# **SIEMENS**

3RH2440-1AF00 **Data sheet** 

Contactor relay, latched, 4 NO, 110 V AC, 50 / 60 Hz, Size S00, screw terminal



product brand name	SIRIUS
product designation	Auxiliary contactor
product type designation	3RH2
General technical data	
size of contactor	S00
product extension auxiliary switch	Yes
insulation voltage with degree of pollution 3 at AC rated value	690 V
degree of pollution	3
surge voltage resistance rated value	6 kV
shock resistance at rectangular impulse	
at AC	7,3g / 5 ms, 4,7g / 10 ms
shock resistance with sine pulse	
at AC	11,4g / 5 ms, 7,3g / 10 ms
mechanical service life (switching cycles)	
<ul> <li>of contactor typical</li> </ul>	5 000 000
<ul> <li>of the contactor with added electronically optimized auxiliary switch block typical</li> </ul>	5 000 000
<ul> <li>of the contactor with added auxiliary switch block typical</li> </ul>	5 000 000
reference code according to IEC 81346-2	K
Substance Prohibitance (Date)	10/01/2009
Ambient conditions	
installation altitude at height above sea level maximum	2 000 m
ambient temperature	
<ul><li>during operation</li></ul>	-25 +60 °C
during storage	-55 +80 °C
relative humidity minimum	10 %
relative humidity at 55 °C according to IEC 60068-2-30 maximum	95 %
Main circuit	
no-load switching frequency	
• at AC	10 000 1/h
• at DC	10 000 1/h
Control circuit/ Control	
type of voltage of the control supply voltage	AC
control supply voltage at AC	
<ul> <li>at 50 Hz rated value</li> </ul>	110 V
at 60 Hz rated value	110 V

• 1 rated value	50 Hz
2 rated value	60 Hz
operating range factor control supply voltage rated value of magnet coil at AC	
● at 50 Hz	0.8 1.1
● at 60 Hz	0.85 1.1
apparent pick-up power of magnet coil at AC	37 VA
inductive power factor with closing power of the coil	0.8
apparent holding power of magnet coil at AC	5.7 VA
inductive power factor with the holding power of the coil	0.25
closing delay	
• at AC	8 33 ms
opening delay	
• at AC	4 15 ms
arcing time	10 15 ms
Auxiliary circuit	
number of NO contacts for auxiliary contacts	4
instantaneous contact	4
identification number and letter for switching	40 E
elements	
operational current at AC-12 maximum	10 A
operational current at AC-15	
• at 230 V rated value	10 A
<ul> <li>at 400 V rated value</li> </ul>	3 A
<ul> <li>at 500 V rated value</li> </ul>	2 A
at 690 V rated value	1 A
operational current at 1 current path at DC-12	
<ul><li>at 24 V rated value</li></ul>	10 A
<ul> <li>at 110 V rated value</li> </ul>	3 A
at 220 V rated value	1 A
<ul> <li>at 440 V rated value</li> </ul>	0.3 A
at 600 V rated value	0.15 A
operational current with 2 current paths in series at DC-12	
<ul> <li>at 24 V rated value</li> </ul>	10 A
<ul> <li>at 60 V rated value</li> </ul>	10 A
<ul> <li>at 110 V rated value</li> </ul>	4 A
at 220 V rated value	2 A
<ul> <li>at 440 V rated value</li> </ul>	1.3 A
at 600 V rated value	0.65 A
operational current with 3 current paths in series at DC-12	
<ul><li>at 24 V rated value</li></ul>	10 A
• at 60 V rated value	10 A
• at 110 V rated value	10 A
• at 220 V rated value	3.6 A
• at 440 V rated value	2.5 A
at 600 V rated value	1.8 A
operating frequency at DC-12 maximum	1 000 1/h
operational current at 1 current path at DC-13	
<ul><li>at 24 V rated value</li></ul>	10 A
at 110 V rated value	1 A
<ul><li>at 220 V rated value</li></ul>	0.3 A
at 440 V rated value	0.14 A
at 600 V rated value	0.1 A
operational current with 2 current paths in series at DC-13	
<ul><li>at 24 V rated value</li></ul>	10 A
<ul><li>at 60 V rated value</li></ul>	3.5 A
• at 110 V rated value	1.3 A

el 220 V rated value     el et 800 V rated value     el rate value value value value     el rate value value value value value value     el rate value value value value     el rate value value value value value value value     el rate value valu		
e at 600 V rated value	• at 220 V rated value	0.9 A
poperational current with 3 current paths in series at DC-13  • at 24 V stated value • at 60 V rated value • at 110 V rated value • at 110 V rated value • at 110 V rated value • at 220 V rated value • at 400 V rated value • at 600 V rated value • at 60	<ul> <li>at 440 V rated value</li> </ul>	0.2 A
a at 24 V rated value at 80 V rated value 4.7 A 3.8 A 4.7 220 V rated value 4.7 A 5.8 A 5.8 A 5.9 A 5.	at 600 V rated value	0.1 A
at 10 V rated value at 110 V rated value at 110 V rated value at 140 V rated value bet 100 V rated value at 140 V rated value  0.26 A  1.00 t h  1.00 t		
at 110 V rated value at 220 V rated value at 220 V rated value be at 440 V rated value at 600 V rated value be at 600 V rated value correction of the auxiliary correction of the auxiliary contacts contact reliability of auxiliary contacts contact rating of auxiliary contacts according to UL Short-circuit protection cleasing of the lose link for short-circuit protection of the auxiliary switch required flower and backward by +t-22.5 for vertical mounting surface; can be tilted forward and backward by +t-22.5 for vertical mounting surface; can be tilted forward and backward by +t-22.5 for vertical mounting surface; forward and backward by +t-22.5 for vertical mounting surface; forward and backward by +t-22.5 for vertical mounting surface; forward and backward by +t-22.5 for vertical mounting surface; forward and backward by +t-22.5 for vertical mounting surface; forward and backward by +t-22.5 for vertical mounting surface; forward and backward by +t-22.5 for vertical mounting surface; forward and backward by +t-22.5 for vertical mounting surface; forward and backward by +t-22.5 for vertical mounting surface; forward and backward by +t-22.5 for vertical mounting surface; forward and backward by +t-22.5 for vertical mounting surface; forward and backward by +t-22.5 for vertical mounting surface; forward and backward by +t-22.5 for vertical mounting surface; forward and backward by +t-22.5 for vertical mounting surface; forward and backward by +t-22.5 for vertical mounting surface; forward and backward by +t-22.5 for vertical mounting surface; forward and backward by +t-22.5 for vertical mounting surface; forward and backward by +t-22.5 forward and	at 24 V rated value	10 A
a till 20 V rated value at 440 V rated value at 440 V rated value 0.26 A at 600 V rated value 0.26 A 1 000 fb design of the miniature circuit up to 230 V contact reliability of auxiliary contacts protection of the auxiliary contacts 1 faulty switching per 100 million (17 V, 1 mA)  ULOSA ratings  ULOSA ratings  Contact rating of auxiliary contacts contact rating of auxiliary contacts auxiliary switch required design of the fuse link for short-circuit protection of the auxiliary switch required finatiliation mounting dimensions  mounting position  fastening method screw and snap-on mounting onto 35 mm standard mounting surface; can be titled forward and backward by ± 22.5° on vertical mounting surface screw and snap-on mounting onto 35 mm standard mounting rail 57.5 mm width 90 mm depth 73 mm  required spacing  • with side by-side mounting — forwards — odwnwards — odwnwards — odwnwards — of mounting — of powards — of mounting — of powards — of the side — odwnwards — of many • of rowards — of mounting — if the side — odwnwards — of many • of owards — of many • of owards — of the side — odwnwards — of the side — odwnwards — of the side — of owards — of the side — owards — of the side — owards — of the side — of the side — of the side — of the side — owards — ow	at 60 V rated value	4.7 A
at 440 V rated value at 600 V rated value operating frequency at DC-13 maximum design of the miniature circuit breaker for short-circuit protection of the auxiliary contacts  C characteristic: 6 A; 0.4 kA  C characteristic: 6 A; 0.4 kA  T faulty switching per 100 million (17 V; 1 mA)  ULCSA ratings contact rating of auxiliary contacts  C short-circuit protection design of the flue link for short-circuit protection of the auxiliary switch required  Installation mounting dimensions  mounting position  fastening method height forward and backward by +2-2.5° on vertical mounting surface: can be titled forward and backward by +2-2.5° on vertical mounting rail height forward and backward by +2-2.5° on vertical mounting rail height forwards  - upwards - upwards - downwards - of maxiliary contacts  - of orwards - at the side - of orwards - of or	at 110 V rated value	3 A
e at 600 V rated value  operating frequency at DC-13 maximum  design of the ministure circuit protection of the auxiliary contact trainity or crust up to 230 V  Contact reliability of auxiliary contacts  1 faulty switching per 100 million (17 V, 1 mA)  UL/CSA-ratings  design of the fuse link for short-circuit protection of the auxiliary switching per 100 million (17 V, 1 mA)  UL/CSA-ratings  design of the fuse link for short-circuit protection of the auxiliary switch required  Installation mounting dimensions  mounting position  fastening method  fastening method  screw and snap-on mounting onto 35 mm standard mounting surface; can be titled forward and backward by ++ 22.5° on vertical mounting surface  fastening method screw and snap-on mounting onto 35 mm standard mounting rail  height  svith 90 mm  required spacing  with side by-side mounting  with side by-side mounting  of whis side by-side mounting  of whis side by-side mounting  of mounting surface is an experiment of the side on ministry standard mounting rail  forwards  of ministry in the side on the side on ministry in the side on the	at 220 V rated value	1.2 A
design of the miniature circuit preater of short-circuit protection of the auxiliary contacts   1 faulty switching per 100 million (17 V, 1 mA)	at 440 V rated value	0.5 A
design of the ministure circuit breaker for short-circuit protection of the auxilliary contacts  ULCSA ratings  Contact reliability of auxillary contacts  ULCSA rating of auxillary contacts according to UL  Short-circuit protection  design of the fuse link for short-circuit protection of the auxillary which required  Installation/ mounting/ dimonsions  mounting position  fastening method  screw-and snap-on-mounting onto 35 mm standard mounting rail  beight  forwards  width  depth  required spacing  with side-by-side mounting  — forwards — downwards — at the side — downwards — at the side — downwards — of rive parts — forwards — of rive parts — forwards — of rive parts — forwards — ownwards — of rive parts — forwards — ownwards	at 600 V rated value	0.26 A
design of the miniature circuit breaker for short-circuit protection of the auxillary contacts  ULICSA ratings  Contact rating of auxillary contacts  ULICSA ratings  Contact rating of auxillary contacts according to UL  Short-circuit protection  design of the fives link for short-circuit protection of the auxillary switch required  Installation mounting of dimensions  mounting position  fastening method  forward and backward by 4-7-22.5° on vertical mounting surface; can be tilted forward and backward by 4-7-22.5° on vertical mounting rail  forward and backward by 4-7-22.5° on vertical mounting surface; can be tilted forward and backward by 4-7-22.5° on vertical mounting rail  forward and backward by 4-7-22.5° on vertical mounting surface; can be tilted forward and backward by 4-7-22.5° on vertical mounting rail  forwards and backward by 4-7-22.5° on vertical mounting rail  forwards and backward by 4-7-22.5° on vertical mounting rail  forwards and backward by 4-7-22.5° on vertical mounting rail  forwards and backward by 4-7-22.5° on vertical mounting rail  forwards and backward by 4-7-22.5° on vertical mounting surface; can be tilted forward and backward by 4-7-22.5° on vertical mounting rail  forwards and backward by 4-7-22.5° on vertical mounting surface; can be tilted forward and backward by 4-7-22.5° on vertical mounting surface; can be tilted forward and backward by 4-7-22.5° on vertical mounting surface; can be tilted forward and backward by 4-7-22.5° on vertical mounting surface; can be tilted forward and backward by 4-7-22.5° on vertical mounting surface; can be tilted forward and backward by 4-7-22.5° on vertical mounting surface; can be tilted forward and backward by 4-7-22.5° on vertical mounting surface; can be tilted forward and backward by 4-7-22.5° on vertical mounting surface; can be tilted forward and backward by 4-7-22.5° on vertical mounting surface; can be tilted forward and backward by 4-7-22.5° on vertical mounting surface; can be tilted forward and backward by 4-7-22.5° on vertical mounti	operating frequency at DC-13 maximum	1 000 1/h
Taulity switching per 100 million (17 V, 1 mA)	design of the miniature circuit breaker for short-circuit	C characteristic: 6 A; 0.4 kA
contact rating of auxiliary contacts according to UL  A600 / G600  Short-circuit protection  design of the fuse ink for short-circuit protection of the auxiliary switch required  Installation/ mounting / dimensions  mounting position  fastening method height 57.5 mm  width 90 mm  depth  required spacing • with side-by-side mounting — forwards — upwards — od winwards — at the side — downwards — at the side — downwards — at the side — downwards — of rowards — of rowards — of rowards — at the side — downwards — of rowards — of rowards — of rowards — at the side — downwards — of mm  for live parts — for wards — of ownwards — of mm — of ownwards — of mm — of the side — downwards — of mm — of the side — downwards — of mm — of the side — downwards — of mm — of the parts — forwards — of mm — of the side — downwards — of mm — of ownwards — of the side — downwards — of the parts — forwards — of mm — of the side — downwards — of the side — of ownwards — of the side — in the side — sold or stranded — finely stranded with core end processing — at AVC cables for auxiliary contacts  Society rolated data  B10 value with high demand rate according to SN 31920 — with high demand rate according to SN 31920 — with high demand rate according to SN 31920 — with high demand rate according to SN 31920 — with high demand rate according to SN 31920 — with high demand rate according to SN 31920 — with high demand rate according to SN 31920 — with high demand rate according to SN 31920 — with high demand rate according to SN 31920 — with high demand rate according to SN 31920 — with high demand rate according to SN 31920 — with high demand rate according to SN 31920 — with high demand rate according to SN 31920 — with high demand rate according to SN 31920 — with high demand rate according to SN 3		1 faulty switching per 100 million (17 V, 1 mA)
contact rating of auxiliary contacts according to UL Short-circuit protection design of the fuse link for short-circuit protection of the auxiliary switch required Installation/ mounting/ dimensions  mounting position  fastening method height fuse gL/gG: 10 A auxiliary contacts fastening method sorew and snap-on mounting onto 35 mm standard mounting ratil forward and backward by **L- 22.5* on vertical mounting surface; can be tilted forward and backward by **L- 22.5* on vertical mounting surface; can be tilted forward and backward by **L- 22.5* on vertical mounting surface; can be tilted forward and backward by **L- 22.5* on vertical mounting surface; can be tilted forward and backward by **L- 22.5* on vertical mounting surface; can be tilted forward and backward by **L- 22.5* on vertical mounting surface; can be tilted forward and backward by **L- 22.5* on vertical mounting surface; can be tilted forward and backward by **L- 22.5* on vertical mounting surface; can be tilted forward and backward by **L- 22.5* on vertical mounting surface; can be tilted forward and backward by **L- 22.5* on vertical mounting surface; can be tilted forward and backward by **L- 22.5* on vertical mounting surface; can be tilted forward and backward by **L- 22.5* on vertical mounting surface; can be tilted forward and backward by **L- 22.5* on vertical mounting surface; can be tilted forward and backward by **L- 22.5* on vertical mounting surface; can be tilted forward and backward by **L- 22.5* on vertical mounting surface; can be tilted forward and backward by **L- 22.5* on we tilted forward and backward by **L- 22.5* on we tilted forward and backward by **L- 22.5* on we tilted forward and backward by **L- 22.5* on we tilted forward and backward by **L- 22.5* on we tilted forward and backward by **L- 22.5* on we tilted forward and backward by **L- 22.5* on we tilted forward and backward by **L- 22.5* on we tilted forward and backward by **L- 22.5* on we tilted forward by **L- 22.5* on we tilted forward by **L- 22.5* on we tilted f		
design of the fuse link for short-circuit protection of the auxiliary switch required (installation/ mounting) dimensions  mounting position	· · · · · · · · · · · · · · · · · · ·	A600 / O600
design of the fuse link for short-circuit protection of the auxiliary swiftch required installation mounting protection of the auxiliary swiftch required installation mounting protection for auxiliary swiftch required forward and backward by 4+. 22.5" on vertical mounting surface; can be titled forward and backward by 4+. 22.5" on vertical mounting surface screw and snap-on mounting onto 35 mm standard mounting rail forward and backward by 4+. 22.5" on vertical mounting surface screw and snap-on mounting onto 35 mm standard mounting rail strength forwards and backward by 4+. 22.5" on vertical mounting surface screw and snap-on mounting onto 35 mm standard mounting rail strength forwards and snap-on mounting onto 35 mm standard mounting rail strength forwards and snap-on mounting onto 35 mm standard mounting rail strength forwards and snap-on mounting onto 35 mm standard mounting rail strength forwards and snap-on mounting onto 35 mm standard mounting rail strength forwards and snap-on mounting onto 35 mm standard mounting rail strength forwards and snap-on mounting onto 35 mm standard mounting surface screw and snap-on mounting onto 35 mm standard mounting surface screw and snap-on mounting onto 35 mm standard mounting surface screw and snap-on mounting onto 35 mm standard mounting surface screw and snap-on mounting onto 35 mm standard mounting surface screw and snap-on mounting onto 35 mm standard mounting surface screw and snap-on mounting onto 35 mm standard mounting surface screw and snap-on mounting onto 35 mm standard mounting surface screw and snap-on mounting onto 35 mm standard mounting surface screw and snap-on mounting onto 35 mm standard mounting surface screw and snap-on mounting onto 35 mm standard mounting surface screw and snap-on mounting onto 35 mm standard mounting surface screw and snap-on mounting onto 35 mm standard mounting surface screw and snap-on mounting onto 35 mm standard mounting surface screw and snap-on mounting onto 35 mm standard mounting surface screw and snap-on mounting onto		
mounting position  fastening method height width go man with side-by-side mounting - forwards - downwards - at the side - downwards - opwards -	design of the fuse link for short-circuit protection of the	fuse gL/gG: 10 A
### required spacing    Fastening method		
forwards and backward by **- 22.5° on vertical mounting surface screw and snap-on mounting onto 35 mm standard mounting rail 57.5 mm width 90 mm 40 mm	<u> </u>	
height width width 90 mm		forward and backward by +/- 22.5° on vertical mounting surface
width depth 73 mm  required spacing  • with side-by-side mounting  — forwards 10 mm — downwards 10 mm — at the side 0 mm  • for grounded parts — forwards 10 mm  • for grounded parts — forwards 10 mm  • for grounded parts — forwards 10 mm  • for live parts — formards 10 mm  • for live parts — solid or stranded 6 mm   Connections/ Torminals  type of electrical connection for auxiliary and control circuit type of connectable conductor cross-sections • for auxiliary contacts — solid or stranded 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²), 2x 4 mm²  2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²), 2x 4 mm²  2x (20 16), 2x (18 14), 2x 12  Safety related data  B10 value with high demand rate according to SN 31920 • with high demand rate according to SN 31920 • with high demand rate according to SN 31920  failure rate [FIT] with low demand rate according to SN 31920  11 value for proof test interval or service life according to EIC 61508  protection class IP on the front according to EIC		
required spacing  • with side-by-side mounting  — forwards — upwards — downwards — at the side — for grounded parts — forwards — upwards — upwards — upwards — upwards — the side — ownwards — at the side — ownwards — at the side — ownwards — ownwards — ownwards — ownwards — for live parts — forwards — upwards — ownwards — upwards — ownwards — the side — ownwards — ownwards — upwards — ownwards — the side — ownwards — ownwards — at the side — forwards — ownwards — ownwar		
required spacing  • with side-by-side mounting  — forwards — upwards — downwards — of the side — forwards — forwards — forwards — forwards — upwards — forwards — upwards — at the side — downwards — of with side by side — downwards — of mm — ownwards — of mile parts — forwards — for live parts — forwards — upwards — upwards — upwards — downwards — upwards — ownwards — at the side — formards — upwards — ownwards — ow		
<ul> <li>with side-by-side mounting</li> <li>— forwards</li> <li>— upwards</li> <li>— downwards</li> <li>— at the side</li> <li>of or grounded parts</li> <li>— forwards</li> <li>— for grounded parts</li> <li>— forwards</li> <li>— upwards</li> <li>— at the side</li> <li>— downwards</li> <li>— of nive parts</li> <li>— for live parts</li> <li>— for live parts</li> <li>— for live parts</li> <li>— forwards</li> <li>— upwards</li> <li>— upwards</li> <li>— upwards</li> <li>— downwards</li> <li>— upwards</li> <li>— odownwards</li> <li>— at the side</li> <li>— at the side</li> <li>— at the side</li> <li>— of mm</li> <li>Connections/ Terminals</li> <li>type of electrical connection for auxiliary and control circuit</li> <li>type of electrical connection for auxiliary and control circuit</li> <li>type of connectable conductor cross-sections</li> <li>• for auxiliary contacts</li> <li>— solid or stranded</li> <li>— finely stranded with core end processing</li> <li>• at AWC cables for auxiliary contacts</li> <li>2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²), 2x 4 mm²</li> <li>2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)</li> <li>• at AWC cables for auxiliary contacts</li> <li>2x (20 16), 2x (18 14), 2x 12</li> <li>Safety related data</li> <li>B10 value with high demand rate according to SN 31920</li> <li>• with low demand rate according to SN 31920</li> <li>• with low demand rate according to SN 31920</li> <li>failure rate [FIT] with low demand rate according to SN 31920</li> <li>failure rate [FIT] with low demand rate according to SN 31920</li> <li>failure rate [FIT] with low demand rate according to SN 31920</li> <li>failure rate [FIT] with low demand rate according to SN 31920</li> <li>failure rate [FIT] with low demand rate according to EC</li> <li>IP20</li> </ul>	depth	73 mm
- forwards - upwards - downwards - at the side • for grounded parts - forwards - upwards - the side • for grounded parts - forwards - upwards - upwards - at the side - downwards - at the side - downwards - for live parts - for live parts - for orwards - upwards - downwards - at the side - formards - upwards - downwards - downwards - downwards - for manuely contacts - solid or stranded - finely stranded with core end processing • at AWG cables for auxiliary contacts - for auxiliary contacts - solid or stranded - finely stranded with core end processing • at AWG cables for auxiliary contacts - with low demand rate according to SN 31920 - with low demand rate according to SN 31920 • with low demand rate according to SN 31920 - w	required spacing	
- upwards 10 mm 10	<ul><li>with side-by-side mounting</li></ul>	
- downwards - at the side  • for grounded parts  - forwards - upwards - at the side - downwards - at the side - downwards - at the side - downwards - for live parts - forwards - upwards - upwards - for live parts - forwards - upwards - upwards - upwards - downwards - downwards - at the side - downwards - at the side - forwards - at the side - formals  type of electrical connection for auxiliary and control circuit  type of connectable conductor cross-sections • for auxiliary contacts - solid or stranded - finely stranded with core end processing • at AWG cables for auxiliary contacts  Safety related data  B10 value with high demand rate according to SN 31920  proportion of dangerous failures • with low demand rate according to SN 31920 • with high demand rate according to SN 31920 • with high demand rate according to SN 31920 • with high demand rate according to SN 31920 • with high demand rate according to SN 31920 • with high demand rate according to SN 31920 • with low demand rate according to SN 31920 • with low demand rate according to SN 31920 • with high demand rate according to SN 31920 • with high demand rate according to SN 31920 • with high demand rate according to SN 31920 • with low demand rate according to SN 31920 • with low demand rate according to SN 31920 • with low demand rate according to SN 31920 • with low demand rate according to SN 31920 • with low demand rate according to SN 31920 • with high demand rate according to SN 31920 • with low demand rate according to SN 31920 • with high demand rate according to SN 31920 • with low demand rate according to SN 31920 • with low demand rate according to SN 31920 • with low demand rate according to SN 31920 • with low demand rate according to SN 31920 • with low demand rate according to SN 31920 • with low demand rate according to SN 31920 • with low demand rate according to SN 31920 • with low demand rate according to SN 31920 • with low demand rate according to SN 31920 • with low demand rate according to SN 31920 • with low demand rate accordi	— forwards	10 mm
- at the side  • for grounded parts  - forwards  - upwards  - at the side  - downwards  • for live parts  - forwards  - upwards  • for live parts  - forwards  - upwards  - downwards  - upwards  - downwards  - downwards  - at the side  - downwards  - upwards  - upwards  - downwards  - at the side  Connections/ Terminals  type of electrical connection for auxiliary and control circuit  type of connectable conductor cross-sections  • for auxiliary contacts  - solid or stranded  - finely stranded with core end processing  • at AWG cables for auxiliary contacts  B10 value with high demand rate according to SN 31920  proportion of dangerous failures  • with low demand rate according to SN 31920  • with high demand rate according to SN 31920  **evith low demand rate according to SN 31920  **proportion of test interval or service life according to EC IP20  **proportion of test interval or service life according to IP20  **proportion of test interval or service life according to IP20  **proportion of test interval or service life according to IP20  **protection class IP on the front according to IP20  **protection class IP on the front according to IP20	— upwards	10 mm
• for grounded parts  — forwards — upwards — at the side — downwards — 10 mm  • for live parts — forwards — upwards — upwards — upwards — upwards — upwards — downwards — upwards — at the side — forwards — upwards — the side — formatic side — formatic side — at the side — formatic side — at the side  Connections/ Terminals  type of electrical connection for auxiliary and control circuit  type of connectable conductor cross-sections • for auxiliary contacts — soild or stranded — finely stranded with core end processing • at AWG cables for auxiliary contacts  Safety related data  B10 value with high demand rate according to SN 31920  proportion of dangerous failures • with low demand rate according to SN 31920 • with high demand rate according to SN 31920  • with high d	— downwards	10 mm
- forwards - upwards - at the side - downwards - for live parts - forwards - forwards - forwards - forwards - upwards - forwards - upwards - downwards - upwards - downwards - downwards - at the side - format the side - for auxiliary contacts - solid or stranded - finely stranded with core end processing - at AWG cables for auxiliary contacts - at AWG cables for auxiliary contacts - solid or stranded - finely stranded with core end processing - at AWG cables for auxiliary contacts - solid or stranded - finely stranded with core end processing - at the WG cables for auxiliary contacts - solid or stranded - finely stranded with core end processing - at the WG cables for auxiliary contacts - solid or stranded - finely stranded with core end processing - at the WG cables for auxiliary contacts - solid or stranded - finely stranded with core end processing - at the with low demand rate according to SN 31920 - at the side - solid or stranded - finely stranded with core end processing - at the side - screw-type terminals - type terminals - type of connectable conductor cross-sections - solid or stranded - finely stranded with core end processing - at the side - screw-type terminals - type of connectable conductor cross-sections - solid or stranded - finely stranded with core end processing - solid or stranded - finely stranded with core end processing - at the side - solid or stranded - finely stranded with core end processing - solid or stranded - finely stranded with core end processing - solid or stranded - finely stranded with core end processing - solid or stranded - finely stranded with core end processing - solid or stranded - finely stranded with core end processing - solid or stranded - finely stranded with core end processing - solid or stranded - finely stranded with core end processing - solid or stranded with core end processing - solid or strande	— at the side	0 mm
- upwards - at the side - downwards 10 mm  • for live parts - forwards 10 mm  - upwards - downwards 10 mm - upwards - downwards - at the side  Connections/ Terminals  type of electrical connection for auxiliary and control circuit type of connectable conductor cross-sections • for auxiliary contacts - solid or stranded - finely stranded with core end processing • at AWG cables for auxiliary contacts  2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²), 2x 4 mm² 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)  2x (20 16), 2x (18 14), 2x 12  Safety related data  B10 value with high demand rate according to SN 31920 proportion of dangerous failures • with low demand rate according to SN 31920 failure rate [FIT] with low demand rate according to SN 31920 T1 value for proof test interval or service life according to IEC  IP20  In the side  6 mm  20 mm  5 mm  6 mm  Connections/ Terminals  5 crew-type terminals  5 crew-type terminals  5 crew-type terminals  5 crew-type terminals  10 mm  6 mm  6 mm  Connections/ Terminals  10 mm  10 mm  6 mm  Connections/ Terminals  10 mm  6 mm  Connections/ Terminals  2 x (0.5 1.5 mm²), 2x (0.75 2.5 mm²), 2x 4 mm²  2 x (0.5 1.5 mm²), 2x (0.75 2.5 mm²), 2x 4 mm²  2 x (20 16), 2x (18 14), 2x 12  Safety related data  B10 value with high demand rate according to SN 31920  • with low demand rate according to SN 31920  1 000 000; With 0.3 x le  7 3 %  failure rate [FIT] with low demand rate according to SN 31920  T1 value for proof test interval or service life according to IEC	<ul> <li>for grounded parts</li> </ul>	
- at the side - downwards • for live parts - forwards - upwards - downwards - at the side  Connections/ Terminals  type of electrical connection for auxiliary and control circuit  type of connectable conductor cross-sections • for auxiliary contacts - solid or stranded - finely stranded with core end processing • at AWG cables for auxiliary contacts  B10 value with high demand rate according to SN 31920 • with low demand rate according to SN 31920 failure rate [FIT] with low demand rate according to SN 31920  T1 value for proof test interval or service life according to IEC  ID mm  10 mm  20 mm  20 mm  20 cerew-type terminals  screw-type terminals  20 cerew-type terminals  21 cerew-type terminals  22 cerew-type terminals  23 cerew-type terminals  24 cerew-type terminals  25 cerew-type terminals  26 cerew-type terminals  27 cerew-type terminals  28 cerew-type terminals  29 cerew-type terminals  29 cerew-type terminals  20 cerew-type terminals  20 cerew-type terminals  20 cerew-type terminals  26 cerew-type terminals  27 cerew-type terminals  28 cerew-type terminals  29 cerew-type terminals  29 cerew-type terminals  20 cerew-type	— forwards	10 mm
- downwards • for live parts  - forwards - upwards - downwards - downwards - at the side  Connections/ Terminals  type of electrical connection for auxiliary and control circuit  type of connectable conductor cross-sections • for auxiliary contacts - solid or stranded - finely stranded with core end processing • at AWG cables for auxiliary contacts  2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²), 2x 4 mm²  2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)  • at AWG cables for auxiliary contacts  2x (20 16), 2x (18 14), 2x 12  Safety related data  B10 value with high demand rate according to SN 31920  proportion of dangerous failures • with low demand rate according to SN 31920 • with high demand rate according to SN 31920  1 000 000; With 0.3 x le  proportion of the foot according to SN 31920  1 000 FIT  1 value for proof test interval or service life according to EC IP20	— upwards	10 mm
for live parts         — forwards         — upwards         — downwards         — at the side  Connections/ Terminals  type of electrical connection for auxiliary and control circuit  type of connectable conductor cross-sections          • for auxiliary contacts         — solid or stranded         — finely stranded with core end processing         • at AWG cables for auxiliary contacts  B10 value with high demand rate according to SN 31920  proportion of dangerous failures         • with low demand rate according to SN 31920  failure rate [FIT] with low demand rate according to SN 31920  T1 value for proof test interval or service life according to IEC  protection class IP on the front according to IEC  Ip20	— at the side	6 mm
- forwards 10 mm - upwards 10 mm - downwards 10 mm - at the side 6 mm  Connections/ Terminals  type of electrical connection for auxiliary and control circuit screw-type terminals  type of connectable conductor cross-sections  • for auxiliary contacts - solid or stranded 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²), 2x 4 mm² - finely stranded with core end processing 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) • at AWG cables for auxiliary contacts 2x (20 16), 2x (18 14), 2x 12  Safety related data  B10 value with high demand rate according to SN 31920 1000 000; With 0.3 x le  proportion of dangerous failures • with low demand rate according to SN 31920 40 % • with high demand rate according to SN 31920 73 %  failure rate [FIT] with low demand rate according to SN 31920 100 FIT  31920  T1 value for proof test interval or service life according to IEC IP20	— downwards	10 mm
- upwards - downwards - at the side  Connections/ Terminals  type of electrical connection for auxiliary and control circuit  type of connectable conductor cross-sections  • for auxiliary contacts - solid or stranded - finely stranded with core end processing • at AWG cables for auxiliary contacts  2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²), 2x 4 mm²  2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)  • at AWG cables for auxiliary contacts  2x (20 16), 2x (18 14), 2x 12  Safety related data  B10 value with high demand rate according to SN 31920 • with low demand rate according to SN 31920 • with high demand rate according to SN 31920 • with high demand rate according to SN 31920  • with low demand rate according to SN 31920	for live parts	
- downwards - at the side  Connections/ Terminals  type of electrical connection for auxiliary and control circuit  type of connectable conductor cross-sections  • for auxiliary contacts - solid or stranded - finely stranded with core end processing • at AWG cables for auxiliary contacts  B10 value with high demand rate according to SN 31920 • with low demand rate according to SN 31920 • with high demand rate according to SN 31920  failure rate [FIT] with low demand rate according to SN 31920  T1 value for proof test interval or service life according to IEC  ID mm 6 mm  Connections/ Terminals  screw-type terminals  2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²), 2x 4 mm²  2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)  2x (20 16), 2x (18 14), 2x 12  Safety related data  B10 value with high demand rate according to SN 31920  • with low demand rate according to SN 31920  • with high demand rate according to SN 31920  • with high demand rate according to SN 31920  • with low demand rate according to SN 31920  • with high demand rate according to SN 31920  • with high demand rate according to SN 31920  • with high demand rate according to SN 31920  • with low demand rate according to SN 31920  • with high demand rate according to SN 31920  • with high demand rate according to SN 31920  • with high demand rate according to SN 31920  • with high demand rate according to SN 31920  • with low demand rate according to SN 31920  • with low demand rate according to SN 31920  • with low demand rate according to SN 31920  • with low demand rate according to SN 31920  • with low demand rate according to SN 31920  • with low demand rate according to SN 31920  • with low demand rate according to SN 31920  • with low demand rate according to SN 31920  • with low demand rate according to SN 31920  • with low demand rate according to SN 31920	— forwards	10 mm
- at the side  Connections/ Terminals  type of electrical connection for auxiliary and control circuit  type of connectable conductor cross-sections  • for auxiliary contacts  - solid or stranded - finely stranded with core end processing • at AWG cables for auxiliary contacts  - at the side  2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²), 2x 4 mm²  2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)  2x (20 16), 2x (18 14), 2x 12  Safety related data  B10 value with high demand rate according to SN 31920  proportion of dangerous failures  • with low demand rate according to SN 31920  • with high demand rate according to SN 31920  • with high demand rate according to SN 31920  100 FIT  31920  T1 value for proof test interval or service life according to IEC  IP20	— upwards	10 mm
type of electrical connection for auxiliary and control circuit  type of connectable conductor cross-sections  • for auxiliary contacts  — solid or stranded — finely stranded with core end processing  • at AWG cables for auxiliary contacts  B10 value with high demand rate according to SN 31920  • with low demand rate according to SN 31920  • with high demand rate according to SN 31920  • with high demand rate according to SN 31920  1000 FIT  1000 FIT  1100 FIT  1200  12	— downwards	10 mm
type of electrical connection for auxiliary and control circuit  type of connectable conductor cross-sections  • for auxiliary contacts  — solid or stranded — finely stranded with core end processing  • at AWG cables for auxiliary contacts  B10 value with high demand rate according to SN 31920  • with low demand rate according to SN 31920  • with high demand rate according to SN 31920  • with high demand rate according to SN 31920  1000 FIT	— at the side	6 mm
type of electrical connectable conductor cross-sections  • for auxiliary contacts  — solid or stranded — finely stranded with core end processing • at AWG cables for auxiliary contacts  B10 value with high demand rate according to SN 31920 • with low demand rate according to SN 31920 • with high demand rate according to SN 31920 • with high demand rate according to SN 31920  failure rate [FIT] with low demand rate according to SN 31920  T1 value for proof test interval or service life according to IEC  propertion class IP on the front according to IEC  IP20	Connections/ Terminals	
type of connectable conductor cross-sections  • for auxiliary contacts  — solid or stranded — finely stranded with core end processing • at AWG cables for auxiliary contacts  B10 value with high demand rate according to SN 31920 • with low demand rate according to SN 31920 • with high demand rate according to SN 31920 failure rate [FIT] with low demand rate according to SN 31920  T1 value for proof test interval or service life according to IEC  T2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) 2x (20 16), 2x (18 14), 2x 12  1 000 000; With 0.3 x le  1 000 000; With 0.3 x le  40 % 73 % 100 FIT 20 y  FIT value for proof test interval or service life according to IEC  FIT value for proof test interval or service life according to IEC		screw-type terminals
<ul> <li>for auxiliary contacts  — solid or stranded — finely stranded with core end processing  • at AWG cables for auxiliary contacts  B10 value with high demand rate according to SN 31920  • with low demand rate according to SN 31920  • with high demand rate according to SN 31920  • with high demand rate according to SN 31920  failure rate [FIT] with low demand rate according to SN 31920  T1 value for proof test interval or service life according to IEC IP20  proportion or dangerous failures  • with low demand rate according to SN 31920  • with high demand rate according to SN 31920  T1 value for proof test interval or service life according to IEC IP20  IP20  IP20  IP20    X (0.5 1.5 mm²), 2x (0.75 2.5 mm²)    20 y (0.5 1.5 mm²), 2x (0.75 2.5 mm²)   20 y (0.5 1.5</li></ul>		7F - 12
- solid or stranded - finely stranded with core end processing  • at AWG cables for auxiliary contacts  Safety related data  B10 value with high demand rate according to SN 31920 • with low demand rate according to SN 31920 • with high demand rate according to SN 31920 • with high demand rate according to SN 31920  • with high demand rate according to SN 31920  • with low demand rate according to SN 31920  1000 000; With 0.3 x le  proportion of dangerous failures  • with low demand rate according to SN 31920  • with high demand rate according to SN 31920  T1 value for proof test interval or service life according to IEC IP20		
<ul> <li>— finely stranded with core end processing <ul> <li>at AWG cables for auxiliary contacts</li> <li>2x (20 1.5 mm²), 2x (0.75 2.5 mm²)</li> <li>2x (20 16), 2x (18 14), 2x 12</li> </ul> </li> <li>Safety related data <ul> <li>B10 value with high demand rate according to SN 31920</li> <li>with low demand rate according to SN 31920</li> <li>with high demand rate according to SN 31920</li> <li>with high demand rate according to SN 31920</li> <li>failure rate [FIT] with low demand rate according to SN 31920</li> </ul> </li> <li>T1 value for proof test interval or service life according to IEC</li> <li>IP20</li> </ul>		2x (0.5
<ul> <li>at AWG cables for auxiliary contacts</li> <li>2x (20 16), 2x (18 14), 2x 12</li> <li>Safety related data</li> <li>B10 value with high demand rate according to SN 31920</li> <li>with low demand rate according to SN 31920</li> <li>with low demand rate according to SN 31920</li> <li>with high demand rate according to SN 31920</li> <li>failure rate [FIT] with low demand rate according to SN 31920</li> <li>T1 value for proof test interval or service life according to IEC</li> <li>IP20</li> </ul>		
Safety related data  B10 value with high demand rate according to SN 31920  proportion of dangerous failures  with low demand rate according to SN 31920  with high demand rate according to SN 31920  failure rate [FIT] with low demand rate according to SN 31920  failure rate [FIT] with low demand rate according to SN 31920  T1 value for proof test interval or service life according to IEC IP20		
B10 value with high demand rate according to SN 31920  proportion of dangerous failures  with low demand rate according to SN 31920  with high demand rate according to SN 31920  with high demand rate according to SN 31920  failure rate [FIT] with low demand rate according to SN 31920  T1 value for proof test interval or service life according to IEC IP20	-	
proportion of dangerous failures  ■ with low demand rate according to SN 31920 40 %  ■ with high demand rate according to SN 31920 73 %  failure rate [FIT] with low demand rate according to SN 31920  T1 value for proof test interval or service life according to IEC IP20		4 000 000: With 0.2 v lo
<ul> <li>with low demand rate according to SN 31920</li> <li>with high demand rate according to SN 31920</li> <li>failure rate [FIT] with low demand rate according to SN 31920</li> <li>T1 value for proof test interval or service life according to IEC 61508</li> <li>protection class IP on the front according to IEC</li> <li>IP20</li> </ul>		1 000 000; With 0.3 x ie
<ul> <li>with high demand rate according to SN 31920</li> <li>failure rate [FIT] with low demand rate according to SN 31920</li> <li>T1 value for proof test interval or service life according to IEC 61508</li> <li>protection class IP on the front according to IEC</li> <li>IP20</li> </ul>		40.0/
failure rate [FIT] with low demand rate according to SN 31920  T1 value for proof test interval or service life according to IEC IP20  protection class IP on the front according to IEC IP20	_	
31920  T1 value for proof test interval or service life according to IEC 61508  protection class IP on the front according to IEC IP20		
Protection class IP on the front according to IEC IP20	31920	
	IEC 61508	
		IP20

### Certificates/ approvals

#### **General Product Approval**





Confirmation



<u>KC</u>



**EMC** 

Functional Safety/Safety of Machinery

**Declaration of Conformity** 

**Test Certificates** 



Type Examination
Certificate





Special Test Certificate

Type Test Certificates/Test Report

# Marine / Shipping













Marine / Shipping

other



Confirmation



Vibration and Shock

Railway

## **Further information**

Information- and Downloadcenter (Catalogs, Brochures,...)

https://www.siemens.com/ic10

Industry Mall (Online ordering system)

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RH2440-1AF00

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RH2440-1AF00

 $Service \& Support \ (Manuals, \ Certificates, \ Characteristics, \ FAQs, ...)$ 

https://support.industry.siemens.com/cs/ww/en/ps/3RH2440-1AF00

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

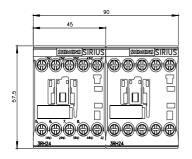
 $\underline{\text{http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RH2440-1AF00\&lang=en}}$ 

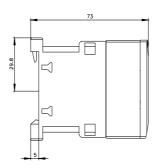
Characteristic: Tripping characteristics, I2t, Let-through current

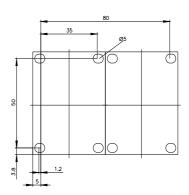
https://support.industry.siemens.com/cs/ww/en/ps/3RH2440-1AF00/char

Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RH2440-1AF00&objecttype=14&gridview=view1







last modified: 12/1/2021 🖸