

1. General

JD-5 motor protector ("protector" in short) is mainly used for overload and phase-loss protection of continous duty or non-continous duty AC motor with AC frequency of 50Hz, rated insulation voltage below AC690V and rated operating current of 0.5A~400A.
Standards:IEC/EN 60947-4-1

JD-5 Series Motor Protection Relays

2.Key Technical Parameters

Table 1 Ambient Conditions

Normal use conditions	Ambient temp.: -5℃ ~+40℃ ; average value within 24h not exceeding +35℃ ; altitude not exceeding 2,000m.
Atmospheric conditions	RH shall not exceed 50% when maximum temperature is +40℃ ; in case of lower temperature, higher RH is allowed. Measures should be taken against occasional condensation due to temperature change.
Installation category	Ⅲ
Transport and storage conditions	-25℃ ~+55℃

Table 2 Product specifications and key technical parameters

Model	**JD-5/5**	**JD-5/20**	**JD-5/80**		**JD-5/200**	**JD-5/400**
Current setup range (A)	0.5~5	2~20	20~80	1~80	80~200	160~400
Applicable motor power (kW)	0.25~2.5	1~10	10~40	0.5~40	40~100	80~200
Installation method	Molded case					
Setting method	Knob					
Display method	LED					
Protection functions	Overload, loss of phase					
Contact number	1 NO				1 change-over	

Table 3 Main Circuit Technical Parameters

Product Model	**JD-5/5**	**JD-5/20**	**JD-5/80**	**JD-5/200**	**JD-5/400**
Rated insulation voltage	690V				
Rated control supply voltage Us , frequency	85%Us~110%Us ,AC220V、AC380V、50Hz				
Allowable flunctuation range of rated control supply voltage	85%Us~110%Us				
Rated impulse withstand voltage Uimp	4kV				
Rated conditional short-circuit current	30kA				
Enclosure protection class (if applicable)	IP00				
Pollution class	Class 3				
Rated duty	8h duty or non-stop duty				
Electromagnetic environment (EME)	B				

3. Design features

3.1 Three-phase electronic type, tripping grade (trip class): 10A.

3.2 Equipped with function of phase-failure and overload protection.

3.3 Equipped with continuously adjustable device for setting current.

3.4 Three indicators indicate normal, overload and phase-failure status respectively.

3.5 Main circuit adopts feed through wiring.

3.6 Installation mode: use bolts for installation.

Table 4 Auxiliary Circuit Technical Parameters

Product specifications	JD-5/5, JD-5/20, JD-5/80, JD-5/200, JD-5/400
Rated insulation voltage (V)	380V
Rated impulse withstand voltage Uimp(kV)	2.5kV
Contact capacity	Ue/Ie:415V/0.95A, 240V/1.5A;Ith:5A

4. Protection features

4.1 Operation characteristics under three-phase balanced-load status (see Table 3)

Table 3

S.N.	I/In	operating time	Test Condition	Ambient temperature
1	1.05	<2h non-tripping	Cold Status	+20℃
2	1.20	<2h tripping	Hot Status	
3	1.50	<2min tripping		
4	7.20	2s<Tp≤10s	Cold Status	

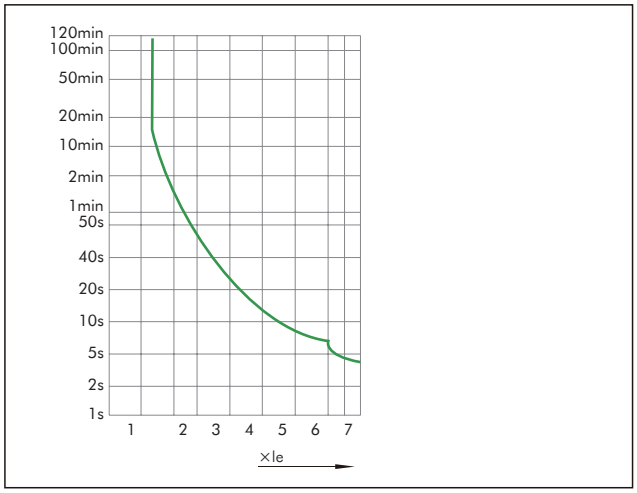
4.2 Operation characteristic under phase-failure status (see Table 4)

Table 4

S.N.	Multiple of setting current		operating time	Test Condition	Ambient temperature
	Any two phases	The Third phases			
1	1.0	0.9	<2h non-tripping	Cold Status	+20℃
2	1.15	0	≤5s	Hot Status	

4.3 Tripping feature

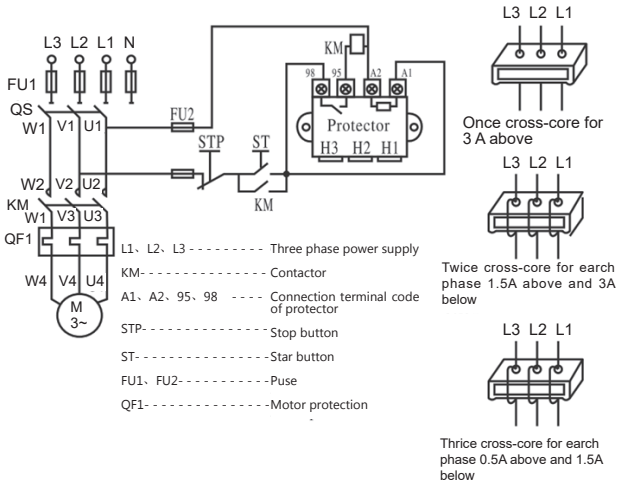
Figure1



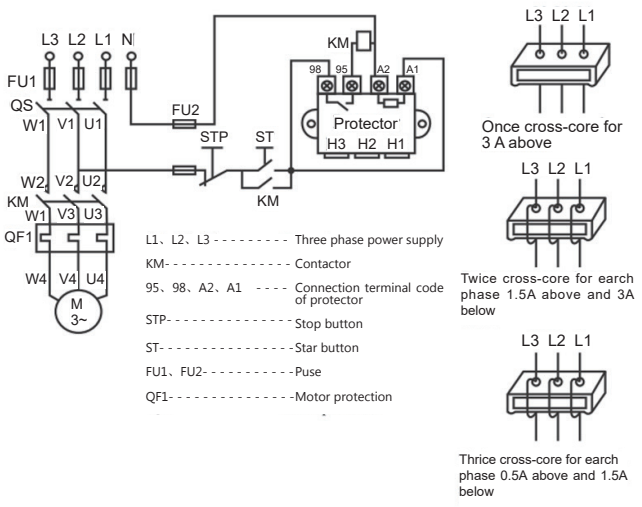
4.4 Reset mode: de-energizing reset

5. Wiring diagram

5.1 Wiring diagram for control power supply @ AC380V voltage

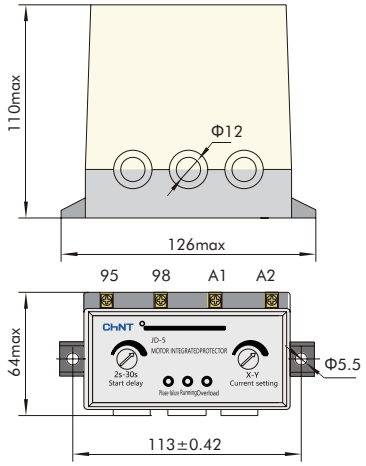


5.2 Wiring diagram for control power supply @ AC220V voltage

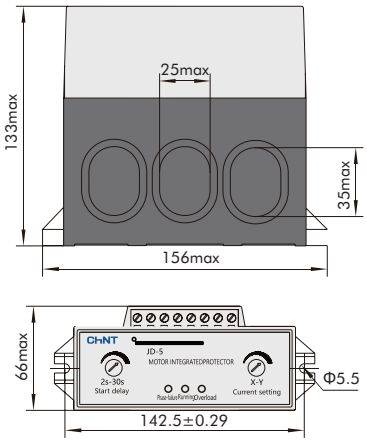


6. Overall and mounting dimensions (mm)

JD-5/80



JD-5/400



JD	-	5	2A-20A	AC220V(with buzzer)	1Z
Motor protector		**Designing series**	**Setting current**	**Control voltage and buzzer**	**Contact group**
			0.5A-5A 2A-20A 1A-80A 20A-80A 80A-200A 160A-400A	AC220V AC380V AC220V(with buzzer) AC380V(with buzzer)	Blank: 1NO 1Z: 1 change-over contact

Setting current	Matched motor power	Control voltage	Buzzer	Contact group	Description	Code
0.5A-5A	0.25~2.5kW	AC220V	/	1NO	JD-5 0.5A-5A AC220V	282059
0.5A-5A	0.25~2.5kW	AC380V	/	1NO	JD-5 0.5A-5A AC380V	282066
2A-20A	1~10kW	AC220V	/	1NO	JD-5 2A-20A AC220V	282060
2A-20A	1~10kW	AC380V	/	1NO	JD-5 2A-20A AC380V	282061
1A-80A	0.5~40kW	AC220V	/	1NO	JD-5 1A-80A AC220V	282085
1A-80A	0.5~40kW	AC380V	/	1NO	JD-5 1A-80A AC380V	282086
1A-80A	0.5~40kW	AC220V	Yes	1NO	JD-5 1A-80A AC220V(with buzzer)	282089
1A-80A	0.5~40kW	AC380V	Yes	1NO	JD-5 1A-80A AC380V(with buzzer)	282090
20A-80A	10~40kW	AC220V	/	1NO	JD-5 20A-80A AC220V	282065
20A-80A	10~40kW	AC380V	/	1NO	JD-5 20A-80A AC380V	282064
80A-200A	40~100kW	AC220V	/	1NO	JD-5 80A-200A AC220V	282067
80A-200A	40~100kW	AC380V	/	1NO	JD-5 80A-200A AC380V	282068
160A-400A	80~200kW	AC220V	/	1NO	JD-5 160A-400A AC220V	282069
160A-400A	80~200kW	AC380V	/	1NO	JD-5 160A-400A AC380V	282070
0.5A-5A	0.25~2.5kW	AC220V	/	1Z(change-over)	JD-5 0.5A-5A AC220V 1Z	218761
0.5A-5A	0.25~2.5kW	AC380V	/	1Z(change-over)	JD-5 0.5A-5A AC380V 1Z	218762
2A-20A	1~10kW	AC220V	/	1Z(change-over)	JD-5 2A-20A AC220V 1Z	218771
2A-20A	1~10kW	AC380V	/	1Z(change-over)	JD-5 2A-20A AC380V 1Z	218773
1A-80A	0.5~40kW	AC220V	/	1Z(change-over)	JD-5 1A-80A AC220V 1Z	218763
1A-80A	0.5~40kW	AC380V	/	1Z(change-over)	JD-5 1A-80A AC380V 1Z	218765
20A-80A	10~40kW	AC220V	/	1Z(change-over)	JD-5 20A-80A AC220V 1Z	218767
20A-80A	10~40kW	AC380V	/	1Z(change-over)	JD-5 20A-80A AC380V 1Z	218769
2A-20A	1~10kW	AC220V	Yes	1Z(change-over)	JD-5 2A-20A AC220V(with buzzer) 1Z	218772
2A-20A	1~10kW	AC380V	Yes	1Z(change-over)	JD-5 2A-20A AC380V(with buzzer) 1Z	218774
1A-80A	0.5~40kW	AC220V	Yes	1Z(change-over)	JD-5 1A-80A AC220V(with buzzer) 1Z	218764
1A-80A	0.5~40kW	AC380V	Yes	1Z(change-over)	JD-5 1A-80A AC380V(with buzzer) 1Z	218766
20A-80A	10~40kW	AC220V	Yes	1Z(change-over)	JD-5 20A-80A AC220V(with buzzer) 1Z	218768
20A-80A	10~40kW	AC380V	Yes	1Z(change-over)	JD-5 20A-80A AC380V(with buzzer) 1Z	218770