YCP6 Motor Starter

General

YCP6 series Motor protection circuit breaker (also known as: Motor Protector or Motor starter, hereinafter referred to as "circuit breaker")is suitable for AC voltage to 690V, the highest current to 32A circuit, is a circuit breaker integrating the functions of isolation switch, circuit breaker and thermal relay with isolation protection, overload protection, temperature compensation, phase failure protection, short circuit protection. Application range: three-phase mouse cage asynchronous motor direct start and control, distribution line protection and infrequent load conversion. Standard: IEC60947-2, 60947-4-1.

Coil voltage of contactor and code

YCP6	-	32	P	0.16
Model		Frame current	Operating method	Rated current
Motor Circuit Breaker		32	P: Knob operation	0.16
				0.25
				0.4
				0.63
				1
				1.6
				2.5
				4
				6.3
				10
				14
				18
				23
				25
				32

Operating Conditions

1. The altitude of the installation site is generally not more than 2000m.
2. The lower limit of ambient air temperature is generally not lower than -5°C, and the upper limit is generally not higher than +40°C.
3. The relative humidity of the air is not more than 50% when the temperature is +40°C, and the minimum monthly temperature of the wettest month is 25°C, and the monthly average maximum relative humidity is not more than 90%.
4. The surrounding environment pollution level is 3.
5. Starter installation categories are III.
6. The inclination of the mountion surface and the vertical plane is not more than ± 5°.
7. Rated working system: uninterrupted working system, intermittent working system.

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Technical data

1. Rated insulation voltage Ui(V): 690
2. Rated impulse withstand voltage Uimp(kV): 8
3. Rated operating voltage Ue(V): 230/240, 400/415, 440, 500, 690
4. Rated frequency(Hz): 50, 60
5. Frame rated current Inm(A): 32A
6. Rated current In(A): see Table 1

Hot component setting current adjustment range: rated limit and rated operating short-circuit breaking capacity see Table 1.

Table 1

Type	Arcing distance (mm)	Rated limit short-circuit breaking capability ICU, rated operation short-circuit breaking capability Ics kA				Current setting range
		400/415V		690V		
		Icu	Ics	Icu	Ics	
YCP6-32P-0.16	40	100	100	100	100	0.1-0.16
YCP6-32P-0.25	40	100	100	100	100	0.16-0.25
YCP6-32P-0.4	40	100	100	100	100	0.25-0.4
YCP6-32P-0.63	40	100	100	100	100	0.4-0.63
YCP6-32P-1	40	100	100	100	100	0.63-1
YCP6-32P-1.6	40	100	100	100	100	1-1.6
YCP6-32P-2.5	40	100	100	3	2.25	1.6-2.5
YCP6-32P-4	40	100	100	3	2.25	2.5-4
YCP6-32P-6.3	40	100	100	3	2.25	4-6.3
YCP6-32P-10	40	100	100	3	2.25	6-10
YCP6-32P-14	40	15	7.5	3	2.25	9-14
YCP6-32P-18	40	15	7.5	3	2.25	13-18
YCP6-32P-23	40	15	6	3	2.25	17-23
YCP6-32P-25	40	15	6	3	2.25	20-25
YCP6-32P-32	40	10	6	3	2.25	24-32

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Table 2

Type	Standard power ratings of 3-phase molors 50/60Hz in category AC-3						Current setting range
	220V	380V	415V	440V	500V	690V	
	kW	kW	kW	kW	kW	kW	
YCP6-32P-0.16	-	-	-	-	-	-	0.1-0.16
YCP6-32P-0.25	-	-	-	-	-	-	0.16-0.25
YCP6-32P-0.4	-	-	-	-	-	-	0.25-0.4
YCP6-32P-0.63	-	-	-	-	-	0.37	0.4-0.63
YCP6-32P-1	-	-	-	0.37	0.37	0.55	0.63-1
YCP6-32P-1.6	-	0.37	-	0.55	0.75	1.1	1-1.6
YCP6-32P-2.5	0.37	0.75	0.75	1.1	1.1	1.5	1.6-2.5
YCP6-32P-4	0.75	1.5	1.5	1.5	2.2	3	2.5-4
YCP6-32P-6.3	1.1	2.2	2.2	3	3.7	4	4-6.3
YCP6-32P-10	2.2	4	4	4	5.5	7.5	6-10
YCP6-32P-14	3	5.5	5.5	7.5	7.5	9	9-14
YCP6-32P-18	4	7.5	9	9	9	11	13-18
YCP6-32P-23	5.5	11	11	11	11	15	17-23
YCP6-32P-25	5.5	11	11	11	15	18.5	20-25
YCP6-32P-32	7.5	15	15	15	18.5	25	24-32

The enclosure protection class is IP20.

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The enclosure protection class is IP20.
The operating performance of the circuit breaker is shown in Table 3.
Table 3

Type	Frame size rated current Inm	Hourly operation cycles	Operation cycle number	
			Electrical life	Mechanical life
YCP6-32P	32	120	10000	100000

Overcurrent action protection

See Table 4, Table 5, and Table 6 for the action characteristics of the circuit breaker when each phase is balanced and unbalanced.

Table 4 Operating characteristics of the circuit breaker when the phases are balanced (Distribution protection)

Type	Distribution breaker			Circumstance temperature
	Setting current multiple	Tripping time	Status	
YCP6-32P	1.05	1h non-tripping	Initial	+20°C±2°C
	1.3	1h tripping	Following serial 1	
	1.5	⟨ 2min tripping		

Table 5 Action characteristics of balanced load of each phase of the circuit breaker (Motor protection)

Type	Distribution breaker			Circumstance temperature
	Setting current multiple	Tripping time	Status	
YCP6-32P	1.05	2h non-tripping	Initial	+20°C±2°C
	1.2	2h tripping	Following serial 1	
	1.5	Action within 2 minutes		
	7.2	2~10s 2h tripping	Initial	

Table 6 The action characteristics of the circuit breaker when the load is unbalanced (phase break)

Type	Setting current multiple		Start status	Specified time	Expected results	Circumstance temperature
	Any two-phase	Third phase				
YCP6-32P	1.0	0.9	Cold state	t ≥ 2h	tripping	+20°C±2°C
	1.15	0	Thermal state (In immediate order 1.)	t ≤ 2h	non-tripping	

Table 7 The instantaneous electromagnetic buckle action characteristics of short circuit device are shown

Type	Test current	Start status	Specified time	Expected results	Circumstance temperature
YCP6-32P	0.8×12×In	Cold state	t ≥ 0.2s	non-tripping	+20°C ± 5°C
	1.2×12×In	Cold state	t ≤ 0.2s	tripping	+20°C ± 5°C

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Accessories

Table 3

Attachment Name	YCP6-32	Accessory Specifications	
Undervoltage release	YCP6-AU115	110~150V, 50Hz; 127V, 50Hz	
	YCP6-32 AU225	220~240V, 50Hz	
	YCP6-32 AU385	380~400V, 50Hz; 400V, 60Hz	
Shunt release	YCP6-32 AS115	110~150V, 50Hz; 127V, 60Hz	
	YCP6-32 AS225	220~240V, 50Hz	
	YCP6-32 AS385	380~400V, 50Hz; 440V, 60Hz	
Instantaneous auxiliary contacts (front hanging)	YCP6-32 AE20	2NO	
	YCP6-32 AE11	1NO+1NC	
Instantaneous auxiliary contacts (side hanging)	YCP6-32 AN20	2NO	
	YCP6-32 AN11	1NO+1NC	
Fault signal contacts and instantaneous auxiliary contacts	YCP6-32 AD1010	Fault signal contact NO	NO
	YCP6-32 AD1001		NC
	YCP6-32 AD0110	Fault signal contact NC	NO
	YCP6-32 AD0101		NC

Undervoltage release

Performance of the YCP6-32 AU115, AU225, AU385 of the Undervoltage stripper: Rated insulated voltage Ui (V): 690.

Motion Characteristics:
When the voltage drops to the range of 70% and 35% of the rated voltage, the undervoltage stripper shall act; The Undervoltage stripper shall be able to prevent the starter from closing when the supply voltage is less than 35% of the rated voltage of the stripper, and the undervoltage stripper shall be able to ensure the closure of the starter when the supply voltage is equal to or greater than 85% of the rated voltage

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Shunt release

Performance of the YCP6-32 AS115, AS225, AS385 of the shunt release.
Rated insulated voltage Ui (V): 690

Action characteristics:
The operating voltage range of the shunt release stripper is 70%~110% of the rated operating voltage.

Upper auxiliary
AE-11, AE-20

Performance of instantaneous auxiliary contact YCP6-32 AE20, AE11 (front hanging):
Rated insulated voltage Ui (V): 250;
Agreed heating current Ith (A): 2.5;
The use category of instantaneous auxiliary contacts, rated operating voltage and rated operating current are shown in the table below.

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Working with categories	AC-15				DC-13		
Rated operating voltage Ue (V)	24	48	110/127	230/240	24	48	60
Rated operating current Ie (A)	2	1.25	1	0.5	1	0.3	0.15
Normal working power P (W)	48	60	127	120	24	15	9

The abnormal connection and breaking ability of fault signal contacts and instantaneous auxiliary contacts are shown in the following table

Working with categories	Connected			Division			Number of cycles and operating frequencies of the pass- through operation		
	I/Ie	U/UE	cosΦ or T0.95	I/Ie	U/UE	cosΦ or T0.95	Number of Operation Loops	Number of operation cycles per minute	Electrified time
AC-14	24	48	48	6	1.1	0.7	24	48	60
AC-15	2	1.25	1.25	10	1.1	0.3	1	0.3	0.15
DC-13	48	60	60	1.1	1.1	6Pe	24	15	9

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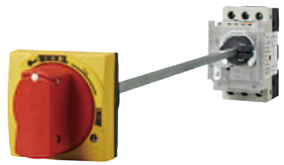
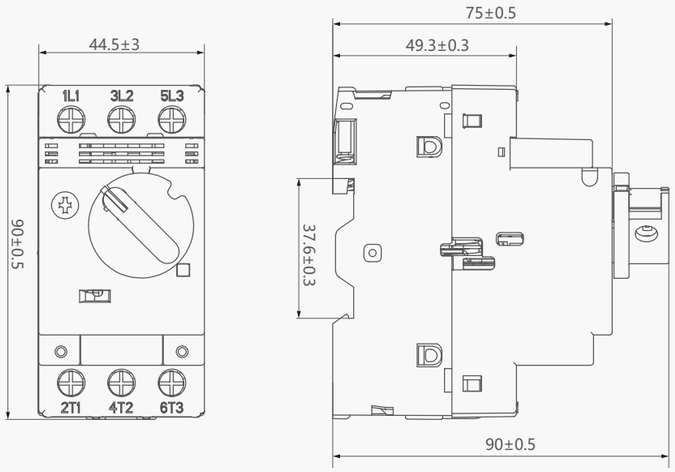
YCP6-32P Knob type product extension handle

	Attachment Type	Function
	AP02	off position locked with padlock, IP54
	AP04	Cannot be padlocked in the On and Off positions, Unable to lock door (or chest of drawers) in On position, IP42

Overall and mounting dimensions(mm)



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