

YCQR2 Soft Starter



Product Features

AC squirrel-cage type asynchronous electric motor is a popular electric apparatus. By applying intelligent, the apparatus completes stable load making capacity and reduces impact strength to electrical network; it can work with stable and reliable performance. YCQR2 Model soft starter completes Human-machine interface. Applied to a scope of 5.5~600KW in thermal power plant, hydraulic power plant, metallurgy, chemical industry, architecture, cement plant, mining industry as well as environmental protection projects. It's the ideal replacer of Y-Δ Starter, reactor starter, auto-transformer starter etc.

The advanced technology applied prevents the heavy starting current of AC electric motor, influence to voltage quality and power consumption in loop as well as the impact strength to electric apparatus.

Microprocessor is core of YCQR2 soft starter. It controls big power thyristor components, to limit starting current, voltage ramp start, soft stop. Technical parameters can be set depending different load. It also has over current, overload and out-of-phase protections. Output voltage of soft start is ascending as per setups, then electric motor torque finish starting according to optimized speed-up curve, thyristor components breaks, and bypass AC contact starts.

Functions of YCQR2 Soft Starter

1. Double Single-chip machine automatic digital control;
2. Parameters like starting torsion current, voltage, and time to be set according to different load, to obtain optimal torque control feature.
3. Smooth and gradual starting process, to reduce the impact strength of electric network, vibration and noise of apparatus, to lengthen lifetime of mechanical driver and to improve working environment.
4. Starting current is adjustable as per load, to reduce starting consumption and to make optimal torque with smallest current.
5. Soft stop function – make long lifetime of electric contacts, meet mechanical requirements under various occasions.
6. Over-current protection, overload protection and thermal protection, out-of-phase protection.
7. Extrocontrol interface to facilitate multi-functions: digital delayed start, transient stop control input, start output of time delay relay, fault relay output.
8. No special requirements on the phase sequence to input power.
9. Free stop and soft stop, soft stop time is adjustable.
10. Complete digital control and extrocontrol
11. Standard 485 interface
12. Output 0-20MA analog current
13. Innovative structure, small volume, stable performance, easy installation and operation.
14. Harvard type single-chip machine has strong anti-interruption capacity to prevent the control system from severe electric interruption.

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Main Technical Parameter of YCQR2 Series Soft Starter

Item No.	YCQR2
Electric motor power(400v.h)/kw	5.5-600kw
Rated working current Ie/A	10-1200
Rated working voltage / V	380V±15%
Frequency /Hz	50Hz
Continuous working current /A	115% Ie
Rated control voltage/V	AC 220V-240V/50Hz
Ambient temperature /°C	30°C/55°C

Function code table and parameter description

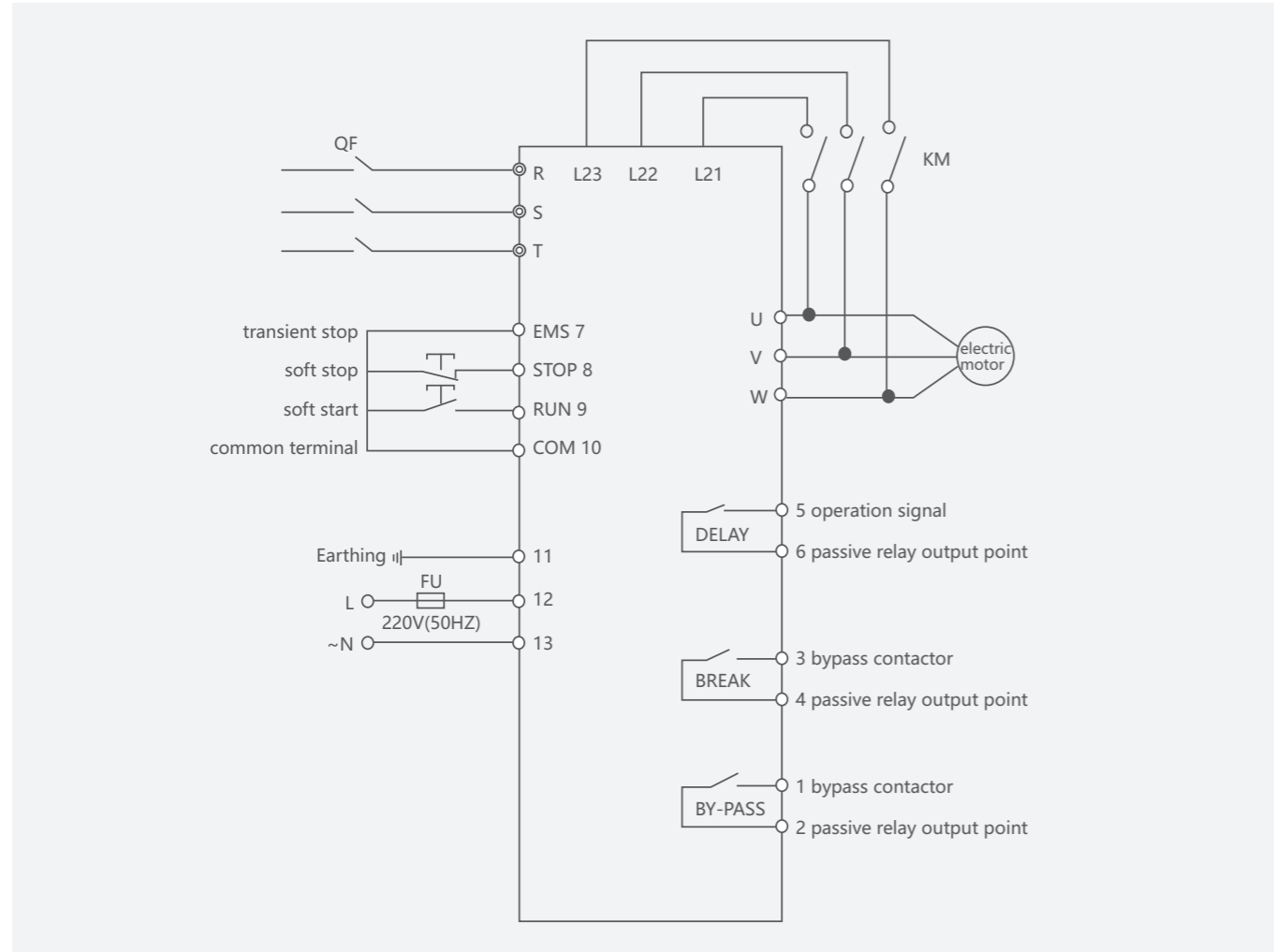
Code	Function Name	Set Range	Factory Value	Illumination
0	Start Voltage	30-80%	30%	Voltage mode effective
1	Rising Time	0-60S	10S	Voltage mode effective
2	Soft Stop Time	0-60S	2S	Stop freely when set as 0
3	Start Delay	0-240S	0S	Two lines way effective
4	Limiting start current	150-500%	250%	Limiting current mode effective
5	Interlock delay	0-240S	0S	
6	Transient stop set	0-1	0	0:yes 1:no
7	Restart after transient stop	0-1	0	0:yes 1:no
8	Control mode	0-1	1	0:limiting current 1:voltage
9	control way	1-6	1	1:keyboard 2:outer control 3:keyboard+outer control 4:PC 5:PC+keyboard 6:PC+outer control
A	0-20mA	0-1	0	0:full scale(20mA)corresponding to 400% 1:full scale(20mA)corresponding to 130%
B	Display Mode	0-132	0	0:by percent of rated voltage XXX:actual rated power value
C	Local Address	1-30	0	For serial-port communication
D	Set parameter modification	0-1	0	0:yes 1:no
E	Overload multiple set	50-200%	150%	
F	Out-of-phase protection	0-1	0	0:yes 1:no
EY	Modification set protection	The data should not be modified in this condition		
-A	Start and rising condition	1.displaying current value XXXA or percent of rate value. 2.Delay start time displays time EOTTT		
-A	Operation condition			
-A	Soft stop condition			

Note:Values XO-9

Even if using the voltage mode,the limiting current is still effective,and its value is 400%.

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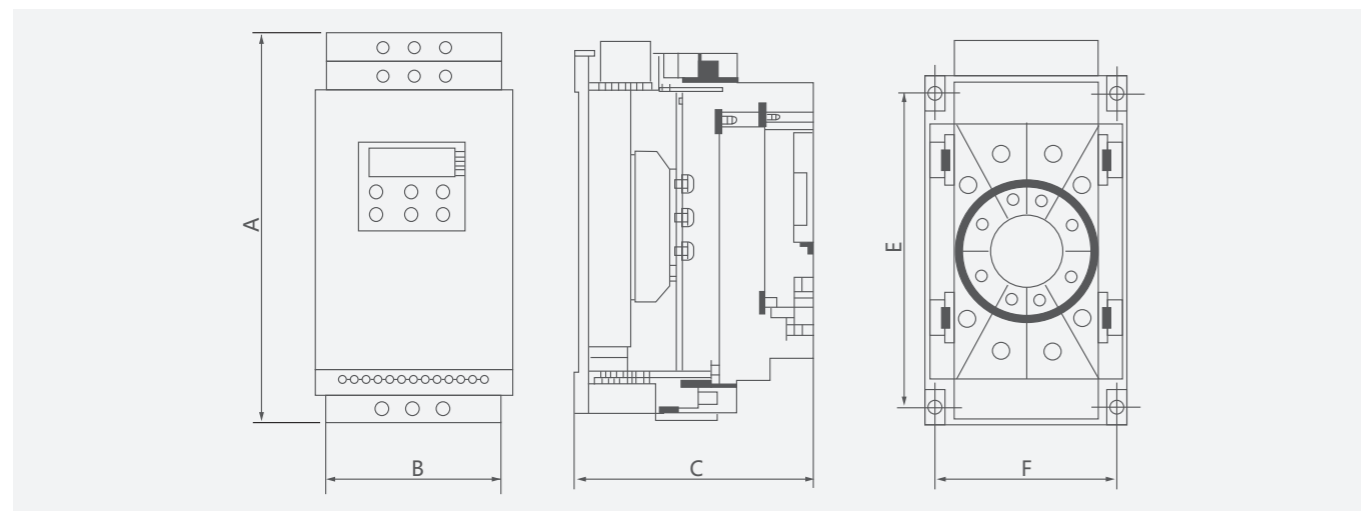
Wiring diagram



Overall and mounting dimensions(mm)

Plane Structure Picture And Size (see Picture 10.1 and 10.2)

Plane Structure Picture Of Ycqr2 55kw Type

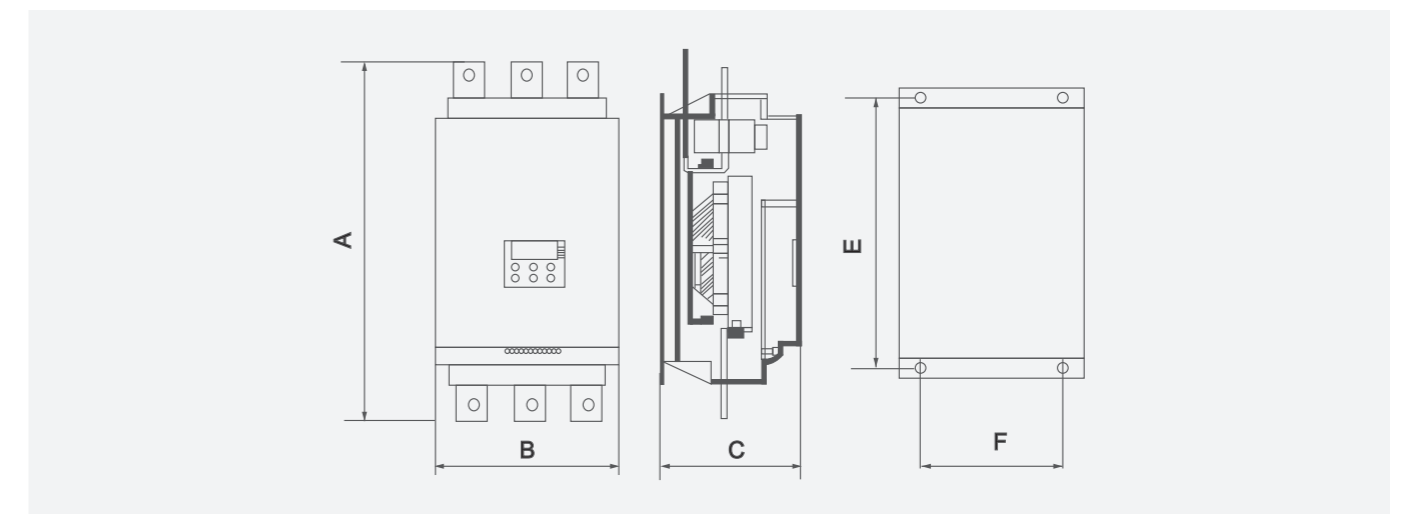


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Structure Size Of YCQR2 55KW Type

Model	Power (KW)	Rated Current (A)	Outline Size(mm)			Installing Size(mm)		Installing Hole Dimension
			A	B	C	E	F	
YCQR2	5.5-22	10-40	265	154	165	219	140	Φ6
YCQR2	30	54	265	154	165	219	140	Φ6
YCQR2	37	68	265	154	165	219	140	Φ6
YCQR2	45	80	265	154	165	219	140	Φ6
YCQR2	55	100	265	154	165	219	140	Φ6

Plane Structure Picture of YCQR2 75-600KW Type



Structure Size of YCQR2 75-600KW Type

Model	Power (KW)	Rated Current (A)	Outline Size(mm)			Installing Size(mm)		Installing Hole Dimension
			A	B	C	E	F	
YCQR2	75	135	531	260	204	380	230	Φ8
YCQR2	90	160	531	260	204	380	230	Φ8
YCQR2	115	200	531	260	204	380	230	Φ8
YCQR2	132	250	531	260	204	380	230	Φ8
YCQR2	160	300	531	260	204	380	230	Φ8
YCQR2	200	360	564	290	204	260	260	Φ8
YCQR2	250	450	564	290	204	260	260	Φ8
YCQR2	320	560	564	290	204	260	260	Φ8
YCQR2	400	800	600	350	220	480	320	Φ8
YCQR2	500	1000	600	350	220	480	320	Φ8
YCQR2	600	1200	600	350	220	480	320	Φ8