## **SIEMENS**

3RH2431-1AB00 **Data sheet** 

Contactor relay, latched, 3 NO + 1 NC, 24 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>	24 V
	041/
at 60 Hz rated value	24 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 NC contacts for auxiliary contacts	1
instantaneous contact	1
number of NO contacts for auxiliary contacts	3
instantaneous contact	3
identification number and letter for switching elements	31 E
operational current at AC-12 maximum	10 A
operational current at AC-15	
at 230 V rated value	10 A
at 400 V rated value	3 A
at 500 V rated value	2 A
at 690 V rated value	1 A
operational current at 1 current path at DC-12	
at 24 V rated value	10 A
at 110 V rated value	3 A
• at 220 V rated value	1 A
• at 440 V rated value	0.3 A
at 600 V rated value	0.15 A
operational current with 2 current paths in series at DC-12	40.4
• at 24 V rated value	10 A
at 60 V rated value     at 110 V rated value	10 A
at 110 V rated value     at 220 V rated value	4 A
at 220 V rated value     at 440 V rated value	2 A
at 600 V rated value	1.3 A 0.65 A
at 600 V rated value  operational current with 3 current paths in series at DC-12	0.00 A
• at 24 V rated value	10 A
at 60 V rated value	10 A
at 100 V rated value      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	
• at 24 V rated value	10 A
at 110 V rated value	1 A
at 220 V rated value	0.3 A
• at 440 V rated value	0.14 A
<ul><li>at 600 V rated value</li></ul>	0.1 A
operational current with 2 current paths in series at DC-13	
• at 24 V rated value	10 A

at 10 V traited value at 120 V rated value at 220 V rated value at 220 V rated value at 240 V rated value at 260 V rated value at 270	100.1/	0.5.4
and 220 V rated value and 400 V rated value bordational current with 3 current paths in series at constant accurrent with 3 current paths in series at constant accurrent with 3 current paths in series at constant accurrent with 3 current paths in series at constant rating of auxiliary contacts  but 60 V rated value at 400 V rated value beging of the minister circuit breast for short-circuit protection of the auxiliary circuit up to 230 V contact rating for auxiliary contacts  but 600 V rated value contact rating for auxiliary contacts  but 600 V rated value beging of the minister circuit breast for short-circuit protection of the auxiliary contacts  but 600 V rated value beging of the minister circuit breast for short-circuit protection of the auxiliary contacts according to UL but 600 V rated value  but 600 V rated value beging of the size link for short-circuit protection of the auxiliary contacts according to UL but 600 V rated value  but 600 V rated value  contact rating of auxiliary contacts  but 600 V rated value  contact rating of auxiliary contacts  but 600 V rated value  contact rating of auxiliary contacts  contact rating of auxiliary contacts  but 600 V rated value  contact rating of auxiliary contacts  contact rating of auxiliar	• at 60 V rated value	3.5 A
e at 450 V rated value at 800 V rated value poperational current with 3 current paths in series at DC-13 e at 24 V rated value at 20 V rated value at 20 V rated value 3.A at 200 V rated value 3.A at 220 V rated value 3.A at 220 V rated value 3.A at 400 V rated value 3.A at 600 V rated value 3.A 4.A 4.A 4.A 4.A 4.A 4.A 4.A 4.A 4.A 4		
e at 500 V rated value operational current with 3 current paths in series at OC-13  e at 24 V rated value at 50 V rated value at 50 V rated value at 10 V rated value		
operational current with 3 current paths in series at DC-13  • at 24 V rated value • at 30 V rated value • at 110 V rated value • at 110 V rated value • at 110 V rated value • at 220 V rated value • at 40 V rated value • at 400 V rated value • at 400 V rated value • at 400 V rated value • at 600 V		
o at 24 V rated value  at 60 V rated value  at 61 V rated value  at 61 V rated value  at 61 V rated value  at 62 V rated value  at 64 V rated value  at 65 V		0.1 A
a till 0 V rated value at 110 V rated value at 20 V rated value at 440 V rated value at 460		
e at 110 V rated value e 1220 V rated value 1,2 A 1,2 A 2,4 to 50 V rated value 2,5 A 2,6 A 2,7 rated value 2,7 value value 3,8 A 2,8 A 2,8 A 3,8 A 2,8 A 3,8 A 3,	<ul><li>at 24 V rated value</li></ul>	10 A
a ta 220 V rated value at 440 V rated value b at 460 V rated value coperating frequency at DC-13 maximum design of the miniature circuit up to 230 V contact reliability of auxiliary contacts  1 faulty switching per 100 million (17 V, 1 mA)  1 faulty switching per 100 million (17 V	<ul> <li>at 60 V rated value</li> </ul>	4.7 A
e at 440 V rated value  operating frequency at DC-13 maximum  design of the miniature circuit breaker for short-circuit protection of the auxiliary contacts  ULCSA ratings  contact rating of auxiliary contacts  ULCSA ratings  contact rating of auxiliary contacts according to UL.  Short-circuit protection  design of the sign in Kin 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 tilted forward and absolward by +/- 22.5' on vertical mounting surface and snap-on mounting onto 35 mm standard mounting rail  depth  73 mm  required spacing  e with side-by-side mounting  — lorwards — opwards — at the side — odwnwards — of regrounded parts — for grounded parts — for live parts — for live parts — ownwards — otherwards — otherwards — otherwards — otherwards — otherwards — otherwards — ownwards — otherwards — ownwards — otherwards — o	<ul> <li>at 110 V rated value</li> </ul>	3 A
a ti 600 V rated value  operating frequency at DC-13 maximum  design of the ministure circuit breaker for short-circuit protection of the auxiliary contact up to 230 V  contact reliability of auxiliary contacts  1 faulty switching per 100 million (17 V; 1 mA)  ULCSA ratings  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  mounting position  fastening method  height  fastening method  height  forward and backward by ++ 22.5° on vertical mounting surface; can be titled forward and backward by ++ 22.5° on vertical mounting rail  by mm  depth  73 mm  required spacing  • with side-by-side mounting  • with side-by-side mounting  • with side-by-side mounting  • with side-by-side mounting  • of moverds  — offorwards  — o	at 220 V rated value	1.2 A
Doparating frequency at DC-13 maximum   Dopa	<ul> <li>at 440 V rated value</li> </ul>	0.5 A
design of the miniature circuit breaker for short-circuit protection of the auxiliary circuit up to 230 V contact reliability of auxiliary contacts 1 faulty switching per 100 million (17 V, 1 mA)  ULCSA ratings  contact rating of auxiliary contacts according to UL  Short-circuit protection  design of the fuse link for short-circuit protection of the auxiliary worth required  Installation mounting (dimensions)  mounting position  fastening method		
protection of the auxiliary contacts contact reliability of auxiliary contacts  ULICSA ratings  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 inconting/idimensions  mounting position  fastening method height full fill fill fill fill fill fill fill		
Contact rating of auxillary contacts   1 faulty switching per 100 million (17 V, 1 mA)		C characteristic: 6 A; 0.4 kA
contact rating of auxillary contacts according to UL A600 / Q600  Short-circuit protection design of the fuse link for short-circuit protection of the auxiliary switch required Installation mounting dimensions  mounting position  fastening method fastening method height width 90 mm depth 73 mm required spacing • with side-by-side mounting • forwards — upwards — at the side — downwards — to five parts — forwards — to five parts — forwards — upwards — downwards — at the side — downwards — at the side — downwards — at the side — downwards — to five parts — forwards — to five parts — forwards — upwards — downwards — at the side — downwards — to five parts — forwards — to five parts — forwards — at the side — downwards — downwards — to five parts — forwards — to five parts — forwards — to five parts — solid or stranded — finely stranded with core end processing • at AVG cables for auxiliary contacts — solid or stranded — finely stranded with core end processing • at AVG cables for auxiliary contacts  Sefety related data  B10 value with high demand rate according to SN 31920 • With h		1 faulty switching per 100 million (17 V 1 mA)
contact rating of auxiliary contacts according to UL Short-circuit protection design of the flus link for short-circuit protection of the auxiliary switch required Installation/ mounting/ dimensions mounting position  fastening method screw and snap-on mounting onto 35 mm standard 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 — upwards — downwards — at the side — downwards — at the side — downwards — to rive parts — forwards — to rive parts — forwards — to rive parts — forwards — downwards — odwnwards — odwnwards — to mm • for grounded parts — forwards — to mm • for prounded parts — forwards — to mm • for live parts — forwards — downwards — to mm • for live parts — forwards — to mm • for live parts — forwards — odwnwards — odwnwards — odwnwards — of mm • for live parts — forwards — to mm • for live parts — forwards — to mm • for live parts — forwards — to mm • for live parts — forwards — to mm • for live parts — forwards — to mm • for live parts — forwards — to mm • for live parts — forwards — to mm • for live parts — to mm • for live parts — to mm • for live parts — forwards — to mm • for live parts — forwards — to mm • for live parts — to mm • for live parts — to mm • for live parts — forwards — to mm • for live parts — to mm • for mm • to		readity switching per 100 million (17 V, 1 m/y)
Short-circuit protection   design of the fuse link for short-circuit protection of the auxiliary switch required   fuse gL/gG: 10 A   auxiliary switch required   fu		A600 / Q600
design of the fuse link for short-circuit protection of the auxiliary switch required Installation mounting dimensions  mounting position  fastening method height width 90 mm  depth 73 mm  required spacing  * with side-by-side mounting — forwards — at the side — downwards — at the side —		
installation/ mounting/ dimensions  mounting position  fastening method height height sort with side-by-side mounting - downwards - upwards - upwards - upwards - at the side - downwards - at the side - downwards - at the side - downwards - at the side - for ilve parts - forwards - upwards - for ilve parts - forwards - upwards - for ilve parts - forwards - of rive parts - forwards - forma - forward	•	fuse al /aG: 10 A
mounting position  fastening method  height  fastening method  height  fastening method  fastening method  fastening method  for auxiliary contacts  — at the side — downwards — downwards — of or live parts — forwards — downwards — for wards — downwards — for wards — the side — forwards — the side — downwards — to mm — upwards — to mm — the side — downwards — to mm — upwards — to mm — upwards — to mm — the side — downwards — downwards — downwards — at the side — formations Torminals  type of electrical connection for auxiliary and control circuit type of connectable conductor cross-sections — finely 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 failure rate [FIT] with low demand rate according to SN 31920 T1 value for proof test interval or service life according to SN 31920 T1 value for proof test interval or service life according to SN 31920 T1 value for proof test interval or service life according to SN 31920 T1 value for proof test interval or service life according to SN 31920 T1 value for proof test interval or service life according to SN 31920 T1 value for proof test interval or service life according to SN 31920		1000 gilgo. 10 /1
fastening method screw and snap-on mounting onto 35 mm standard mounting rail height s7.5 mm width 90 mm required spacing • with side-by-side mounting — forwards — upwards — downwards — of or grounded parts — forwards — upwards — the side • for grounded parts — forwards — upwards — at the side • for grounded parts — forwards — upwards — 10 mm  • at the side • for mm  - at the side — downwards — 10 mm  • for live parts — forwards — upwards — to mm  • for live parts — forwards — upwards — 10 mm  • for live parts — forwards — upwards — 10 mm  • for live parts — forwards — upwards — 10 mm  • for live parts — forwards — upwards — the side — downwards — the side — formal side — downwards — at the side — formal side — 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 • 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 T1 value for proof test interval or service life according to  T1 value for proof test interval or service life according to  T1 value for proof test interval or service life according to  T1 value for proof test interval or service life according to  T1 value for proof test interval or service life according to	Installation/ mounting/ dimensions	
forward and backward by +- 22.5° on vertical mounting surface screw and snap-on mounting onto 35 mm standard mounting rail height  57.5 mm  width 90 mm  required spacing • with side-by-side mounting — forwards — upwards — downwards — at the side • for grounded parts — forwards — upwards — upwards — the side • for grounded parts — forwards — upwards — at the side — downwards — at the side — downwards — to mm  • for live parts — forwards — upwards — to mm  • for live parts — forwards — upwards — to mm  • for live parts — forwards — upwards — to mm  • for live parts — forwards — to mm  • for live parts — forwards — to mm  • 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 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 T1 value for proof test interval or service life according to  T1 value for proof test interval or service life according to  T1 value for proof test interval or service life according to  T1 value for proof test interval or service life according to  T1 value for proof test interval or service life according to  T1 value for proof test interval or service life according to	-	
height width		
width 90 mm  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  — upwards 10 mm  • for grounded parts 10 mm  — at the side 6 mm  — downwards 10 mm  — at the side 6 mm  — downwards 10 mm  — at the side 6 mm  — downwards 10 mm  • for live parts  — forwards 10 mm  • for live parts  — forwards 10 mm  — upwards 10 mm  • for live parts  — forwards 10 mm  — the side 6 mm  Connections/ Terminals  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 (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 SN 31920 T1 value for proof test interval or service life according to SN 31920 T1 value for proof test interval or service life according to SN 31920 T1 value for proof test interval or service life according to SN 31920 T1 value for proof test interval or service life according to SN 31920 T1 value for proof test interval or service life according to SN 31920 T1 value for proof test interval or service life according to SN 31920 T1 value for proof test interval or service life according to SN 31920 T1 value for proof test interval or service life according to SN 31920 T1 value for proof test interval or service life according to SN 31920 T1 value for proof test interval or service life according to SN 31920 T1 value for proof test interval or service life according to SN 31920 T1 value for proof test interval or service life according to SN 31920 T1 value for proof test interval or service life according to SN 31920 T1 value for proof test interval or service life according to SN 31920 T1 value for pro		
required spacing  • with side-by-side mounting  — forwards — upwards — downwards — 10 mm  — at the side — for grounded parts — of for auxiliary contacts — solid or stranded — for auxiliary contacts  Safety related data  B10 vith side-by-side mounting  • with side-by-side mounting  10 mm  20 mm		
required spacing  • with side-by-side mounting  — forwards — upwards — downwards — at the side — for grounded parts — forwards — upwards — upwards — upwards — upwards — of ror grounded parts — forwards — upwards — upwards — at the side — downwards — of rive parts — forwards — forwards — of or ive parts — forwards — upwards — 10 mm — of rive parts — forwards — upwards — 10 mm — ownwards — upwards — 10 mm — ownwards — upwards — ownwards — omn — at the side — ownwards — at the side — ownwards — of or auxiliary contact  type of connectable conductor cross-sections • for auxiliary contacts — solid or stranded — finely stranded with core end processing • at AWC cables for auxiliary contacts  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 • 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  T1 value for proof test interval or service life according to SN 31920  T1 value for proof test interval or service life according to SN 31920  T1 value for proof test interval or service life according to SN 31920  T1 value for proof test interval or service life according to SN 31920  T1 value for proof test interval or service life according to SN 31920  T1 value for proof test interval or service life according to SN 31920		
<ul> <li>with side-by-side mounting — forwards — upwards — downwards — at the side — for grounded parts — forwards — upwards — upwards — the side — downwards — the side — downwards — the side — downwards — of or live parts — forwards — forwards — lo mm — upwards — for live parts — forwards — downwards — downwards — at the side — forwards — upwards — to mm — upwards — to mm — upwards — to mm — at the side — formards — to mm — the side — formards — to mm — upwards — to mm — upwards — to mm —</li></ul>	•	/3 mm
forwards		
- upwards - downwards - at the side of or grounded parts - forwards - upwards - at the side - downwards - at the side - downwards - at the side - downwards of rilive parts - forwards - upwards - for live parts - forwards - upwards - upwards - downwards - at the side - downwards - at the side - downwards - at the side - the side - downwards - at the side - the	, ,	10 mm
- 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 - downwards - downwards - at the side - downwards - at the side - for mm  - 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 AWG cables for auxiliary contacts - with live 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  10 mm  10 mm  10 mm  2 cmm  2 cmm²  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)  2 x (20 16), 2x (18 14), 2x 12  - 1 000 000; With 0.3 x le  - 1 000 000; With 0.3 x le  - 1 000 000; With 0.3 x le  - 1 000 FIT  - 1 value for proof test interval or service life according to  - 20 y		
<ul> <li>at the side</li> <li>for grounded parts</li> <li>forwards</li> <li>upwards</li> <li>at the side</li> <li>downwards</li> <li>for live parts</li> <li>forwards</li> <li>upwards</li> <li>for live parts</li> <li>forwards</li> <li>upwards</li> <li>downwards</li> <li>mm</li> <li>at the side</li> <li>forwards</li> <li>upwards</li> <li>mm</li> <li>at the side</li> <li>form</li> </ul> Connections/ Terminals type of electrical connection for auxiliary and control circuit type of connectable conductor cross-sections <ul> <li>for auxiliary contacts</li> <li>solid or stranded</li> <li>for auxiliary contacts</li> <li>solid or stranded with core end processing</li> <li>at AWG cables for auxiliary contacts</li> <li>at AWG cables for auxiliary contacts</li> <li>at WWG cables for auxiliary contacts</li> <li>at WWG with high 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>T1 value for proof test interval or service life according to 20 y</li> </ul>	•	
• for grounded parts  — forwards — upwards — at the side — downwards 10 mm  • for live parts — forwards — upwards — to five parts — forwards — upwards — upwards — upwards — downwards — to 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  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  10 mm  10 mm  10 mm  20 crew-type terminals  21 crew-type terminals  22 crew-type terminals  23 crew-type terminals  24 crew-type terminals  25 crew-type terminals  26 crew-type terminals  27 crew-type terminals  28 crew-type terminals  29 crew-type terminals  20 crew-type terminals  20 crew-type terminals  21 crew-type terminals  22 crew-type terminals  23 crew-type terminals  24 crew-type terminals  25 crew-type terminals  26 crew-type terminals  27 crew-type terminals  28 crew-type terminals  29 crew-type terminals  20 crew-type terminals  20 crew-type terminals  20 crew-type terminals  21 crew-type te		
- forwards 10 mm - upwards 6 mm - downwards 10 mm  • for live parts - forwards 10 mm  • for live parts - forwards 10 mm - upwards 10 mm - upwards 10 mm - downwards 10 mm - downwards 10 mm - at the side 6 mm  Connections/ Terminals  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 - finely stranded with core end processing 2x (20 1.5 mm²), 2x (0.75 2.5 mm²) • at AWG cables for auxiliary contacts 2x (20 1.5 mm²), 2x (18 14), 2x 12  Safety related data  B10 value with high demand rate according to SN 31920 40 % • with low 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 SN 31920  T1 value for proof test interval or service life according to SN 31920		
- at the side - downwards 10 mm  • for live parts - 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  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 (0.5 1.5 mm²), 2x (0.75 2.5 mm²) 100 0000; 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 • with high demand rate according to SN 31920 100 FIT 1 value for proof test interval or service life according to  70 y	•	10 mm
- 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 • 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  10 mm  10 mm  10 mm  10 mm  20 (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  40 %  40 %  40 minute for proof test interval or service life according to SN 31920  T1 value for proof test interval or service life according to SN 31920  T1 value for proof test interval or service life according to SN 31920	— 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  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 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  20 y	— 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 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 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 20 y	— 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  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  10 mm  10 mm  10 mm  6 mm  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  1 000 000; With 0.3 x le  1 000 000; With 0.3 x le  1 000 FIT  1 value for proof test interval or service life according to  20 y	• 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  10 mm 6 mm  6 mm  2 mm 6 mm  2 x (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  1 000 000; With 0.3 x le  1 000 000; With 0.3 x le  1 000 FIT  1 value for proof test interval or service life according to 20 y	— 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  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  T1 value for proof test interval or service life according to 20 y	•	
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 S0 20 y  screw-type terminals  screw-type terminals  \$\$x (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  \$\$x (20 16), 2x (1		
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 failure rate [FIT] with low demand rate according to SN 31920  T1 value for proof test interval or service life according to 20 y		6 mm
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  • 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  1000 FIT  1000 FIT  1000 FIT		
<ul> <li>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  • 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  2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)  2x (20 16), 2x (18 14), 2x 12  1000 000; With 0.3 x le  20 y</li> </ul>		screw-type terminals
<ul> <li>— solid or stranded</li> <li>— finely stranded with core end processing</li> <li>— at AWG cables for auxiliary contacts</li> <li>Eat a AWG cables for auxiliary contacts</li> &lt;</ul>		
— 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  failure rate [FIT] with low demand rate according to SN 31920  T1 value for proof test interval or service life according to 20 y		0: (0.5 4.5
<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>proportion of dangerous failures</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>failure rate [FIT] with low demand rate according to SN 31920</li> <li>T1 value for proof test interval or service life according to 20 y</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  T1 value for proof test interval or service life according to 20 y		
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  T1 value for proof test interval or service life according to 20 y		ZA (ZU 10), ZA (10 14), ZX 1Z
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 20 y		1,000,000: With 0,2 x 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</li> <li>20 y</li> </ul>		1 000 000, Willi 0.3 x le
<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</li> <li>20 y</li> </ul>		40 %
failure rate [FIT] with low demand rate according to SN 31920  T1 value for proof test interval or service life according to 20 y		
T1 value for proof test interval or service life according to  20 y	failure rate [FIT] with low demand rate according to SN	
	T1 value for proof test interval or service life according to	20 y

protection class IP on the front according to IEC 60529

IP20

touch protection on the front according to IEC 60529

finger-safe, for vertical contact from the front

Certificates/ approvals

## **General Product Approval**



Confirmation





<u>KC</u>



**EMC** 

Functional Safety/Safety of Machinery

**Declaration of Conformity** 

**Test Certificates** 



Type Examination
Certificate





Type Test Certificates/Test Report

Special Test Certificate

## Marine / Shipping













Marine / Shipping

othe

Railway



Confirmation



Vibration and Shock

## **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=3RH2431-1AB00

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RH2431-1AB00

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

https://support.industry.siemens.com/cs/ww/en/ps/3RH2431-1AB00

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

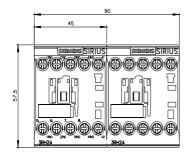
http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RH2431-1AB00&lang=en

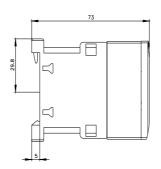
Characteristic: Tripping characteristics, I2t, Let-through current

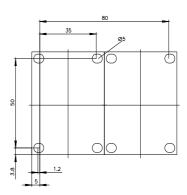
https://support.industry.siemens.com/cs/ww/en/ps/3RH2431-1AB00/char

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

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RH2431-1AB00&objecttype=14&gridview=view1







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