

eltwin

IC



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



Rated operational voltage 200...480VAC
 Rated operational current: 30A (rms)
 51A inside delta
 Rated operational current: 50A (rms)
 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 starter can be used with motor protection, which protects the engine against overload. Motor protection type 10A and type 10 is recommended. At very high load during soft start and soft stop, type 20 is used.

The soft starter to be short-circuit protected by circuit breakers or fuses. It is recommended to use the circuit breaker or fuse that has a lower I^2t value than the soft-starter's. National regulations must be observed. See general technical information about the installation of soft starter.

technical specifications:

Supply voltage specifications:

Rated operational voltage U_e	:	3 x 200...480VAC +10/- 15%
Current I_e SMC33DA4830BPi (In line)	:	3 x 30A (rms)
Current I_e SMC33DA4830BPi (Inside delta)	:	3 x 51A (rms)
Current I_e SMC33DA4850BPi (In line)	:	3 x 50A (rms)
Current I_e SMC33DA4850BPi (Inside delta)	:	3 x 86A (rms)
Rated AC frequency	:	50/60Hz
By-pass	:	With internal by-pass relay
Categori	:	AC - 53b

Control voltage specifications: (L - N)

Control voltage U_c	:	1 x 230 Vac +/-15%
Control current I_c (4830BPi)	:	<2mA @ U_c = 230Vac (L -N)
Control current I_c (4850BPi)	:	<3mA @ U_c = 230Vac (L -N)

Control signal:

Start/stop (A1 - A2)	:	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^2t	Short circuit protection
SMC 33 DA 4830BPi	30A	6300 A ² s	80A max.: gI/gG
SMC 33 DA 4850BPi	50A	25300 A ² s	125A max.: gI/gG

SMC 33 Da 4830bpi

environmental conditions:

Degree of protection : IP 20
 Storage temperature : -200 to 800C
 Operating temperature large : -50 ... 400C
 Pollution degree 3

features:

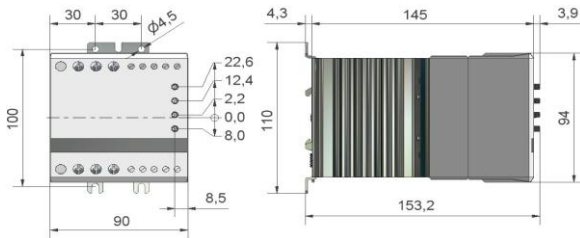
Soft starter with microprocessor control.
 Line frequency detection.
 Setting rotary switches, ramp up, ramp down, kick start and / or starting torque increase.
 Fault, indication LED and signal relay.
 Internal by-pass.
 Power supply monitoring

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

400C	500C	600C
100% Load duty-cycle	80% Load duty-cycle	70% Load duty-cycle



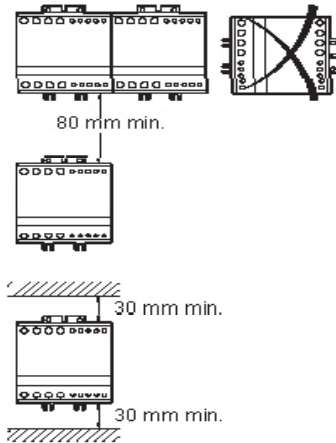
Drawing dimension



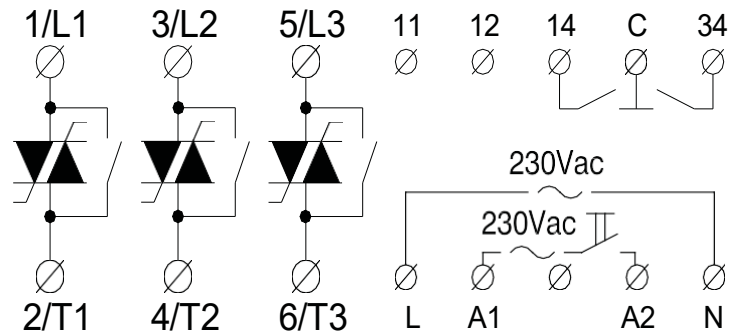
housing material:

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

Mounting instructions



Connections



output load specification:

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:

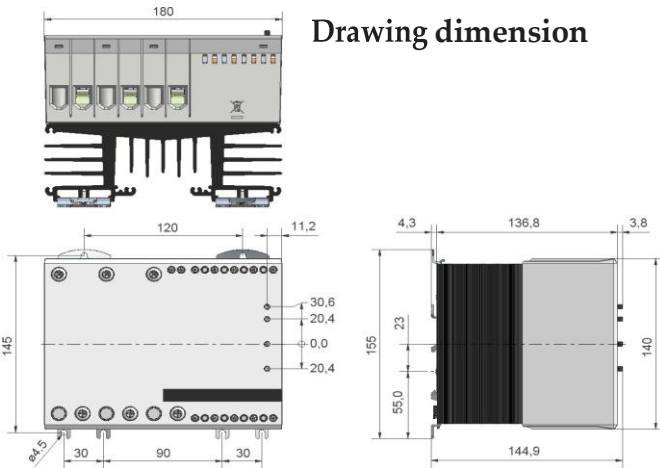
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features:

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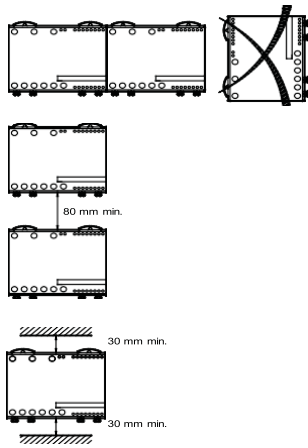
400C	500C	600C
100%	80%	70%
Load duty-cycle	Load duty-cycle	Load duty-cycle



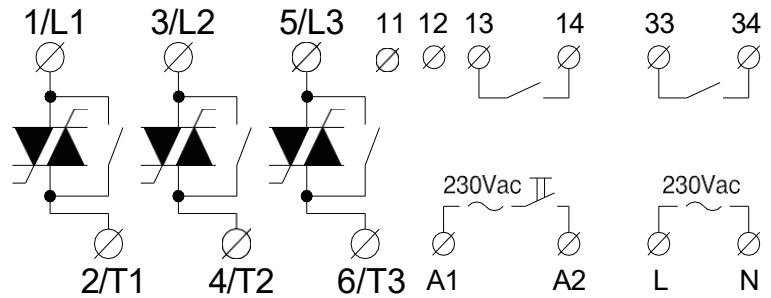
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Connections



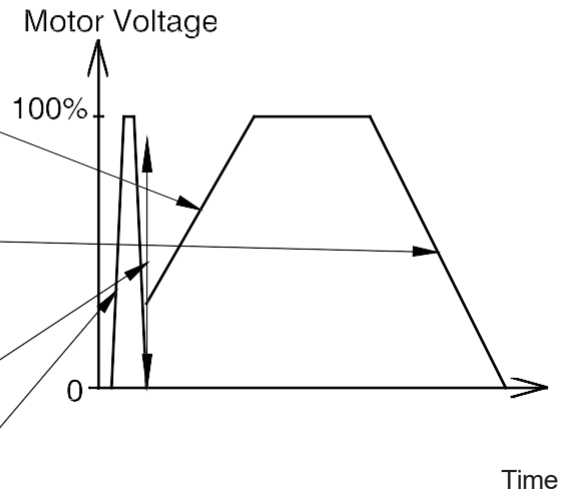
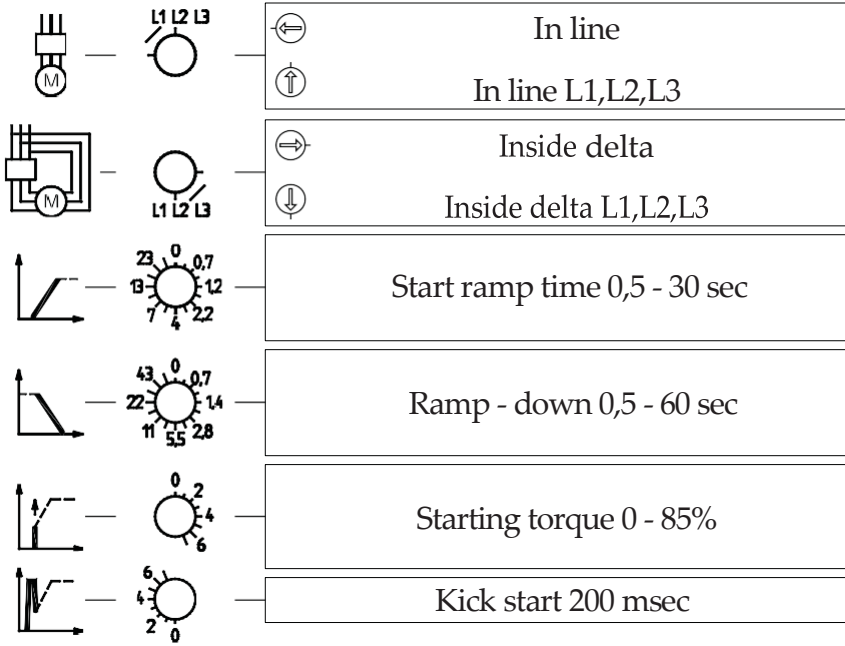
output load specifikaion:

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
 (potentialfri contacts)
 33-34: Fault signal relay
 (potentialfri contacts)

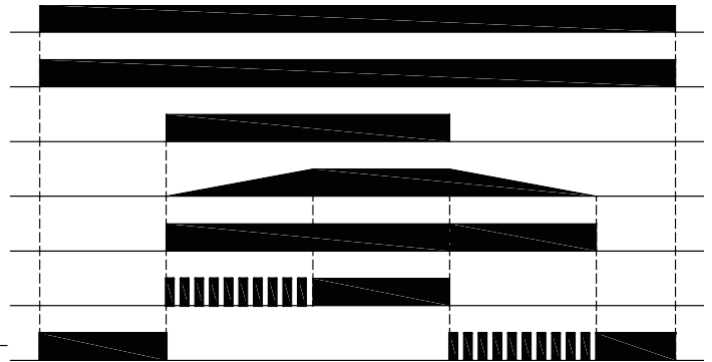
Setting



functional

operating

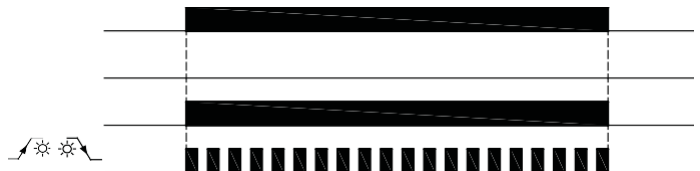
Control voltage U_c L - N
 Line voltage U_e L1,L2,L3
 Control voltage U_c A1 - A2
 Motor voltage T1,T2,T3
 C - 14 / 13 - 14
 LED 1 
 LED 2 



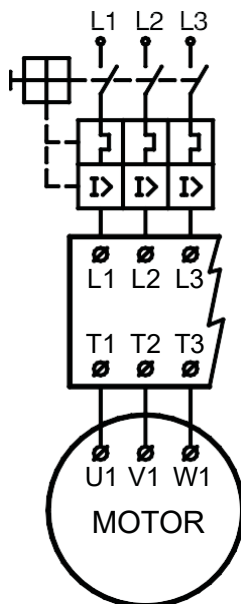
operating voltage failure

Control voltage U_c A1 - A2
 Line voltage U_e L1,L2 or L3
 C - 34 / 33 - 34

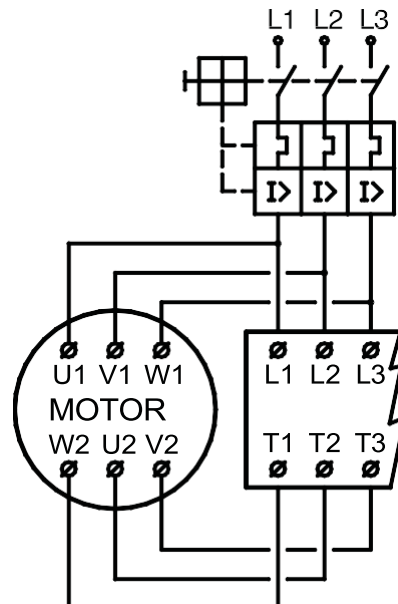
LED 1 + 2 Line voltage failure L1/L2/L3 C-34/33-34 (5 Hz)



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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