



## Price groups

PG 41B, 41H

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## Introduction

### Coupling relays

[SIRIUS 3RQ3 coupling relays,  
narrow design \*\*NEW\*\*](#)

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Overview

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### Note:

Conversion tool  
e. g. from 3TX7 to 3RQ3, see  
[www.siemens.com/sirius/conversion-tool](http://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



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 **NEW**

### Overview

The advantages at a glance



Type

3RQ3

Article No.

Page

#### SIRIUS 3RQ3 coupling relays, narrow design

##### Coupling relays with relay output (not plug-in)

- Width 6.2 mm, 1 CO, versions with hard gold-plated contacts optionally available
  - Output coupling links
  - Input coupling links

**3RQ301**  
**3RQ303**

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##### Coupling relays with plug-in relay

- Width 6.2 mm, 1 CO, versions with hard gold-plated contacts optionally available
  - Output coupling links

**3RQ311**

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##### Coupling relays with semiconductor output (not plug-in)

- Width 6.2 mm, output 1 semiconductor, triac or transistor
  - Output coupling links
  - Input coupling links

**3RQ305, 3RQ306**  
**3RQ307**

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#### Connection methods

The 3RQ3 coupling relays are supplied with screw terminals and spring-type (push-in) terminals.



Screw terminals



Spring-type terminals (push-in)

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

#### 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 fine-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.

**NEW** SIRIUS 3RQ3 coupling relays, narrow design**Overview**

SIRIUS 3RQ3 coupling relays

**Further information**

Home page, see [www.siemens.com/relays](http://www.siemens.com/relays)

Industry Mall, see [www.siemens.com/product?3RQ3](http://www.siemens.com/product?3RQ3)

For the conversion tool e.g. from 3TX7 to 3RQ3, see [www.siemens.com/sirius/conversion-tool](http://www.siemens.com/sirius/conversion-tool)

SIRIUS 3RQ3 coupling relays in narrow design are used to connect control signals from and to a PLC, and they are available in different versions:

- Coupling relays with relay output (not plug-in)
- Coupling relays with plug-in relay
- Coupling relays with semiconductor output (not plug-in)

***Coupling relays with relay output (not plug-in)*****AC and DC operation**

IEC 60947-5-1, EN 60947-5-1

The input and output coupling relays differ with regard to the positioning of the terminals and the LED.

***Coupling relays with plug-in relay*****AC and DC operation**

IEC 60947-1

These coupling relays are plug-in so that the relay can be replaced quickly at the end of its service life without detaching the wiring.

***Coupling relays with semiconductor output (not plug-in)*****AC and DC operation**

IEC 60947-1, EN 60664-1 and EN 50005;  
coupling relays with semiconductor output: EN 60747-5;  
Programmable controllers: IEC 61131-2

The input and output coupling relays differ with regard to the positioning of the terminals and the LED.

The coupling relays with semiconductor output have extremely high contact reliability, so they are especially suitable for electronic systems.

For test purposes, versions are available with manual-0-automatic switches.

## Coupling Relays

### SIRIUS 3RQ3 coupling relays, narrow design **NEW**

#### Article No. scheme

Product versions		Article number	
<b>Coupling relays with relay output (not plug-in)</b>		<b>3RQ30</b> <input type="checkbox"/> 8 – <input type="checkbox"/> A <input type="checkbox"/> 0 <input type="checkbox"/>	
Design and output type	Output coupler Without manual/automatic switch	<b>1</b>	
	Input coupler	<b>3</b>	
Type of electrical connection	Screw terminals	<b>1</b>	
	Spring-type terminals (push-in)	<b>2</b>	
Control supply voltage	24 V AC/DC		<b>B</b>
	115 V AC/DC		<b>E</b>
	230 V AC/DC		<b>F</b>
Material of switching contacts	e. g.		
	AgSnO2		<b>0</b>
	AgSnO2-HTV		<b>1</b>

Product versions		Article number	
<b>Coupling relays with relay output (not plug-in)</b>		<b>3RQ30 1 8 – 2 A</b> <input type="checkbox"/> 0 8 – 0 A A 0	
Railway version with extended operating range 0.7 ... 1.2 x $U_s$			
Control supply voltage	24 V DC		<b>M</b>
	115 V DC		<b>N</b>

Product versions		Article number	
<b>Coupling relays with plug-in relay</b>		<b>3RQ31 1 8 –</b> <input type="checkbox"/> A <input type="checkbox"/> 0 <input type="checkbox"/>	
Type of electrical connection	Screw terminals	<b>1</b>	
	Spring-type terminals (push-in)	<b>2</b>	
Control supply voltage	24 V AC/DC		<b>B</b>
	115 V AC/DC		<b>E</b>
	230 V AC/DC		<b>F</b>
	24 V DC		<b>M</b>
Material of switching contacts	AgSnO2		<b>0</b>
	AgSnO2-HTV		<b>1</b>

Product versions		Article number			
<b>Coupling relays with semiconductor output (not plug-in)</b>		<b>3RQ30</b> <input type="checkbox"/> <input type="checkbox"/> – <input type="checkbox"/> S <input type="checkbox"/> <input type="checkbox"/> 0			
	Current carrying capacity of the semiconductor output			Control supply voltage	Switching voltage of the semiconductor output
Output coupler	• Without manual/automatic switch	1 mA ... 0.5 A	<b>3RQ30 5 0 –</b> <input type="checkbox"/> S M 5 0	11 ... 30 V DC	10 ... 60 V DC
		5 mA ... 2 A	<b>3RQ30 5 2 –</b> <input type="checkbox"/> S M 3 0	11 ... 30 V DC	10 ... 30 V DC
		1 mA ... 2 A	<b>3RQ30 5 2 –</b> <input type="checkbox"/> S M 4 0	11 ... 30 V DC	10 ... 60 V DC
		5 mA ... 2 A	<b>3RQ30 5 2 –</b> <input type="checkbox"/> S M 5 0	11 ... 30 V DC	20 ... 264 V AC
	• With manual/automatic switch	1 mA ... 3 A	<b>3RQ30 5 3 –</b> <input type="checkbox"/> S G 3 0	110 ... 230 V AC/DC	10 ... 30 V DC
		5 mA ... 5 A	<b>3RQ30 5 5 –</b> <input type="checkbox"/> S M 3 0	11 ... 30 V DC	10 ... 30 V DC
		5 mA ... 5 A	<b>3RQ30 6 5 –</b> <input type="checkbox"/> S M 3 0	11 ... 30 V DC	10 ... 30 V DC
Input coupler	10 mA ... 0.5 A	<b>3RQ30 7 0 –</b> <input type="checkbox"/> S B 3 0	11 ... 30 V AC/DC	10 ... 30 V DC	
		<b>3RQ30 7 0 –</b> <input type="checkbox"/> S G 3 0	110 ... 230 V AC/DC	10 ... 30 V DC	
Type of electrical connection	Screw terminals	<b>1</b>			
	Spring-type terminals (push-in)	<b>2</b>			

#### Note:

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

For your order please use the article numbers quoted in the catalog under the selection and ordering data.

**NEW** SIRIUS 3RQ3 coupling relays, narrow design**Benefits****General**

- All versions with screw or spring-type terminals (push-in technology)
- TOP wiring with spring-type terminals (push-in) for quick and reliable wiring
- Low space requirements in the control cabinet thanks to a consistent width of 6.2 mm
- Reduced inventory due to fewer variants
- Clearly visible functional state of the coupling relay by green LED
- Integrated reverse polarity protection and EMC arc-suppression diode
- Uniform accessories throughout the entire 3RQ3 series
- Universal bridging option using connecting combs for all terminals
- Galvanic isolation plate for isolating different voltages for neighboring units
- Clip-on labels available as set for individual labeling

**Coupling relays with relay output (not plug-in)**

- Permanently soldered relay for enhanced contact reliability
- Device variants with hard gold-plated contacts providing high contact reliability at low currents

**Coupling relays with plug-in relay**

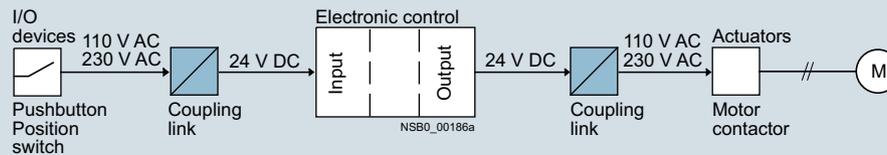
- Fast replacement of the relays with existing wiring
- Tested complete units → lower assembly time
- Individual relays available as spare parts
- Device variants with hard gold-plated contacts providing high contact reliability at low currents

**Coupling relays with semiconductor output (not plug-in)**

- Long service life as there is no mechanical wear
- High switching frequency thanks to short make and break times
- Insensitive to vibrations
- No contact bounce
- Maximum contact reliability
- Noise-free switching
- Low control power required
- Switching of DC and capacitive loads

**Application**

- Electrical separation between the input and output circuit
- Adjustment of different signal levels
- Signal amplification



Application example motor controller

# Coupling Relays

## SIRIUS 3RQ3 coupling relays, narrow design **NEW**

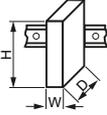
### Technical specifications

#### Further information

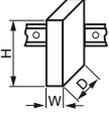
For technical specifications, see  
<https://support.industry.siemens.com/cs/ww/en/ps/16198/td>  
 For operating instructions, see  
<https://support.industry.siemens.com/cs/ww/en/ps/16198/man>

For internal circuit diagrams, see  
<https://support.industry.siemens.com/cs/ww/en/ps/16198/man>  
 For FAQs, see <https://support.industry.siemens.com/cs/ww/en/ps/16198/faq>

#### Coupling relays with relay output (not plug-in)

Article number	3RQ30.8- .AB00	3RQ30.8- .AB01	3RQ30.8- .AE00	3RQ30.8- .AE01	3RQ30.8- .AF00	3RQ30.8- .AF01	3RQ3018- 2AM08-0AA0	3RQ3018- 2AN08-0AA0	
<b>General technical specifications:</b>									
<b>Width x height x depth</b>			mm						6.2 x 93 x 72.5
<b>Insulation voltage for overvoltage category III to IEC 60664 for pollution degree 3</b>	V		300						
<b>Max. permissible voltage for protective separation between control circuit and auxiliary circuit</b>	V		300						
<b>Ambient temperature</b>									
• During operation	°C		-25 ... +60			-40 ... +70			
• During storage	°C		-40 ... +85						
<b>IP degree of protection</b>	IP20								
<b>Version of the fuse link required for short-circuit protection of the auxiliary switch</b>	Fuse gG: 4 A								
<b>Operational current of the auxiliary contacts</b>									
• At AC-15	A		3						
- At 24 V	A		3						
- At 250 V	A		3						
• At DC-13	A		1						
- At 24 V	A		0.2						
- At 125 V	A		0.1						
- At 250 V	A		0.1						
<b>Contact reliability of the auxiliary contacts</b>	17 V, 1 mA		5 V, 1 mA		17 V, 1 mA		5 V, 1 mA		
<b>Mechanical endurance (operating cycles) typical</b>	10 000 000								
<b>Electrical endurance (operating cycles) for AC-15 at 230 V typical</b>	100 000								
<b>Operating range factor of the control supply voltage, rated value</b>									
• At AC at 50 Hz	0.8 ... 1.25		0.8 ... 1.1			--			
• At DC	0.8 ... 1.25		0.8 ... 1.1			0.7 ... 1.25			
<b>Active power input</b>	W		0.3		0.5		1		
<b>Thermal current</b>	A		6						

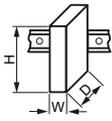
**NEW** SIRIUS 3RQ3 coupling relays, narrow design**Coupling relays with plug-in relay**

Article number	3RQ3118- .AB00	3RQ3118- .AB01	3RQ3118- .AE00	3RQ3118- .AE01	3RQ3118- .AF00	3RQ3118- .AF01	3RQ3118- .AM00	3RQ3118- .AM01
<b>General technical specifications:</b>								
<b>Width x height x depth</b>			mm	6.2 x 93 x 76				
<b>Insulation voltage for overvoltage category III to IEC 60664 for pollution degree 3</b>	V	300						
<b>Max. permissible voltage for protective separation between control circuit and auxiliary circuit</b>	V	300						
<b>Ambient temperature</b>								
• During operation	°C	-25 ... +60						
• During storage	°C	-40 ... +85						
<b>IP degree of protection</b>	IP20							
<b>Version of the fuse link required for short-circuit protection of the auxiliary switch</b>	Fuse gG: 4 A							
<b>Operational current of the auxiliary contacts</b>								
• At AC-15								
- At 24 V	A	3						
- At 250 V	A	3						
• At DC-13								
- At 24 V	A	1						
- At 125 V	A	0.2						
- At 250 V	A	0.1						
<b>Contact reliability of the auxiliary contacts</b>		17 V, 1 mA	5 V, 1 mA	17 V, 1 mA	5 V, 1 mA	17 V, 1 mA	5 V, 1 mA	17 V, 1 mA
<b>Mechanical endurance (operating cycles) typical</b>	10 000 000							
<b>Electrical endurance (operating cycles) for AC-15 at 230 V typical</b>	100 000							
<b>Operating range factor of the control supply voltage, rated value</b>								
• At AC at 50 Hz		0.8 ... 1.25		0.8 ... 1.1			--	
• At DC		0.8 ... 1.25		0.8 ... 1.1			0.8 ... 1.25	
<b>Active power input</b>	W	0.3		0.5		1		0.3
<b>Thermal current</b>	A	6						

## Coupling Relays

SIRIUS 3RQ3 coupling relays, narrow design **NEW**

## Coupling relays with semiconductor output (not plug-in)

Article number	3RQ3050- .SM50	3RQ3052- .SM30	3RQ3052- .SM40	3RQ3052- .SM50	3RQ3053- .SG30	3RQ30.5- .SM30	3RQ3070- .SB30	3RQ3070- .SG30
<b>General technical specifications:</b>								
<b>Width x height x depth</b>	6.2 x 93 x 72.5							
								
<b>Insulation voltage for overvoltage category III to IEC 60664 for pollution degree 3</b>	50 V			300 V		50 V		--
<b>Ambient temperature</b>								
• During operation	-25 ... +60 °C							
• During storage	-40 ... +85 °C							
<b>IP degree of protection</b>	IP20							
<b>Switching voltage of the semiconductor output</b>								
• At AC	--			20 ... 264 V		--		
• At DC	10 ... 60 V		10 ... 30 V		10 ... 60 V		--	
<b>Current carrying capacity of the semiconductor output</b>								
• At AC	--			5 mA ... 2 A		--		
• At DC	1 mA ... 0.5 A		5 mA ... 2 A		1 mA ... 2 A		1 mA ... 3 A 5 mA ... 5 A 10 mA ... 0.5 A	
<b>Operating range factor of the control supply voltage, rated value</b>								
• At AC at 50 Hz	--			1 ... 1		--		1 ... 1
• At DC	1 ... 1							
<b>Active power input</b>	0.3 W			0.25 W		0.3 W		0.5 W
<b>Thermal current</b>	0.5 A		2 A		3 A		5 A 0.5 A	

Article number	3RQ3...-1....	3RQ3...-2....
<b>Type of electrical connection For auxiliary and control circuit</b>	 Screw terminals	 Spring-type terminals (push-in)
<b>Type of connectable conductor cross-sections</b>		
• Solid	1x (0.25 ... 2.5) mm <sup>2</sup>	
• Finely stranded		
- Without end sleeves	--	
- With end sleeves	1x (0.25 ... 1.5) mm <sup>2</sup>	
• Solid for AWG cables	1x (20 ... 14)	

**NEW** SIRIUS 3RQ3 coupling relays, narrow design

## Selection and ordering data

Type of voltage	Control supply voltage			Number of CO contacts for auxiliary contacts	Material of switching contacts	DT	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
	At AC		At DC								
	At 50 Hz	At 60 Hz									
	V	V	V								

## Coupling relays with relay output (not plug-in)

**Output coupling links**

AC/DC	24	24	24	1	AgSnO2	A	<b>3RQ3018-□AB00</b>	1	5 units	41H
					AgSnO2-HTV	A	<b>3RQ3018-□AB01</b>	1	5 units	41H
	115	115	115	1	AgSnO2	A	<b>3RQ3018-□AE00</b>	1	5 units	41H
	230	230	230	1	AgSnO2	A	<b>3RQ3018-□AF00</b>	1	5 units	41H
DC	--	--	24	1	AgSnO2	A	<b>3RQ3018-2AM08-0AA0</b>	1	5 units	41H
			115	1	AgSnO2	A	<b>3RQ3018-2AN08-0AA0</b>	1	5 units	41H

**Input coupling links**

AC/DC	24	24	24	1	AgSnO2	A	<b>3RQ3038-□AB00</b>	1	5 units	41H
					AgSnO2-HTV	A	<b>3RQ3038-□AB01</b>	1	5 units	41H
	115	115	115	1	AgSnO2	A	<b>3RQ3038-□AE00</b>	1	5 units	41H
	230	230	230	1	AgSnO2	A	<b>3RQ3038-□AF00</b>	1	5 units	41H
					AgSnO2-HTV	A	<b>3RQ3038-□AF01</b>	1	5 units	41H

## Coupling relays with plug-in relay

**Output coupling links**

AC/DC	24	24	24	1	AgSnO2	A	<b>3RQ3118-□AB00</b>	1	5 units	41H
					AgSnO2-HTV	A	<b>3RQ3118-□AB01</b>	1	5 units	41H
	115	115	115	1	AgSnO2	A	<b>3RQ3118-□AE00</b>	1	5 units	41H
	230	230	230	1	AgSnO2	A	<b>3RQ3118-□AF00</b>	1	5 units	41H
					AgSnO2-HTV	A	<b>3RQ3118-□AF01</b>	1	5 units	41H
DC	--	--	24	1	AgSnO2	A	<b>3RQ3118-□AM00</b>	1	5 units	41H
			115	1	AgSnO2-HTV	A	<b>3RQ3118-□AM01</b>	1	5 units	41H

## Type of electrical connection

- Screw terminals
- Spring-type terminals (push-in)

1  
2

Type of voltage	Control supply voltage			Current carrying capacity of the semiconductor output		Operating mode selectable via switch position	DT	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
	At AC		At DC	At AC	At DC							
	At 50 Hz	At 60 Hz										

## Coupling relays with semiconductor output (not plug-in)

**Output coupling links**

DC	--	--	11 ... 30 V	--	1 mA ... 0.5 A	--	A	<b>3RQ3050-□SM50</b>	1	5 units	41H
					5 mA ... 2 A	--	A	<b>3RQ3052-□SM30</b>	1	5 units	41H
					1 mA ... 2 A	--	A	<b>3RQ3052-□SM40</b>	1	5 units	41H
					5 mA ... 2 A	--	A	<b>3RQ3052-□SM50</b>	1	5 units	41H
					5 mA ... 5 A	--	A	<b>3RQ3055-□SM30</b>	1	5 units	41H
									Manual/ Off/ Automatic	A	<b>3RQ3065-□SM30</b>
AC/DC	110 ... 230 V	110 ... 230 V	110 ... 230 V	--	1 mA ... 3 A	--	A	<b>3RQ3053-□SG30</b>	1	5 units	41H

**Input coupling links**

AC/DC	11 ... 30 V	11 ... 30 V	11 ... 30 V	--	10 mA ... 0.5 A	--	A	<b>3RQ3070-□SB30</b>	1	5 units	41H
	110 ... 230 V	110 ... 230 V	110 ... 230 V	--	10 mA ... 0.5 A	--	A	<b>3RQ3070-□SG30</b>	1	5 units	41H

## Type of electrical connection

- Screw terminals
- Spring-type terminals (push-in)

1  
2

## Coupling Relays

### SIRIUS 3RQ3 coupling relays, narrow design **NEW**

#### Accessories

Version	DT	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG	
<b>Galvanic isolation plates</b>							
 3RQ3900-0A		For electrical separation of different potentials when devices of different types are installed side by side	A	<b>3RQ3900-0A</b>	1	10 units	41H
<b>Connecting combs</b>							
 3RQ3901-0B		For linking the same potentials, current carrying capacity for infeed max. 6 A					
		• 2-pole	A	<b>3RQ3901-0A</b>	1	10 units	41H
		• 4-pole	A	<b>3RQ3901-0B</b>	1	10 units	41H
		• 8-pole	A	<b>3RQ3901-0C</b>	1	10 units	41H
		• 16-pole	A	<b>3RQ3901-0D</b>	1	10 units	41H
<b>Clip-on labels</b>							
		For terminal marking and equipment labeling, white					
		• 5 x 5 mm	A	<b>3RQ3902-0A</b>	100	2 000 units	41H
		• 6 x 12 mm	A	<b>3RQ3902-0B</b>	100	1 200 units	41H
<b>Tools for opening spring-type terminals</b>							
 3RA2908-1A		<b>Screwdrivers</b> for all SIRIUS devices with spring-type terminals; 3.0 mm x 0.5 mm; Length approx. 200 mm, titanium gray/black, partially insulated	A	<b>Spring-type terminals (push-in)</b>  <b>3RA2908-1A</b>	1	1 unit	41B

#### Replacement modules for 3RQ3118 coupling relays with plug-in relay

Coupling relays with plug-in relay	Control supply voltage	Material of switching contacts	Number of CO contacts for auxiliary contacts	DT	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Type	V								
3RQ3118-.AM00	24 DC	AgSnO2	1	A	<b>3TX7014-7BM00</b>		1	20 units	41H
3RQ3118-.AM01		AgSnO2-HTV		A	<b>3TX7014-7BM02</b>		1	20 units	41H
3RQ3118-.AB00	24 AC/DC	AgSnO2	1	A	<b>3TX7014-7BQ00</b>		1	20 units	41H
3RQ3118-.AB01		AgSnO2-HTV		A	<b>3TX7014-7BQ02</b>		1	20 units	41H
3RQ3118-.AE00	115 AC/DC	AgSnO2	1	A	<b>3TX7014-7BP00</b>		1	20 units	41H
3RQ3118-.AF00	230 AC/DC	AgSnO2-HTV							
3RQ3118-.AE01	115 AC/DC	AgSnO2	1	A	<b>3TX7014-7BP02</b>		1	20 units	41H
3RQ3118-.AF01	230 AC/DC	AgSnO2-HTV							