

Switching Devices – Contactors and Contactor Assemblies – Contactor Relays and Relays



Price groups

PG 41A, 41B, 41H

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Note:

3RH1 contactor relays can be found

- in the [Catalog Add-On IC 10 AO · 2016](#)
at the [Information and Download Center](#)
- in the [Interactive Catalog CA 01](#)
- in the [Industry Mall](#)

Conversion tool

e. g. from 3RH11 to 3RH21, see
www.siemens.com/sirius/conversion-tool

NEW

Click on the Article No. in the catalog PDF to access it in the Industry Mall and get all related information.

Article No.

3RA1943-2C
3RA1943-2B
3RA1953-2B
3RA1953-2N



IC10_00413

Or directly in the Internet, e. g.
[www.siemens.com/
product?3RA1943-2C](http://www.siemens.com/product?3RA1943-2C)

Switching Devices – Contactors and Contactor Assemblies

Contactor Relays and Relays

Introduction

Overview

More information

Homepage, see www.siemens.com/sirius
Industry Mall, see www.siemens.com/product?3RH_3TH

For the conversion tool, e.g. from 3RH11 to 3RH21, see www.siemens.com/sirius/conversion-tool

The advantages at a glance



Size
Type

S00
3RH21

S00
3RH22

3TH42

3TH43

3TH2

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SIRIUS 3RH2 contactor relays

4-pole • Screw or spring-type terminals

3RH21	5/12, 5/13
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8-pole • Screw or spring-type terminals

3RH22	5/12, 5/13
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4-pole, latched • Screw or spring-type terminals

3RH24	5/12, 5/13
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Coupling contactor relays • Coils for control by PLC

3RH21	5/14, 5/15
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Contactor relays for railway applications • Coils with extended voltage range

3RH21	4/56
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3TH4 contactor relays

8-pole • Screw terminals

3TH42	5/20
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10-pole • Screw terminals

3TH43	5/21
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Contactor relays for railway applications • Coils with extended voltage range

3TH42	4/58
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3TH2 miniature contactor relays

4-pole • Screw terminals, flat connectors and solder pin connections

3TH20	5/28, 5/29
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8-pole • Screw terminals

3TH22	5/28
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4-pole, latched • Screw terminals

3TH27	5/28
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Accessories for SIRIUS 3RH2 contactor relays

Auxiliary switch blocks • On front

3RH29, 3RA281.	from 3/83, 3/96
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• Lateral

3RH29	3/93
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Function modules (direct-on-line starting, star-delta (wye-delta) starting) • On front

3RA281., 3RA283.	3/101
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Surge suppressors • On front

3RT2916	3/98, 3/99
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Additional load modules • On front

3RT2916	3/114
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Note:

For safety characteristics for contactors, see "Standards and approvals", page 16/6.

Switching Devices – Contactors and Contactor Assemblies

Contactor Relays and Relays

Introduction

More information

Homepage, see www.siemens.com/relaysIndustry Mall, see www.siemens.com/product?3RQ_3RS_LZFor the conversion tool, e.g. from 3TX7 to 3RQ3, see www.siemens.com/sirius/conversion-tool

The advantages at a glance



3RQ3



3RS18



LZS/LZX

Type	Article No.	Page
SIRIUS 3RQ3 coupling relays, narrow design		
Coupling relays with relay output (not plug-in)	<ul style="list-style-type: none"> Width 6.2 mm, 1 CO, versions with hard gold-plated contacts optionally available - Output coupling links - Input coupling links 	3RQ301 3RQ303 5/38 5/38
Coupling relays with plug-in relays	<ul style="list-style-type: none"> Width 6.2 mm, 1 CO, versions with hard gold-plated contacts optionally available - Output coupling links 	3RQ311 5/38
Coupling relays with semiconductor output (not plug-in)	<ul style="list-style-type: none"> Width 6.2 mm, output 1 semiconductor, triac or transistor - Output coupling links - Input coupling links 	3RQ305, 3RQ306 3RQ307 5/38 5/38
SIRIUS 3RS18 coupling relays with industrial enclosure		
Coupling relays with relay output	<ul style="list-style-type: none"> Protective separation up to 300 V between contacts and relay circuits • 1, 2 or 3 changeover contacts • Hard gold-plated contacts in combination and wide voltage range versions 	3RS18 5/41
LZS coupling relays with plug-in relays		
Coupling relays with plug-in relays with 2, 3 and 4 changeover contacts	<ul style="list-style-type: none"> Switching capacity 12 A/10 A/6 A • Width 27 mm • Base with or without logical separation 	LZS:PT, LZX:PT 5/46 ... 5/48
Coupling relays with plug-in relays with 3 changeover contacts and circular base	<ul style="list-style-type: none"> Switching capacity 10 A • 11-pole circular base • Width 38 mm 	LZS:MT, LZX:MT 5/48
Coupling relays with plug-in relays with 1 or 2 changeover contacts	<ul style="list-style-type: none"> Switching capacity 16 A/8 A • Width 15.5 mm • Base with or without logical separation 	LZS:RT, LZX:RT 5/49

Connection methods

The contactor relays and the relays are available with screw terminals (box terminals) or with spring-type terminals.

Devices of the 3TH2 series are also available with screw terminals, flat connectors and solder pin connectors.

The 3RQ3 coupling relays are supplied with screw terminals and spring-type (push-in) terminals. The plug-in bases for LZS/LZX coupling relays are also available with plug-in (push-in) terminals.



Screw terminals



Spring-type terminals, spring-type terminals (push-in)



Flat connectors



Solder pin connections



Plug-in terminals (push-in)

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

3RQ coupling relays: Spring-type terminals (push-in) with TOP-wiring

Push-in connections are a form of spring-type terminals allowing fast wiring without tools for rigid conductors or conductors equipped with end sleeves.

As with other spring-type terminals, a screwdriver (with 3,0 x 0,5 mm blade) is required to disconnect the conductor. The same tool can also be used to wire finely-stranded or stranded conductors with no end finishing.

The advantages of the push-in terminals are found, as with all spring-type terminals, in speed of assembly and disassembly and vibration-proof connection. There is no need for the checking and tightening required with screw terminals.

With the TOP wiring method, the wire inlet and terminals can be reached from the front. This helps to speed up the wiring process and eliminate wiring errors.

SUVA-certified safety contactors

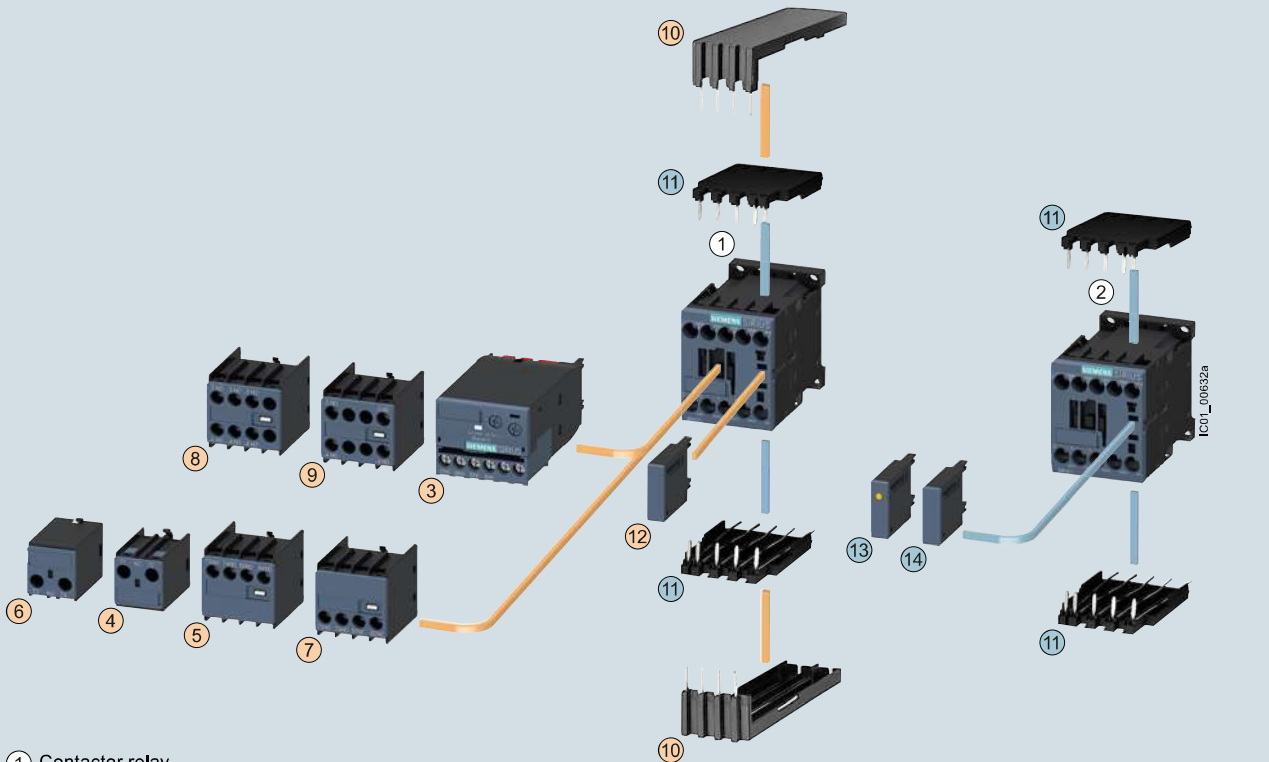
We offer special safety contactors for use in safety-related applications. They have NC contacts with mirror contact function and they have SUVA certification. This means they have permanently fitted auxiliary switch blocks and cannot be operated manually. They thus comply with all requirements for use in safety applications.

Contactors Relays

SIRIUS 3RH2 contactor relays, 4- and 8-pole

Overview

Contactors relays, size S00, with accessories



- ① Contactor relay
- ② Coupling contactor relay for auxiliary circuits

- ③ 3RA28 function module
- ④ 1-pole auxiliary switch block, cable entry from the top
- ⑤ 2-pole auxiliary switch block, cable entry from the top
- ⑥ 1-pole auxiliary switch block, cable entry from the bottom
- ⑦ 2-pole auxiliary switch block, cable entry from the bottom
- ⑧ 4-pole auxiliary switch block
(terminal designations according to EN 50011 or EN 50005)
- ⑨ 2-pole auxiliary switch block, solid-state compatible version
(terminal designations according to EN 50005)

- ⑩ Solder pin adapter for contactor relays with 4-pole auxiliary switch block
- ⑪ Solder pin adapter
- ⑫ Additional load module for increasing the permissible residual current
- ⑬ Surge suppressor with LED
- ⑭ Surge suppressor without LED

- For contactor relays
- For increasing the permissible residual current

SIRIUS 3RH2 contactor relays, 4- and 8-pole

Standards

IEC/EN 60947-1, IEC/EN 60947-4-1, IEC/EN 60947-5-1

The 3RH2 contactor relays are available with screw or spring-type terminals. The basic unit contains four contacts with terminal designations according to EN 50011.

The 3RH2 contactor relays are suitable for use in any climate. They are finger-safe according to IEC 60529.

The 3RH21 coupling contactor relays for switching auxiliary circuits are tailored to the special requirements of working with electronic controls.

Contact reliability

High contact stability at low voltages and currents, suitable for solid-state circuits with currents ≥ 1 mA at a voltage of ≥ 17 V.

Surge suppression

RC elements, varistors, diodes or diode assemblies (combination of a diode and a Zener diode) can be plugged onto all 3RH2 contactor relays from the front for damping opening surges in the coil. The plug-in direction is determined by a coding device.

Coupling contactor relays have a low power consumption and an extended solenoid coil operating range.

Depending on the version, the solenoid coils of the coupling contactor relays are supplied without overvoltage damping (versions 3RH21...-HB40 or 3RH21...-MB40-0KT0) or with a diode or suppressor diode connected as standard.

Accessories

The accessories for the 3RT2 contactors in size S00 can also be used for the 3RH2 contactor relays (see from page 3/71 onwards).

Auxiliary switch blocks

The 3RH21 contactor relays (with the exception of coupling contactor relays) can be expanded by up to four contacts by the addition of mounted auxiliary switch blocks.

The auxiliary switch block can easily be snapped onto the front of the contactor relays. The auxiliary switch block has a centrally positioned release lever for disassembly.

The conventional front auxiliary contacts fulfill the characteristics of positively driven operation and are therefore suitable for safety applications.

Article No. scheme

Product versions		Article number	
SIRIUS contactor relays		3RH2 □ □ □ - □ □ □ □ 0 - □ □ □ □	
Device type	e.g. 1 = 4-pole motor contactor	□	
Number of NO contacts	e.g. 2 = 2 NO	□	
Number of NC contacts	e.g. 2 = 2 NC	□	
Type of electrical connection	Screw terminals		1
	Spring-type terminals		2
Operating range/solenoid coil circuit	e.g. A = AC standard/without coil circuit	□	
Rated control supply voltage	e.g. P0 = 50/60 Hz 230 V AC		□ □
Special version			□ □ □ □
Example		3RH2 1 2 2 - 1 A P 0 0	

Note:

The Article No. scheme shows an overview of product versions for better understanding of the logic behind the article numbers.

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

Contactor Relays

SIRIUS 3RH2 contactor relays, 4- and 8-pole

Technical specifications

More information	
For technical specifications, see https://support.industry.siemens.com/cs/ww/en/ps/16188/td FAQs, see https://support.industry.siemens.com/cs/ww/en/ps/16188/faq	Manuals, see <ul style="list-style-type: none"> System Manual "SIRIUS Modular System – 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/de/en/view/60306557

Type	Contactor relays
Size	3RH2 S00

Permissible mounting position	
The contactor relays are designed for operation on a vertical mounting surface.	

Upright mounting position	<p>Special version required (in the case of coupling contactor relays and contactor relays with extended operating range 3RH2122-2K.40 on request)</p>
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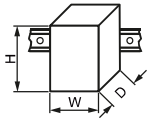
Positively-driven operation of contacts in contactor relays	
<p>3RH2: Yes, in the basic unit and the auxiliary switch block as well as between the basic unit and the mounted auxiliary switch block (removable) acc. to: <ul style="list-style-type: none"> ZH1/457 IEC 60947-5-1, Appendix L </p> <p>3RH22: Yes, in the basic unit and the auxiliary switch block as well as between the basic unit and the mounted auxiliary switch block (permanently mounted) acc. to: <ul style="list-style-type: none"> ZH1/457 IEC 60947-5-1, Appendix L </p> <p><u>Note:</u> 3RH2911-.NF. solid-state compatible auxiliary switch blocks have no positively-driven contacts.</p>	<p>Explanations: There is positively-driven operation if it is ensured that the NC and NO contacts cannot be closed at the same time.</p> <p>ZH1/457 Safety Rules for Controls on Power-Operated Metalworking Presses.</p> <p>IEC 60947-5-1, Appendix L Standard for low-voltage switchgear and controlgear; special requirements for positively-driven contacts</p>

Contact reliability	
Contact reliability at 17 V, 1 mA acc. to IEC 60947-5-4	Frequency of contact faults $< 10^{-8}$, i.e. < 1 fault per 100 million operating cycles

Contact endurance for AC-15/AC-14 and DC-13 utilization categories	
<p>The contact endurance is mainly dependent on the breaking current. It is assumed that the operating mechanisms are switched randomly, i.e. not synchronized with the phase angle of the supply system.</p> <p>If magnetic circuits other than the contactor coil systems or solenoid valves are present, e.g. magnetic brakes, protective measures for the load circuits are necessary, e.g. in the form of RC elements and freewheel diodes.</p> <p>The characteristic curves apply to</p> <ul style="list-style-type: none"> 3RH21/3RH22 contactor relays¹⁾ 3RH24 latched contactor relays 3RH2911 auxiliary switch blocks¹⁾ Auxiliary switch blocks for snapping onto the front, max. 4-pole and for mounting onto the side in size S00 	<p>Diagram legend: I_a = Breaking current I_e = Rated operational current</p>

¹⁾ 3RH22, 3RH2911: $I_e = 6$ A for AC-15/AC-14 and DC-13.

SIRIUS 3RH2 contactor relays, 4- and 8-pole

Type Size	Contactor relays					
	3RH21 S00	3RH22	3RH24			
General data						
Dimensions (W x H x D)						
<ul style="list-style-type: none"> • Basic units <ul style="list-style-type: none"> - Screw terminals - Spring-type terminals • Basic unit with mounted auxiliary switch block <ul style="list-style-type: none"> - Screw terminals - Spring-type terminals • Basic unit with mounted function module or solid-state time-delay auxiliary switch block <ul style="list-style-type: none"> - Screw terminals - Spring-type terminals 		mm	45 x 58 x 73	--	90 x 58 x 73	
		mm	45 x 70 x 73	--		
		mm	45 x 58 x 117	--		
		mm	45 x 70 x 121	--		
		mm	45 x 58 x 147	--		
		mm	45 x 70 x 147	--		
		Mechanical endurance				
		• Basic units	Operat- ing cycles	30 million		5 million
		• Basic unit with mounted auxiliary switch block	Operat- ing cycles	10 million		5 million
		• Solid-state compatible auxiliary switch block	Operat- ing cycles	5 million		
Rated insulation voltage U_i (pollution degree 3)	V	690				
Rated impulse withstand voltage U_{imp}	kV	6				
Protective separation between the coil and the contacts in the basic unit, acc. to IEC 60947-1, Appendix N	V	400				
Permissible ambient temperature						
• During operation	°C	-25 ... +60				
• During storage	°C	-55 ... +80				
Degree of protection acc. to IEC 60529						
• On front		IP20 (screw terminals and spring-type terminals)				
• Connecting terminal		IP20 (screw terminals and spring-type terminals)				
Touch protection acc. to IEC 60529		Finger-safe (screw terminals and spring-type terminals)				
Shock resistance						
• Rectangular pulse						
- AC operation	g/ms	7.3/5 and 4.7/10				
- DC operation	g/ms	10/5 and 5/10				
• Sine pulse						
- AC operation	g/ms	11.4/5 and 7.3/10				
- DC operation	g/ms	15/5 and 8/10				
Short-circuit protection						
• Short-circuit test						
- With fuse links of operational class gG: DIAZED, type 5SB; NEOZED, type 5SE with short-circuit current $I_k = 1$ kA acc. to IEC 60947-5-1	A	10				
- With miniature circuit breakers with C characteristic with short-circuit current $I_k = 400$ A acc. to IEC 60947-5-1	A	6				

Contactors Relays

SIRIUS 3RH2 contactor relays, 4- and 8-pole

Type Size	Contactor relays		
	3RH21 S00	3RH22	3RH24
Conductor cross-sections			
Auxiliary conductors and coil terminals (1 or 2 conductors can be connected)		⊕ Screw terminals	
• Solid or stranded	mm ²	2 x (0.5 ... 1.5) ¹⁾ ; 2 x (0.75 ... 2.5) ¹⁾ , max. 2 x 4	
• Finely stranded with end sleeve	mm ²	2 x (0.5 ... 1.5) ¹⁾ ; 2 x (0.75 ... 2.5) ¹⁾	
• AWG cables, solid or stranded	AWG	2 x (20 ... 16) ¹⁾ ; 2 x (18 ... 14) ¹⁾	
• Terminal screw		M3 (for Pozidriv size 2, Ø 5 ... 6 mm)	
- Tightening torque	Nm	0.8 ... 1.2 (7 ... 10.3 lb.in)	
Auxiliary conductors and coil terminals²⁾ (1 or 2 conductors can be connected)		∞ Spring-type terminals	
• Operating tool	mm	3.0 x 0.5; 3.5 x 0.5	
• Solid or stranded	mm ²	2 x (0.5 ... 4)	
• Finely stranded with end sleeve	mm ²	2 x (0.5 ... 2.5)	
• Finely stranded without end sleeve	mm ²	2 x (0.5 ... 2.5)	
• AWG cables, solid or stranded	AWG	2 x (20 ... 12)	
Auxiliary conductors for front and laterally mounted auxiliary switches²⁾			
• Operating tool	mm	3.0 x 0.5; 3.5 x 0.5	
• Solid or stranded	mm ²	2 x (0.5 ... 2.5)	
• Finely stranded with end sleeve	mm ²	2 x (0.5 ... 1.5)	
• Finely stranded without end sleeve	mm ²	2 x (0.5 ... 2.5)	
• AWG cables, solid or stranded	AWG	2 x (20 ... 14)	

¹⁾ If two different conductor cross-sections are connected to one clamping point, both cross-sections must lie in one of the ranges specified.

²⁾ Max. external diameter of the conductor insulation: 3.6 mm.
On spring-type terminals with conductor cross-sections ≤ 1 mm² an "insulation stop" must be used, see page 3/115.

SIRIUS 3RH2 contactor relays, 4- and 8-pole




Type		Contactor relays	
Size		3RH2	
Control		S00	
Solenoid coil operating range			
• AC operation	At 50 Hz At 60 Hz	0.8 ... 1.1 x U_s 0.85 ... 1.1 x U_s	
• DC operation	At +50 °C At +60 °C	0.8 ... 1.1 x U_s 0.85 ... 1.1 x U_s	
Solenoid coil power consumption (for cold coil and 1.0 x U_s)			
• AC operation, 50 Hz			
- Closing	VA/p.f.	37/0.8	
- Closed	VA/p.f.	5.7/0.25	
• AC operation, 60 Hz			
- Closing	VA/p.f.	33/0.75	
- Closed	VA/p.f.	4.4/0.25	
• DC operation	W	4.0	
Closing = Closed			
Permissible residual current of the electronics (with 0 signal)			
• AC operation ¹⁾		< 4 mA x (230 V/ U_s)	
• For DC operation		< 10 mA x (24 V/ U_s)	
Operating times for 1.0 x U_s²⁾ Total break time = OFF-delay + Arcing time Values apply with coil in cold state and at operating temperature for operating range			
<u>AC operation</u>			
• Closing			
- ON-delay of NO contact	ms	9 ... 22	
3RH24 minimum operating time	ms	≥ 35	
- OFF-delay of NC contact	ms	6.5 ... 19	
• Opening			
- OFF-delay of NO contact	ms	4.5 ... 15	
3RH24 minimum operating time	ms	≥ 30	
- ON-delay of NC contact	ms	5 ... 15	
<u>DC operation</u>			
• Closing			
- ON-delay of NO contact	ms	35 ... 50	
3RH24 minimum operating time	ms	≥ 100	
- OFF-delay of NC contact	ms	30 ... 45	
• Opening			
- OFF-delay of NO contact	ms	7 ... 12	
3RH24 minimum operating time	ms	≥ 30	
- ON-delay of NC contact	ms	13 ... 18	
• Arcing time	ms	10 ... 15	




¹⁾ The 3RT2916-1GA00 additional load module is recommended for higher residual currents, see page 3/114.

²⁾ The OFF-delay times of the NO contacts and the ON-delay times of the NC contacts increase if the contactor coils are attenuated against voltage peaks (suppression diode 6x to 10x; diode assembly 2x to 6x; varistor +2 to 5 ms).

Contactors Relays

SIRIUS 3RH2 contactor relays, 4- and 8-pole

		Coupling contactor relays		
		3RH21...-HB40	3RH21...-JB40	3RH21...-KB40
Type		S00		
Size		S00		
Control				
Solenoid coil operating range		0.7 ... 1.25 x U_s		
Power consumption of the solenoid coil (for cold coil and 1.0 x U_s) Closing = Closed at $U_s = 24$ V		W	2.8	
Permissible residual current Of the electronics for 0 signal		< 10 mA x (24 V/ U_s)		
Overvoltage configuration of the solenoid coil		No overvoltage damping 	Built-in diode 	Built-in suppressor diode 
Operating times at 1.0 x U_s				
• Closing delay	ON-delay NO	ms	35 ... 60	
	OFF-delay NC	ms	25 ... 40	
• Opening delay	OFF-delay NO	ms	7 ... 20	7 ... 20
	ON-delay NO	ms	10 ... 30	10 ... 30
Upright mounting position		On request		

		Coupling contactor relays		
		3RH21...-MB40-0KT0	3RH21...-VB40	3RH21...-SB40
Type		S00		
Size		S00		
Control				
Solenoid coil operating range		0.85 ... 1.85 x U_s		
Power consumption of the solenoid coil (for cold coil and 1.0 x U_s) Closing = Closed at $U_s = 24$ V		W	1.6	
Permissible residual current Of the electronics for 0 signal		< 8 mA x (24 V/ U_s)		
Overvoltage configuration of the solenoid coil		No overvoltage damping 	Built-in diode 	Built-in suppressor diode 
Operating times at 1.0 x U_s				
• Closing delay	ON-delay NO	ms	25 ... 90	
	OFF-delay NC	ms	15 ... 80	
• Opening delay	ON-delay NO	ms	5 ... 20	5 ... 20
	OFF-delay NC	ms	10 ... 30	10 ... 30
Upright mounting position		On request		

SIRIUS 3RH2 contactor relays, 4- and 8-pole

		Contactor relays	
Type		3RH2	S00
Size			
Rated data of the auxiliary contacts			
Load rating with AC			
Rated operational currents I_e			
AC-12	A	10	
AC-15/AC-14, for rated operational voltage U_e	Up to 230 V A	10 ¹⁾	
	400 V A	3	
	500 V A	2	
	690 V A	1	
Load rating with DC			
Rated operational currents I_e			
DC-12, for rated operational voltage U_e			
• 1 conducting path	24 V A	10	
	60 V A	6	
	110 V A	3	
	220 V A	1	
	440 V A	0.3	
	600 V A	0.15	
• 2 conducting paths in series	24 V A	10	
	60 V A	10	
	110 V A	4	
	220 V A	2	
	440 V A	1.3	
	600 V A	0.65	
• 3 conducting paths in series	24 V A	10	
	60 V A	10	
	110 V A	10	
	220 V A	3.6	
	440 V A	2.5	
	600 V A	1.8	
DC-13, for rated operational voltage U_e			
• 1 conducting path	24 V A	10 ¹⁾	
	60 V A	2	
	110 V A	1	
	220 V A	0.3	
	440 V A	0.14	
	600 V A	0.1	
• 2 conducting paths in series	24 V A	10	
	60 V A	3.5	
	110 V A	1.3	
	220 V A	0.9	
	440 V A	0.2	
	600 V A	0.1	
• 3 conducting paths in series	24 V A	10	
	60 V A	4.7	
	110 V A	3	
	220 V A	1.2	
	440 V A	0.5	
	600 V A	0.26	
Switching frequency			
Switching frequency z in operating cycles/hour			
• Rated operation for utilization category	AC-12/DC-12	h ⁻¹	1 000
Dependence of the switching frequency z' on the operational current I' and operational voltage U' : $z' = z \cdot (I_e/I') \cdot (U_e/U')^{1.5} \cdot 1/h$	AC-15/AC-14	h ⁻¹	1 000
	DC-13	h ⁻¹	1 000
• No-load switching frequency		h ⁻¹	10 000
Ⓢ and Ⓞ rated data			
Basic units and auxiliary switch blocks			
• Rated control supply voltage	V AC	max. 600	
• Rated voltage	V AC	600	
• Switching capacity		A 600, Q 600	
• Uninterrupted current at 240 V AC	A	10	

1) 3RH22, 3RH29: $I_e = 6$ A for AC-15/AC-14 and DC-13.

Contactor Relays

SIRIUS 3RH2 contactor relays, 4- and 8-pole

Selection and ordering data

AC operation

PU (UNIT, SET, M) = 1
 PS* = 1 unit
 PG = 41A







3RH2122-1A..0

3RH2122-2A..0

3RH2244-1A..0

3RH2244-2A..0

3RH2422-1A..0

Rated operational current $I_{e,AC-15/AC-14}$ at 230 V	Contacts		Rated control supply voltage U_s at 50/60 Hz ¹⁾	SD	Screw terminals 		SD	Spring-type terminals 	
	Ident. No.	Version			Article No.	Price per PU		Article No.	Price per PU
A		 NO  NC	V AC	d			d		

For screw fixing and snap-on mounting onto TH 35 standard mounting rail

Size S00

10	40E	4	--	24	▶	3RH2140-1AB00	2	3RH2140-2AB00
				110	▶	3RH2140-1AF00	5	3RH2140-2AF00
				230	▶	3RH2140-1AP00	▶	3RH2140-2AP00
31E	3	1	24	▶	3RH2131-1AB00	2	3RH2131-2AB00	
			110	▶	3RH2131-1AF00	▶	3RH2131-2AF00	
			230	▶	3RH2131-1AP00	▶	3RH2131-2AP00	
22E	2	2	24	▶	3RH2122-1AB00	2	3RH2122-2AB00	
			110	▶	3RH2122-1AF00	▶	3RH2122-2AF00	
			230	▶	3RH2122-1AP00	▶	3RH2122-2AP00	

With permanently mounted auxiliary switch block (SUVA-certified safety contactor)

6	44E	4	4	230	▶	3RH2244-1AP00	2	3RH2244-2AP00
	62E	6	2	230	▶	3RH2262-1AP00	2	3RH2262-2AP00

Latched

No lateral auxiliary switch blocks can be mounted

10	40E	4	--	24	5	3RH2440-1AB00	--
				110	5	3RH2440-1AF00	--
				230	5	3RH2440-1AP00	--
31E	3	1	24	5	3RH2431-1AB00	--	
			110	5	3RH2431-1AF00	--	
			230	5	3RH2431-1AP00	--	
22E	2	2	24	5	3RH2422-1AB00	--	
			110	5	3RH2422-1AF00	--	
			230	5	3RH2422-1AP00	--	

¹⁾ Coil operating range
 - at 50 Hz: 0.8 to 1.1 x U_s
 - at 60 Hz: 0.85 to 1.1 x U_s .

Other voltages according to page 3/69 on request.

Accessories, see page 3/71 onwards.

SIRIUS 3RH2 contactor relays, 4- and 8-pole

DC operation 

PU (UNIT, SET, M) = 1
 PS* = 1 unit
 PG = 41A



3RH2122-1B..0



3RH2122-2B..0







3RH2244-1B..0



3RH2244-2B..0



3RH2422-1B.40

Rated operational current I_e /AC-15/AC-14 at 230 V	Contacts		Rated control supply voltage U_s	SD	Screw terminals 		SD	Spring-type terminals 	
	Ident. No.	Version			Article No.	Price per PU		Article No.	Price per PU
A		 NO  NC	V DC	d			d		

For screw fixing and snap-on mounting onto TH 35 standard mounting rail

Size S00

10	40E	4	--	24	▶	3RH2140-1BB40	▶	3RH2140-2BB40
				220	▶	3RH2140-1BM40	▶	3RH2140-2BM40
	31E	3	1	24	▶	3RH2131-1BB40	▶	3RH2131-2BB40
				220	▶	3RH2131-1BM40	▶	3RH2131-2BM40
22E	2	2	24	▶	3RH2122-1BB40	▶	3RH2122-2BB40	
			220	▶	3RH2122-1BM40	▶	3RH2122-2BM40	

With integrated diode

10	40E	4	--	24	▶	3RH2140-1FB40	▶	3RH2140-2FB40
	31E	3	1	24	▶	3RH2131-1FB40	▶	3RH2131-2FB40
	22E	2	2	24	▶	3RH2122-1FB40	▶	3RH2122-2FB40

With permanently mounted auxiliary switch block (SUVA-certified safety contactor)

6	44E	4	4	24	▶	3RH2244-1BB40	▶	3RH2244-2BB40
	62E	6	2	24	▶	3RH2262-1BB40	▶	3RH2262-2BB40

Latched

No lateral auxiliary switch blocks can be mounted

10	40E	4	--	24	5	3RH2440-1BB40	--
				110	5	3RH2440-1BF40	--
				220	5	3RH2440-1BM40	--
31E	3	1	24	5	3RH2431-1BB40	--	
			110	5	3RH2431-1BF40	--	
			220	5	3RH2431-1BM40	--	
22E	2	2	24	2	3RH2422-1BB40	--	
			110	5	3RH2422-1BF40	--	
			220	5	3RH2422-1BM40	--	

Other voltages according to page 3/69 on request.

Accessories, see page 3/71 onwards.



Contactor Relays

SIRIUS 3RH2 contactor relays, 4- and 8-pole

DC operation for direct control from the PLC

- Coupling contactor relays with adapted power consumption
- Suitable for solid-state PLC outputs
- Cannot be expanded with auxiliary switch blocks





PU (UNIT, SET, M) = 1
 PS* = 1 unit
 PG = 41A



3RH21...-1.B40



3RH21...-2.B40

Rated operational current I_e /AC-15/ AC-14 at 230 V	Auxiliary contacts Ident. No. acc. to EN 50011	Version	SD	Screw terminals 		Spring-type terminals 	
				Article No.	Price per PU	Article No.	Price per PU
		 NO  NC	d				

A
 For screw fixing and snap-on mounting onto TH 35 standard mounting rail

Size S00

Diode, varistor or RC element, attachable

No auxiliary switch blocks can be mounted

Rated control supply voltage $U_s = 24$ V DC,
 operating range **0.7 to 1.25 x U_s**

Power consumption of the solenoid coils **2.8 W** at 24 V

10	40E	4	--	5	3RH2140-1HB40	5	3RH2140-2HB40
	31E	3	1	5	3RH2131-1HB40	5	3RH2131-2HB40
	22E	2	2	5	3RH2122-1HB40	5	3RH2122-2HB40
10	40E	4	--	5	3RH2140-1MB40-0KT0	5	3RH2140-2MB40-0KT0
	31E	3	1	2	3RH2131-1MB40-0KT0	5	3RH2131-2MB40-0KT0
	22E	2	2	5	3RH2122-1MB40-0KT0	5	3RH2122-2MB40-0KT0

Other voltages [according to page 3/69](#) on request.

Accessories, [see page 3/71 onwards](#).

SIRIUS 3RH2 contactor relays, 4- and 8-pole

DC operation for direct control from the PLC 

- Coupling contactor relays with adapted power consumption
- Suitable for solid-state PLC outputs
- Cannot be expanded with auxiliary switch blocks





PU (UNIT, SET, M) = 1
 PS* = 1 unit
 PG = 41A



3RH21..-1.B40



3RH21..-2.B40

Rated operational current I_e /AC-15/ AC-14 at 230 V	Auxiliary contacts Ident. No. acc. to EN 50011	Version	SD	Screw terminals 		Spring-type terminals 	
				Article No.	Price per PU	Article No.	Price per PU
A			d				
							

For screw fixing and snap-on mounting onto TH 35 standard mounting rail

Size S00**With integrated coil circuit (diode)**

No auxiliary switch blocks can be mounted

Rated control supply voltage $U_s = 24$ V DC,
operating range **0.7 to 1.25 x U_s**

Power consumption of the solenoid coils **2.8 W** at 24 V

10	40E	4	--	2	3RH2140-1JB40	▶	3RH2140-2JB40
	31E	3	1	▶	3RH2131-1JB40	▶	3RH2131-2JB40
	22E	2	2	▶	3RH2122-1JB40	2	3RH2122-2JB40

Rated control supply voltage $U_s = 24$ V DC,
operating range **0.85 to 1.85 x U_s**
Power consumption of the solenoid coils **1.6 W** at 24 V

10	40E	4	--	5	3RH2140-1VB40	5	3RH2140-2VB40
	31E	3	1	5	3RH2131-1VB40	5	3RH2131-2VB40
	22E	2	2	5	3RH2122-1VB40	5	3RH2122-2VB40

With integrated coil circuit (suppressor diode)

No auxiliary switch blocks can be mounted

Rated control supply voltage $U_s = 24$ V DC,
operating range **0.7 to 1.25 x U_s**

Power consumption of the solenoid coils **2.8 W** at 24 V

10	40E	4	--	5	3RH2140-1KB40	5	3RH2140-2KB40
	31E	3	1	▶	3RH2131-1KB40	▶	3RH2131-2KB40
	22E	2	2	▶	3RH2122-1KB40	▶	3RH2122-2KB40

Rated control supply voltage $U_s = 24$ V DC,
operating range **0.85 to 1.85 x U_s**
Power consumption of the solenoid coils **1.6 W** at 24 V

10	40E	4	--	5	3RH2140-1SB40	5	3RH2140-2SB40
	31E	3	1	2	3RH2131-1SB40	5	3RH2131-2SB40
	22E	2	2	2	3RH2122-1SB40	5	3RH2122-2SB40

Other voltages according to page 3/69 on request.

Accessories, see page 3/71 onwards.