# **SIEMENS**

## **Data sheet**

## 3RT2045-3NB30-0CC0



power contactor, AC-3e/AC-3, 80 A, 37 kW / 400 V, 3-pole, 20-33 V AC/DC, 50/60 Hz, with integrated varistor, auxiliary contacts: 1 NO + 1 NC, main circuit: screw terminal, control and auxiliary circuit: spring-loaded terminal, size: S3, communication-capable

product brand name	SIRIUS
product designation	Power contactor
product type designation	3RT2
General technical data	
size of contactor	S3
product extension	
<ul> <li>function module for communication</li> </ul>	Yes
auxiliary switch	Yes
power loss [W] for rated value of the current	
<ul> <li>at AC in hot operating state</li> </ul>	15.9 W
<ul> <li>at AC in hot operating state per pole</li> </ul>	5.3 W
<ul> <li>without load current share typical</li> </ul>	1.8 W
type of calculation of power loss depending on pole	quadratic
insulation voltage	
<ul> <li>of main circuit with degree of pollution 3 rated value</li> </ul>	690 V
<ul> <li>of auxiliary circuit with degree of pollution 3 rated value</li> </ul>	690 V
surge voltage resistance	
of main circuit rated value	8 kV
of auxiliary circuit rated value	6 kV
maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1	690 V
shock resistance at rectangular impulse	
• at AC	10.3g / 5 ms, 6,.g / 10 ms
• at DC	6.7 g / 5 ms, 4g / 10 ms
shock resistance with sine pulse	
• at AC	16.3g / 5 ms, 10.g / 10 ms
• at DC	10.6 g / 5 ms, 6.3 g / 10 ms
mechanical service life (operating cycles)	
<ul> <li>of contactor typical</li> </ul>	10 000 000
<ul> <li>of the contactor with added electronically optimized auxiliary switch block typical</li> </ul>	5 000 000
of the contactor with added auxiliary switch block typical	10 000 000
reference code according to IEC 81346-2	Q
Substance Prohibitance (Date)	
SVHC substance name	Lead - 7439-92-1 Lead monoxide (lead oxide) - 1317-36-8
Weight	1.818 kg
Ambient conditions	
installation altitude at height above sea level maximum	2 000 m
ambient temperature	
during operation	-25 +60 °C

during storage	-55 +80 °C
relative humidity minimum	10 %
relative humidity at 55 °C according to IEC 60068-2-30	95 %
maximum	
Environmental footprint	
Environmental Product Declaration(EPD)	Yes
Global Warming Potential [CO2 eq] total	267 kg
Global Warming Potential [CO2 eq] during manufacturing	9.35 kg
Global Warming Potential [CO2 eq] during operation	259 kg
Global Warming Potential [CO2 eq] after end of life	-1.55 kg
Main circuit	
number of poles for main current circuit	3
number of NO contacts for main contacts	3
operating voltage	
• at AC-3 rated value maximum	690 V
at AC-3e rated value maximum	690 V
operational current	
<ul> <li>at AC-1 at 400 V at ambient temperature 40 °C rated value</li> </ul>	125 A
• at AC-1	
<ul> <li>up to 690 V at ambient temperature 40 °C rated value</li> </ul>	125 A
— up to 690 V at ambient temperature 60 °C rated value	105 A
• at AC-3	
— at 400 V rated value	80 A
— at 500 V rated value	80 A
— at 690 V rated value	58 A
• at AC-3e	
— at 400 V rated value	80 A
— at 500 V rated value	80 A
— at 690 V rated value	58 A
<ul> <li>at AC-4 at 400 V rated value</li> </ul>	66 A
<ul> <li>at AC-5a up to 690 V rated value</li> </ul>	110 A
<ul> <li>at AC-5b up to 400 V rated value</li> </ul>	80 A
• at AC-6a	
<ul> <li>up to 230 V for current peak value n=20 rated value</li> </ul>	80 A
— up to 400 V for current peak value n=20 rated value	80 A
— up to 500 V for current peak value n=20 rated value	80 A
— up to 690 V for current peak value n=20 rated value	58 A
• at AC-6a	
— up to 230 V for current peak value n=30 rated value	54 A
— up to 400 V for current peak value n=30 rated value	54 A
— up to 500 V for current peak value n=30 rated value	54 A
— up to 690 V for current peak value n=30 rated value	54 A
minimum cross-section in main circuit at maximum AC-1 rated value	50 mm²
operational current for approx. 200000 operating cycles at AC-4	
• at 400 V rated value	34 A
• at 690 V rated value	24 A
operational current	
• at 1 current path at DC-1	
— at 24 V rated value	100 A
— at 60 V rated value	60 A
— at 110 V rated value	9 A
— at 220 V rated value	2 A
— at 440 V rated value	0.6 A
— at 600 V rated value	0.4 A
with 2 current paths in series at DC-1	
— at 24 V rated value	100 A
— at 60 V rated value	100 A
at oo v ratou valuo	

at 110 V rated value	100 A
— at 110 V rated value	
— at 220 V rated value — at 440 V rated value	10 A 1.8 A
— at 600 V rated value	1A
with 3 current paths in series at DC-1	400 A
— at 24 V rated value	100 A
— at 60 V rated value	100 A
— at 110 V rated value	100 A
— at 220 V rated value	80 A
— at 440 V rated value	4.5 A
— at 600 V rated value	2.6 A
at 1 current path at DC-3 at DC-5	
— at 24 V rated value	40 A
— at 60 V rated value	6 A
— at 110 V rated value	2.5 A
— at 220 V rated value	1.4
— at 440 V rated value	0.15 A
— at 600 V rated value	0.06 A
with 2 current paths in series at DC-3 at DC-5	400 4
— at 24 V rated value	100 A
— at 60 V rated value	100 A
— at 110 V rated value	100 A
— at 220 V rated value	7 A
— at 440 V rated value	0.42 A
— at 600 V rated value	0.16 A
with 3 current paths in series at DC-3 at DC-5	
— at 24 V rated value	100 A
— at 60 V rated value	100 A
— at 110 V rated value	100 A
— at 220 V rated value	35 A
— at 440 V rated value	0.8 A
— at 600 V rated value	0.35 A
operating power	07 144
at AC-2 at 400 V rated value	37 kW
• at AC-3	22 144
— at 230 V rated value	22 kW
— at 400 V rated value	37 kW
— at 500 V rated value	45 kW
— at 690 V rated value	55 kW
• at AC-3e	22 144
— at 230 V rated value	22 kW
— at 400 V rated value	37 kW 45 kW
— at 500 V rated value	
— at 690 V rated value operating power for approx. 200000 operating cycles at AC-	55 kW
4	
• at 400 V rated value	17.9 kW
• at 690 V rated value	21.8 kW
operating apparent power at AC-6a	
• up to 230 V for current peak value n=20 rated value	31 kVA
• up to 400 V for current peak value n=20 rated value	55 kVA
• up to 500 V for current peak value n=20 rated value	69 kVA
• up to 690 V for current peak value n=20 rated value	69 kVA
operating apparent power at AC-6a	
up to 230 V for current peak value n=30 rated value	21.5 kVA
<ul> <li>up to 400 V for current peak value n=30 rated value</li> </ul>	37.4 kVA
up to 500 V for current peak value n=30 rated value	46.7 kVA
up to 690 V for current peak value n=30 rated value	64.5 kVA
short-time withstand current in cold operating state up to	
40 °C	
<ul> <li>limited to 1 s switching at zero current maximum</li> </ul>	1 500 A; Use minimum cross-section acc. to AC-1 rated value

• limited to 5 s switching at zero current maximum	1 186 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 10 s switching at zero current maximum</li> </ul>	851 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 30 s switching at zero current maximum</li> </ul>	538 A; Use minimum cross-section acc. to AC-1 rated value
Iimited to 60 s switching at zero current maximum	423 A; Use minimum cross-section acc. to AC-1 rated value
no-load switching frequency	
• at AC	1 000 1/h
• at DC	1 000 1/h
operating frequency	
<ul> <li>at AC-1 maximum</li> </ul>	900 1/h
at AC-2 maximum	400 1/h
• at AC-3 maximum	1 000 1/h
• at AC-3e maximum	1 000 1/h
at AC-4 maximum	300 1/h
Control circuit/ Control	
type of voltage of the control supply voltage	AC/DC
control supply voltage at AC	
• at 50 Hz rated value	20 33 V
at 60 Hz rated value	20 33 V
control supply voltage at DC rated value	20 33 V
operating range factor control supply voltage rated value of magnet coil at DC	
• initial value	0.8
• full-scale value	1.1
operating range factor control supply voltage rated value of magnet coil at AC	
• at 50 Hz	0.8 1.1
• at 60 Hz	0.8 1.1
design of the surge suppressor	with varistor
inrush current peak	6.5 A
duration of inrush current peak	50 µs
locked-rotor current mean value	3.2 A
locked-rotor current peak	6.5 A
duration of locked-rotor current	150 ms
holding current mean value	75 mA
apparent pick-up power of magnet coil at AC	
• at 50 Hz	151 VA
• at 60 Hz	151 VA
apparent holding power	
at minimum rated control supply voltage at DC	1.8 VA
at maximum rated control supply voltage at DC	1.8 VA
apparent holding power	
at minimum rated control supply voltage at AC	
— at 50 Hz	3.1 VA
— at 60 Hz	3.1 VA
at maximum rated control supply voltage at AC	
— at 50 Hz	3.1 VA
— at 60 Hz	3.1 VA
apparent holding power of magnet coil at AC	
• at 50 Hz	3.1 VA
• at 60 Hz	3.1 VA
inductive power factor with the holding power of the coil	
• at 50 Hz	0.95
• at 60 Hz	0.95
closing power of magnet coil at DC	76 W
holding power of magnet coil at DC	1.8 W
<u> </u>	
closing delay	
	50 70 ms
closing delay	50 70 ms 50 70 ms
closing delay • at AC	
closing delay • at AC • at DC	

10 20 ms
Standard A1 - A2, optionally via function module
1
1
10 A
6 A
3 A
2 A
1 A
10 A
6 A
6 A
3 A
2 A
1 A
0.15 A
10 A
2 A
2 A
1 A 0.9 A
0.9 A 0.3 A
0.3 A 0.1 A
1 faulty switching per 100 million (17 V, 1 mA)
ready officering por roo million (17 t), this y
77 A
62 A
7.5 hp
15 hp
25 hp
30 hp
60 hp
60 hp
A600 / P600
-O. 050 A (000 V 400 LA) - N. 400 A (000 V 400 LA)
gG: 250 A (690 V, 100 kA), aM: 160 A (690 V, 100 kA), BS88: 200 A (415 V, 80 kA)
gG: 160A (690V,100kA), aM: 80A (690V,100kA), BS88: 125A (415V,80kA)
gG: 10 A (500 V, 1 kA)
±/ 190° rotation possible on vertical mounting outfaces and he tilted forward and
+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface
screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715
440 mana
140 mm
70 mm
70 mm
70 mm

- downwards   10 mm   - at the slide   0 mm   - (or grounded parts   - (or forwards   10 mm   - (or forwards   20 mm   - (or forwards   20 mm   - (or forwards   20 mm   - (or forwards   10 mm   - (or forward or forwards   10 mm   - (or		40
• for grounded parts  — forwards — part file alds — the alds — forwards • for the parts — forwards — upwards — to five parts — forwards — upwards — to forwards — to file side  Connectional Terminals  Vyps of electrical connection • for auxiliary and control concil • or cauxiliary and control concil • or cauxiliary and control concil • or cauxiliary and control concil • for magnet coil  Vyps of connectable conductor cross-sections • for magnet coil • for	— downwards	10 mm
flowards	— at the side	0 mm
upwards at the side documwards 10 mm	<ul> <li>for grounded parts</li> </ul>	
	— forwards	20 mm
- downwards - for live parts - for wards - upwards - upwards - downwards - downwards - downwards - downwards - the side - downwards - at the side - to mm - to remain current circuit - for auxiliary and control circuit - for auxiliary and control circuit - of or auxiliary controls - of marine controls - for main controls - finely stranded with core end processing - finely stranded with core end processing - they stranded with core and processing - they stranded with core and processing - they stranded with core and processing - they stranded with core end processing - shelp stranded with core end processing - shelp stranded with core end processing - shelp stranded with core end processing - with they stranded without core end processing - finely stranded without core end processing - with high demand rate according to IEC 60947-5-1 - subtability for use safety related savicting OFF - service life maximum - ves - with high demand rate according to SN 31920 - with high demand rate according to SN 31920 - with high them and rate according to SN 31920 - with high them and rate according to SN 31920 - with high them and rate according to SN 31920 - wit	— upwards	10 mm
- for live pars - forwards - upwards - upwards - downwards - at the side 10 mm  Connections/ Torminats  type of electrical connection - for main current crout! - for main cuntacts - of magnet cot! - finely stranded with core end processing - for AWG cables for main contacts - finely stranded with core end processing - finely stranded with c	— at the side	10 mm
Forwards	— downwards	10 mm
Forwards	• for live parts	
- upwards	·	20 mm
- downwards — at the sale do 10 mm  Connections/Triminals  Type of electrical connection  • for auxillary and control circuit soria auxillary contacts soria auxillary contacts soria auxillary contacts  • of connectable conductor cross-sections  • for Maria Cables for main contacts  • solid  • stranded  • finely stranded with core end processing  • finely stranded without core end processing  • for auxillary contacts  • solid or stranded  • finely stranded with core end processing  • for auxillary contacts  •	— upwards	10 mm
Connections of terminals  Type of electrical connection  • for main current circuit  • at contactor for auxiliary contacts  • of magnet coil  Type of connectable conductor cross-sections  • for main contacts  • for MAVG cables for main contacts  • solid  • stranded  • stranded  • finely stranded with core end processing  • for auxiliary contacts  • solid or stranded  • finely stranded with core end processing  • for auxiliary contacts  • solid or stranded  • finely stranded with core end processing  • for auxiliary contacts  • solid or stranded  • finely stranded with core end processing  • for finely stranded without one end processing  • for main contacts  • for auxiliary contacts  • for main contacts  • for m	•	
ype of electrical connection  • for main current circuit  • for auxillary and control circuit  • for auxillary and control circuit  • for auxillary and control circuit  • for main current for auxillary contacts  • of magnet coil  type of connectable conductor cross-sections  • for man contacts  — finely stranded with core end processing  • for AVXC cables for main contacts  • solid  • stranded  • inney stranded with core end processing  • solid or stranded  • finely stranded with core end processing  • finely stranded without core end processing  • finely stranded without core end processing  • finely stranded without core end processing  • for avXC cables for auxiliary contacts  — solid or stranded  — finely stranded with core end processing  • for avXC cables for auxiliary contacts  — solid or stranded  — finely stranded with core end processing  • for avXC cables for auxiliary contacts  — solid or stranded  — finely stranded with core end processing  • for avXC cables for auxiliary contacts  — solid or stranded  — finely stranded with core end processing  • for AvXC cables for auxiliary contacts  — solid or stranded  — finely stranded with core end processing  • for avXC cables for auxiliary contacts  — solid or stranded  — finely stranded with core end processing  • for avXC cables for auxiliary contacts  — solid or stranded  • for avXC cables for auxiliary contacts  — solid or stranded  • for main contacts  • for auxiliary contacts		
type of electrical connection  • for main current circuit  • at contactor for auxiliary and control circuit  • at contactor for auxiliary contacts  • for main contacts  • for main contacts  • for main contacts  • for main contacts  • for AWG cables for main contacts  • solid  • stranded  • finely stranded with core end processing  • for the stranded  • finely stranded with core end processing  • for auxiliary contacts  • solid  • finely stranded with core end processing  • for auxiliary contacts  • solid or stranded  • finely stranded with core end processing  • for auxiliary contacts  • for auxiliary contacts  • for auxiliary contacts  • for auxiliary contacts  • for for main contacts  • for		
• for main current circuit  • for auxiliary and control circuit  • at contactor for auxiliary contacts  • of magnet coil  type of connectable conductor cross-sections  • for main contacts  — finely stranded with core end processing  • stranded  • finely stranded with core end processing  • stranded  • finely stranded with core end processing  • stranded  • finely stranded with core end processing  • stranded  • finely stranded with core end processing  • for owner stranded  • finely stranded with core end processing  • for for AWC cables for auxiliary contacts  • solid or stranded  — finely stranded with core end processing  • for for auxiliary contacts  — solid or stranded  — finely stranded with core end processing  • for AWC cables for auxiliary contacts  • for a		
of consectable conductor cross-sections     of manger col     spring-loaded terminals     spring-loaded termi		ecrew type terminals
• at contactor for auxiliary contacts • of magnet coil  Type of connectable conductor cross-sections • for main contacts — finely stranded with core end processing • for AWG cables for main contacts • solid • stranded • finely stranded with core end processing • for awd cables for main contacts • solid • stranded • finely stranded with core end processing connectable conductor cross-section for auxiliary contacts • solid or stranded • finely stranded with core end processing connectable conductor cross-section for auxiliary contacts • solid or stranded • finely stranded without core end processing • finely stranded without core end processing • finely stranded without core end processing • for ownectable conductor cross-sections • for auxiliary contacts — solid or stranded — finely stranded without core end processing • for AWG cables for auxiliary contacts  AWG number as coded connectable conductor cross-sections • for fav. Cables for auxiliary contacts  AWG number as coded connectable conductor cross-section • for main contacts • for auxiliary contacts  2x (0.5 2.5 mm²)  x (0.5		**
e of magnet coll  type of connectable conductor cross-sections  of or main contacts  — finely stranded with core end processing  of AWG cables for main contacts  connectable conductor cross-section for main contacts  osolid  stranded  of main contacts  solid  stranded  of mely stranded with core end processing  connectable conductor cross-section for main contacts  osolid  stranded  of mely stranded with core end processing  connectable conductor cross-section for auxiliary contacts  osolid or stranded  of mely stranded with core end processing  of mely stranded without core end processing  of a will apply connectable conductor cross-sections  of a auxiliary contacts  of a will or stranded  —finely stranded with core end processing  of a will or stranded  —finely stranded with core end processing  of a for will cables for auxiliary contacts  a solid or stranded  —finely stranded with core end processing  of a for will cables for auxiliary contacts  a for auxiliary contacts  of a main contacts  of or auxiliary contacts  a for auxiliary contact	•	
type of connectable conductor cross-sections  • for main contacts  • for main contacts  • for AWC cables for main contacts  • solid  • stranded with core end processing  • for AWC cables for main contacts  • solid  • stranded with core end processing  • for stranded with core end processing  • for stranded with core end processing  connectable conductor cross-section for auxiliary contacts  • solid or stranded  • finely stranded with core end processing  • finely stranded without core end processing  • finely stranded without core end processing  • for auxiliary contacts  • solid or stranded  • finely stranded without core end processing  • for auxiliary contacts  • solid or stranded  • finely stranded without core end processing  • for auxiliary contacts  • solid or stranded  • finely stranded without core end processing  • for auxiliary contacts  • solid or stranded  • finely stranded without core end processing  • for awxiliary contacts  • solid or stranded  • finely stranded without core end processing  • for awxiliary contacts  • for main contacts  • for main contacts  • for main contacts  • for auxiliary contacts  • for sine contacts  • for with contacts  • for sine contacts  • for with contacts  • for sine contacts  • for	•	
• for main contacts  — finely stranded with core end processing to rate WGC achies for main contacts 2x (10 10), 1x (10 2)  2x (10 10, 1x (10 2)  2x (10		opring-type terminals
• finely stranded with core end processing • for AWG cables for main contacts • solid • stranded • stranded • finely stranded with core end processing • finely stranded with core end processing • solid or stranded • stranded • finely stranded with core end processing • finely stranded with core end processing • finely stranded with core end processing • finely stranded without core end processing • finely stranded without core end processing • finely stranded without core end processing • for auxiliary contacts • solid or stranded • finely stranded with core end processing • for far auxiliary contacts • solid or stranded • finely stranded with core end processing • for far stranded • finely stranded with core end processing • for far will stranded with core end processing • for far will stranded without core end processing • for far will stranded without core end processing • for far will stranded without core end processing • for far will stranded without core end processing • for far will stranded without core end processing • for main contacts • for auxiliary contacts  • for auxiliary contacts  • for auxiliary contacts  • for satisfary contacts  • for auxiliary contacts  • for satisfary contacts  • suitable for safety function • mirror contact according to IEC 60947-5-1 • positively driven operation according to IEC 60947-5-1 • suitable for use safety-related switching OFF  • 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 high demand rate according to SN 31920  • for will be device type according to ISO 13849-2 • we will see the process of	· ·	
or AWG cables for main contacts     one contactable conductor cross-section for main contacts     solid     stranded     of inely stranded with core end processing     connectable conductor cross-section for auxiliary contacts     olid or stranded     of inely stranded with core end processing     of inely stranded with core end processing     of inely stranded without core end processing     of auxiliary contacts     of auxiliary contacts     of or auxiliary contacts		0 (0 5 05 3) 4 (0 5 50 3)
connectable conductor cross-section for main contacts  • solid  • stranded  • finely stranded with core end processing  connectable conductor cross-section for auxiliary contacts  • solid or stranded  • finely stranded with core end processing  if niely stranded with core end processing  • finely stranded with core end processing  • finely stranded without core end processing  • for auxiliary contacts  • solid or stranded  - finely stranded without core end processing  • for auxiliary contacts  • solid or stranded  - finely stranded without core end processing  • for AWG cables for auxiliary contacts  AWG number as coded connectable conductor cross-sections  • for auxiliary contacts  - solid or stranded  - finely stranded without core end processing  • for AWG cables for auxiliary contacts  2x (0.5 2.5 mm²)  2x (0.5 2.5 mm²)  2x (0.5 2.5 mm²)  2x (0.5 2.5 mm²)  4x (0.5 2.5 mm²)  - finely stranded with core end processing  • for auxiliary contacts  2x (20 16)  AWG number as coded connectable conductor cross-section  • for main contacts  • for auxiliary contacts  2 un. 14  Safety related data  product function  • mirror contact according to IEC 60947-4-1  • positively driven operation according to IEC 60947-5-1  • suitability for use safety-related switching OFF  yes  service life maximum  20 a  suitability for use safety-related switching OFF  yes  service life maximum  20 a  to service life maximum  20 a  to service life maximum  20 a  100 000  failure rate [FIT] with low demand rate according to SN 31920  3 with high demand rate according to SN 31920  5 3 %  B10 value with high demand rate according to SN 31920  100 000  failure rate [FIT] with low demand rate according to SN 31920  73 %  B10 value with pink demand rate according to SN 31920  73 %  B10 safety device type according to IEC 61508-2  Fiectrical Safety		
solid     stranded     sinely stranded		2x (10 1/0), 1x (10 2)
Infinely stranded with core end processing 2.5 50 mm² 2.5 50 mm² 3.5 2.5 mm² 3.5 mm²		
e finely stranded with core end processing  connectable conductor cross-section for auxiliary contacts  e solid or stranded  finely stranded with core end processing  e finely stranded with core end processing  finely stranded without core end processing  e finely stranded without core end processing  for auxiliary contacts  - solid or stranded  - finely stranded with core end processing  - finely stranded with core end processing  - finely stranded with core end processing  - finely stranded without core end processing  - solid or stranded  - finely stranded without core end processing  - finely stranded without core end processing  - finely stranded without core end processing  - solid or strander  - solid or st	• solid	
connectable conductor cross-section for auxiliary contacts  • solid or stranded  • finely stranded with core end processing  • finely stranded with core end processing  • finely stranded without core end processing  • for auxiliary contacts  • for auxiliary contacts  • solid or stranded  — solid or stranded  — solid or stranded  — finely stranded with core end processing  — finely stranded with core end processing  • for AWG cables for auxiliary contacts  AWG number as coded connectable conductor cross section  • for main contacts  • for auxiliary contacts  • for auxiliary contacts  • for auxiliary contacts  • for auxiliary contacts  • for successing  • for auxiliary contacts  • for auxiliary contacts  • for successing  • for successing  • for auxiliary contacts  • for successing  • for auxiliary contacts  • for auxiliary co	• stranded	6 70 mm²
• solid or stranded     • finely stranded with core end processing     • finely stranded without core end processing     • finely stranded without core end processing     • finely stranded conductor cross-sections     • for auxiliary contacts     — solid or stranded     — finely stranded with core end processing     — finely stranded with core end processing     — finely stranded without core end processing     — for AWG cables for auxiliary contacts  AWG number as coded connectable conductor cross section     • for main contacts     • for auxiliary contacts     20 14  Safety related data  product function     • mirror contact according to IEC 60947-4-1     • positively driven operation according to IEC 60947-5-1     • positively driven operation according to IEC 60947-5-1     • suitability for use safety-related switching OFF     • service life maximum     20 a  test wear-related service life necessary     proportion of dangerous failures     • with low demand rate according to SN 31920     • with high demand rate according to SN 31920     • with low demand rate according to SN 31920     100 000  failure rate [FIT] with low demand rate according to SN 31920     100 000  failure rate [FIT] with low demand rate according to SN 31920     100 010  ISO 13849  device type according to ISO 13849-1     overdimensioning according to ISO 13849-2 necessary  IEC 61508  safety device type according to IEC 61508-2  Fige according to IEC 61508-2	finely stranded with core end processing	2.5 50 mm²
• finely stranded with core end processing • finely stranded without core end processing (0.5 2.5 mm²  type of connectable conductor cross-sections • for auxiliary contacts — solid or stranded — finely stranded without core end processing • for AWG cables for auxiliary contacts  AWG number as coded connectable conductor cross section • for main contacts • for auxiliary contacts 20 14  Safety rolated data  Product function • mirror contact according to IEC 60947-4-1 • positively driven operation according to IEC 60947-5-1 • suitablic for safety function  suitablic for use safety-related switching OFF yes service life maximum 20 a  test wear-related service life necessary proportion of dangerous failures • with low demand rate according to SN 31920 • with high demand rate according to SN 31920 133020  failure rate [FiT] with low 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 failure rate [FiT] with low 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 failure rate [FiT] with low 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 failure rate [FiT] with low 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 failure rate [FiT] with low 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 failure rate [FiT] with low demand rate according to SN 31920 failure rate [FiT] with low demand rate according to SN 31920 failure rate [FiT] with low demand	connectable conductor cross-section for auxiliary contacts	
type of connectable conductor cross-sections  • for auxiliary contacts  — solid or stranded — finely stranded with our cere and processing — finely stranded with core end processing — finely stranded without core end processing — for AWG cables for auxiliary contacts  AWG number as coded connectable conductor cross section • for main contacts — for auxiliary contacts — for auxiliary contacts — 20 14  Safety related data  product function • mirror contact according to IEC 60947-4-1 • positively driven operation according to IEC 60947-5-1 • suitable for safety function • suitablity for use safety-related switching OFF — Yes service life maximum — 20 a  test wear-related service life necessary — vith low demand rate according to SN 31920 • with high demand rate according to SN 31920 • with high demand rate according to SN 31920 fallure rate [FIT] with low demand rate according to SN 31920 fallure rate [FIT] with low demand rate according to SN 31920 fallure rate [FIT] with low demand rate according to SN 31920 fallure rate [FIT] with low demand rate according to SN 31920 fallure rate (FIT] with low demand rate according to SN 31920 fallure rate (FIT) with low demand rate according to SN 31920 fallure rate (FIT) with low demand rate according to SN 31920 fallure rate (FIT) with low demand rate according to SN 31920 fallure rate (FIT) with low demand rate according to SN 31920 fallure rate (FIT) with low demand rate according to SN 31920 fallure rate (FIT) with low demand rate according to SN 31920 fallure rate (FIT) with low demand rate according to SN 31920 fallure rate (FIT) with low demand rate according to SN 31920 fallure rate (FIT) with low demand rate according to SN 31920 fallure rate (FIT) with low demand rate according to SN 31920 fallure rate (FIT) with low demand rate according to SN 31920 fallure rate (FIT) with low demand rate according to SN 31920 fallure rate	<ul> <li>solid or stranded</li> </ul>	0.5 2.5 mm²
type of connectable conductor cross-sections  • for auxiliary contacts  — solid or stranded — finely stranded with core end processing — finely stranded with core end processing — finely stranded without core end processing 2 x (0.5 2.5 mm²) — finely stranded without core end processing 2 x (0.5 2.5 mm²)  • for AWG cables for auxiliary contacts 2 x (20 16)  AWG number as coded connectable conductor cross section • for main contacts • for auxiliary contacts 2 0 14  Safety related data  product function • mirror contact according to IEC 60947-4-1 • positively driven operation according to IEC 60947-5-1 • suitability for use safety-related switching OFF yes service life maximum 2 0 a  test wear-related service life necessary 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  B10 value 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 failure rate [FIT] with low 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 failure rate [FIT] with low 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 failure rate [FIT] with low 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 failure rate [FIT] with low 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 failure rate [FIT] with low 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 fail	<ul> <li>finely stranded with core end processing</li> </ul>	0.5 2.5 mm <sup>2</sup>
• for auxiliary contacts  — solid or stranded  — finely stranded with core end processing  — finely stranded without core end processing  • for AWG cables for auxiliary contacts  AWG number as coded connectable conductor cross section  • for main contacts  • for auxiliary contacts  10 2  • for auxiliary contacts  20 14  Safety related data  product function  • mirror contact according to IEC 60947-4-1  • positively driven operation according to IEC 60947-5-1  • suitable for safety function  • suitable for safety function  • suitable for safety function  • survice life maximum  20 a  test wear-related service life necessary  yes  • 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  100 000  failure rate [FIT] with low demand rate according to SN 31920  ISO 13849  device type according to ISO 13849-1  overdimensioning according to ISO 13849-2 necessary  IEC 61508  safety device type according to IEC 61508-2  Type A  Electrical Safety	finely stranded without core end processing	0.5 2.5 mm <sup>2</sup>
- solid or stranded	type of connectable conductor cross-sections	
finely stranded with core end processing finely stranded without core end processing finely stranded without core end processing finely stranded without core end processing for AWG cables for auxiliary contacts	<ul> <li>for auxiliary contacts</li> </ul>	
- finely stranded without core end processing  • for AWG cables for auxiliary contacts  AWG number as coded connectable conductor cross section  • for main contacts • for auxiliary contacts  10 2 • for auxiliary contacts  20 14  Safety related data  product function  • mirror contact according to IEC 60947-4-1 • positively driven operation according to IEC 60947-5-1 • suitablify for use safety-related switching OFF  service life maximum  20 a  test wear-related service life necessary  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  1000 000  failure rate [FIT] with low demand rate according to SN 31920  ISO 13849  device type according to ISO 13849-1  overdimensioning according to IEC 61508-2  Electrical Safety	— solid or stranded	2x (0.5 2.5 mm²)
for AWG cables for auxiliary contacts  AWG number as coded connectable conductor cross section     for main contacts     for auxiliary contacts     for auxiliary contacts     for auxiliary contacts     for auxiliary contacts  Safety related data  product function     mirror contact according to IEC 60947-4-1     positively driven operation according to IEC 60947-5-1     positively driven operation according to IEC 60947-5-1     ves suitability for use safety-related switching OFF     yes service life maximum     20 a  test wear-related service life necessary     Yes  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     ISO 13849  device type according to ISO 13849-1     overdimensioning according to ISO 13849-2 necessary     IEC 61508  safety device type according to IEC 61508-2     Type A  Electrical Safety	<ul> <li>finely stranded with core end processing</li> </ul>	2x (0.5 1.5 mm²)
for AWG cables for auxiliary contacts  AWG number as coded connectable conductor cross section     for main contacts     for auxiliary contacts     for auxiliary contacts     for auxiliary contacts     for auxiliary contacts  Safety related data  product function     mirror contact according to IEC 60947-4-1     positively driven operation according to IEC 60947-5-1     positively driven operation according to IEC 60947-5-1     ves suitability for use safety-related switching OFF     yes service life maximum     20 a  test wear-related service life necessary     Yes  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     ISO 13849  device type according to ISO 13849-1     overdimensioning according to ISO 13849-2 necessary     IEC 61508  safety device type according to IEC 61508-2     Type A  Electrical Safety	<ul> <li>finely stranded without core end processing</li> </ul>	2x (0.5 2.5 mm²)
AWG number as coded connectable conductor cross section  • for main contacts • for auxiliary contacts 20 14  Safety related data  product function • mirror contact according to IEC 60947-4-1 • positively driven operation according to IEC 60947-5-1 • suitable for safety function  • suitable for safety function  • suitability for use safety-related switching OFF  yes service life maximum 20 a  test wear-related service life necessary  yes  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 1000 000  failure rate [FiT] with low demand rate according to SN 31920  failure rate [FiT] with low demand rate according to SN 31920  ISO 13849  device type according to ISO 13849-1 overdimensioning according to ISO 13849-2 necessary  Yes  IEC 61508  safety device type according to IEC 61508-2 Type A  Electrical Safety	<ul> <li>for AWG cables for auxiliary contacts</li> </ul>	2x (20 16)
• for main contacts     • for auxiliary contacts 20 14  Safety related data  product function     • mirror contact according to IEC 60947-4-1     • positively driven operation according to IEC 60947-5-1     • suitable for safety function     • suitablity for use safety-related switching OFF     service life maximum     20 a  test wear-related service life necessary     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     1000 000  failure rate [FIT] with low demand rate according to SN 31920  ISO 13849  device type according to ISO 13849-1     overdimensioning according to ISO 13849-2 necessary  Fixed the service of the s	AWG number as coded connectable conductor cross	
• for auxiliary contacts  Safety related data  product function  • mirror contact according to IEC 60947-4-1  • positively driven operation according to IEC 60947-5-1  • suitable for safety function  suitability for use safety-related switching OFF  service life maximum  20 a  test wear-related service life necessary  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	section	
Safety related data  product function  • mirror contact according to IEC 60947-4-1  • positively driven operation according to IEC 60947-5-1  • positively driven operation according to IEC 60947-5-1  • suitable for safety function  suitability for use safety-related switching OFF  yes  service life maximum  20 a  test wear-related service life necessary  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  ISO 13849  device type according to ISO 13849-1  overdimensioning according to ISO 13849-2 necessary  IEC 61508  safety device type according to IEC 61508-2  Fyes  Type A  Electrical Safety	• for main contacts	10 2
product function  • mirror contact according to IEC 60947-4-1  • positively driven operation according to IEC 60947-5-1  • positively driven operation according to IEC 60947-5-1  • suitability for use safety-related switching OFF  service life maximum  20 a  test wear-related service life necessary  proportion of dangerous failures  • with low demand rate according to SN 31920  • with high demand rate according to SN 31920  1000 000  failure rate [FIT] with low demand rate according to SN 31920  ISO 13849  device type according to ISO 13849-1  overdimensioning according to ISO 13849-2 necessary  IEC 61508  safety device type according to IEC 61508-2  Type A  Electrical Safety	for auxiliary contacts	20 14
mirror contact according to IEC 60947-4-1     positively driven operation according to IEC 60947-5-1     positively driven operation according to IEC 60947-5-1     No     suitable for safety function     yes  suitability for use safety-related switching OFF     yes  service life maximum     20 a  test wear-related service life necessary     yes  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  B10 value with high demand rate according to SN 31920  failure rate [FIT] with low demand rate according to SN 31920  ISO 13849  device type according to ISO 13849-1  overdimensioning according to ISO 13849-2 necessary  IEC 61508  safety device type according to IEC 61508-2  Type A  Electrical Safety	Safety related data	
positively driven operation according to IEC 60947-5-1     suitable for safety function     suitability for use safety-related switching OFF     service life maximum     20 a     test wear-related service life necessary     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     B10 value with high demand rate according to SN 31920     IsO 13849     device type according to ISO 13849-1     overdimensioning according to ISO 13849-2 necessary     IEC 61508     safety device type according to IEC 61508-2     Electrical Safety	product function	
suitable for safety function     suitability for use safety-related switching OFF     service life maximum     20 a     test wear-related service life necessary     proportion of dangerous failures     • with low demand rate according to SN 31920     • with high demand rate according to SN 31920     73 %  B10 value with high demand rate according to SN 31920     1000 000 failure rate [FIT] with low demand rate according to SN 31920     ISO 13849 device type according to ISO 13849-1     overdimensioning according to ISO 13849-2 necessary     IEC 61508 safety device type according to IEC 61508-2     Type A Electrical Safety	<ul> <li>mirror contact according to IEC 60947-4-1</li> </ul>	Yes
suitability for use safety-related switching OFF  service life maximum  test wear-related service life necessary  proportion of dangerous failures  • with low demand rate according to SN 31920  • with high demand rate according to SN 31920  B10 value with high demand rate according to SN 31920  failure rate [FIT] with low demand rate according to SN 31920  ISO 13849  device type according to ISO 13849-1  overdimensioning according to ISO 13849-2 necessary  IEC 61508  safety device type according to IEC 61508-2  Type A  Electrical Safety	<ul> <li>positively driven operation according to IEC 60947-5-1</li> </ul>	No
suitability for use safety-related switching OFF  service life maximum  test wear-related service life necessary  proportion of dangerous failures  • with low demand rate according to SN 31920  • with high demand rate according to SN 31920  B10 value with high demand rate according to SN 31920  failure rate [FIT] with low demand rate according to SN 31920  ISO 13849  device type according to ISO 13849-1  overdimensioning according to ISO 13849-2 necessary  IEC 61508  safety device type according to IEC 61508-2  Type A  Electrical Safety	suitable for safety function	Yes
service life maximum  test wear-related service life necessary  proportion of dangerous failures  with low demand rate according to SN 31920  with high demand rate according to SN 31920  B10 value with high demand rate according to SN 31920  failure rate [FIT] with low demand rate according to SN 31920  ISO 13849  device type according to ISO 13849-1  overdimensioning according to ISO 13849-2 necessary  IEC 61508  safety device type according to IEC 61508-2  Type A  Electrical Safety	·	Yes
proportion of dangerous failures  • with low demand rate according to SN 31920  • with high demand rate according to SN 31920  B10 value with high demand rate according to SN 31920  failure rate [FIT] with low demand rate according to SN 31920  ISO 13849  device type according to ISO 13849-1  overdimensioning according to ISO 13849-2 necessary  IEC 61508  safety device type according to IEC 61508-2  Type A  Electrical Safety		20 a
proportion of dangerous failures  • with low demand rate according to SN 31920  • with high demand rate according to SN 31920  B10 value with high demand rate according to SN 31920  failure rate [FIT] with low demand rate according to SN 31920  ISO 13849  device type according to ISO 13849-1  overdimensioning according to ISO 13849-2 necessary  IEC 61508  safety device type according to IEC 61508-2  Type A  Electrical Safety	test wear-related service life necessary	Yes
<ul> <li>with low demand rate according to SN 31920</li> <li>with high demand rate according to SN 31920</li> <li>B10 value with high demand rate according to SN 31920</li> <li>failure rate [FIT] with low demand rate according to SN 31920</li> <li>ISO 13849</li> <li>device type according to ISO 13849-1</li> <li>overdimensioning according to ISO 13849-2 necessary</li> <li>IEC 61508</li> <li>safety device type according to IEC 61508-2</li> <li>Type A</li> </ul>		
● with high demand rate according to SN 31920  B10 value with high demand rate according to SN 31920  failure rate [FIT] with low demand rate according to SN 31920  ISO 13849  device type according to ISO 13849-1 3  overdimensioning according to ISO 13849-2 necessary Yes  IEC 61508  safety device type according to IEC 61508-2 Type A  Electrical Safety		40 %
B10 value with high demand rate according to SN 31920  failure rate [FIT] with low demand rate according to SN 100 FIT  31920  ISO 13849  device type according to ISO 13849-1 3  overdimensioning according to ISO 13849-2 necessary Yes  IEC 61508  safety device type according to IEC 61508-2 Type A  Electrical Safety	-	
failure rate [FIT] with low demand rate according to SN 31920  ISO 13849 device type according to ISO 13849-1 3 overdimensioning according to ISO 13849-2 necessary Yes IEC 61508 safety device type according to IEC 61508-2 Type A Electrical Safety		
device type according to ISO 13849-1 3 overdimensioning according to ISO 13849-2 necessary Yes IEC 61508 safety device type according to IEC 61508-2 Type A Electrical Safety	failure rate [FIT] with low demand rate according to SN	
device type according to ISO 13849-1  overdimensioning according to ISO 13849-2 necessary  IEC 61508  safety device type according to IEC 61508-2  Electrical Safety		
overdimensioning according to ISO 13849-2 necessary  IEC 61508  safety device type according to IEC 61508-2  Electrical Safety		2
IEC 61508 safety device type according to IEC 61508-2 Electrical Safety		
Safety device type according to IEC 61508-2  Electrical Safety		res
Electrical Safety		-
·		Type A
protection class IP on the front according to IEC 60529 IP20		IDOO
	protection class IP on the front according to IEC 60529	IP20

### **Approvals Certificates**

#### **General Product Approval**





Confirmation





<u>KC</u>

General Product Approval

EMV

**Functional Saftey** 

**Test Certificates** 

Marine / Shipping





Type Examination Certificate

Special Test Certificate

Type Test Certificates/Test Report



Marine / Shipping









Confirmation

other

Special Test Certificate

Railway

**Dangerous goods** 

**Environment** 

**Transport Information** 



Environmental Confirmations

## Further information

Information on the packaging

https://support.industry.siemens.com/cs/ww/en/view/109813875

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=3RT2045-3NB30-0CC0

Cax online generator

 $\underline{\text{http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en\&mlfb=3RT2045-3NB30-0CC0}$ 

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT2045-3NB30-0CC0

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

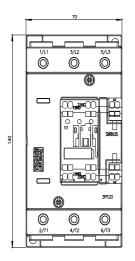
http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RT2045-3NB30-0CC0&lang=en

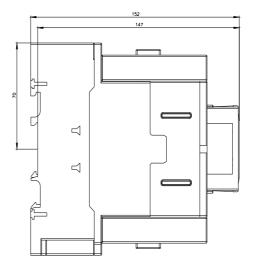
Characteristic: Tripping characteristics, I²t, Let-through current

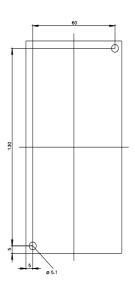
https://support.industry.siemens.com/cs/ww/en/ps/3RT2045-3NB30-0CC0/char

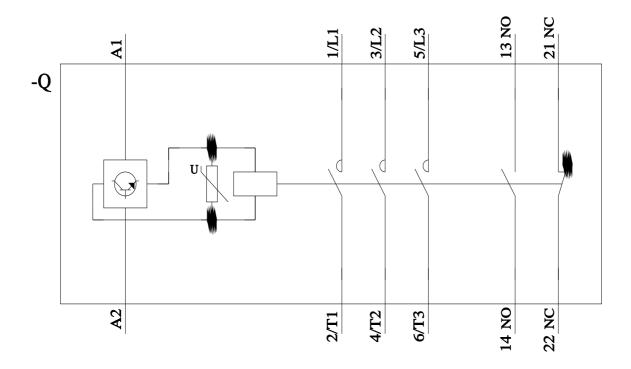
Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2045-3NB30-0CC0&objecttype=14&gridview=view1









last modified:

