Overview

3RA6 fuseless compact starters and infeed system for 3RA6

3RA62 reversing starter

Integrated functionality

The SIRIUS 3RA6 compact starters are a generation of innovative load feeders with the integrated functionality of a motor starter protector, contactor and electronic overload relay.
In addition, various functions of optional mountable accessories (e.g. auxiliary switches, surge suppressors) are already integrated in the SIRIUS compact starter.

3RA6 compact starters with the integrated functionality of a motor starter protector, contactor and electronic overload relay.

Applications

The SIRIUS compact starters can be used wherever standard three-phase motors up to 32 A (approx. 15 kW/400 V) are directly started.

The compact starters are not suitable for the protection of DC loads.

Approvals according to IEC, UL, CSA and CCC standards have been issued for the compact starters.

Low variance of devices

Thanks to wide setting ranges for the rated current and wide voltage ranges, the equipment variance is greatly reduced compared to conventional load feeders.

Very high operational reliability

The high short-circuit breaking capacity and defined shut-down when the end of service life is reached means that the SIRIUS compact starter achieves a very high level of operational reliability that would otherwise have only been possible with considerable additional outlay. This sets it apart from devices with similar functionality.

Safe disconnection

The auxiliary switches (NC contacts) of the 3RA6 compact starters are designed as mirror contacts. This enables their use for safe disconnection - e.g. EMERGENCY STOP up to SIL 1 (IEC 62061) or PL c (ISO 13849-1) or, if used in conjunction with an additional infeed contactor, up to SIL 3 (IEC 62061) or PL e (ISO 13849-1).

Communications integration through AS-Interface

To enable communications integration through AS-Interface there is an AS-i add-on module available in several versions for mounting instead of the control circuit terminals on the SIRIUS compact starter.

The design of the AS-i add-on module permits a group of up to 62 feeders with a total of four cables to be connected to the control system. This reduces wiring work considerably compared to the parallel wiring method.

Communications integration using IO-Link

Up to 4 compact starters in IO-Link version (reversing and direct-on-line starters) can be connected together and conveniently linked to the IO-Link master through a standardized IO-Link connection. The SIRIUS 4SI electronic modules are used e.g. as IO-Link masters for connection to the SIMATIC ET 200S distributed I/O system.

The IO-Link connection enables a high density of information in the local range.

Details of the communications integration using IO-Link, see Chapter 2 "Industrial Communication" → "IO-Link".

The diagnostics data of the process collected by the 3RA6 compact starter, e.g. short circuit, end of service life, limit position etc., are not only indicated on the compact starter itself but also transmitted to the higher-level control system through IO-Link.

Thanks to the optionally available operator panel, which can be installed in the control cabinet door, it is easy to control the 3RA6 compact starters with IO-Link from the control cabinet door.

Permanent wiring/easy replacement

Using the SIRIUS infeed system for 3RA6 (see page 8/72) it is possible to carry out the wiring in advance without a compact starter needing to be connected.

A compact starter is very easily replaced simply by pulling it out of the device without disconnecting the wiring.

Even with screw connections or mounting on a standard mounting rail there is no need to disconnect any wiring (on account of the removable main and control circuit terminals) in order to replace a compact starter.

Consistent solution from the infeed to the motor feeder

The SIRIUS infeed system for 3RA6 with integrated PE bar is offered as a user-friendly possibility of feeding in summation currents up to 100 A with a maximum conductor cross-section of 70 mm² and connecting the motor cable directly without additional intermediate terminals.

Screw and spring-type terminals

The SIRIUS compact starters and the infeed system for 3RA6 are available with screw and spring-type terminals.

General data

Screw terminals

Spring-type terminals

The terminals are indicated in the corresponding tables by the symbols shown on orange backgrounds.

System configurator for engineering

A free system configurator is available to reduce further the amount of engineering work for selecting the required compact starters and matching infeed.

Types of infeed for the 3RA6 fuseless compact starters

On the whole four different infeed possibilities are available:

- Parallel wiring
- Use of three-phase busbars (combination with SIRIUS motor starter protectors and SIRIUS contactors possible)
- 8US busbar adapters
- SIRIUS infeed system for 3RA6 (see page 8/72)

To comply with the clearance and creepage distances demanded according to UL 508 there are the following infeed possibilities:

Type of infeed	Infeed terminal (acc. to UL 508, type E)	Type
Parallel wiring	Terminal block for "Self-Protected Combination Motor Controller (Type E)"	**3RV2928-1H**
Three-phase busbars	Three-phase infeed terminal for constructing "Type E Starters", UL 508	**3RV2925-5EB**
Infeed systems for 3RA6	Infeed on left, 50/70 mm^2, screw terminal with 3 sockets, outgoing terminal with screw/spring-type connections, including PE bar	**3RA6813-8AB** (screw terminals), **3RA6813-8AC** (spring-type terminals)

SIRIUS 3RA6 compact starters

The SIRIUS 3RA6 compact starters are universal motor feeders according to IEC 60947-6-2. As control and protective switching devices (CPS) they can connect, convey and disconnect the thermal, dynamic and electrical loads from short-circuit currents up to I_q = 53 kA, i.e. they are practically weld-free. They combine the functions of a motor starter protector, a contactor and a solid-state overload relay in one enclosure. Direct-on-line starters with 45 mm width and reversing starters with 90 mm width are available as variants.

The reversing starter version comes with not only an internal electrical interlock but also with a mechanical interlock to prevent simultaneous actuation of both directions of rotation.

The compact starters have isolating features in accordance with IEC 60947.2 and can be used as disconnector units (main control switch according to EN 60204 or DIN VDE 0113). Isolation is effected by moving the actuator into the "OFF" position; disconnection by means of the control contacts is not enough.

3RA6 fuseless compact starters are supplied for 5 different current setting ranges. The 3RA61 and 3RA62 have 2 control voltage ranges (AC/DC), the 3RA64 and 3RA65 have one control voltage range (DC):

Current setting range	At 400 V AC for three-phase motors Standard output *P*	Rated control supply voltage for 3RA61, 3RA62 compact starters	Rated control supply voltage for 3RA64, 3RA65 compact starters for IO-Link
A	kW	V AC/DC	V DC
0.1 ... 0.4	0.09	24	24
0.32 ... 1.25	0.37	110 ... 240	
1 ... 4	1.5		
3 ... 12	5.5		
8 ... 32	15		

Note:

The 3RA1 load feeders can be used for fuseless load feeders >32 A up to 100 A.

The SENTRON 3VL circuit breakers and the SIRIUS 3RT contactors can be used for fuseless load feeders >100 A.

Operating conditions

The SIRIUS 3RA6 compact starters are suitable for use in any climate. They are intended for use in enclosed rooms in which no severe operating conditions (such as dust, caustic vapors, hazardous gases) prevail. Suitable covers must be provided for installation in dusty and damp locations.

The SIRIUS compact starters are generally designed to degree of protection IP20. The permissible ambient temperature during operation is -20 to +60 °C.

The rated short-circuit current I_{CS} according to IEC 60947-6-2 is 53 kA at 400 V.

Note:

The maximum permissible short-circuit currents of the device versions for the various forms of power supply and voltages are available on request from Technical Assistance:
Tel.: +49 (9 11) 8 95-59 00
E-mail: technical-assistance@siemens.com

Overload tripping times

The tripping time in the event of overload can be set on the device to normal starting conditions (CLASS 10) and to heavy starting conditions (CLASS 20). As the breaker mechanism still remains closed after an overload, resetting is possible by either local manual reset or auto reset after 3 minutes cooling time.

With autoreset there is no need to open the control cabinet.

Diagnostics options

The compact starter provides the following diagnostics options:

- With LEDs
  - Connection to the control voltage
  - Position of the main contacts
- With mechanical display
  - Tripping due to overload
  - Tripping due to short circuit
  - Tripping due to malfunction (end of service life reached because of worn switching contacts or a worn switching mechanism or faults in the control electronics)

These states can also be evaluated in the higher-level control system:

- With parallel wiring using the integrated auxiliary and signaling switches of the compact starter
- With AS-Interface or IO-Link in even greater detail using the respective communication interface

Four complement versions for 3RA61 and 3RA62 compact starters

- For standard mounting rail or screw fixing:
  basic version including 1 pair of main circuit terminals and 1 pair of control circuit terminals
- For standard mounting rail or screw fixing when using the AS-i add-on module:
  without control circuit terminals because the AS-i add-on module is plugged on instead
- For use with the infeed system for 3RA6:
  without main circuit terminals because they are supplied with the infeed system and the expansion modules
- For use with the infeed system for 3RA6 and the AS-i add-on module: without terminal complement (also for reordering when replacing the compact starter)

The control circuit terminals are always required by the compact starters for IO-Link; the main circuit terminals depend on the use of the infeed system.

More components of the 3RA6

Apart from the control supply voltage, "Overload" (1 CO) and "Short circuit / Function fault" (1 NO) signaling contacts are already integrated into the 3RA61/3RA62 – and lockable via two 6-pole removable control circuit terminals. The 3RA61 has two auxiliary contacts (1 NO + 1 NC) for displaying the position of the main contacts. Unlike the 3RA61 direct-on-line starter, the 3RA62 reversing starter has one auxiliary contact (1 NO) per direction of rotation per main contact.

Available for the 3RA61 and 3RA64 direct-on-line starters is a slot for an optional auxiliary switch block (optionally 2 NO, 2 NC or 1 NO + 1 NC) and for the 3RA62 and 3RA65 reversing starters there are two slots (for auxiliary switch blocks, see "Accessories" on page 8/65).

Positively-driven operation of the auxiliary contacts

Positively-driven operation between individual auxiliary circuits exists for the compact starter in the version as a direct-on-line starter for parallel wiring (3RA61) between the auxiliary circuits of the NC contacts (NC 21-22) and the NO contacts (NO 13-14) in the basic unit.

In addition, the optional auxiliary switch block offers positively driven contacts in the 3RA6913-1A version, each with one normally closed contact and one normally open contact.

Article No. scheme

Digit of the Article No.	1st - 4th	5th	6th	7th		8th	9th	10th	11th	12th
	□□□□	□	□	□	–	□	□	□	□	□
SIRIUS 3RA6 compact starters	**3 R A 6**									
Version (direct-on-line starter = 1, reversing starter = 2, direct-on-line starter for IO-Link = 4, reversing starter for IO-Link = 5, infeed system = 8, accessories = 9)		□								
Details of accessories			□	□						
Connection method (0 = without terminals, 1 = screw terminals, 2 = spring-type terminals)						□				
Setting range							□			
Rated control supply voltage								□	□	
Terminals complement variant										□
Special versions										
Example	**3 R A 6**	**1**	**2**	**0**	**–**	**0**	**A**	**B**	**3**	**0**

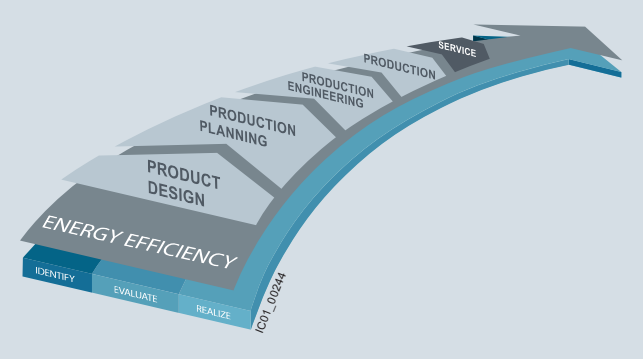
Note:

The Article No. scheme is presented here merely for information purposes and for better understanding of the logic behind the article numbers.

For your orders, please use the article numbers quoted in the catalog in the Selection and ordering data.

Benefits

Advantages through energy efficiency



Overview of the energy management process

We offer you a unique portfolio for industrial energy management, using an energy management system that helps to optimally define your energy needs. We split up our industrial energy management into three phases – identify, evaluate, and realize – and we support you with the appropriate hardware and software solutions in every process phase.

The innovative products of the SIRIUS industrial controls portfolio can also make a substantial contribution to a plant's energy efficiency (see www.siemens.com/sirius/energysaving).

With the 3RA6 compact starters, control cabinets heat up less because power losses have been minimized by operation:

- Lower intrinsic power loss (than comparable motor feeders with thermal overload trips) thanks to electronic current analysis
- Lower power losses (than conventional load feeders) because there is only one switching point for short circuit and operational switching
- Lower control circuit power losses (compared with conventional switching devices) as a result of electronic control of switching points
- Thanks to the above advantages, additional energy savings are possible because less cooling is required (and a more compact design is possible)

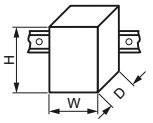
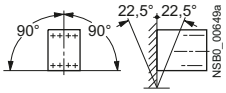
Product advantages

The SIRIUS 3RA6 compact starters offer a number of benefits:

- Compact design saves space in the control cabinet
- Little planning and assembly work and far less wiring thanks to a single complete unit with one article number
- Low variance through 2 wide voltage ranges and 5 wide setting ranges for the rated current mean low stock levels
- High plant availability through integrated functionalities such as prevention of main contact welding and disconnection at end of service life
- Greater productivity through automatic device reset in case of overload and differentiated detection of overload and short circuit
- Easy checking of the wiring and testing of the motor direction prior to start up thanks to optional "control kits"
- Speedy replacement of devices thanks to removable terminals with spring-type and screw connections in the main and control circuit
- Efficient power distribution through the related SIRIUS infeed system for 3RA6
- Direct connection of the motor feeder cable to the SIRIUS infeed system for 3RA6 thanks to integrated PE bar
- Connecting and looping through incoming feeders up to a cross-section of 70 mm^2
- When using the infeed system for 3RA6, possibility of directly connecting the motor cable without intermediate terminals
- Integration in Totally Integrated Automation thanks to the optional connection to AS-Interface or IO-Link

The SIRIUS 3RA6 compact starters create the basis for high-availability and future-proof machine concepts.

Technical specifications

Type			**3RA61**	**3RA62**	**3RA64**	**3RA65**
Size			**S0**			
Number of poles			**3**			
Mechanics and environment						
Mounting dimensions (W x H x D)						
• Screw terminals		mm	45 x 170 x 165	90 x 170 x 165	45 x 170 x 165	90 x 170 x 165
• Spring-type terminals		mm	45 x 191 x 165	90 x 191 x 165	45 x 191 x 165	90 x 191 x 165
Depth from standard mounting rail		mm	160			
Permissible ambient temperature						
• For operation (permissible operational current, see the following section "Electrical Specifications")		°C	-20 ... +70, restriction as from 60 depending on design			
• During storage		°C	-55 ... +80			
• During transport		°C	-55 ... +80			
Permissible mounting position						
Shock resistance (sine-wave pulse)			a = 60 m/s^2 = 6 g with 10 ms; for every 3 shocks in all axes			
Vibratory load			f = 4 ... 5.8 Hz; d =15 mm; f = 5.8 ... 500 Hz; a = 20 m/s^2;10 cycles			
Degree of protection	Acc. to IEC 60947-1		IP20			
Installation altitude		m	Up to 2 000 above sea level without restriction			
Relative air humidity		%	10 ... 90			
Pollution degree			3			
Electrical specifications						
Device standard			IEC 60947-6-2			
Maximum rated operational voltage U_e		V	690			
		V	400 at 3RA6250-.E... and 3RA6500-.E... (reversing starter 32 A versions)			
Rated frequency		Hz	50/60			
Rated insulation voltage U_i (pollution degree 3)		V	690			
Rated impulse withstand voltage U_{imp}		kV	6			
Rated current I_e[1] and setting range for overload release	0.1 ... 0.4 A	A	0.4			
	0.32 ...1.25 A	A	1.25			
	1 ... 4 A	A	4			
	3 ... 12 A	A	12			
	8 ... 32 A	A	32			
Permissible operational current of the compact starter[2] when several compact starters are mounted side-by-side in the 3RA6 infeed system (for more details on the various design variants, see System Manual "SIRIUS Compact Starters and Accessories")						
• For a control cabinet inside temperature of	+40 °C	%	100			
• For a control cabinet inside temperature of	+60 °C	%	80			
• For a control cabinet inside temperature of	+70 °C	%	60			
Trip class (CLASS)	Acc. to IEC 60947-4-1, EN 60947-4-1 (VDE 0660 Part 102)		10/20			
Overload function Ratio of lower to upper current mark			1:4			
Rated service short-circuit breaking capacity I_{CS} at 50/60 Hz 400 V AC		kA	53			
Rated service short-circuit breaking capacity I_{CSIT} at 50/60 Hz 400/690 V AC in IT systems		kA	1.5			
Power loss $P_{v\ max}$ of all main current paths dependent on the rated current I_n (upper setting range)	0.4 A	mW	10			
	1.25 A	mW	100			
	4 A	W	1			
	12 A	W	1.8			
	32 A	W	5.4			
Max. switching frequency	AC-41	1/h	750			
	AC-43	1/h	250			
	AC-44	1/h	15			
No-load switching frequency		1/h	3 600		3 600, depending on the IO-Link communication time	
Touch protection	Acc. to DIN VDE 0106, Part 100		Finger-safe			

[1] For use of 3RA6 compact starters in conjunction with highly energy-efficient IE3 motors, please observe the information on dimensioning and configuring in the "Configuration Manual for SIRIUS Controls with IE3 Motors".

[2] Details about installation conditions and the use of the compact starters, and particularly about the derating of the rated current, can be found in the System Manual "SIRIUS Compact Starters and Accessories".

General data

Type			**3RA61**	**3RA62**	**3RA64**	**3RA65**
Size			**S0**			
Number of poles			**3**			
Electrical specifications (continued)						
Isolating features of the compact starter	Acc. to IEC 60947-3		Yes: Isolation is assured only by moving the actuator into the "OFF" position.			
Main and EMERGENCY-STOP switch characteristics of the compact starter and accessories	Acc. to IEC 60204		Yes			
Protective separation	Acc. to IEC 60947-2					
Control circuit to auxiliary circuit						
• Horizontal standard mounting rail		V	Up to 400			
• Other mounting position		V	Up to 250			
Auxiliary circuit to auxiliary circuit						
• Horizontal standard mounting rail		V	Up to 400			
• Other mounting position		V	Up to 250			
Main circuit to auxiliary circuit						
• Any mounting position		V	Up to 400			
EMC interference immunity	Acc. to IEC 60947-1		Corresponds to degree of severity 3			
Conducted interference	BURST acc. to IEC 61000-4-4					
• In the main circuit		kV	4		4	
• In the auxiliary circuit		kV	3		2	
Conducted interference	SURGE acc. to IEC 61000-4-5					
• In the main circuit						
- Conductor - Ground		kV	4		2	
- Conductor - Conductor		kV	2		1	
• In the auxiliary circuit						
- Conductor - Ground		kV	2		0.5[1]	
- Conductor - Conductor		kV	1		0.5[1]	
Auxiliary switches						
• Integrated						
- Position of the main contacts			1 NO + 1 NC	2 NO	1 NO + 1 NC	2 NO
- Overload/short circuit and malfunction signal			1 CO/1 NO			
• Expandable						
- Position of the main contacts			2 NO, 2 NC, 1 NO, 1 NC			
Surge suppressors			Integrated (Varistor)			
Electromagnetic operating mechanisms						
Control voltage		V	24 AC/DC		24 DC	
		V	110 ... 240 AC/DC		--	
Frequency	At AC	Hz	50/60 (±5 %)			
Operating range			0.7 ... 1.25 U_s		0.85 ... 1.2 U_s	
No-load switching frequency		1/h	3 600			
Line protection	At 10 kA	mm^2	2.5			
	At 50 kA	mm^2	4			
Shock resistance						
• Breaker mechanism OFF		*g*	25			
• Breaker mechanism ON		*g*	15			
Normal switching duty						
Making capacity			12 x I_n			
Breaking capacity			10 x I_n			
Switching capacity dependent on rated current	Up to 12 A	kW	5.5			
	Up to 32 A	kW	15			
Endurance in operating cycles						
• Electrical endurance	At I_e = 0.9 x I_n and 400 V		3 ... 10 000 000	2 x 3 ... 10 000 000	3 000 000	2 x 1 500 000

[1] To maintain maximum interference immunity in a harsh electromagnetic environment, additional overvoltage protection should be provided in the control circuit. A suitable answer is for example the Dehn Blitzductor BVT AD 24 V, Art. No. 918 402 or an equivalent protection element. Manufacturer:
DEHN+SÖHNE GmbH+Co. KG
Hans-Dehn-Straße 1
Postfach 1640
D-92306 Neumarkt.

Type		**3RA6120-.☐B3., 3RA6250-.☐B3.** **☐ = A, B, C or D** **Rated operational current ≤ 12 A**				**3RA6120-.EB3., 3RA6250-.EB3.** **Rated operational current 32 A**			
Rated control supply voltage	**V**	**24 AC**		**24 DC**		**24 AC**		**24 DC**	
Inrush peak current	A	0.59		0.47		0.59		0.47	
Hold current	A	0.13		0.12		0.17		0.14	
Closed	W	2.8		2.9		3.5		3.1	
Operating times, typical									
• On	ms	<160		<140		<160		<140	
• Off	ms	<35		<35		<30		<30	
Type		**3RA6 20-.☐P3., 3RA6250-.☐P3.** **☐ = A, B, C or D** **Rated operational current ≤ 12 A**				**3RA6120-.EP3., 3RA6250-.EP3.** **Rated operational current 32 A**			
Rated control supply voltage	**V**	**110 AC**	**240 AC**	**110 DC**	**240 DC**	**110 AC**	**240 AC**	**110 DC**	**240 DC**
Inrush peak current	A	0.24	0.40	0.17	0.29	0.24	0.40	0.17	0.29
Hold current	A	0.06	0.08	0.03	0.02	0.06	0.07	0.04	0.03
Closed	W	3.8	6	3.1	5.1	3.7	5.2	3.4	5.8
Operating times, typical									
• On	ms	<160	<140	<150	<140	<160	<140	<150	<140
• Off	ms	<50	<80	<50	<70	<40	<60	<40	<60
Type		**3RA6400-.☐B4., 3RA6500-.☐B4.** **☐ = A, B, C or D** **Rated operational current ≤ 12A**				**3RA6400-.EB4., 3RA6500-.EB4.** **Rated operational current 32 A**			
Rated control supply voltage	**V**	**24 DC**				**24 DC**			
Inrush peak current	A	0.39				0.53			
Hold current	A	0.13				0.15			
Closed	W	2.9				3.4			
Operating times, typical[1)]									
• On	ms	<140				<140			
• Off	ms	<35				<30			

1) Plus IO-Link communication

General data

Type			**3RA61**	**3RA62**	**3RA64**	**3RA65**
Size			**S0**			
Number of poles			**3**			
Control circuit						
Rated operational voltage						
• External auxiliary switch block		V	400/690			
• Internal auxiliary switch		V	400/690			
• Short-circuit signaling switch		V	400			
• Overload signaling switch		V	400			
Switching capacity						
• External auxiliary switch block	**AC-15**					
	• Up to U_e = 230 V	A	6			
	• Up to U_e = 400 V	A	3			
	• Up to U_e = 289/500 V	A	2			
	• Up to U_e = 400/690 V	A	1			
	DC-13					
	• Up to U_e = 24 V	A	6			
	• Up to U_e = 60 V	A	0.9			
	• Up to U_e = 125 V	A	0.55			
	• Up to U_e = 250 V	A	0.27			
• Internal auxiliary switch	**AC-15**					
	• Up to U_e = 230 V	A	6			
	• Up to U_e = 400 V	A	3			
	• Up to U_e = 289/500 V	A	2			
	• Up to U_e = 400/690 V	A	1			
	DC-13					
	• Up to U_e = 24 V	A	10			
	• Up to U_e = 60 V	A	2			
	• Up to U_e = 125 V	A	1			
	• Up to U_e = 250 V	A	0.27			
	• Up to U_e = 480 V	A	0.1			
• Signaling switches	**AC-15**					
	• Up to U_e = 230 V	A	3			
	• Up to U_e = 400 V	A	1			
	DC-13					
	• Up to U_e = 24 V	A	2			
	• Up to U_e = 250 V	A	0.11			
External auxiliary switch blocks, internal auxiliary switches						
Endurance in operating cycles						
• Mechanical endurance			10 000 000		3 000 000	
• Electrical endurance	**AC-15, 230 V**					
	• Up to 6 A		200 000			
	• Up to 3 A		500 000			
	• Up to 1 A		2 000 000			
	• Up to 0.3 A		10 000 000			
	DC-13, 24 V					
	• Up to 6 A		30 000			
	• Up to 3 A		100 000			
	• Up to 0.5 A		2 000 000			
	• Up to 0.2 A		10 000 000			
	DC-13, 110 V					
	• Up to 1 A		40 000			
	• Up to 0.55 A		100 000			
	• Up to 0.3 A		300 000			
	• Up to 0.1 A		2 000 000			
	• Up to 0.04 A		10 000 000			
	DC-13, 220 V					
	• Up to 0.3 A		110 000			
	• Up to 0.1 A		650 000			
	• Up to 0.05 A		2 000 000			
	• Up to 0.018 A		10 000 000			
Contact reliability	At 17 V and 5 mA	Operating cycles	1 incorrect switching operation per 100 000 000			
Short-circuit protection						
• Short-circuit current $I_K \leq$ 1.1 kA	Fuse links, operational class gG - NEOZED Type 5SE - DIAZED Type 5SB - LV HRC Type 3NA	A	10			
• Short-circuit current $I_K <$ 400 A	Miniature circuit breaker up to 230 V with C characteristic	A	10			

Type			**3RA61**	**3RA62**	**3RA64**	**3RA65**
Size			**S0**			
Number of poles			**3**			
Signaling switches						
Endurance in operating cycles						
• Mechanical endurance			20 000			
• Electrical endurance AC-15	At 230 V and 3 A		6 050			
Contact reliability	At 17 V and 5 mA	Operating cycles	1 incorrect switching operation per 100 000 000			
Short-circuit protection						
• Short-circuit current $I_K \leq 1.1$ kA	Fuse links, operational class gG - NEOZED Type 5SE - DIAZED Type 5SB - LV HRC Type 3NA	A	6			
• Short-circuit current $I_K < 400$ A	Miniature circuit breaker up to 230 V with C characteristic	A	6			
Overload (short-circuit current $I_K \leq 1.1$ kA)	Fuse links, operational class gG - NEOZED Type 5SE - DIAZED Type 5SB - LV HRC Type 3NA	A	4			

More information

Notes on safety

System networking requires suitable protective measures (including network segmentation for IT security) in order to ensure safe plant operation.

More information about the subject of Industrial Security, see www.siemens.com/industrialsecurity.

Infeed systems for 3RA6

	Version	DT	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Accessories for infeed systems for 3RA6 (continued)							
	45 mm adapters						
 3RA6890-0BA	For SIRIUS 3RV1.2 and 3RV2.2 motor starter protectors. Size S0 up to 25 A		**Screw terminals**				
	• Screw terminals (conductor cross-section AWG 10)	A	**3RA6890-0BA**		1	1 unit	42F
	Terminal covers for infeeds with screw connection						
 3RA6880-2AB	**IP20 terminal covers for infeeds with screw connection 25/35 mm² (3RA6812-8AB/AC)** (2 units per pack)	A	**3RA6880-2AB**		1	1 unit	42F
 3RA6880-3AB	**IP20 terminal covers for infeeds with screw connection 50/70 mm² (3RA6813-8AB/AC)** (2 units per pack)	A	**3RA6880-3AB**		1	1 unit	42F
	Terminal blocks						
 3RV2917-5D	For integration of single-phase, 2-phase and 3-phase external components		**Spring-type terminals**				
	• Spring-type terminals	A	**3RV2917-5D**		1	1 unit	41E
Tools for opening spring-type terminals							
	Screwdrivers						
 3RA2908-1A	For all SIRIUS devices with spring-type terminals		**Spring-type terminals**				
	Length approx. 200 mm, 3.0 mm x 0.5 mm, titanium gray/black, partially insulated	A	**3RA2908-1A**		1	1 unit	41B
System Manual "SIRIUS Compact Starters and Accessories"							
	The system manual can be downloaded free of charge in PDF format from the Internet, see http://support.automation.siemens.com/WW/view/en/27136554/133300						

* You can order this quantity or a multiple thereof.
Illustrations are approximate.