ENERTRONICA SANTERNO

ASAB

Soft Starters for
Three-phase Asynchronous Motors

ASAB-0580B Model

(picture is for illustration purposes only)

The ASAB is an advanced digital soft start solution for motors from 7.5 kW to 800 kW. The ASAB provides a management system for the most demanding soft starting and stopping applications, with a complete range of motor and system protection features and a high level of flexibility in a compact and user-friendly package. Not only does the ASAB soft starter feature Constant Current and Current Ramp, but also allows control acceleration with the Adaptive Control Acceleration feature, offering three different starting profiles, to suit the requirements of most applications.

HIGHLIGHTS

- Models for all connection requirements
  - 23 A to 1600 A (nominal)
  - 200 to 525Vac or 380 to 690Vac
  - Internally bypassed up to 1000 A
  - In-line or inside delta connection (auto-detect)
- Extensive starting and stopping options
  - AAC Adaptive
  - Constant current
  - Current ramp start mode
  - Timed voltage ramp soft stop
  - Brake
- Inputs and outputs
  - Remote control inputs (3 x fixed, 1 x programmable)
  - Relay outputs (3 x programmable)
  - Analog output
  - Communication modules using Profibus, DeviceNet, Modbus RTU and USB protocols (optional)
- Easy-to-read display with comprehensive feedback
  - Multiple status screens and performance graphs
  - Date and time stamped event logging
  - Operational counters (number of starts, hours run, kWh)
  - Performance monitoring (current, voltage, power factor, kWh)
  - Multi-language feedback and user-programmable monitoring screen
- Customizable protection
  - Motor overload
  - Excess start time
  - Undercurrent
  - Instantaneous overcurrent
  - Current imbalance
  - Mains frequency
  - Input trip
  - Motor thermistor
  - Power circuit
  - Phase sequence

Main features				
Model	ASAB-0580B			
N. of Starts per hour	6			
Bypass contactor presence	With Internal Bypass Contactor			
Degree of protection	IP00			
Operating temperature range	-10 up to 60°C			
Max. operating temperature without derating	40°C			
Storage temperature range	-25 up to 60°C			
Max. operating altitude	1000 m a.s.l.			
Input Ratings				
Mains frequency	45 Hz .. 66 Hz			
Mains voltage[1]	200 VAC .. 525 VAC (± 10%) or 380 VAC .. 600 VAC (± 10%) (in-line or inside delta connection) 380 VAC .. 690 VAC (± 10%) (earthed star supply system only)			
Control voltage[1]	110 .. 120 VAC or 220 .. 240 VAC (+ 10% / -15%), 600mA			
In-line connection				
Motor current at full load	**Up to 300% for 10s** 580 A	**Up to 350% for 15s** 492 A	**Up to 400% for 20s** 425 A	**Up to 450% for 30s** 364 A
Delta connection				
Motor current at full load	**Up to 300% for 10s** 870 A	**Up to 350% for 15s** 738 A	**Up to 400% for 20s** 637 A	**Up to 450% for 30s** 546 A
Dissipation				
Dissipation at start	approx. 4.5 W per ampere			
Dissipation in run	≤ 357 W			
Dimensions and weight				
Soft Starter dimensions (WxHxD)	433x640x293 mm			
Soft Starter weight	49 kg			

NOTE:
[1] The required mains and control voltage must be specified when ordering the equipment.

Standards	
Main Standards	▪ UL Recognised ▪ CE: IEC 60947-4-2 ▪ EAC: TP TC 020/2011 ▪ RoHS: Compliant with EU Directive 2002/95/EC ▪ RCM ▪ Vibrations: IEC 60068-2-6

ASAB – Main Features

SCR Shorted Action
This feature keeps your plant running even if the ASAB soft starter is damaged in one phase. In the event that a damaged SCR is detected in one phase, the ASAB soft starter offers the option to continue operation using two-phase control. This ensures continued operation while long term repair of the damage is initiated.

Premium Overload Protection
Motor overload protection is an important consideration for all applications. The ASAB soft starter excels in this area providing a protection levels previously only available from dedicated and expensive high-end motor protection relays. The ASAB soft starter's thermal model allows motors to be used to their full potential without fear of damage from overloading.

Emergency Run Mode
In case of fire, equipment such as ventilation fans in high rise buildings can be required to run under any conditions. Activation of the ASAB's Emergency Run mode deactivates all protections systems, enabling the motor to run as long as possible despite the deteriorating environment.

Auto-Reset Of Fault Conditions
Uninterrupted operation of unmanned installations such as irrigators, flood pumps, remote pump stations is aided by the the ASAB soft starter's Auto-Reset function.

Jog Operation
The ASAB soft starter's jog function allows the operator to run the motor at part speed in either the forward or reverse direction. This is ideal for machine positioning of loads such as mixers or hopper bins ready for unloading.

Dual Parameter Sets
The ASAB soft starter can be programmed for two separate start scenarios. Typical application of this capability includes:

- A single ASAB soft starter to control duty-standby pumps.
- Different start performance for varying load conditions.
- Soft braking.

Adaptive Acceleration Control - AAC
Every application has a particular starting profile, based on characteristics of the load and the motor. Adaptive Control offers three different starting profiles, to suit the requirements of most applications.

Braking Of High Inertia Loads
DC brake is used to electrically brake high inertia loads. The brake cycle produces a motor brake torque which approximates the parameter set motor torque.
The ASAB soft starter pulses the DC over all three phases and does not require an external contactor.

Operation Timers
Operation of remote installations such as irrigation pumps can be automatically controlled using the ASAB soft starter's operation timer doing away with the need for external control circuits.

ASAB Pump Control
Flow, pressure transducers or level probes can all be connected directly to the ASAB soft starter. This simplifies control circuits and reduces installed costs, making installation, maintenance and operation simple and straight forward.

Metering & Monitoring
ASAB soft starters deliver extensive monitoring information to support process improvement and maintenance. Feedback is available on-screen or via serial, analog and relay outputs.

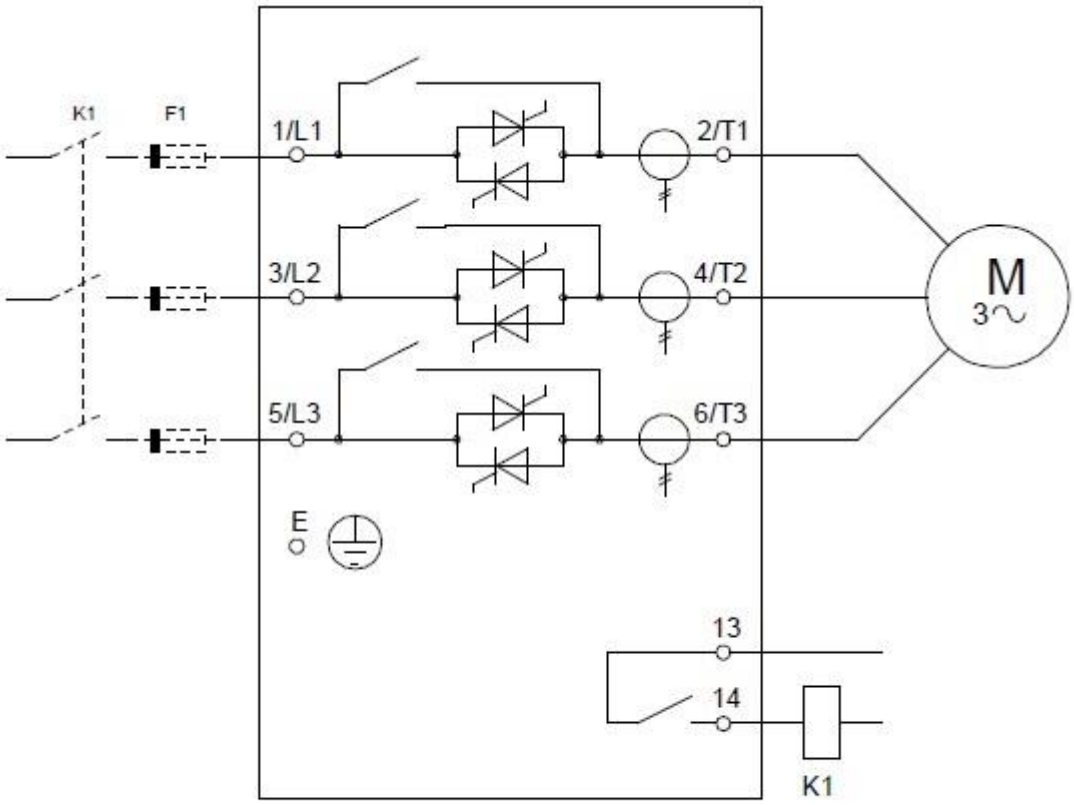
ASAB – Main Options
The following options are available on ASAB Soft Starters:

Communications Modules
ASAB soft starters support network communication via easy-to-install communications modules. Each soft starter can support one communications module at a time.
Available protocols: Ethernet (Profinet, Modbus TCP, Ethernet/IP), Profibus, DeviceNet, Modbus RTU, and USB.

Remote Control Panel (RCP)
A remote mounted keypad can be installed with the ASAB. The keypad can be mounted up to 3 meters away from the starter, for control and monitoring purposes.
The starter can be controlled and programmed from either the remote keypad or the keypad on the starter. Both displays show the same information.
The remote keypad also allows parameter settings to be copied between soft starters.

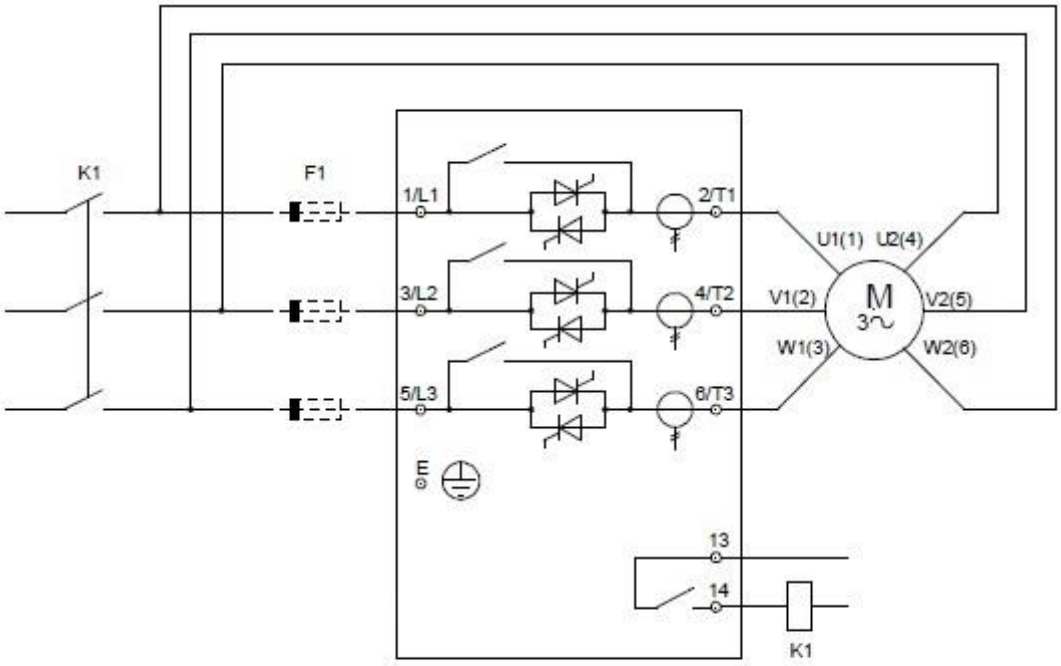
Finger Guard Kit
Finger guards may be specified for personnel safety. Finger guards fit over the soft starter terminals to prevent accidental contact with live terminals. Finger guards provide IP20 protection when correctly installed.

In- line Connection



K1	Main contactor (optional)
F1	Semiconductor fuses (optional)

Inside Delta Connection



K1	Main contactor (strongly recommended)
F1	Semiconductor fuses (optional)