



Soft starter for 3-phase motors with integrated by-pass



Rated operational voltage 200...480VAC
 Rated operational current: 30A / 50A
 (rms) (up to 86A inside delta)
 Frequency: 50/60Hz
 Phase sequence protection
 Integrated by-pass
 Relay for operating signal
 Soft start / soft stop
 Kickstart / starting torque
 Status via LED and signal relay
 Fault, via LED and signal relay
 Power supply monitoring

Selection and technical specifications:

Product type	Rated operational voltage U_e	EAN Nr.	Rated operational current I_e	Control voltage U_c
SMC 33 DA 4830BPI	200...480VAC	5705609003142	30A AC 53b	230VAC
SMC 33 DA 4850BPI	200...480VAC	5705609003159	50A AC 53b	230VAC

Product description:

The soft starter is 3-phase controlled with integrated by-pass relays which give a compact solution and reduce the wiring.
 The soft starter is dimensioned to handle many starts per hour.
 The soft starter is used for start-up of 3-phase motors in applications such as pumps, compressors, conveyor belts, escalators, centrifugal fans, crushers, mixers, mills and stirrers etc.

Protection:

The soft starters are designed to be used with an external motor protection device.
 Motor protection device type 10 or 10A.
 A motor protection device will not protect the installation.
 For short circuit protection of the installation use fuses. (Co-ordination Type 1)
 For short circuit protection of the installation and the soft starter use semiconductor fuses.(Co-ordination Type 2)
 Using semiconductor fuses, ensure the selected fuse I^2t are lower than the semiconductors I^2t value in the actual softstarter and it can carry the start current in full start duration.

Technical specifications:

Supply voltage specifications:

Rated operational voltage Ue	:	3 x 200...480VAC +15/- 15%
Current Ie	:	3 x 30/50A (rms)
Rated AC frequency	:	50/60Hz
By-pass	:	With internal by-pass relay
Category	:	AC - 53b
Motor size / power	:	Eks.: 17/28kW @ 3 x 400Vac, 50Hz., cos phi = 0,8

Control voltage specifications:

Control voltage Uc	:	1 x 230 Vac +/-15%
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Control signal:

Start/stop	:	230 Vac +/-15%
Signal output	:	3A @ 12...250 Vac/Vdc (signal relay)

Adjustable settings:

Ramp up	:	16 step	0,5...30 sec.
Ramp down	:	16 step	0,5...60 sec.
Initial torque / kick start	:	8+8 step	200mS / 0...85%
Switch for inline / inside delta / L1/L2/L3	:	4 step (2 In line / 2 Inside delta)	

General specifications:

Initial torque	:	0 ... 85%
Motor current nominal 30A	:	30A
Motor current nominal 50A	:	50A

Semiconductor data:

Product type	Rated operational current	I ² t	Short circuit protection
SMC 33 DA 4830BPi	30A	6300 A ² s	80A max.: gl/gG
SMC 33 DA 4850BPi	50A	25300 A ² s	125A max.: gl/gG

Indications control voltage failure (LED):

Error internal to the soft starter

Control voltage Uc L - N
Line voltage Ue L1, L2, L3
C - 34 / 33 - 34
LED 1 + 2 Control voltage failure C-34/33-34 (2,5 Hz)



SMC 33 DA 4830BPi

Environmental conditions:

Degree of protection : IP 20
Storage temperature : -20° to 80°C
Operating temperature large : -5° ... 40°C
Pollution degree : 3

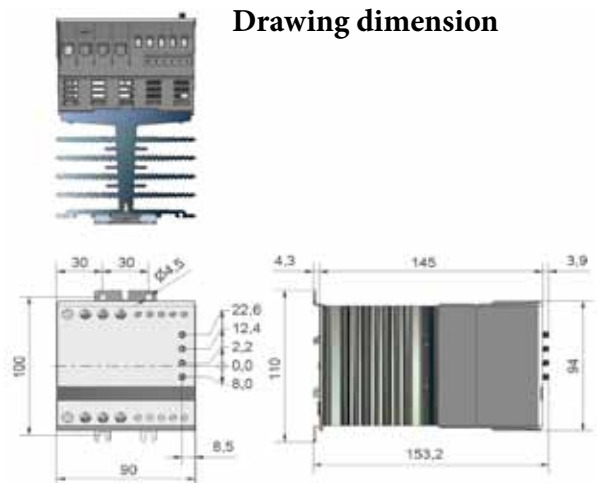
Features:

Soft starter with microprocessor control.
Line frequency detection.
Setting rotary switches, ramp up, ramp down, kick start and / or starting torque increase.
Fault, indication LED and signal relay.
Internal by-pass.
Power supply monitoring

Operation in ambient temperatures exceeding 40°C is possible if the power dissipation is limited either by reducing the steady-state current.

40°C	50°C	60°C
100% Load duty-cycle	80% Load duty-cycle	70% Load duty-cycle

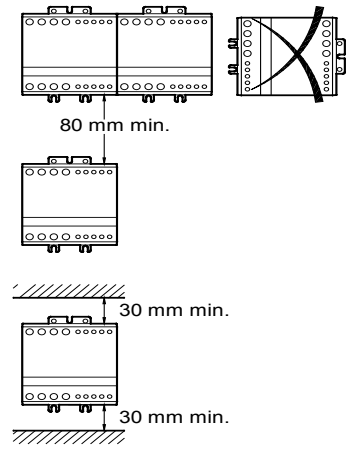
Drawing dimension



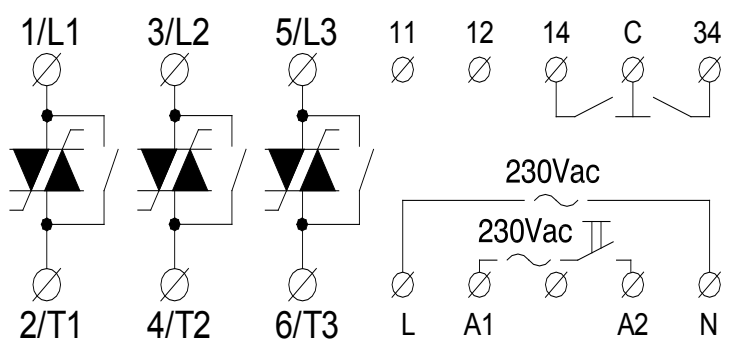
Housing material:

Self-extinguishing PPO UL94V1 halogen free
Color: black / gray
Built-in DIN rail mounting

Mounting instructions



Connections



Output load specifikation:

Overload current profile AC-53b
X-Tx: 5-5:30 (30A)

Connection:

L1; L2; L3: Line voltage
T1; T2; T3: Motor mounting
L - N : Control voltage 230VAC
A1 - A2: Start
14: Status signal relay (potentialfri contacts)
34: Fault signal relay (potentialfri contacts)
C: Common terminal

SMC 33 DA 4850BPi

Environmental conditions:

Degree of protection : IP 20
Storage temperature : -20° to 80°C
Operating temperature large : -5° ... 40°C
Pollution degree : 3

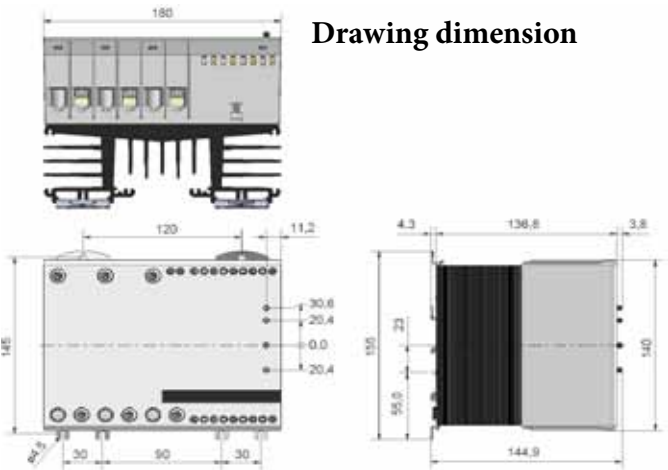
Features:

Soft starter with microprocessor control.
Line frequency detection.
Setting rotary switches, ramp up, ramp down, kick start and / or starting torque increase.
Fault, indication LED and signal relay.
Internal by-pass.
Power supply monitoring

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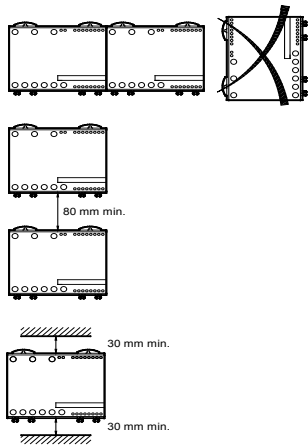
Drawing dimension



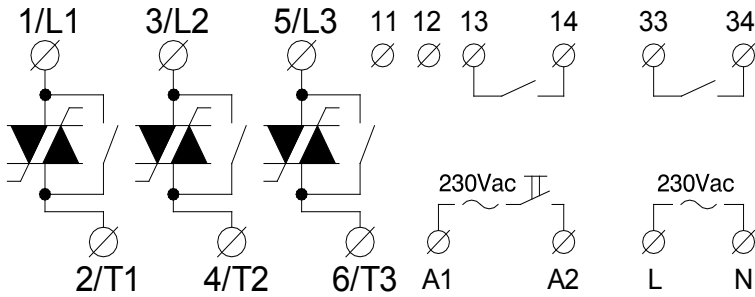
Housing material:

Self-extinguishing PPO UL94V1 halogen free
Color: black / gray
Built-in DIN rail mounting

Mounting instructions



Connections



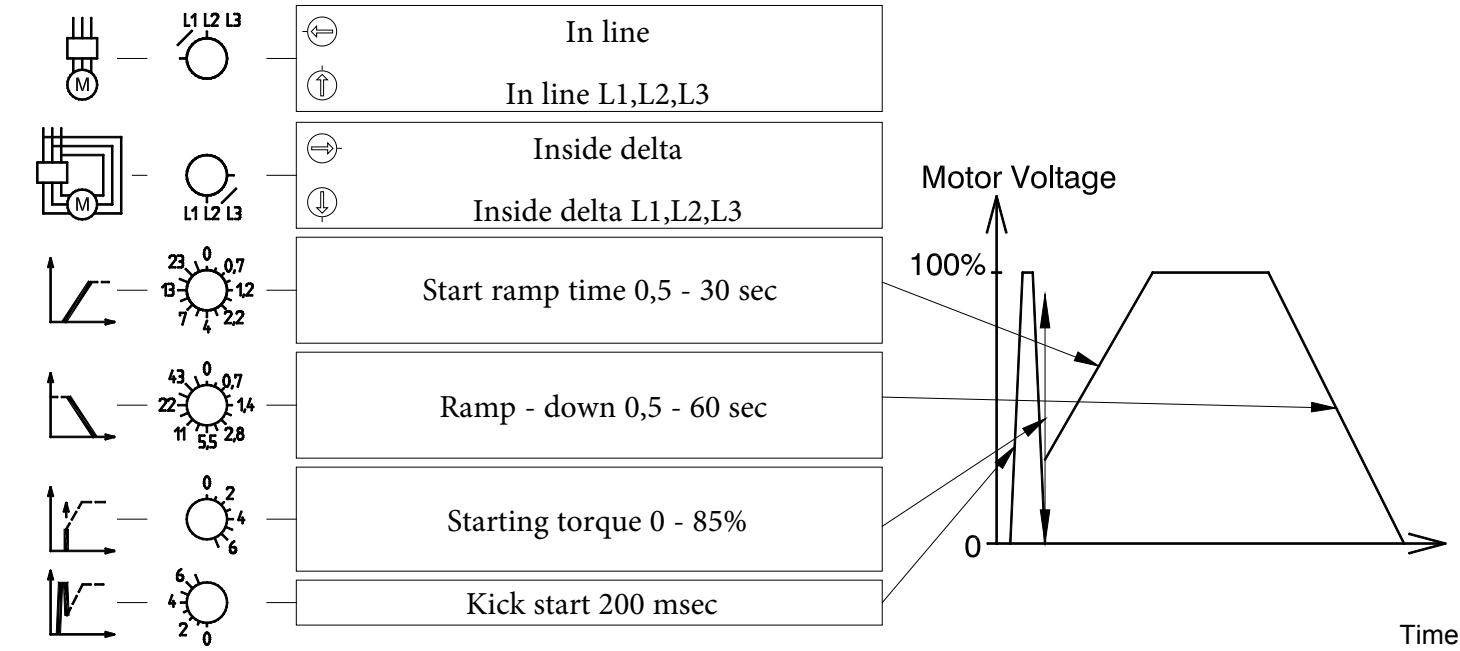
Output load specification:

Overload current profile AC-53b
X-Tx: 6-6:30 (50A)

Connection:

L1; L2; L3: Line voltage
T1; T2; T3: Motor mounting
L - N : Control voltage 230VAC
A1 - A2: Start
13-14: Status signal relay
(potentialfrie contacts)
33-34: Fault signal relay
(potentialfrie contacts)

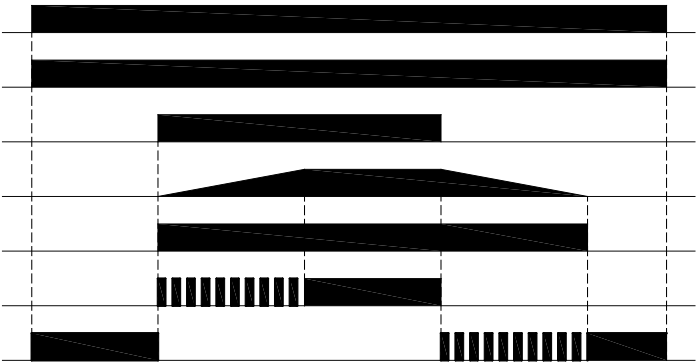
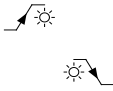
Setting



Functional

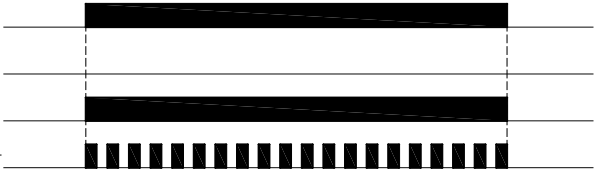
Operating

Control voltage Uc L - N
Line voltage Ue L1,L2,L3
Control voltage Uc A1 - A2
Motor voltage T1,T2,T3
C - 14 / 13 - 14
LED 1
LED 2

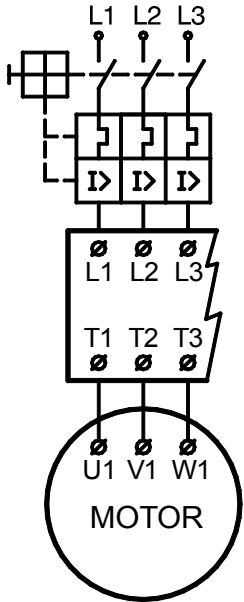


Operating voltage failure

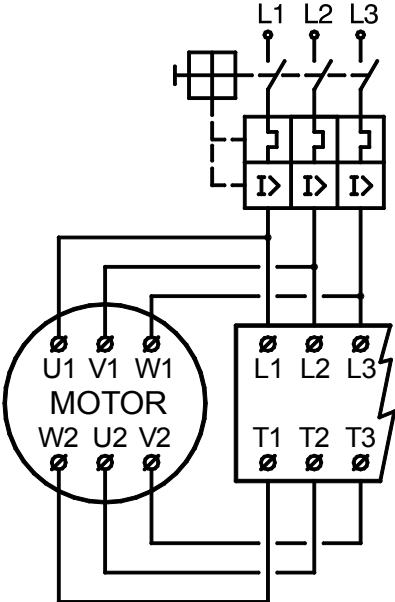
Control voltage Uc A1 - A2
Line voltage Ue L1,L2,L3
C - 34 / 33 - 34
LED 1 + 2 Line voltage failure L1/L2/L3 C-34/33-34 (5 Hz)



In line



Inside delta



Standards

Restrictions of hazardous substances

RoHs Compliant

CE marking

LVD
EMC: Immunity
Emission

EN 60947-4-2
EN 61000-6-4
EN 61000-6-2

Electrostatic discharge ESD

Immunity

EN 61000-4-2
8 kV, Air discharge
4 kV, Contact

Electrical fast transient/
Burst immunity

Output
Input

EN 61000-4-4
4 kV
4 kV

Electrical surge immunity

Output, line to line
Output, line to earth
Input, line to line
Input, line to earth

EN 61000-4-5
1 kV
2 kV
1 kV
2 kV

Radiated radio frequency
Immunity

EN 61000-4-3
3V/m, 80-1000MHz

Conducted radio frequency
Immunity
Voltage dips & interference

EN 61000-4-6
3V/m, 0,15-80MHz
IEC/EN 61000-4-11

Radio interference field
emissions (radiated)

CISPR 11
IEC/EN 55011, Class B

Radio interference voltage
emissions (conducted)

CISPR 11
IEC/EN 55011, Class B

Harmonics

IEC 61000-3-2



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