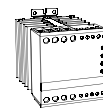


Combined Soft Starter and Dynamic Brake



- * Rated operational voltage up to 480 V AC
- * Rated operational current: from 1A to 25 A AC-3, AC-53a, AC58a (15Hp 400-480VAC)
- * Ramp Up time adjustable from 0.5-10 sec
- * Initial torque adjustable from 0-85%
- * Optional break-loose function (Kick-start)
- * Control voltage range from: 24 to 480 VAC/DC
- * Adjustable Brake current from 0-50A DC
- * Fast action brake mode with automatic motor field reduction
- * Slowspeed: 7.5% or 10% of nominal speed
- * Automatic stop detection
- * Output signal for Full-On(By-pass) and for control of mechanical brake or direct wired start-stop function 0.5A 24-480V AC



Product Description and Item Selection

Motor Brake Controller Form 1. (Soft Starter w. Dynamic Brake) designed to control acceleration & deceleration of 3 Phase motors. Brake current is adjustable from 0-50 ADC. Ramp-up is adjustable from 0.5 to 10 sec. Torque is adjustable with or without break loose (kick start) function.

Line Voltage	Control Voltage	Motor Size	Item No. (25A)
208-240 VAC 50/60Hz	24 - 230 VAC/DC	0.7 - 7.5kW/10HP	SMBC 3 DA 2325
400-480 VAC 50/60Hz	24 - 480 VAC/DC	1 - 11kW/15HP	SMBC 3 DA4025
Ramp-Up time	Adjustable from 0.5 - 10 Sec.		
Brake Current	Adjustable from 0-50A DC		
Initial Torque	Adjustable from 0 - 85 % of nominal. torque		
200 ms Kick Start function	Selectable		

Output Specifications

SMBC3 - 25 A

Operational current max.	25 A AC-53a, AC-3
Leakage current	5 mA AC max.
Minimum operational current	1A
Overload relay trip class	10 or 10 A

Control specifications

Control Input voltage range	24 - 480 V AC/DC	Max. control current for no operation	1 mA
Pick-up voltage max.	20.4 V AC/DC	Response time max.	100 ms
Drop out voltage min..	5 V AC/DC	Control current/power max.	15 mA / 2 VA
Control Output (SCR) Terminal 23-24 for Full-On after Ramp-Up function (By-Pass function)	0.5A AC-14, AC15 24-480V AC 50-60Hz	Control Output (SCR) Terminal 13-14 for control of mechanical brake or direct wired start-stop function	0.5A AC-14, AC15 24-480V AC 50-60Hz

Fusing 10 A gI / gG Max I²t: 72 A²S

Current Derating

Amb. Temperature

SMBC3 - 25 A

Current derating in high temperature applications

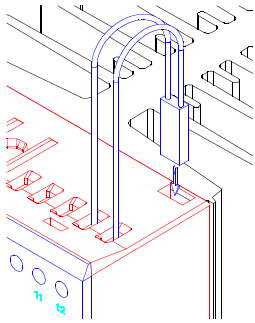
Operation in ambient temperatures exceeding 40°C is possible if the power dissipation is limited either by reducing the steady-state current or by reducing the duty-cycle of the Soft Starter as shown in the table.

50°C	20 A continuous
Limited duty-cycle rating by 50°C	25 A: On time max. 15min duty-cycle max. 0.8
60°C	17 A continuous
Limited duty-cycle rating by 60°C	25 A: On time max. 15min duty-cycle max. 0.65

Specifications are subject to change without notice

Combined Soft Starter and Dynamic Brake

Thermal Overload Protection



Optional thermal overload protection is possible by inserting a thermostat in the slot on the right hand side of the Soft starter.
Type number UP62-100

See application hints for further details page 30

Thermal Specifications

Power dissipation for continuous operation PD _{max} .	2 W/A
Power dissipation for intermittent operation PD	2 W/ A x dutycycle
Cooling method.	Natural convection
Mounting	Vertical +/-30°
Operating temperature range EN 947-4-2	-5°C° to 40°C
Max. operating temperature with current derating according to table	60°C Max. @17A AC-3
Storage temperature EN 947-4-2	-20°C° to 80°C

Cable Wiring Hints

See page 57

Dimension and Mounting Instruction

See page 57

Insulation Specifications

Rated insulation voltage	U _i 660 Volt
Rated impulse withstand voltage	U _{imp} . 4 kVolt
Installation category	III

EMC

This component meets the requirements of the product standard EN60947-4-2 and is CE marked according to this standard.

Approvals

UL Std No. 508

Overload Protection

See page 30-31

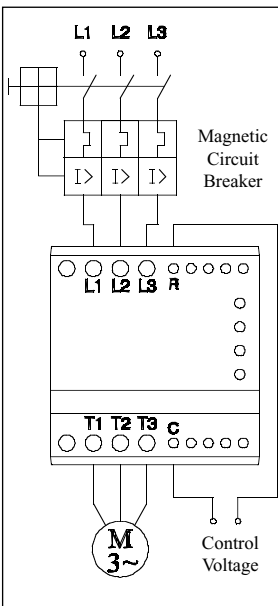
Environment

Degree of protection / Pollution degree IP 20 / 3

Application Hints

See page 30-31

Motor wiring diagram

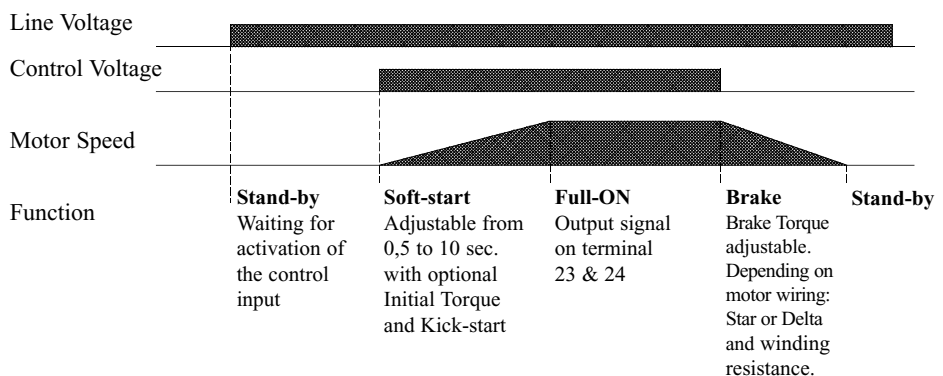


Basic application / Functional diagram

Basic application.

When the control voltage is applied the motor will soft-start. When the control voltage is switched off the automatic Brake cycle will operate.
The application is overload- and shortcircuit protected by the circuit breaker.

Functional Diagram



The controller can operate in 3 different modes.:

1. Run: the motor is soft-started with or without kick-start.

2. Slowspeed: The motor will run at 7,5 or 10% (Selectable)of its nominal speed. OBS Limited operation time due to higher current

3. Dynamic Brake: A DC current is fed to the motor .The motor will brake the load until no rotation is detected.

Outputs: The controller has two 0,5 A 24-480 V AC outputs.

Output 1: For signalling Full-On state terminals 23, 24. Can be used for by-passing the controller with an electromechanical contactor.

Output 2: For control of an electromechanical motor brake terminals 13, 14.

In applications with standard motors this output can be used for controlling a Start-Stop function directly wired to the controller.

Continues on the next pages