

Switching Devices – Contactors and Contactor Assemblies

Introduction

Overview

The advantages at a glance



S00
3RH11



S00
3RH12

Size
Type

		Article No.	Page
3RH1 contactor relays			
4-pole	• Screw terminals, spring-type terminals and ring terminal lug connections	3RH11	5/5, 5/6
8-pole		3RH12	5/5, 5/6
4-pole, latched		3RH14	5/10
Coupling contactors	• Coils for control by PLC	3RH11	5/11
Contact relays for railway applications	• Coils with extended voltage range	3RH11	5/13
Accessories for 3RH1 contactor relays			
Auxiliary switch blocks	• On front	3RH1911	5/7
	• Lateral	3RH1911	Chap.3
Timing relay blocks	• On front	3RT1916	Chap.3
OFF-delay devices	• For mounting separately	3RT1916	5/9
Surge suppressors	• On front	3RT1916	5/8
Additional load modules	• On front	3RT1916	5/8

Connection methods

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



Screw terminals

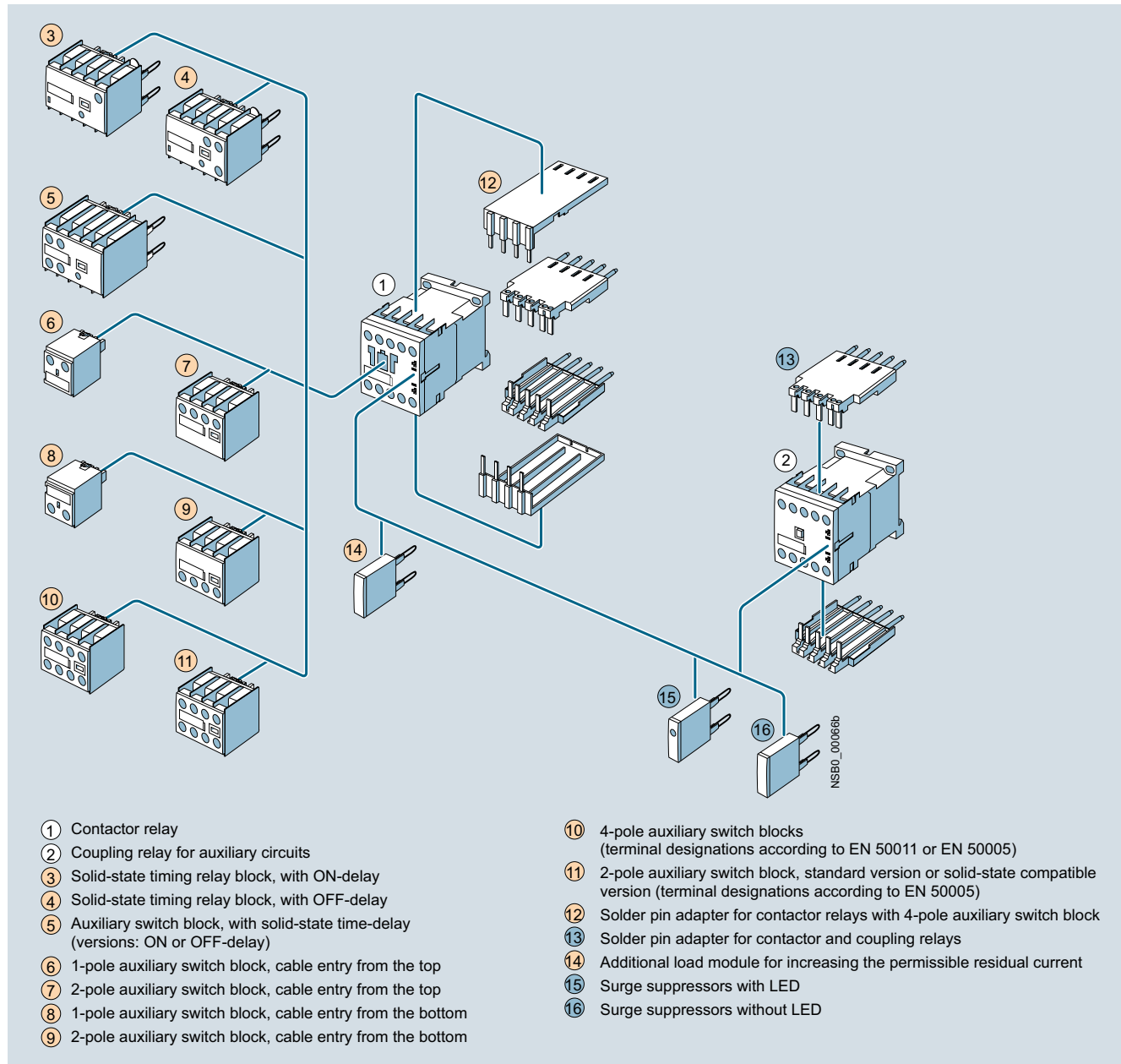


Spring-type terminals

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

Overview

Contactor relays and coupling contactors, size S00, with accessories



Contactors Relays

SIRIUS 3RH1 contactor relays, 4- and 8-pole

Standards

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

The 3RH1 contactor relays are suitable for use in any climate. They are finger-safe according to EN 50274.

The 3RH1 contactor relays have screw or spring-type terminals. The basic unit contains four contacts with terminal designations according to EN 50011.

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 contactor relays from the front for damping opening surges in the coil. The plug-in direction is determined by a coding device.

Note:

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

Accessories

The accessories for the 3RT1 contactors in size S00 can also be used for the 3RH1 contactor relays (see Chapter 3 and pages 5/8 and 5/9).

Auxiliary switch blocks

The 3RH1 contactor relays can be expanded by up to four contacts by the addition of snap-on auxiliary switch blocks.

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

Auxiliary switches according to EN 50011

The 3RH11 contactor relays with 4 contacts with the identification number 40E according to EN 50011 can be extended with 3RH1911-GA .. auxiliary switch blocks (see page 5/7) to obtain contactor relays with 8 contacts according to EN 50011. The identification numbers 80E to 44E on the auxiliary switch blocks apply to the complete contactors. These auxiliary switch blocks cannot be combined with contactor relays with identification numbers 31E and 22E; they are coded.

Auxiliary switches according to EN 50005

All 3RH11 contactor relays with 4 contacts, identification numbers 40E to 22E, can be extended with auxiliary switch blocks 40 to 02 to obtain contactor relays with 6 or 8 contacts in accordance with EN 50005. The identification numbers on the auxiliary switch blocks apply only to the attached auxiliary switch blocks.

Of the auxiliary contacts (integrated plus mountable) possible on the device, no more than four NC contacts are permitted.

8-pole contactor relay 3RH12

In addition, fully mounted 3RH12 8-pole contactor relays are available; the mounted 4-pole auxiliary switch block is not removable. The terminal designations are in accordance with EN 50011 or IEC 60947-5-1.

These versions are built according to special Swiss regulations SUVA and are distinguished externally by a red labeling plate.

Article No. scheme

Digit of the article No.	1st - 3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th	16th
	□ □ □	□ □	□ □	□ □	□ □	□ □	□ □	□ □	□ □	□ □	□ □	□ □	□ □	□ □
SIRIUS contactor relays	3 R H													
1. generation		1												
Device type (e.g. 1 = 4-pole contactor relay, 2 = 8-pole contactor relay)			□											
Number of NO contacts (e.g. 2 = 2 NO)				□										
Number of NC contacts (e.g. 2 = 2 NC)					□									
Connection type (1 = screw, 2 = spring)							□							
Operating range / solenoid coil circuit (e.g. A = AC standard / without)								□						
Rated control supply voltage (e.g. P0 = 230 V, 50 Hz)									□	□				
No significance (0)										□				
Special version												□	□	□
Example	3 R H	1	1	2	2	-	1	A	P	0	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.

SIRIUS 3RH1 contactor relays, 4- and 8-pole

Selection and ordering data

AC operation

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

Size S00



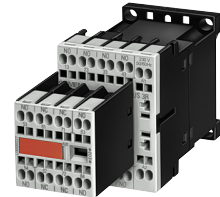
3RH11...-1B.40



3RH11...-2B.40



3RH12...-1B.40

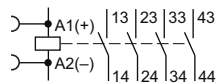
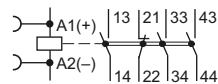
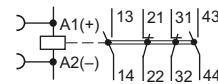


3RH12...-2B.40

Rated operational current I_e /AC-15/ AC-14 at 230 V	Contacts		Rated control supply voltage U_s at 50/60 Hz ¹⁾	DT	Screw terminals		DT	Spring-type terminals	
Ident. No.	Version	Article No.			Price per PU	Article No.		Price per PU	
NO NC V AC									
A									

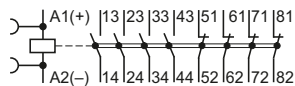
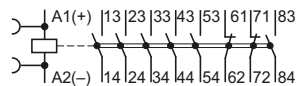
For screw fixing and snap-on mounting onto TH 35 standard mounting rail

Terminal designations according to EN 50011

4 NO, Ident. No. **40E**3 NO + 1 NC, Ident. No. **31E**2 NO + 2 NC, Ident. No. **22E**

6	40E	4	--	24 110 230	▶ 3RH1140-1AB00 ▶ 3RH1140-1AF00 ▶ 3RH1140-1AP00	▶ 3RH1140-2AB00 ▶ 3RH1140-2AF00 ▶ 3RH1140-2AP00
	31E	3	1	24 110 230	▶ 3RH1131-1AB00 ▶ 3RH1131-1AF00 ▶ 3RH1131-1AP00	▶ 3RH1131-2AB00 ▶ 3RH1131-2AF00 ▶ 3RH1131-2AP00
	22E	2	2	24 110 230	▶ 3RH1122-1AB00 ▶ 3RH1122-1AF00 ▶ 3RH1122-1AP00	▶ 3RH1122-2AB00 ▶ 3RH1122-2AF00 ▶ 3RH1122-2AP00

• With permanently mounted auxiliary switch block for safety applications according to SUVA

4 NO + 4 NC, Ident. No. **44E**6 NO + 2 NC, Ident. No. **62E**

6	44E	4	4	230	▶ 3RH1244-1AP00	B	3RH1244-2AP00
	62E	6	2	230	▶ 3RH1262-1AP00	B	3RH1262-2AP00

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 5/7 on request.

Accessories, see pages 5/7 to 5/9 and
 "Accessories for 3RT1 contactors", see Chapter 3.