

Product number	Rated current of release I_n (A)	Setting current Adjustment range(A)	Rated ultimate short-circuit breaking capacity I_{cu} , rated operating short-circuit breaking capacity I_{cs} kA				Flying arc distance (mm)
			AC 400/415V		AC 690V		
			I_{cu}	I_{cs}	I_{cu}	I_{cs}	
YCP7-32B	0.16	0.1~0.16	100	100	100	100	40
	0.25	0.16-0.25	100	100	100	100	40
	0.4	0.25-0.4	100	100	100	100	40
	0.63	0.4-0.63	100	100	100	100	40
	1	0.63-1	100	100	100	100	40
	1.6	1-1.6	100	100	100	100	40
	2.5	1.6-2.5	100	100	4	4	40
	4	2.5-4	100	100	4	4	40
	6.3	4-6.3	100	100	4	4	40
	10	6-10	100	100	4	4	40
	14	9-14	25	15	4	4	40
	18	13-18	25	15	4	4	40
	23	17-23	25	15	4	4	40
	25	20-25	25	15	4	4	40
32	24-32	25	15	4	4	40	

C

Motor Control & Protection

YCP7 Motor protector

Rated power of three-phase motor controlled by starter

Product number	Rated current of release I_n (A)	Setting current Adjustment range(A)	Standard rated power of three-phase motor (kW)					
			AC-3,50Hz/60Hz					
			230/240V	400V	415V	440V	500V	690V
YCP7-32B	0.16	0.1~0.16	-	-	-	-	-	-
	0.25	0.16-0.25	-	-	-	-	-	-
	0.4	0.25-0.4	-	-	-	-	-	-
	0.63	0.4-0.63	-	-	-	-	-	0.37
	1	0.63-1	-	-	-	0.37	0.37	0.55
	1.6	1-1.6	-	0.37	-	0.55	0.75	1.1
	2.5	1.6-2.5	0.37	0.75	0.75	1.1	1.1	1.5
	4	2.5-4	0.75	1.5	1.5	1.5	2.2	3
	6.3	4-6.3	1.1	2.2	2.2	3	3.7	4
	10	6-10	2.2	4	4	4	5.5	7.5
	14	9-14	3.4	5.5	5.5	7.5	7.5	9
	18	13-18	5.5	7.5	9	9	9	11
	23	17-23	5.5	11	11	11	11	15
	25	20-25	15	11	11	11	15	18.5
32	24-32	7.5	15	15	15	18.5	25	

Note: When using a starter in a line with the presence of high-order harmonics (such as frequency converters and other equipment), the specifications of the starter should be selected according to the actual situation, which is 1.3 to 1.9 times the rated current of the motor, For example when the rated current of the motor is 1.1A, for lines without high-order harmonics, the starter specifications should be selected: 1-1.6A; for circuits with high-order harmonics, it is recommended to choose a starter specification of 1.6-2.5A.

Motor Control & Protection

YCP7 Motor protector

Overcurrent protection characteristics

Serial Number	Setting current multiple	Initial state	Set time	Expected results	ambient air temperature
1	1.05	cold state	$t \geq 2h$	Non release	$+20^{\circ}\text{C} \pm 2^{\circ}\text{C}$
2	1.2	Hot state (rising to the specified current immediately after the first test)	$t < 2h$	trip	$+20^{\circ}\text{C} \pm 2^{\circ}\text{C}$
3	1.5	Starting after thermal balance of 1 times the set current	$t < 2\text{min}$	trip	$+20^{\circ}\text{C} \pm 2^{\circ}\text{C}$
4	7.2	cold state	$2s < t \leq 10s$	trip	$+20^{\circ}\text{C} \pm 2^{\circ}\text{C}$

Note: The operating characteristics of the starter during load balancing of each phase

Serial Number	Setting current multiple		Initial state	Set time	Expected results	ambient air temperature
	Any two phases	The third phase				
1	1	0.9	cold state	$t \geq 2h$	Non release	$+20^{\circ}\text{C} \pm 2^{\circ}\text{C}$
2	1.15	0	Hot state (rising to the specified current immediately after the first test)	$t < 2h$	trip	$+20^{\circ}\text{C} \pm 2^{\circ}\text{C}$

Note: Action characteristics of the starter when the load of each phase is unbalanced (phase failure)

Serial Number	Setting current multiple	Initial state	Set time	Expected results	ambient air temperature
1	1	cold state	$t \geq 2h$	Non release	$+40^{\circ}\text{C} \pm 2^{\circ}\text{C}$
2	1.2	Hot state (rising to the specified current immediately after the first test)	$t < 2h$	trip	$+40^{\circ}\text{C} \pm 2^{\circ}\text{C}$
3	1.5	Hot state (after reaching equilibrium at 1.0 times the set current)	$t < 2\text{min}$	trip	$+40^{\circ}\text{C} \pm 2^{\circ}\text{C}$
4	1.05	cold state	$t \geq 2h$	Non release	$-5^{\circ}\text{C} \pm 2^{\circ}\text{C}$
5	1.3	Hot state (rising to the specified current immediately after the third test)	$t < 2h$	trip	$-5^{\circ}\text{C} \pm 2^{\circ}\text{C}$
6	1.5	Hot state (after reaching equilibrium at 1.0 times the set current)	$t < 4\text{min}$	trip	$-5^{\circ}\text{C} \pm 2^{\circ}\text{C}$

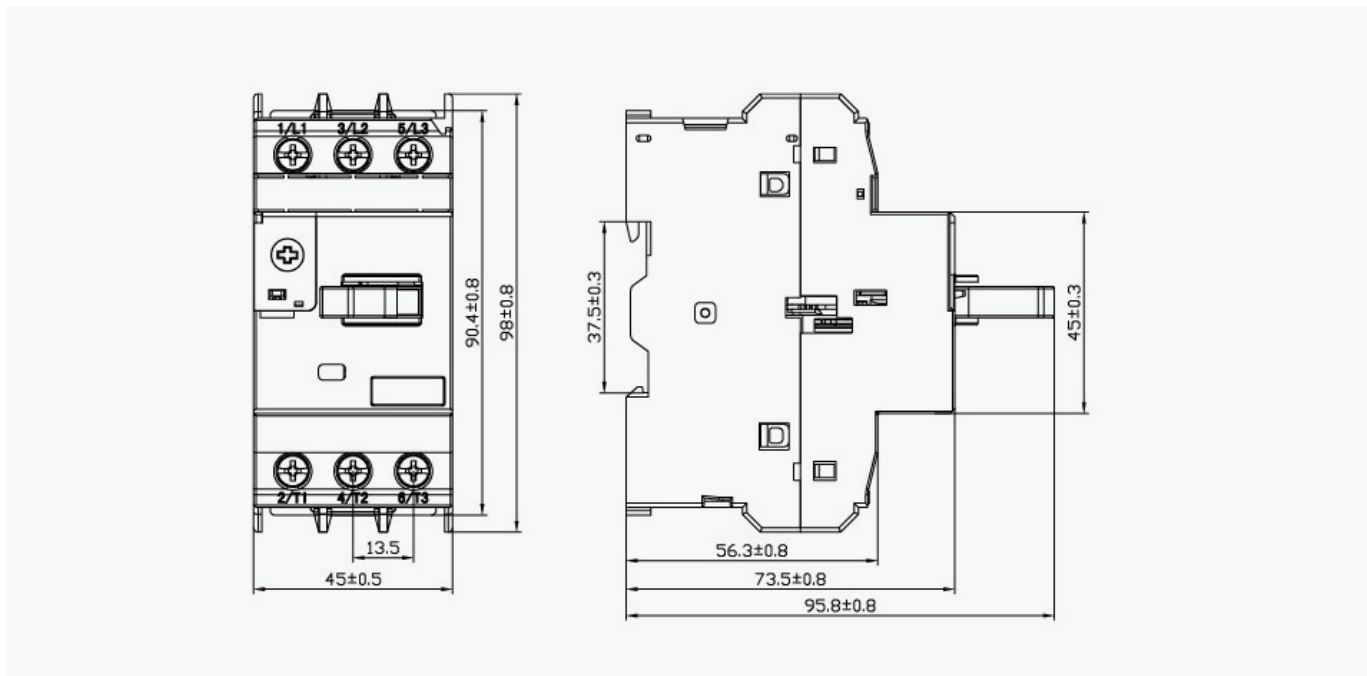
C

Motor Control & Protection

YCP7 Motor protector

Overall and mounting dimensions(mm)

C



The drawing shows the terminal layout of the YCP7 Motor protector. It includes terminals for auxiliary contacts (AU20, AU11, FA), under-voltage release (AE20, AE11), and shunt release (SH, UV). The main terminals are labeled 1/L1, 3/L2, 5/L3 at the top and 2/T1, 4/T2, 6/T3 at the bottom. Dimensions include 9.3 mm between the first two main terminals, 81.1 mm between the first and last main terminals, and 18 mm for the shunt release terminals.

Accessory name	YCP7-32B
Undervoltage release	YCP7-UV110
	YCP7-UV220
	YCP7-UV380
Shunt release	YCP7-SH110
	YCP7-SH220
	YCP7-SH380
Instantaneous auxiliary contact(front hanging)	YCP7-AE20
	YCP7-AE11
Instantaneous auxiliary contact(side mounted)Fault signal contact and instantaneous auxiliary contact	YCP7-AU20
	YCP7-AU11
	YCP7-AD0110
	YCP7-AD1010
	YCP7-AD0101

Motor Control & Protection

YCP7 Motor protector



YCP7-UV

Technical data

Rated insulation voltage U_i (V)	690
Rated impulse withstand voltage U_{imp} (kV):	6
Action characteristics:	When the voltage drops to within the range of 70% and 35% of the rated voltage, the undervoltage release should act, Undervoltage release in power supply. When the voltage is lower than 35% of the rated voltage of the release, the undervoltage release should be able to prevent the starter from closing; The power supply voltage is equal to or greater than At 85% of the rated voltage of the release, the undervoltage release should ensure that the starter is closed



YCP7-SH

Rated insulation voltage U_i (V)	690
Rated impulse withstand voltage U_{imp} (kV):	6
Action characteristics:	Action characteristics: The operating voltage range of the shunt release is 70% to 110% of the rated working voltage.



YCP7-AE

Rated insulation voltage U_i (V)	250
Rated impulse withstand voltage U_{imp} (kV)	2.5
Agreed heating current I_{th} (A)	2.5

Usage 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

C

Motor Control & Protection

YCP7 Motor protector



YCP7-AU

Rated insulation voltage U_i (V):	690
Rated impulse withstand voltage U_{imp} (kV):	4
Agreed heating current I_{th} (A):	6

C

Usage category	AC-15							DC-13				
Rated working voltage U_e (V)	48	110/127	230/240	380/415	440	500	690	24	48	60	110	220
Rated working current I_E (A)	6	4.5	3.3	2.2	1.5	1	0.6	6	5	3	1.3	0.5
Normal working power P (W)	300	500	720	850	650	500	400	140	240	180	140	120



YCP7-FA

Rated insulation voltage U_i (V)	690
The agreed heating current I_{th} (A) of the instantaneous auxiliary contact	6
The agreed heating current I_{th} (A) of the fault signal contact	2.5
Rated impulse withstand voltage U_{imp} (kV) of fault signal contact	2.5
Rated impulse withstand voltage U_{imp} (kV) of instantaneous auxiliary contacts	4

Usage category	AC-14				DC-13		
Rated working voltage U_e (V)	24	48	110/127	230/240	24	48	60
Rated working current I_E (A)	2	1	0.5	0.3	1	0.3	0.15
Normal working power P (W)	48	48	72	72	24	15	9
Operational performance (times)	1000	1000	1000	1000	1000	1000	1000

Usage category	Connect			Disconnection			Number of switching operation cycles and operation frequency		
	I/I_e	u/u_e	$\cos\phi$ or T0.95	I/I_e	u/u_e	$\cos\phi$ or T0.95	Number of operation cycles	Number of operation cycles per minute	Power on 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

Ordering Notice

When placing an order, specify the product model, specifications, and quantity.

For example, ordering 50 AC motor starters with a current regulation range of 9-14A for YCP7-32B is written as: YCP7-32B/9-14A 50 units

For example, ordering 10 units of 110V 50Hz undervoltage release is written as YCP7-UV110 10 units

For example, ordering 10 instantaneous auxiliary contact groups with a heating current of 6A, including one normally open contact and one normally closed contact, is written as YCP7-AU11, 10 units