## 3RH, 3TH Contactor Relays

# 3RH11 coupling relays for switching auxiliary circuits, 4-pole

3RH11 ..-.KB40

### Application

#### **DC** operation

Contactor type

IEC 60947 and EN 60947 (VDE 0660)

The 3RH11 coupling relays for switching auxiliary circuits are tailored to the special requirements of working with electronic controls.

#### Function

No auxiliary switch blocks can be snapped onto 3RH11 coupling relays.

3RH11 ..-.JB40

Coupling relays have a low power consumption, an extended magnetic coil operating range and an integrated surge suppressor for damping opening surges (exceptions: 3RH11 .... HB40 and 3RH11 .... MB4.-0KT0).

#### Technical specifications

All technical specifications not mentioned in the table below are identical to those of the 3RH11 contactor relays (see page 3/132). The size S00 coupling relays (3RH11) cannot be extended with auxiliary switch blocks.

3RH11 ..-.HB40

Magnetic coli operating range	Size		500	500	S00
Closing a closed at U <sub>2</sub> = 17 V	Magnetic coil operating range		0.7 1.25 x <i>U</i> <sub>s</sub>		
No overvoltage configuration of the magnetic coil   No overvoltage damping   With diode   With varistor	Closing = closed at $U_S = 17 \text{ V}$ at $U_S = 24 \text{ V}$	W	2.3		
Coloring times   Coloring at 17 V			< 10 mA x (24 V/U <sub>S</sub> )		
V V   V   V   V	Overvoltage configuration of the magnetic coil		No overvoltage damping	With diode	With varistor
Closing at 17 V ON-delay NC ON-delay NC ms 30 70         40 120			\$ <sup>-(-)</sup> \$	<del>-    </del>	- <u></u>
- ON-delay NO	Operating times				
- ON-delay NO	- ON-delay NO - OFF-delay NC				
- ON-delay NO	- ON-delay NO				
- OFF-delay NC	- ON-delay NO				
Contactor type   Size   Siz	- OFF-delay NO				
Size	•				
Size					
Power consumption of the magnetic coil (for cold coil) (for cold coil) (Closing = Closed at U <sub>s</sub> = 24 V         I.4           Permissible residual current of the electronics for 0 signal         < 8 mA x (24 V/U <sub>s</sub> )           Overvoltage configuration of the magnetic coil         Diode, varistor or RC element, attachable         Built-in diode         Built-in varistor           Operating times of the coupling relays         • Closing at 20.5 V         • CPF-delay         ms         110 20         • CPF-delay         • CPF-delay         • CPF-delay         • CPF-delay NO         • Secondary         • Secondary         • Secondary         • Secondary         • Secondary         • Secondary         • CPF-delay NO         • Secondary         • Secon					
(for cold coil) Closing = Closed at U <sub>s</sub> = 24 V       S mA x (24 V/U <sub>s</sub> )         Permissible residual current of the electronics for 0 signal         Overvoltage configuration of the magnetic coil       Diode, varistor or RC element, attachable       Built-in diode       Built-in varistor         Operating times of the coupling relays         • Closing at 20.5 V       • OFF-delay       ms       110 20         • ON-delay       ms       120 30         • At 24 V       • ON-delay NO       ms       25 90         • OFF-delay NC       ms       15 80         • At 44 V       • OFF-delay       ms       50 10         • ON-delay NC       ms       60 15         • Closing at 17 30 V       • OFF-delay NO       ms       5 20         • ON-delay NC       ms       5 20       20 80       5 20         • ON-delay NC       ms       10 30       30 90       10 30					
Overvoltage configuration of the magnetic coil         Diode, varistor or RC element, attachable         Built-in diode         Built-in varistor           Operating times of the coupling relays         • Closing at 20.5 V         - CPF-delay         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V         - V	Size		S00		
Attachable  Operating times of the coupling relays  Closing at 20.5 V OFF-delay ON-delay  Attachable  I 10 20  ON-delay  MS	Size  Magnetic coil operating range  Power consumption of the magnetic coil (for cold coil)	W	S00 0.85 1.85 x <i>U</i> <sub>s</sub>		
Operating times of the coupling relays  • Closing at 20.5 V - OFF-delay	Size  Magnetic coil operating range  Power consumption of the magnetic coil (for cold coil)  Closing = Closed at $U_s$ = 24 V  Permissible residual current	W	S00 0.85 1.85 x U <sub>s</sub> 1.4		
<ul> <li>Closing at 20.5 V - OFF-delay</li></ul>	Size  Magnetic coil operating range  Power consumption of the magnetic coil (for cold coil)  Closing = Closed at $U_s = 24 \text{ V}$ Permissible residual current of the electronics for 0 signal	W	S00 0.85 1.85 x U <sub>S</sub> 1.4 < 8 mA x (24 V/U <sub>S</sub> ) Diode, varistor or RC element,	S00	S00
- OFF-delay ms 110 20 - ON-delay ms 120 30  • At 24 V - ON-delay NO ms 25 90 - OFF-delay NC ms 15 80  • At 44 V - OFF-delay RC ms 50 10 - ON-delay ms 60 15  • Closing at 17 30 V - OFF-delay NO ms 5 20 - ON-delay NC ms 10 30 30 90 10 30	Size  Magnetic coil operating range  Power consumption of the magnetic coil (for cold coil)  Closing = Closed at $U_{\rm S} = 24 \text{ V}$ Permissible residual current of the electronics for 0 signal	W	S00 0.85 1.85 x U <sub>S</sub> 1.4 < 8 mA x (24 V/U <sub>S</sub> ) Diode, varistor or RC element,	Suilt-in diode	Built-in varistor
- ON-delay NO	Size  Magnetic coil operating range  Power consumption of the magnetic coil (for cold coil)  Closing = Closed at $U_s = 24 \text{ V}$ Permissible residual current of the electronics for 0 signal  Overvoltage configuration of the magnetic coil	W	S00 0.85 1.85 x U <sub>S</sub> 1.4 < 8 mA x (24 V/U <sub>S</sub> ) Diode, varistor or RC element,	Suilt-in diode	Built-in varistor
- OFF-delay ms 50 10 - ON-delay ms 60 15 • Closing at 17 30 V - OFF-delay NO ms 5 20 20 80 5 20 - ON-delay NC ms 10 30 30 90 10 30	Size  Magnetic coil operating range  Power consumption of the magnetic coil (for cold coil)  Closing = Closed at U <sub>s</sub> = 24 V  Permissible residual current of the electronics for 0 signal  Overvoltage configuration of the magnetic coil  Operating times of the coupling relays  • Closing at 20.5 V  - OFF-delay	ms	S00 0.85 $1.85 \times U_{\rm S}$ 1.4  < 8 mA × (24 V/ $U_{\rm S}$ )  Diode, varistor or RC element, attachable	Suilt-in diode	Built-in varistor
- OFF-delay NO       ms       5 20       20 80       5 20         - ON-delay NC       ms       10 30       30 90       10 30	Size  Magnetic coil operating range  Power consumption of the magnetic coil (for cold coil)  Closing = Closed at U <sub>s</sub> = 24 V  Permissible residual current of the electronics for 0 signal  Overvoltage configuration of the magnetic coil  Operating times of the coupling relays  • Closing at 20.5 V  - OFF-delay  - ON-delay  • At 24 V  - ON-delay NO	ms ms	S00  0.85 1.85 x U <sub>s</sub> 1.4  < 8 mA x (24 V/U <sub>s</sub> )  Diode, varistor or RC element, attachable  110 20 120 30  25 90	Suilt-in diode	Built-in varistor
	Size  Magnetic coil operating range  Power consumption of the magnetic coil (for cold coil)  Closing = Closed at U <sub>S</sub> = 24 V  Permissible residual current of the electronics for 0 signal  Overvoltage configuration of the magnetic coil  Operating times of the coupling relays  • Closing at 20.5 V  - OFF-delay  - ON-delay  • At 24 V  - ON-delay NC  • At 44 V  - OFF-delay NC	ms ms ms	S00  0.85 1.85 x U <sub>S</sub> 1.4  < 8 mA x (24 V/U <sub>S</sub> )  Diode, varistor or RC element, attachable  110 20 120 30  25 90 15 80  50 10	Suilt-in diode	Built-in varistor
	Size  Magnetic coil operating range  Power consumption of the magnetic coil (for cold coil)  Closing = Closed at U <sub>s</sub> = 24 V  Permissible residual current of the electronics for 0 signal  Overvoltage configuration of the magnetic coil  Operating times of the coupling relays  • Closing at 20.5 V  • OFF-delay  • ON-delay  • At 24 V  • ON-delay NO  • OFF-delay NC  • At 44 V  • OFF-delay  • ON-delay  • Closing at 17 30 V  • OFF-delay NO	ms ms ms ms ms ms ms	S00  0.85 1.85 x U <sub>s</sub> 1.4  < 8 mA x (24 V/U <sub>s</sub> )  Diode, varistor or RC element, attachable  110 20 120 30  25 90 15 80  50 10 60 15 5 20	Built-in diode  D  20 80	Built-in varistor  U  5 20