

AC and DC operation

IEC 60947, EN 60947.

The 3RH2 contactor relays have screw, ring lug terminal or spring-type terminals. Four contacts are available in the basic unit.

The 3RH2 contactor relays are suitable for use in any climate. They are finger-safe according to EN 50274. The devices with ring lug terminal connection comply with degree of protection IP20 when fitted with the related terminal cover.

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 assemblies 2 to 6 times, varistor +2 to 5 ms).

Auxiliary switch blocks

The 3RH2 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.

The contactor relays with 4 contacts according to EN 50011, with the identification number 40E, can be extended with 80E to 44E auxiliary switch blocks 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 (3RH29 11–1GA..) cannot be combined with contactor relays with identification numbers 31E and 22E; they are coded.

All contactor relays with 4 contacts according to EN 50011, 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.

Order No. scheme

Digit of the Order No.	1st - 3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th	16th		
	□□□	□	□	□	□	–	□	□	□	□	□	–	□	□	□	□
SIRIUS contactor relays	3 R H															
2nd generation		2														
Device type (e. g. 1 = 4-pole contactor relay, 3 = 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, 4 = ring lug)							□									
Operating range / solenoid coil circuit (e. g. A = AC standard / without)								□								
Rated control supply voltage (e. g. K6 = 110/120 V, 50/60 Hz)									□	□						
No significance										□						
Special version												□	□	□	□	□
Example	3 R H	2	1	2	2	–	1	A	K	6	0					

Note:

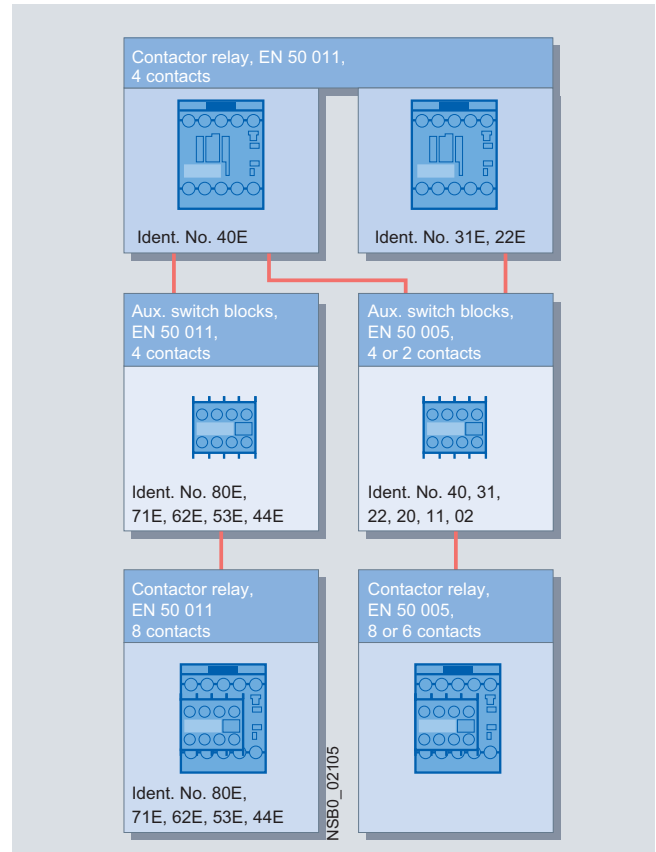
The Order No. scheme is presented here merely for information purposes and for better understanding of the logic behind the order numbers.

3RH2 contactor relays, 4- and 8-pole

In addition, fully mounted 3RH22 8-pole contactor relays are available; the mounted 4-pole auxiliary switch block in the 2nd tier is not removable. The terminal designations are according to EN 50011.

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

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



3RH Contactor Relays

3RH2 contactor relays, 4- and 8-pole

Selection and ordering data

AC operation

Size S00



3RH21 ...-1...



3RH21 ...-2...



3RH22 ...-1...



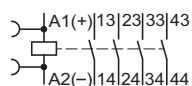
3RH22 ...-2...

Rated operational current at 240 V	Contacts		Rated control supply voltage U_s at 50/60 Hz ²⁾	Screw terminals ¹⁾		Weight approx.	Spring-type terminals		Weight approx.
	Ident. No.	Version		Order No.			Order No.		
A		NO NC	V AC			kg			kg

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

Terminal designations according to EN 50011

4 NO, identification number **40E**



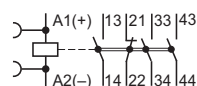
10

40E

4

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3 NO + 1 E, identification number **31E**



24

110/120

220/240

3RH21 40-1AB00

3RH21 40-1AK60

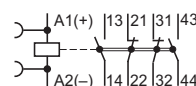
3RH21 40-1AP60

0.220

0.220

0.220

2 NO + 2 NE, identification number **22E**



24

110/120

220/240

0.220

0.220

0.220

3RH21 40-2AB00

3RH21 40-2AK60

3RH21 40-2AP60

0.240

0.240

0.240

31E

3

1

24

110/120

220/240

3RH21 31-1AB00

3RH21 31-1AK60

3RH21 31-1AP60

0.220

0.220

0.220

3RH21 31-2AB00

3RH21 31-2AK60

3RH21 31-2AP60

0.240

0.240

0.240

22E

2

2

24

110/120

220/240

3RH21 22-1AB00

3RH21 22-1AK60

3RH21 22-1AP60

0.220

0.220

0.220

3RH21 22-2AB00

3RH21 22-2AK60

3RH21 22-2AP60

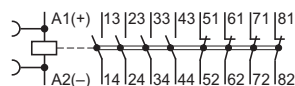
0.240

0.240

0.240

• With permanently mounted auxiliary switch block

4 NO + 4 NC, identification number **44E**



10³⁾

44E

4

4

110/120

3RH22 44-1AK60

0.270

3RH22 44-2AK60

0.300

62E

6

2

110/120

3RH22 62-1AK60

0.270

3RH22 62-2AK60

0.300

6 NO + 2 NC, identification number **62E**



110/120

3RH22 44-1AK60

0.270

3RH22 44-2AK60

0.300

3RH22 62-1AK60

0.270

3RH22 62-2AK60

0.300

For other voltages see page 3/62.

For accessories see pages 3/93 to 3/97.

¹⁾ The 3RH21 contactor relays are also available with ring lug terminal connection. Please insert the number "4" into the 8th position of the part number for versions with ring lug terminal connection.

²⁾ 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 .

³⁾ For AC-15/AC-14 the following applies: $I_e = 6$ A for mounted auxiliary contacts.

3RH Contactor Relays

3RH2 contactor relays, 4- and 8-pole

Rated control supply voltages
(the 10th and 11th position of the order number must be changed)

	Contactor type	3RH21
Rated control supply voltage U_s	Control supply voltage at	

AC operation

Solenoid coils for 50/60 Hz and 60 Hz

50/60 Hz ¹⁾	60 Hz	
24 V AC	---	B0
42 V AC	---	D0
48 V AC	---	H0
110 V AC	---	F0
220 V AC	---	N2
230 V AC	---	P0
400 V AC	---	V0
---	480 V AC	V6
---	600 V AC	T6

Solenoid coils for USA and Canada²⁾

50 Hz	60 Hz	
110 V AC	120 V AC	K6
220 V AC	240 V AC	P6
480 V AC	---	V6
600 V AC	---	T6

Solenoid coils for Japan³⁾

50/60 Hz	60 Hz	
100 V AC	110 V AC	G6
200 V AC	220 V AC	N6
400 V AC	440 V AC	R6

DC operation

12 V DC	A4
24 V DC	B4
42 V DC	D4
48 V DC	W4
60 V DC	E4
110 V DC	F4
125 V DC	G4
220 V DC	M4
230 V DC	P4

1) Coil operating range
at 50 Hz: 0.8 to $1.1 \times U_s$
at 60 Hz: 0.85 to $1.1 \times U_s$.

2) Coil operating range
at 50 Hz: 0.85 to $1.1 \times U_s$
at 60 Hz: 0.8 to $1.1 \times U_s$.

3) Coil operating range
at 50/60 Hz: 0.85 to $1.1 \times U_s$
at 60 Hz: 0.8 to $1.1 \times U_s$.