

SIRIUS 3RW Soft Starters

3RW30, 3RW40 for Standard Applications

3RW30

More information

Application examples for normal starting (CLASS 10)

Normal starting CLASS 10 (up to 20 s with 300 % $I_{n, motor}$, one start per hour)
The soft starter rating can be selected to be as high as the rating of the motor used

Application	Conveyor belts	Roller conveyors	Compressors	Small fans ¹⁾	Pumps	Hydraulic pumps
Starting parameters						
• Voltage ramp and current limiting						
- Starting voltage	% 70	60	50	40	40	40
- Starting time	s 10	10	20	20	10	10

¹⁾ The mass inertia of the fan is <10 times the mass inertia of the motor.

Note:

These tables present sample set values and device dimensions. They are intended only for the purposes of information and are not binding. The set values depend on the application in question and must be optimized during commissioning.

The soft starter dimensions should be checked where necessary with the help of Technical Assistance.

Configuration

The 3RW solid-state motor controllers are designed for easy starting conditions. In the event of deviating conditions or increased switching frequency, it may be necessary to choose a larger device.

If necessary, an overload relay for heavy starting must be selected where long starting times are involved. PTC sensors are recommended.

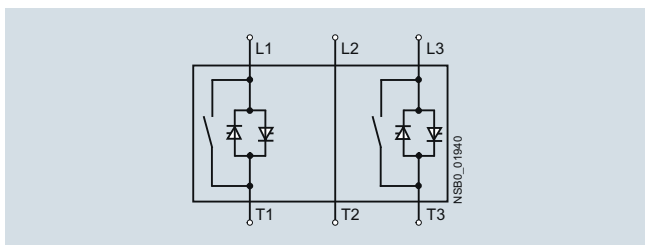
No capacitive elements are permitted in the motor feeder between the SIRIUS 3RW soft starter and the motor (e.g. no reactive-power compensation equipment). In addition, neither static systems for reactive-power compensation nor dynamic PFC (Power Factor Correction) must be operated in parallel during starting and ramp-down of the soft starter. This is important to prevent faults arising on the compensation equipment and/or the soft starter.

All elements of the main circuit (such as fuses, controls and overload relays) should be dimensioned for direct starting, following the local short-circuit conditions. Fuses, controls and overload relays must be ordered separately. Please observe the maximum switching frequencies specified in the technical specifications.

Note:

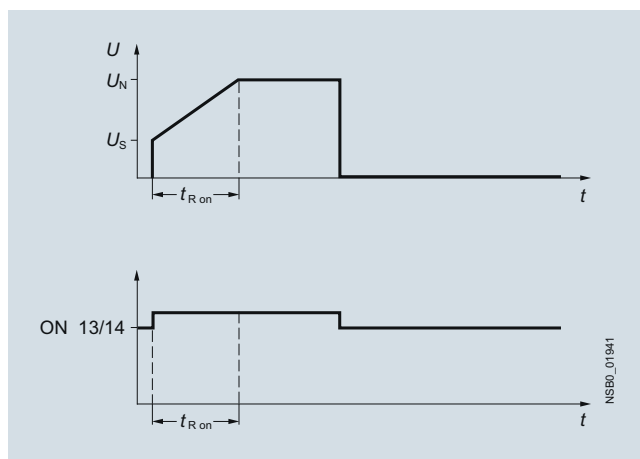
When three-phase motors are switched on, voltage drops occur as a rule on starters of all types (direct-on-line starters, wye-delta starters, soft starters). The infeed transformer must always be dimensioned such that the voltage dip when starting the motor remains within the permissible tolerance. If the infeed transformer is dimensioned with only a small margin, it is best for the control voltage to be supplied from a separate circuit (independently of the main voltage) in order to avoid the potential switching off of the soft starter.

Schematic circuit diagram of power electronics



A bypass contact system is already integrated in the 3RW30 soft starter and therefore does not have to be ordered separately.

Status graphs



Manual for SIRIUS 3RW30/40

In addition to relevant configuration, commissioning, and service information, the manual also contains example circuits and technical specifications for all devices:

<http://support.automation.siemens.com/WW/view/en/38752095>