

StartMaster Soft Starters



INNOVATION IN SOFT STARTER TECHNOLOGY

StartMaster

Soft Starters - 5 to 242 Amps

FEATURES

- Fully Digital
- Auto Set-up
- Select from 10 pre-programmed soft starting profiles
- Reduced starting torque decreases mechanical stress
- Smooth acceleration to full speed
- Suitable for all types of 3 phase induction motors
- Kick start option for high break-away torque loads
- Soft stop to give controlled deceleration
- Over-current “shear-pin” protection
- Reduction of motor starting current
- Phase loss protection at starting
- Reliable microprocessor control
- Top of ramp and run relays
- Multi Ramp starting and stopping strategies

DESIGN STANDARDS

- IEC 60947-4-2 Standard for AC Semiconductor Motor Controllers and Starters
- EN 60947-4-2 European Standard for AC Semiconductor Motor Controllers and Starters



STARTING PROFILES

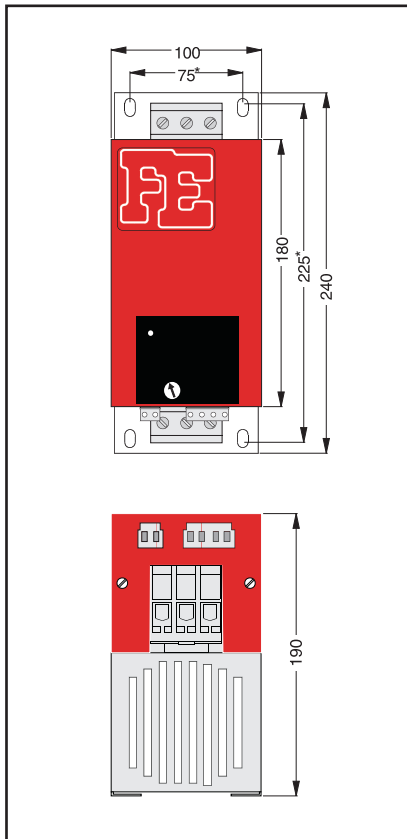
Multi ramp starting and stopping strategies suitable for all applications are designed into the StartMaster.

0	Standard
1	High Torque
2	Pump
3	Pump kick-start
4	Light conveyor
5	Heavy conveyor
6	Low inertia fan
7	High inertia fan
8	Recip. compressor
9	Screw compressor

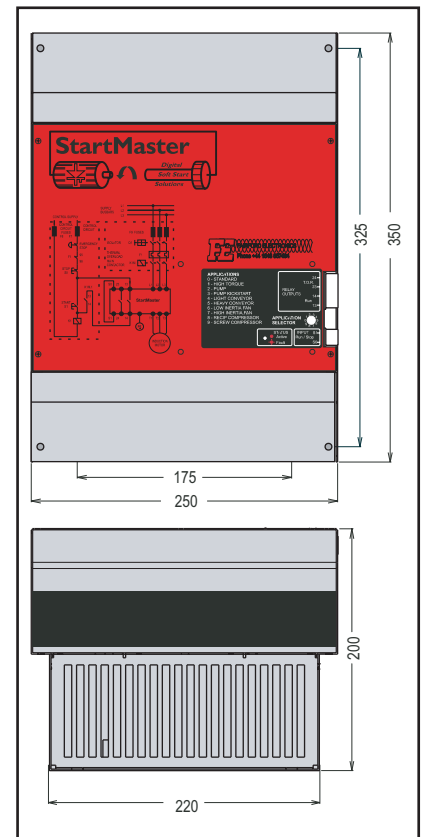
STARTMASTER TECHNICAL SPECIFICATIONS

Supply	400-460V 3-Phase (-15% +10%) 50/60Hz +/- 2Hz 230V 3-Phase (-15% +10%) 50/60Hz +/- 2Hz also available		
Control Outputs	n/o Run Relay 5A 250V AC1 (terminals 13,14) n/o TOR Relay 5A 250V AC1 (terminals 23,24)		
Start/Stop Control Input	Control Input for RUN/STOP, link to run, open to soft stop (terminals S0,S1)		
Application Selection	10 position rotary switch		
Start Times	Units Up to 90A Units Above 90A	1-15 Seconds 5-30 seconds	
Stop Times	Units Up to 90A Units Above 90A	0-15 Seconds 0-35 seconds	
Start Duty	Units up to 90A 5 x FLC for 4 seconds* 4 x FLC for 6 seconds 3 x FLC for 12 seconds 2 x FLC for 26 seconds * Not IP55 Units	Units 105A to 202A 4 x FLC for 6 seconds 3 x FLC for 15 seconds 2 x FLC for 26 seconds	242A 4 x FLC for 6 seconds 3 x FLC for 12 seconds 2 x FLC for 26 seconds
Equally spaced starts per hour	Units up to 202A 10 starts per hour Unit 242A 3 Starts per hour 8 minutes cooling time IP55 Units 3 Starts per hour 2 minutes cooling time		
Ambient Temperature	0° to 40°C Above 40°C de-rate linearly by 2% of unit FLC per °C to a maximum of 40% at 60°C IP55 Min 0°C, Max 40°C		
Altitude	1000m Above 1000m de-rate linearly by 1% of unit FLC per 100m to a max altitude of 2000m		

IP20 for Panel Mounting



Model Name	Motor Full Current Ie (A)	Approx Motor Power Rating @400V (kW)
SM5 IP20	5A	2.2
SM9 IP20	9A	4
SM16 IP20	16A	7.5
SM23 IP20	23A	11
SM30 IP20	30A	15
SM44 IP20	44A	22
SM59 IP20	59A	30
SM72 IP20	72A	37
SM90 IP20	90A	45
SM105 IP20	105A	55
SM146 IP20	146A	75
SM174 IP20	174A	90
SM202 IP20	202A	110
SM242 IP20	242A	132

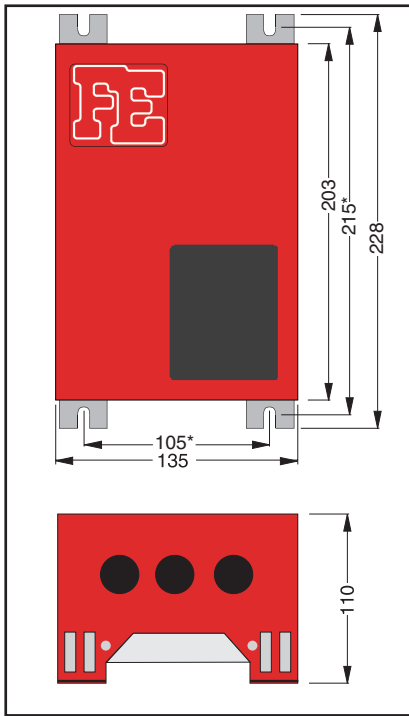


Mechanical outline 5A - 90A StartMaster IP20

*Din Rail and/or M5 fixing mounting holes
Dimensions in mm

Mechanical outline 105A - 242A Startmaster IP20

*M6 fixing mounting holes
Dimensions in mm

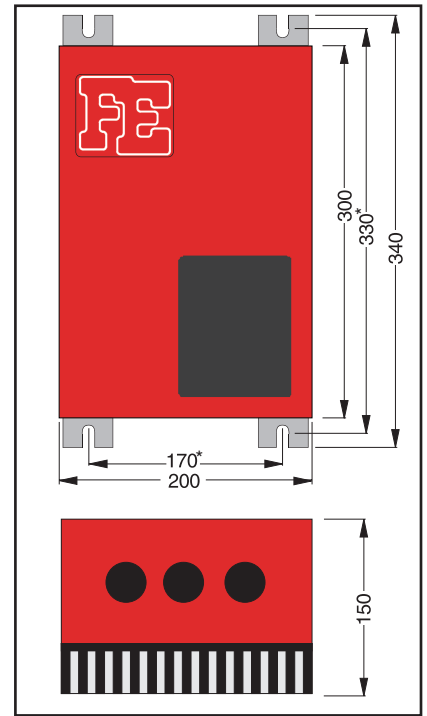


Mechanical outline Size 1 5A - 16A StartMaster IP43

*M5 fixing mounting holes
Dimensions in mm

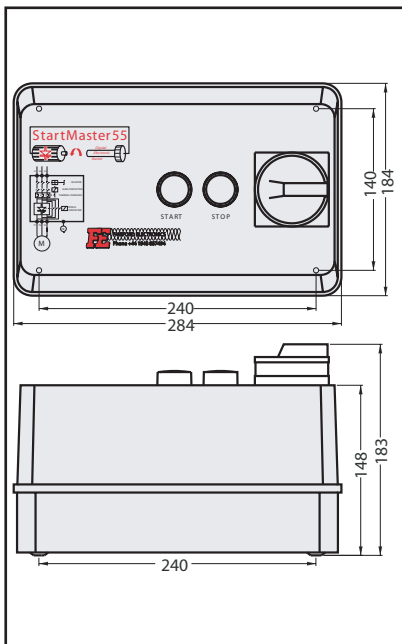
IP43 for Retrofitting

Model Name	Motor Full Current le (A)	Approx Motor Power Rating @400V (kW)
SM5 IP43	5A	2.2
SM9 IP43	9A	4
SM16 IP43	16A	7.5
SM23 IP43	23A	11
SM30 IP43	30A	15
SM44 IP43	44A	22
SM59 IP43	59A	30
SM72 IP43	72A	37



Mechanical outline Size 2 23A - 72A StartMaster IP43

*M6 fixing mounting holes
Dimensions in mm



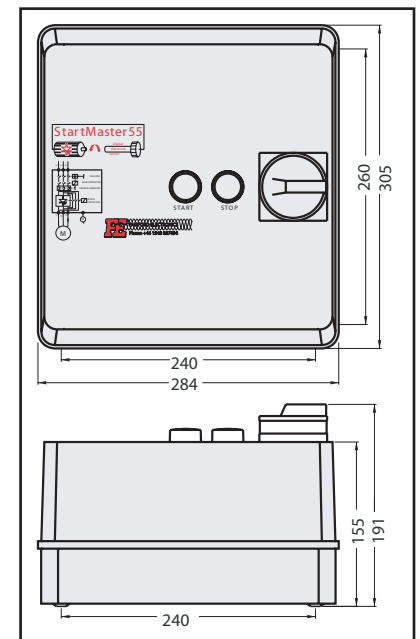
Mechanical outline Size 1 6A - 22A StartMaster IP55

M4 clearance mounting holes
Dimensions in mm

IP55 Complete Starter

Model Name	Motor Full Current le (A)	Approx Motor Power Rating @400V (kW)
SM6 IP55	6A	2.2
SM9 IP55	9A	4
SM13 IP55	13A	5.5
SM16 IP55	16A	7.5
SM22 IP55	22A	11
SM30 IP55	30A	15
SM44 IP55	44A	22

IP55 Complete Starter includes:-
StartMaster Soft Starter,
Panel Mounted Isolator, Main Contactor,
Thermal Overload, By Pass Contactor,
Panel Mounted Start and Stop Push Buttons
and Control Circuit Fusing



Mechanical outline Size 2 30A - 44A StartMaster IP55

M4 clearance mounting holes
Dimensions in mm



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