

Power Contactors for Switching Motors

Accessories and Spare Parts for SIRIUS 3RT Contactors and SIRIUS 3RH2 Contactor Relays

Accessories

SIRIUS 3RA27 function modules for IO-Link or AS-Interface for mounting on 3RT2 contactors

See pages 3/86 and 3/106

The SIRIUS 3RA27 function modules enable the assembly of starters and contactor assemblies for direct-on-line, reversing and star-delta (wye-delta) starting without any additional, complicated wiring of the individual components. They include the key control functions required for the particular feeder, e.g. timing and interlocking, and can be connected to the control system via either IO-Link or AS-Interface.

The electrical and mechanical connection to the contactor is established by snapping on and locking. An additive protection circuit for the individual contactors can be dispensed with completely because a varistor is integrated in the modules. Feedback from the contactor contacts is performed with Hall sensors which provide reliable feedback concerning the switching state even under extremely dusty conditions.

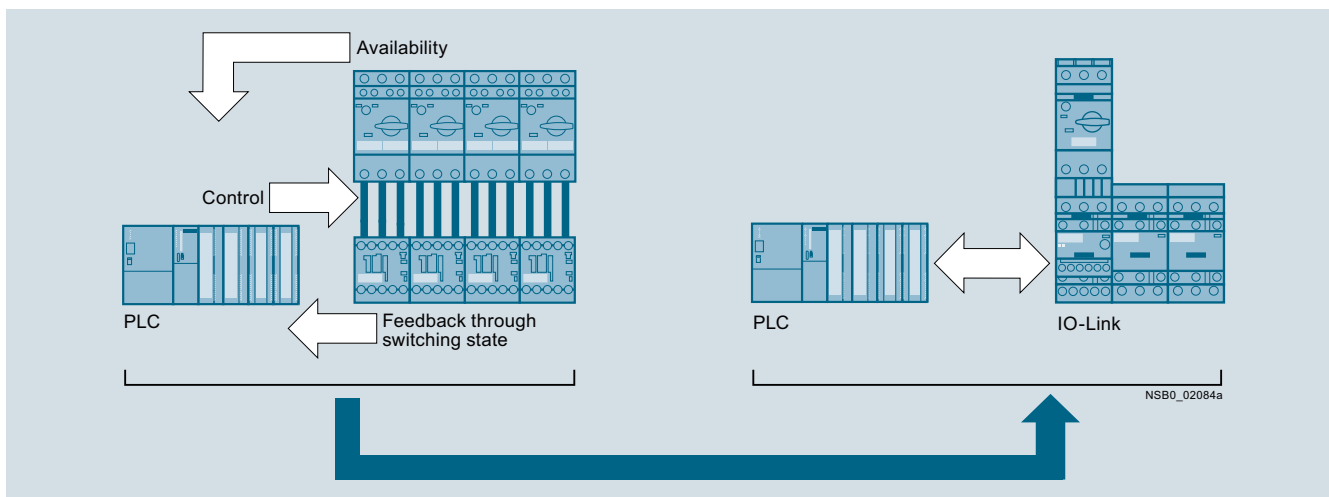
The starters are connected to the higher-level control system through IO-Link, with the possibility of connecting up to four starters as a group to one port of the IO-Link master,

or optionally via AS-Interface, Specification V2.1 or higher, in A/B technology. As a result, up to 62 starters can be connected to one master and the address is entered in the normal manner with an addressing unit.

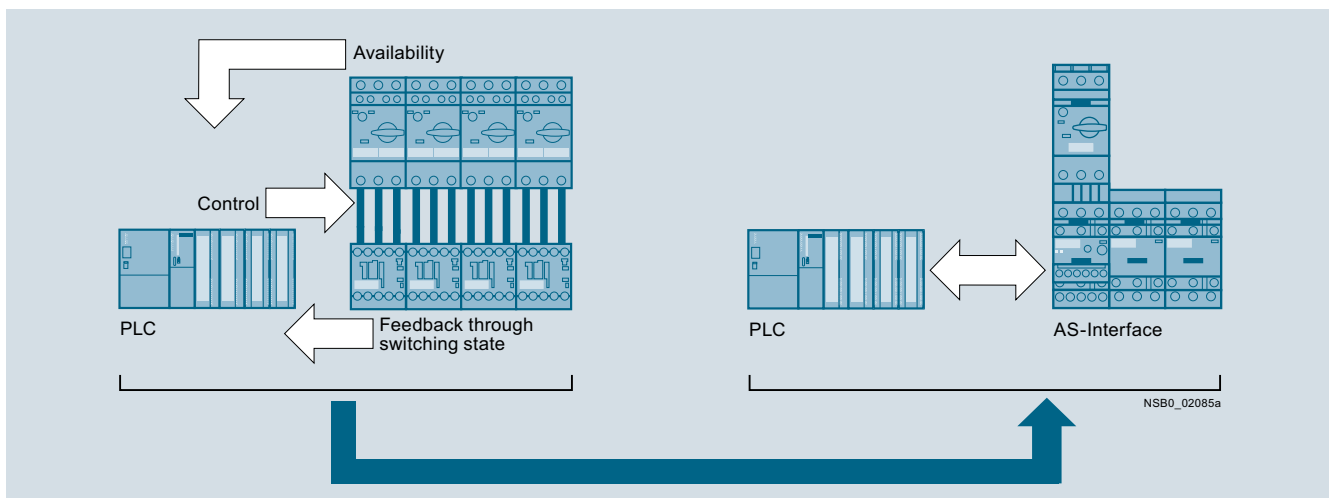
Through this type of connection to the control system, a maximum of wiring is saved. In the case of AS-Interface, the wiring amounts to the control supply voltage and the two individual wires for AS-Interface.

The following essential signals are thus transmitted:

- Availability of the feeder in response to an indirect inquiry from the motor starter protector/circuit breaker
- Starter control
- Feedback concerning the switching state of the starter



Signal transmission through IO-Link



Signal transmission through AS-Interface

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Technical specifications

More information

Technical specifications

- For SIRIUS 3RT2 contactors and SIRIUS 3RH2 contactor relays, see <https://support.industry.siemens.com/cs/ww/en/ps/16208/td>
 - For SIRIUS 3RT1 contactors, see <https://support.industry.siemens.com/cs/ww/en/ps/16209/td>
- FAQs
- For SIRIUS 3RT2 contactors and SIRIUS 3RH2 contactor relays, see <https://support.industry.siemens.com/cs/ww/en/ps/16208/faq>
 - For SIRIUS 3RT1 contactors, see <https://support.industry.siemens.com/cs/ww/en/ps/16209/faq>

Manuals, see

- System Manual "SIRIUS – System Overview", <https://support.industry.siemens.com/cs/WW/en/view/60311318>
- Manual "SIRIUS – SIRIUS 3RT Contactors/Contactor Assemblies", <https://support.industry.siemens.com/cs/WW/en/view/60306557>
- "SIRIUS manual - SIRIUS 3RA28 Function Modules for mounting on 3RT2 Contactors", <https://support.industry.siemens.com/cs/ww/en/view/60279150>
- Manual "SIRIUS 3RA2711 Function Modules for IO-Link", <https://support.industry.siemens.com/cs/ww/en/view/39319600>
- Manual "SIRIUS 3RA2712 Function Modules for AS-Interface", <https://support.industry.siemens.com/cs/ww/en/view/39318922>



Solid-state time-delay auxiliary switch blocks for mounting on 3RT202 to 3RT204 contactors (sizes S00 to S3) and 3RH2 contactor relays (size S00)

Type		3RA2813	3RA2814	3RA2815
Function		ON-delay	OFF-delay with control signal	OFF-delay without control signal
General data				
Dimensions (basic unit with mounted solid-state time-delay auxiliary switch block)		See 3RT2 contactors (pages 3/23, 3/29, 3/34, 3/39) and 3RH2 contactor relays (page 5/8)		
Rated insulation voltage U_i Pollution degree 3, overvoltage category III	V AC	300		
Rated impulse withstand voltage U_{imp}	kV AC	4		
Permissible ambient temperature				
• During operation	°C	-25 ... +60		
• During storage	°C	-40 ... +80		
Degree of protection acc. to IEC 60529		IP20		
Shock resistance Half-sine acc. to IEC 60068-2-27	g/ms	15/11		
Vibration resistance acc. to IEC 60068-2-6	Hz/mm	10 ... 55/0.35		
Electromagnetic compatibility (EMC)		IEC 61000-6-2, IEC 61000-6-4, IEC 61812-1, IEC 60947-4-1		
Overvoltage protection		Varistor integrated		
Permissible mounting position		Any (for the mounting position of 3RT2 contactors, see pages 3/23, 3/29, 3/34, 3/39; for the mounting position of 3RH2 contactor relays, see page 5/7)		
Control				
Operating range of excitation		0.85 ... 1.1 × U_s , 0.95 ... 1.05 times the rated frequency		
Rated power	W	1		
• Power consumption at 230 V AC, 50 Hz	VA	2		
Recovery time	ms	150		
Minimum ON period	ms	--	35	200
Setting accuracy , typ., with reference to upper limit of scale		± 15 %		
Repeat accuracy , max.		± 1 %		
Load side				
Rated operational currents I_e				
• AC-15 at 24 ... 250 V, 50 Hz	A	3		
• DC-13	A	1		
- At 24 V	A	0.2		
- At 125 V	A	0.1		
- At 250 V	A	0.1		
Mechanical endurance	Operating cycles	10 × 10 ⁶		
Electrical endurance at AC-15, 250 V, 3 A	Operating cycles	100 000		
Switching frequency for load				
• With I_e at 230 V AC	h ⁻¹	2 500		
• With 3RT2 contactor at 230 V AC	h ⁻¹	2 500		
Residual current , max.	mA	--		
Voltage drop , max., with conducting output	VA	--		
Short-circuit protection				
• Fuse links, operational class gG: DIAZED, type 5SB	A	4		

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Accessories

Type	3RA2813 ON-delay	3RA2814 OFF-delay with control signal	3RA2815 OFF-delay without control signal
Function			
Conductor cross-sections			
Connection type (1 or 2 conductors can be connected)		 Screw terminals	
• Solid	mm ²	1 x (0.5 ... 4), 2 x (0.5 ... 2.5)	
• Finely stranded with end sleeve (DIN 46228-1)	mm ²	1 x (0.5 ... 2.5), 2 x (0.5 ... 1.5)	
• AWG cables, solid or stranded	AWG	2 x (20 ... 14)	
• Terminal screws		M3 (for standard screwdriver size 2 or Pozidriv 2)	
• Tightening torque	Nm	0.8 ... 1.2	
Connection type (1 or 2 conductors can be connected)		 Spring-type terminals	
• Solid	mm ²	2 x (0.25 ... 1.5)	
• Finely stranded with end sleeve (DIN 46228-1)	mm ²	2 x (0.25 ... 1.5)	
• Finely stranded without end sleeve	mm ²	2 x (0.25 ... 1.5)	
• AWG cables, solid or stranded	AWG	2 x (24 ... 16)	
• Operating devices	mm	3.0 x 0.5	

Solid-state time-delay auxiliary switch blocks, for snapping onto 3RT1 contactors

Type	3RT1926-2E, 3RT1926-2F, 3RT1926-2G
Size	S6 to S12
General data	
Dimensions (W x H x D)	mm 45 x 26 x 50
Rated insulation voltage U_i	V AC 250
Pollution degree 3 Overvoltage category III according to IEC 60664-1	
Permissible ambient temperature	
• During operation	°C -25 ... +60
• During storage	°C -40 ... +80
Degree of protection acc. to IEC 60529	
Terminals	IP20
Shock resistance Half-sine acc. to IEC 60068-2-27	g/ms 15/11
Vibration resistance acc. to IEC 60068-2-6	Hz/mm 10 ... 55/0.35
Electromagnetic compatibility (EMC)	IEC 61812-1
Permissible mounting position	Any (see 3RT1 contactors, page 3/44)
Control	
Operating range of excitation	0.85 ... 1.1 x U_s , 0.95 ... 1.05 times the rated frequency
Rated power	W 2
Power consumption at 230 V AC, 50 Hz	VA 4
Recovery time	ms 150
Minimum ON period	ms 200 (OFF-delay)
Setting accuracy, typ. with reference to upper limit of scale	% ± 15
Repeat accuracy, max.	% ± 1



Type	3RT1926-2E, 3RT1926-2F, 3RT1926-2G
Size	S6 to S12
Load side	
Rated operational currents I_e	
• AC-15, 230 V, 50 Hz	A 3
• DC-13, 24 V	A 1
• DC-13, 110 V	A 0.2
• DC-13, 230 V	A 0.1
Short-circuit protection	
Fuse links, operational class gG: DIAZED, type 5SB	A 4
Mechanical endurance	Operat- ing cycles 10 x 10 ⁶
Switching frequency for load	
• with I_e at 230 V AC	h ⁻¹ 2 500
• With 3RT2016 contactor at 230 V AC	h ⁻¹ 5 500
Conductor cross-sections	
Connection type (1 or 2 conductors can be connected)	
 Screw terminals	
• Solid	mm ² 2 x (0.5 ... 1.5) 2 x (0.75 ... 4)
• Finely stranded with end sleeve	mm ² 2 x (0.5 ... 2.5)
• AWG cables, solid or stranded	AWG 2 x (18 ... 14)
• Terminal screws	M3
• Tightening torque	Nm 0.8 ... 1.2

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Accessories and Spare Parts for SIRIUS 3RT Contactors and SIRIUS 3RH2 Contactor Relays

Accessories

3RA28 function modules for mounting on 3RT2 contactors and 3RH2 contactor relays

Type		3RA2811	3RA2831	3RA2812	3RA2832	3RA2816
Mounting on contactors of size		S00, S0	S2, S3	S00, S0	S2, S3	S00 to S3
Function		For direct-on-line starting				For star-delta (wye-delta) starting
		ON-delay		OFF-delay with control signal		
General data						
Dimensions (basic unit with mounted function module)		See 3RT2 contactors (pages 3/23, 3/29, 3/34, 3/39) and 3RH2 contactor relays (page 5/8)				
Rated insulation voltage U_i Pollution degree 3 Overvoltage category III	V AC	300				
Rated impulse withstand voltage U_{imp}	kV AC	4				
Overvoltage protection		Varistor integrated				
Recovery time	ms	50				150
Minimum ON period	ms	--		35	--	
Setting accuracy Typ. With reference to upper limit of scale		± 15 %				
Repeat accuracy Max.		± 1 %				
Degree of protection acc. to IEC 60529		IP20				
Permissible ambient temperature						
• During operation	°C	-25 ... +60				
• During storage	°C	-40 ... +80				
Shock resistance Half-sine acc. to IEC 60068-2-27	g/ms	15/11				
Vibration resistance acc. to IEC 60068-2-6	Hz/mm	10 ... 55/0.35				
Electromagnetic compatibility (EMC)		IEC 61000-6-2, IEC 61000-6-4, IEC 61812-1, IEC 60947-4-1				
Permissible mounting position		Any (for the mounting position of 3RT2 contactors, see pages 3/23, 3/29, 3/34, 3/39; for the mounting position of 3RH2 contactor relays, see page 5/7)				
Control side						
Operating range of excitation		0.85 ... 1.1 x U_g , 0.95 ... 1.05 times the rated frequency				
Rated power	W	1				
• Power consumption at 230 V AC, 50 Hz	VA	1				2
Load side						
Mechanical endurance	Operating cycles	100 x 10 ⁶				10 x 10 ⁶
Electrical endurance						
• With 3RT2028 contactor	Operating cycles	100 000				--
• At AC-15, 250 V, 3 A	Operating cycles	--				100 000
Switching frequency for load						
• With I_g at 230 V AC	h ⁻¹	2 500				--
• With 3RT2 contactor at 230 V AC	h ⁻¹	2 500				--
Residual current Max.	mA	5	--	--	--	--
Voltage drop Max. With conducting output	VA	3.5	--	--	--	--
DIAZED fuse protection Operational class gG	A	--				4
Conductor cross-sections						
Connection type (1 or 2 conductors can be connected)		 Screw terminals				
• Solid	mm ²	1 x (0.5 ... 4), 2 x (0.5 ... 2.5)				--
• Finely stranded with end sleeve (DIN 46228-1)	mm ²	1 x (0.5 ... 2.5), 2 x (0.5 ... 1.5)				--
• AWG cables, solid or stranded	AWG	2 x (20 ... 14)				--
• Terminal screws		M3 (for standard screwdriver size 2 or Pozidriv 2)				--
• Tightening torque	Nm	0.8 ... 1.2				--
Connection type (1 or 2 conductors can be connected)		 Spring-type terminals				
• Operating devices	mm	3.0 x 0.5				--
• Solid	mm ²	2 x (0.25 ... 1.5)				--
• Finely stranded with end sleeve (DIN 46228-1)	mm ²	2 x (0.25 ... 1.5)				--
• Finely stranded without end sleeve	mm ²	2 x (0.25 ... 1.5)				--
• AWG cables, solid or stranded	AWG	2 x (24 ... 16)				--