Motor Starting Solutions with SIRIUS

Whether conventional solutions with SIRIUS 3RA1 load feeders, high-feature applications with SIMATIC ET 200S motor starters or the new SIRIUS 3RA6 compact starters – the following overview provides information as to which of our motor starting solutions with SIRIUS is suitable for the respective application.

Flexible assembly

High degree of integration

	SIMATIC ET 200S motor starter	SIRIUS 3RA6 compact starter	SIRIUS modular system
			
Current/power range	16 A/7.5 kW	32 A/15 kW	630 A/250 kW
Starter and assembly type	Direct-on-line and reversing starters, soft starters and frequency converters as modules of an I/O system	Direct-on-line and reversing starters as a compact unit	Flexible assembly of all starter types with individual devices
Main and control circuit wiring	Completely pre-wired system both on the main and control circuit side with power bus, PE connection option and retained wiring for fast replacement	Completely pre-wired system on the main circuit side with power bus, PE connection option and retained wiring for fast replacement	Individual devices which can be combined via connection modules and conventional wiring in the main and control circuit
Integration in the automation environment	Modular I/O system with optional motor starters which is connected to the control via PROFIBUS or PROFINET without additional wiring; remote parameterization and comprehensive diagnostics included in the system	Conventional compact switching device which is connected to the control via I/Os, an AS-Interface add-on module or on the basis of an IO-Link design	Conventional switching devices which are connected to the control via I/Os
Conclusion	**The solution offering maximum integration in the control level**	**The compact solution with minimum wiring costs and integration options**	**The solution featuring the largest power range and very flexible assembly options**

Technical Data

Device standard		IEC/EN 60947-6-2
Number of poles		3
Permissible operating temperature	In acc. with IEC/EN 60721-3-3	–20 to +60 °C
Relative humidity		10 to 90 %
Rated frequency		50/60 Hz
Rated impulse voltage		6 kV
Degree of protection	In acc. with IEC 60947-1	IP20
Touch protection	In acc. with DIN VDE 0660 Part 514, DIN EN 50274	finger-proof
Max. dimensions direct-on-line starter	Screw-type connection system (W x H x D)	45 x 170 x 165 mm
	Spring-loaded connection system (W x H x D)	45 x 191 x 165 mm
Max. dimensions reversing starter	Screw-type connection system (W x H x D)	90 x 170 x 165 mm
	Spring-loaded connection system (W x H x D)	90 x 191 x 165 mm
Switching capacity with 400 V	All types	up to 53 kA
Electrical service life (switching cycles) with 400 V		up to 10 million
Surge suppressor	Coil	integrated
Number of integrated main switches	Main contacts	1NO/1NC
	Latching mechanism (e.g. short circuit)	1NO
	Overload	1CO

Selection and Ordering Data

Three-phase standard motor 3-pole with 400 V AC [1] Standard power P in kW	Setting range solid-state overload relay in A	Order number		Order number	
Type of coordination: continuous operation up to 53 kA; rated service short-circuit breaking capacity I_{CS} with 400 V (weld-free)					
SIRIUS 3RA61 compact starter		**3RA61 direct-on-line starter**		**3RA64 direct-on-line starter with IO-Link**	
0.09	0.1 ... 0.4	3RA61 20-☐A☐3☐		3RA64 00-☐AB4☐	
0.37	0.32 ... 1.25	3RA61 20-☐B☐3☐		3RA64 00-☐BB4☐	
1.5	1 ... 4	3RA61 20-☐C☐3☐		3RA64 00-☐CB4☐	
5.5	3 ... 12	3RA61 20-☐D☐3☐		3RA64 00-☐DB4☐	
15	8 ... 32	3RA61 20-☐E☐3☐		3RA64 00-☐EB4☐	
SIRIUS 3RA62 compact starter		**3RA62 reversing starter**		**3RA65 reversing starter with IO-Link**	
0.09	0.1 ... 0.4	3RA62 50-☐A☐3☐		3RA65 00-☐AB4☐	
0.37	0.32 ... 1.25	3RA62 50-☐B☐3☐		3RA65 00-☐BB4☐	
1.5	1 ... 4	3RA62 50-☐C☐3☐		3RA65 00-☐CB4☐	
5.5	3 ... 12	3RA62 50-☐D☐3☐		3RA65 00-☐DB4☐	
15	8 ... 32	3RA62 50-☐E☐3☐		3RA65 00-☐EB4☐	

Order number supplement for alternative equipment

- for DIN rail or screw fastening 2 2
  basic version, including 1 pair of main and control circuit terminals each
- for use with the infeed system for 3RA6 ..... 3 3
  without main circuit terminals, with control circuit terminals
- for DIN rail or screw fastening for use with the AS-i add-on module [2] ..... B 4
  without control circuit terminals, with main circuit terminals

Order number supplement for connection type

- without terminals 0 0
  for use with 3RA6 infeed system and AS-i add-on module
- with screw-type terminals 1 1
- with spring-loaded terminals 2 2

Order number supplement for rated control supply voltage

- 24 V DC ..... B
- 24 V AC/DC ..... B
- 42 ... 70 V AC/DC ..... E
- 110 ... 240 V AC/DC ..... P

1) The specific start-up and rated data of the motor to be protected are critical for selection
2) Only for use with 24 V DC control supply voltage