

- 380 to 600V
- Nominal current 6 to 200A
- ST with Soft Start
- STO with Soft Start + Overload Relay
- Internal by pass relay

CD AUTOMATION

POWERED BY INNOVATION

SOFT STARTER

THE STARTER EVOLUTION



We are delivering Real Cost Benefits



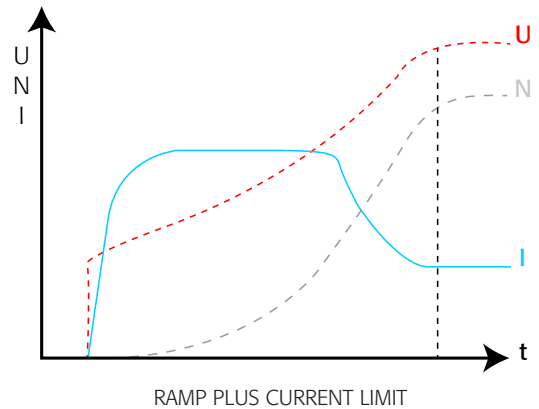
www.cdautomation.com
Soft Starter Catalog 2021

Control Types Available

Voltage ramp (torque ramp)

Soft Starter start from a setted initial voltage, and ramp up to the nominal one in a setted time.
 In addition on all family products is possible to start high friction load with kickstart that gives to the motor for 100÷300 msec 80% of full voltage, without current limit.
 When is started, the motor reach the full speed and remain there, up to when stopped and it can reach zero speed by inerthia or via setted ramp down.

As an option is also available the dynamic braking with an external device.



Current ramp

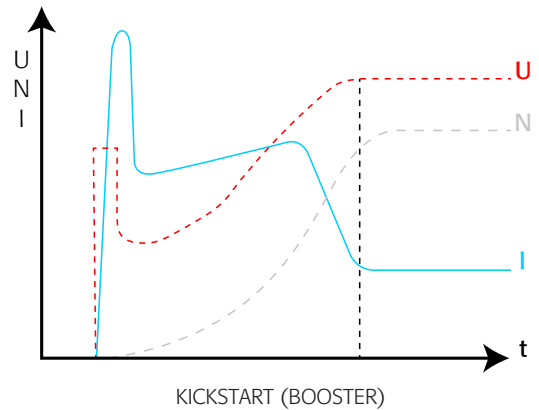
Soft starter start from a setted initial current and ramp up to the nominal value in a setted time. This type of control is available on STO family.

Current limit

This parameter sets the current at which to start.
 This value depend on the application and must not exceed the soft starter sizing (see on next two pages).

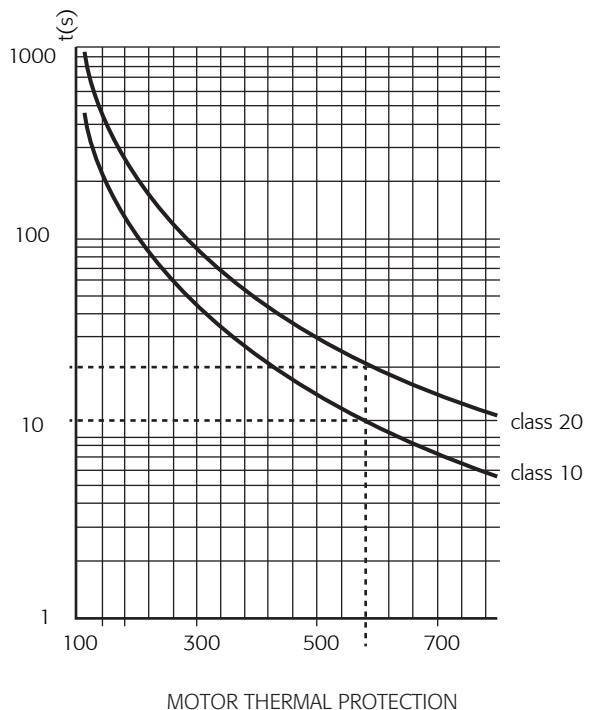
Initial current limit

This parameter sets the initial start current for the current ramp mode.


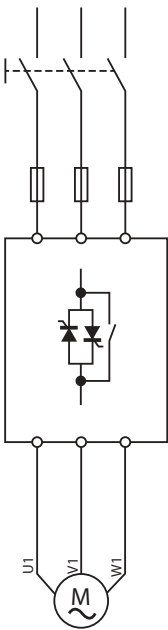


Motor protection

Inside STO soft starter families, has been implemented electronic motor thermal protection.
 The curves are represented on right side, and basically one is for normal service, and the other one for severe service.
 This is an overload relay.



Soft Starter Model

FUNCTIONALITY		STB (Basic)
		
START / STOP	Ramp up voltage	•
	Ramp down	•
	Stop by coasting	•
CONTROL MODE	Internal bypass relay up to 200A	•
	Kick start 80% 100 msec	•
	Kick start 80% 200 msec	•
	Kick start 80% 300 msec	•
PROTECTION	Phase loss	• (1)
	Power circuit failure	•
	Thyristor in short circuit	•
	Supply frequency out of limits	•
	Oversvoltage	•
	PTC motor termistor	•
SOFTWARE APPLICATIONS	Pump application	•

(1) Protection active before ramp up

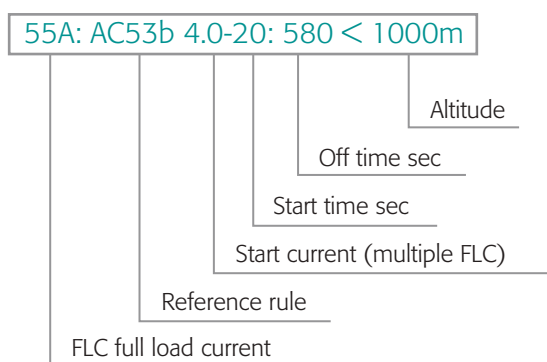
Soft Starter Main Features

GENERAL	Current range	6:200A
	3 wire motor connection	•
	Internal bypass St. from 6 to 200A	•
MAIN SUPPLY VOLTAGE	Supply voltage 3x200V; 3x440V Max (+10: -15%) ac	•
	Voltage frequency 45 to 66 Hz	•
DIGITAL INPUTS	Start/stop optoisolated input + 24V dc start with Dip 4 off	•
	Start with power up with Dip 4 on	•
	Start optoisolated input + 24V dc	•
	Stop optoisolated input + 24V dc	•
CONTROL	Ramp up 0 to 15 sec adjustable	•
	Ramp down 0 to 15 sec adjustable	•
	Initial torque 0 to 80%	•
LED STATUS ALARM INDICATION	Run green led slow blinking ready to start	•
	Run green led fast blinking ramp active	•
	Run green led on end of ramp	•
	Alarm red led off no alarm	•
	PW green on power supply available	•
	PW green on power supply not available	•
ENVIRONMENTAL	Protection IP20	•
	Current sizing as in TAB for 40°C for temperature over see derating	•
	Operating temperature -10 to 60°C max	•
	Humidity 5% to 95% relative humidity	•
RELAY OUTPUT	Conformal coating (option)	•
	2 Relay output free voltage contact (500mA, 125 Vac)	•



Soft Starter Selection

- Start from application table on the right
Example: Agitator 50A the suggested start current is 4 times FLC (full load current 50A)
- Select model from table at the bottom page
- Go on column HEAVY (4) and nominal current of your motor must be equal or less than the value (In our example is 55A)
- If selected model is STB your soft starter is STB075
- If you want to receive Soft Starter already configured follow the code below:



APPLICATION	3 In	3,5 In	4 In	4,5 In
AGITATOR			•	
ATOMIZER			•	
BANDSAW				•
BOTTLE WASHER	•			
CENTRIFUGAL PUMP		•		
CENTRIFUGE				•
CHIPPER				•
CIRCULAR SAW		•		
CONVEYOR BELT				•
CONVEYOR SCREW			•	
CRANE TRANSLATOR			•	
CRUSHER CONE		•		
CRUSHER JAW				•
CRUSHER ROTARY		•		
CRUSHER VERTICAL IMPACT		•		
DEBARKER		•		
DRYER				•
DUST COLLECTOR		•		
EDGER		•		
ELEVATOR	•			
FAN AXIAL CLAMPED		•		
FAN AXIAL UNCLAMPED				•
FAN CENTRIFUGAL CLAMPED		•		
FAN CENTRIFUGAL UNDAMPED				•
FAN HIGH PRESSURE				•
GRINDER		•		
HYDRAULIC POWER PACK		•		
LOADED PISTON COMPRESSOR				•
MILL				•
MILL BALL				•
MILL HAMMER				•
MIL ROLLER				•
MIXER				•
MONORAILS			•	
PALLETISER				•
PLANER		•		
POSITIVE DISPLACEMENT PUMP			•	
PRESS		•		
PUMPS BORE	•			
REPULPER				•
ROLLER CONVEYOR		•		
ROTARY TABLE			•	
SANDER			•	
SCREW COMPRESSOR			•	
SCREW CONVEYOR			•	
SEPARATOR				•
SHREDDER				•
SLICER	•			
SLURRY PUMP				•
TUMBLER			•	
UNLOADED PISTON COMPRESSOR			•	
HYDRAULIC PUMP		•		

SERVICE	LIGHT	MEDIUM	HEAVY	SEVERE
Start Current (Multiple of FLC*)	3	3,5	4	4,5
	AC53b 3,0 -10:350<1000m	AC53b 3,5 -15:345<1000m	AC53b 4,0 -20:340<1000m	AC53b 4,5 -30:340<1000m
MODEL	Rating at 40° C for 3xFLC	Rating at 40° C Amps	Rating at 40° C Amps	Rating at 40° C Amps
STB 006	6A	5A	4A	3A
STB 012	12A	11A	9A	7A
STB 022	22A	20A	17A	13A
STB 032	32A	29A	25A	19A

*FLC Full load current

STB Soft Starter



SIZE SS1

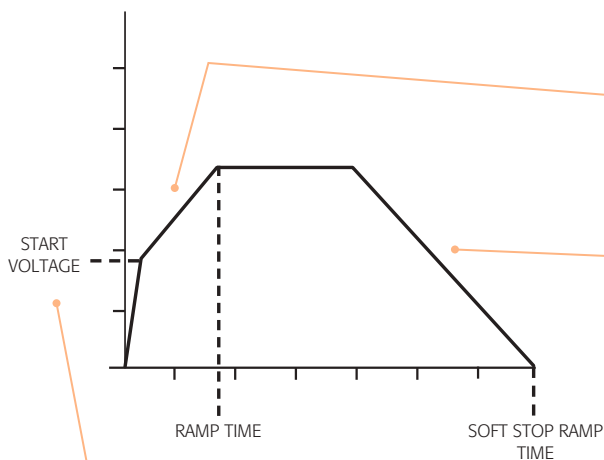


SIZE SS2

SOFT STARTER OF THIS FAMILY ARE DESIGNED TO CONTROL THREE PHASE AC MOTOR FROM 6A TO 200A NOMINAL WITH INTERNAL BYPASS CONTACTOR.

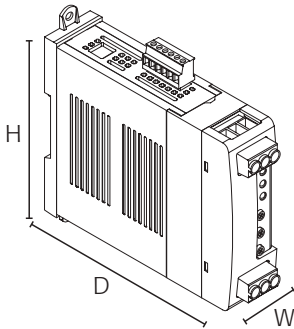
Technical Specification

- STB family has 3 adjustments:
 - Initial start voltage
 - Start ramp time
 - Soft stop ramp time
- Kickstart 100 to 300 msec can be configured by DIP switch
- DIN rail or fixing hole mounting: from 6 to 32A
- Fixing hole mounting from 42 to 200A



STB Control Panel

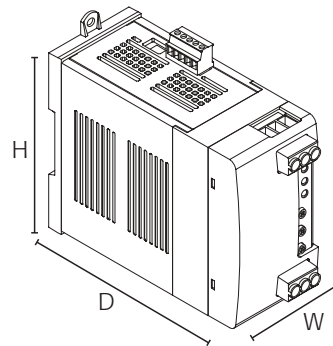
SOFT STARTER CODING



STB 006:012

DIMENSIONS

Wide	30 mm
Deep	130 mm
Height	122 mm



STB 022:032

DIMENSIONS

Wide	52 mm
Deep	130 mm
Height	122 mm

SOFT STARTER STB

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
ORDER CODE	S	T	B	-	-	-	-	-	-	-	-	-	-	-	-	-

CURRENT	4	5	6	
description	code		note	
6 Amp full load current (FLC)	0	0	6	
12 Amp FLC	0	1	2	
22 Amp FLC	0	2	2	
32 Amp FLC	0	3	2	

MAIN SUPPLY VOLTAGE	7	
description	code	note
3x200V + 10:-15%	2	
3x440V + 10:-15%	4	

VOLTAGE SUPPLY AUX.	8	
description	code	note
No auxiliary voltage supply	0	

INPUT	9	
description	code	note
Start with power up	1	
Start/Stop optoisolated + 24V	2	

OVERLOAD RELAY	10	
description	code	note
No overload relay	0	

CONTROL MODE	11	
description	code	note
Voltage control mode	V	

OPTION & FUSE	12	
description	code	note
No Fuses	0	
External fuse & fuse holder	F	

FAN VOLTAGE	13	
description	code	note
No Fan	0	

APPROVALS	14	
description	code	note
CE EMC	0	

MANUAL	15	
description	code	note
None	0	
Italian	1	
English	2	
German	3	
French	4	
Spanish	5	

VERSION	16	
description	code	note
Standard version	1	



Italy

CD Automation Srl
Via Picasso, 34/36
20025 Legnano MI
Italy
T +39 0331 577479
F +39 0331 579479
sales@cdautomation.com
www.cdautomation.com

United Kingdom

CD Automation UK Ltd
Unit 9 Harvington Business Park
Brampton Road, Eastbourne
East Sussex, BN22 9BN
England
T +44 1323 811100
info@cdautomation.co.uk
www.cdautomation.co.uk

India

M/s Toshcon CD Automation Pvt. Ltd.
H1 - 75 Gegal Industrial Area
Ajmer - 305023 (Raj.)
India
T +91 145 2791112
T +91 145 6450601/2/3
sales.cd@toshcon.com
www.cdautomation.in