## **SIEMENS**

## **Data sheet**

3RT2047-1NB30-0CC0



power contactor, AC-3e/AC-3, 110 A, 55 kW / 400 V, 3-pole, 20-33 V AC/DC, 50/60 Hz, with integrated varistor, auxiliary contacts: 1 NO + 1 NC, screw 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>	23.7 W
<ul> <li>at AC in hot operating state per pole</li> </ul>	7.9 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)	
of contactor typical	10 000 000
<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>	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	1.853 kg
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	95 %
maximum	
Environmental footprint	V
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	
<ul> <li>at AC-3 rated value maximum</li> </ul>	690 V
at AC-3e rated value maximum	1 000 V
operational current	
<ul> <li>at AC-1 at 400 V at ambient temperature 40 °C rated value</li> </ul>	130 A
• at AC-1	
— up to 690 V at ambient temperature 40 °C rated value	130 A
— up to 690 V at ambient temperature 60 °C rated value	110 A
• at AC-3	440.4
— at 400 V rated value	110 A
— at 500 V rated value	110 A
— at 690 V rated value	98 A
— at 1000 V rated value	30 A
• at AC-3e	
— at 400 V rated value	110 A
— at 500 V rated value	110 A
— at 690 V rated value	98 A
— at 1000 V rated value	30 A
<ul> <li>at AC-4 at 400 V rated value</li> </ul>	97 A
● at AC-5a up to 690 V rated value	120 A
<ul> <li>at AC-5b up to 400 V rated value</li> </ul>	110 A
• at AC-6a	
<ul> <li>up to 230 V for current peak value n=20 rated value</li> </ul>	98 A
<ul> <li>up to 400 V for current peak value n=20 rated value</li> </ul>	98 A
<ul> <li>up to 500 V for current peak value n=20 rated value</li> </ul>	98 A
<ul><li>— up to 690 V for current peak value n=20 rated value</li><li>at AC-6a</li></ul>	98 A
— up to 230 V for current peak value n=30 rated value	65.3 A
— up to 400 V for current peak value n=30 rated value	65.3 A
— up to 500 V for current peak value n=30 rated value	65.3 A
— up to 690 V for current peak value n=30 rated value	65.3 A
minimum cross-section in main circuit at maximum AC-1 rated value	50 mm <sup>2</sup>
operational current for approx. 200000 operating cycles at AC-4	
• at 400 V rated value	46 A
at 690 V rated value	36 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	

104)/ 1 1 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	10 A
— at 440 V rated value	1.8 A
— at 600 V rated value	1 A
with 3 current paths in series at DC-1	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	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 A
— 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	
— 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	EE IAM
at AC-2 at 400 V rated value	55 kW
• at AC-3	00.14W
— at 230 V rated value	30 kW
— at 400 V rated value	55 kW
— at 500 V rated value	75 kW
— at 690 V rated value	90 kW
— at 1000 V rated value	37 kW
	20 MM
— at 230 V rated value — at 400 V rated value	30 kW 55 kW
— at 500 V rated value	75 kW
— at 690 V rated value	90 kW
— at 1000 V rated value	37 kW
operating power for approx. 200000 operating cycles at AC-	J/ KVV
4	
• at 400 V rated value	24.3 kW
at 690 V rated value	32.9 kW
operating apparent power at AC-6a	
up to 230 V for current peak value n=20 rated value	39 kVA
• up to 400 V for current peak value n=20 rated value	67 kVA
• up to 500 V for current peak value n=20 rated value	84 kVA
• up to 690 V for current peak value n=20 rated value	117 kVA
operating apparent power at AC-6a	
up to 230 V for current peak value n=30 rated value	26 kVA
• up to 400 V for current peak value n=30 rated value	45.2 kVA
• up to 500 V for current peak value n=30 rated value	56.5 kVA

	<b>-</b> 0.1144
up to 690 V for current peak value n=30 rated value	78 kVA
short-time withstand current in cold operating state up to 40 °C	
Ilmited to 1 s switching at zero current maximum	1 960 A; Use minimum cross-section acc. to AC-1 rated value
-	
limited to 5 s switching at zero current maximum     limited to 10 s switching at zero current maximum	1 502 A; Use minimum cross-section acc. to AC-1 rated value
limited to 10 s switching at zero current maximum	1 095 A; Use minimum cross-section acc. to AC-1 rated value
Iimited to 30 s switching at zero current maximum	707 A; Use minimum cross-section acc. to AC-1 rated value
limited to 60 s switching at zero current maximum	562 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	
• at AC-1 maximum	900 1/h
• at AC-2 maximum	350 1/h
• at AC-3 maximum	850 1/h
at AC-3e maximum	850 1/h
at AC-4 maximum	200 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	J
• at 50 Hz	3.1 VA
• at 60 Hz	3.1 VA 3.1 VA
	0.1 VA
inductive power factor with the holding power of the coil	0.05
• 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
closing delay	F0 70
• at AC	50 70 ms
• at DC	50 70 ms

opening delay	
• at AC	38 57 ms
• at DC	38 57 ms
arcing time	10 20 ms
control version of the switch operating mechanism	Standard A1 - A2, optionally via function module
Auxiliary circuit	
number of NC contacts for auxiliary contacts instantaneous contact	1
number of NO contacts for auxiliary contacts instantaneous contact	1
operational current at AC-12 maximum	10 A
operational current at AC-15	
• at 230 V rated value	6 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 DC-12	
• at 24 V rated value	10 A
• at 48 V rated value	6 A
• at 60 V rated value	6 A
• at 110 V rated value	3 A
• at 125 V rated value	2 A
• at 220 V rated value	1 A
at 600 V rated value	0.15 A
operational current at DC-13	
• at 24 V rated value	10 A
• at 48 V rated value	2 A
• at 60 V rated value	2 A
• at 110 V rated value	1 A
• at 125 V rated value	0.9 A
• at 220 V rated value	0.3 A
at 600 V rated value	0.1 A
contact reliability of auxiliary contacts	1 faulty switching per 100 million (17 V, 1 mA)
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
• at 480 V rated value	96 A
at 600 V rated value	99 A
yielded mechanical performance [hp]	
<ul> <li>for single-phase AC motor</li> </ul>	
— at 110/120 V rated value	10 hp
— at 230 V rated value	20 hp
• for 3-phase AC motor	
— at 200/208 V rated value	30 hp
— at 220/230 V rated value	40 hp
— at 460/480 V rated value	75 hp
— at 575/600 V rated value	100 hp
contact rating of auxiliary contacts according to UL	A600 / P600
Short-circuit protection	
design of the fuse link	
<ul> <li>for short-circuit protection of the main circuit</li> </ul>	
— with type of coordination 1 required	gG: 250 A (690 V, 100 kA), aM: 160 A (690 V, 100 kA), BS88: 200 A (415 V, 80 kA)
<ul> <li>— with type of assignment 2 required</li> </ul>	gG: 200A (690V,100kA), aM: 100A (690V,100kA), BS88: 160A (415V,80kA)
for short-circuit protection of the auxiliary switch required	gG: 10 A (500 V, 1 kA)
Installation/ mounting/ dimensions	
mounting position	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- $22.5^\circ$ on vertical mounting surface
fastening method	screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715
height	140 mm
width	70 mm
depth	152 mm
required spacing	

* with side-by-side mounting	a with aids by aids mounting	
- upwards	-	20 mm
- downwards		
at the side  - for grounded parts  forwards  upwards  of the side  downwards  forwards  downwards  downwards  downwards  downwards  downwards  downwards  downwards  downwards  forward ferminals   forward ferminals  forward ferminals  for auxiliary and control circuit  for auxiliary contacts  forward scales for main forward for scales for sauxiliary contacts  for forward scales for forward scales conductor or	•	
- for grounded parts - forwards - upwards - downwards - for live parts - forwards - upwards - for live parts - forwards - downwards - for live parts - forwards - downwards - for men contacts - downwards - for men contacts - for parts - at the side - forwards - for men contacts - for parts - f		
frowards		O min
- upwards		00
- al the side - downwards 10 mm 10 m		
• for live parts - forwards - for live parts - upwards - upwards - downwards - downwards - downwards - downwards - at the side - downwards - at the side - of undifficult - at the side - of undifficult - of undi	·	
- for live parts - forwards - upwards - upwards - downwards - at the side - to mm - at the side - to mm - the side		
forwards		10 mm
upwards	•	
Connections Torminals  Type of electrical connection  • for main current circuit  • for auxiliary and control circuit  • of magnet coil  Yop of connectable conductor cross-sections  • for main contacts  - finely stranded with core end processing  • solid  • stranded  • stranded  • stranded with core end processing  • solid or stranded  • finely stranded with core end processing  • for auxiliary contacts  • solid or stranded  • finely stranded with core end processing  • for salvice conductor cross-section for main contacts  • solid or stranded  • solid or stranded  • finely stranded with core end processing  • for auxiliary contacts  • finely stranded with core end processing  • for auxiliary contacts  • for own contacts  • for for main contacts  • for for main contacts  • for auxiliary contacts  • for main contacts  • for auxiliary contacts  • for main contacts  • for auxiliary contacts  • for auxiliary contacts  • for auxiliary contacts  • for main contacts  • for auxiliary con	·	
Some deterrial connection  of main current circuit  of or auxiliary and control circuit  of main contacts  of magnet coil  Screw-type terminals  of main contacts  of main contacts  of now of connectable conductor cross-sections  of now of conductor cross-sections  of AWG cables for main contacts  osolid  ostranded  ostranded  ostranded  ostranded  ostranded  ostranded  ostranded  of inely stranded with core end processing  ostranded  ostrande		
type of electrical connection  • for main current circuit  • at contactor for auxiliary contacts  • at contactor for auxiliary contacts  • of magnet coil  type of connectable conductor cross-sections  • for main contacts  • for AWG cables for main contacts  • solid  • stranded with core end processing  • for AWG cables for main contacts  • solid or stranded  • finely stranded with core end processing  • for tarnout contacts  • solid or stranded  • finely stranded with core end processing  connectable conductor cross-section for main contacts  • solid or 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-sections  • for auxiliary contacts  • solid or stranded  • finely stranded with core end processing  • for solid or stranded  • finely stranded with core end processing  • for solid or stranded  • finely stranded with core end processing  • for solid or stranded  • finely stranded with core end processing  • for for connectable conductor cross-sections  • for auxiliary contacts  • solid or stranded  • finely stranded with core end processing  • for AWG cables for auxiliary contacts  • for finely contacts  • for finely contacts  • for or main contacts  • for or main contacts  • for finely stranded with core end processing  • for the general finely of the contactor cross  • for successing to the contact according to EC 60947-4-1  • positively driven operation according to EC 60947-5-1  • subtable for safety function  • with low demand rate according to SN 31920  • with high demand rate according to SN 31920  • wit		10 mm
For main current circuit   Screw-type terminals   Screw-type term		
of rauxillary and control circuit     of magnet coil     Screw-type terminals     of magnet coil     Screw-type terminals     Screw-type term		
e at contactor for auxiliary contacts of magnet coil  type of connectable conductor cross-sections of main contacts — finely stranded with core end processing of KNVG cables for main contacts  e solid e stranded of mely stranded with core end processing of stranded of s		screw-type terminals
type of connectable conductor cross-sections  for main contacts  finely stranded with core end processing  for AWC cables for main contacts  solid  stranded  finely stranded with core end processing  stranded  finely stranded with core end processing  connectable conductor cross-section for main contacts  solid  stranded  finely stranded with core end processing  connectable conductor cross-section for auxillary contacts  solid or stranded  finely stranded with core end processing  connectable conductor cross-section for auxillary contacts  solid or stranded  finely stranded with core end processing  for auxillary contacts  solid or stranded  finely stranded with core end processing  for auxillary contacts  solid or stranded  for auxillary contacts  solid or stranded  for auxillary contacts  solid or stranded with core end processing  for auxillary contacts  solid or stranded with core end processing  for auxillary contacts  solid or stranded with core end processing  for auxillary contacts  2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)  2x (	<ul> <li>for auxiliary and control circuit</li> </ul>	screw-type terminals
type of connectable conductor cross-sections  • for main contacts  — finely stranded with core end processing  • for AWG cables for main contacts  2x (10 1/0), 1x (10 2)  connectable conductor cross-section for main contacts  • solid  • stranded  • finely stranded with core end processing  connectable conductor cross-section for auxillary contacts  • solid or stranded  • finely stranded with core end processing  connectable conductor cross-section for auxillary contacts  • solid or stranded  • finely stranded with core end processing  type of connectable conductor cross-sections  • for auxiliary contacts  — solid or stranded  — finely stranded with core end processing  • for AWG cables for auxiliary contacts  — solid or stranded  — finely stranded with core end processing  • for AWG cables for auxiliary contacts  2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)  • for AWG cables for auxiliary contacts  2x (20 16), 2x (18 14)  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  • with low demand rate according to SN 31920  • with loy demand rate according to SN 31920  • with liph demand rate according to SN 31920  • with liph demand rate according to SN 31920  • with liph demand rate according to SN 31920  • with liph demand rate according to SN 31920  • with liph demand rate according to SN 31920  • with liph demand rate according to SN 31920  • with liph demand rate according to SN 31920  • with liph demand rate according to SN 31920  • with liph demand rate according to SN 31920  • with liph demand rate according to SN 31920  • with liph demand rate according to SN 31920  • with liph demand rate according to SN 31920  • with liph demand rate according to SN 31920  • with liph demand rate according to SN 31920  • with liph demand rate according to SN 31920  • with li	<ul> <li>at contactor for auxiliary contacts</li> </ul>	Screw-type terminals
• for main contacts  — finely stranded with core end processing  • for AWG cables for main contacts  2x (1010), 1x (102)  2.5 16 mm²  6 70 mm²  2.5 16 mm²  6 70 mm²  2.5 50 mm²  2.	of magnet coil	Screw-type terminals
- finely stranded with core end processing  • for AWG cables for main contacts  • solid  • stranded  • finely stranded with core end processing  • finely stranded with core end processing  • 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-sections  • finely stranded with core end processing  type of connectable conductor cross-sections  • for auxiliary contacts  - solid or stranded  - finely stranded with core end processing  • for AWG cables for auxiliary contacts  AWG number as coded connectable conductor cross-sections  • for auxiliary contacts  - for 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  10 2  20 15 mm²), 2x (0.75 2.5 mm²)  2x (20 1.5 mm²), 2x (0.75 2.5 mm²)  2x (20 16), 2x (18 14)   Safety related data  product function  • mirror contact according to IEC 60947-4-1  • positively driven operation according to IEC 60947-5-1  • suitablity for use safety-function  • mirror contact according to IEC 60947-5-1  • suitablity for use safety-function  • with low demand rate according to SN 31920  • with liph demand rate according to SN 31920  • with high demand rate according to SN 31920  • with high demand rate according to SN 31920  • with high demand rate according to SN 31920  • with high demand rate according to SN 31920  • with high demand rate according to SN 31920  • with high demand rate according to SN 31920  • with high demand rate according to SN 31920  • with high demand rate according to SN 31920  • with high demand rate according to SN 31920  • with high demand rate according to SN 31920  • with high demand rate according to SN 31920  • with high demand rate according to SN 31920  • with liph demand rate according to SN 31920  • with liph demand rate according to SN 31920  • with liph	type of connectable conductor cross-sections	
• for AWG cables for main contacts  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  connectable conductor cross-section for auxiliary contacts  • solid or stranded  • finely stranded with core end processing  type of connectable conductor cross-sections  • for auxiliary contacts  - solid or stranded  — 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  2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)  2x (20 16), 2x (18 14)  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  • suitable 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  failure rate [FIT] with low demand rate according to SN 31920  failure rate [FIT] with low demand rate according to SN 31920  safety device type according to ISO 13849-1  overdimensioning according to ISO 13849-2 necessary  Figs.  Type A	• for main contacts	
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  connectable conductor cross-sections  • solid or stranded  • finely stranded with core end processing  type of connectable conductor cross-sections  • for auxiliary contacts  — solid or stranded  — finely stranded with core end processing  • for AWG cables for auxiliary contacts  AWG number as coded connectable conductor cross  • for auxiliary contacts  • for main contacts  • for main contacts  • for main contacts  • for main contacts  • positively driven operation according to IEC 60947-4-1  • positively driven operation according to IEC 60947-5-1  • with low demand rate according to SN 31920  • with low demand rate according to SN 31920  • with ligh demand rate according to SN 31920  • with high demand rate according to SN 31920  • with high demand rate according to SN 31920  • with high demand rate according to SN 31920  • With high demand rate according to SN 31920  • With high demand rate according to SN 31920  • With high demand rate according to SN 31920  • With high demand rate according to SN 31920  • With high demand rate according to SN 31920  • With high demand rate according to SN 31920  • With high demand rate according to SN 31920  • With high demand rate according to SN 31920  • With ligh demand rate according to SN 31920  • With high demand rate according to SN 31920  • With ligh demand rate according to SN 31920  • With ligh demand rate according to SN 31920  • With ligh demand rate according to SN 31920  • With ligh demand rate according to SN 31920  • With ligh demand rate according to SN 31920  • With ligh demand rate according to SN 31920  • With ligh demand rate according to SN	<ul> <li>finely stranded with core end processing</li> </ul>	2x (2.5 35 mm²), 1x (2.5 50 mm²)
solid     stranded     stold or stranded     stranded     stranded     stold or stranded     stranded vith core end processing     stor auxiliary contacts     solid or stranded     stranded vith core end processing     stranded vith core end proc	for AWG cables for main contacts	2x (10 1/0), 1x (10 2)
• stranded • finely stranded with core end processing connectable conductor cross-section for auxiliary contacts • solid or stranded • finely stranded with core end processing  type of connectable conductor cross-sections • 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 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 satisfact of auxiliary contacts  * for auxiliary contacts • for auxiliary contacts • for satisfact of auxiliary contacts  * for auxiliary contacts • for satisfact of auxiliary contacts  * for Auxiliary contacts  * fo	connectable conductor cross-section for main contacts	
• finely stranded with core end processing     connectable conductor cross-section for auxiliary contacts     • solid or stranded     • finely stranded with core end processing     very end connectable conductor cross-sections     • 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 AWG cables for auxiliary contacts     AWG number as coded connectable conductor cross section     • for main contacts     • for auxiliary contacts     • for section     • for auxiliary contacts     • for section     • 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     • with low demand rate according to SN 31920     • with low demand rate according to SN 31920     • with high demand rate according to SN 31920     • with high demand rate according to SN 31920     If all use with high demand rate according to SN 31920     If all use with high demand rate according to SN 31920     If all use the first with low demand rate according to SN 31920     If all use the first with low demand rate according to SN 31920     If all use the first with low demand rate according to SN 31920     If all use the first with low demand rate according to SN 31920     If all use with high demand rate according to SN 31920     If all use the first with low demand rate according to SN 31920     If all use with low demand rate according to SN 31920     If all use with low demand rate according to SN 31920     If all use with low demand rate according to SN 31920     If all use with low demand rate according to SN 31920     If all use with low demand rate according to SN 31920     If a	• solid	2.5 16 mm²
connectable conductor cross-section for auxiliary contacts  • solid or stranded  • finely stranded with core end processing  type of connectable conductor cross-sections  • for auxiliary contacts  — solid or stranded  — 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  2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)  2x (20 16), 2x (18 14)  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  yes  service Iffe maximum  20 a  test wear-related service Iffe necessary  yes  proportion of dangerous failures  • with low demand rate according to SN 31920  • with high demand rate according to SN 31920  1000 FIT  31920  ISO 13849  device type according to ISO 13849-1  overdimensioning according to IEC 61508-2  Type A	<ul><li>stranded</li></ul>	6 70 mm²
• solid or stranded     • finely stranded with core end processing     type of connectable conductor cross-sections     • for auxiliary contacts     — solid or stranded     — finely stranded with core end processing     • for AWG cables for auxiliary contacts  AWG number as coded connectable conductor cross section     • for main contacts     • for main contacts     • for auxiliary contacts     2x (20 15. mm²), 2x (0.75 2.5 mm²)     2x (20 16), 2x (18 14)  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     • suitablity for use safety-related switching OFF     Yes     service life maximum     20 a     test wear-related service life necessary     Yes     proportion of dangerous failures     • with loyd 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  ISO 13849  device type according to ISO 13849-1     overdimensioning according to IEC 61508-2     Type A	finely stranded with core end processing	2.5 50 mm²
• finely stranded with core end processing   0.5 2.5 mm²	connectable conductor cross-section for auxiliary contacts	
type of connectable conductor cross-sections  • for auxiliary contacts  — solid or stranded — finely stranded with core end processing 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)  • for AWG cables for auxiliary contacts  AWG number as coded connectable conductor cross section • for main contacts • 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 • 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 130 13049  device type according to ISO 13849-1 overdimensioning according to ISO 13849-2 necessary IFC 61508 safety device type according to IEC 61508-2  Type A  Type A  Type A  Type A	<ul> <li>solid or stranded</li> </ul>	0.5 2.5 mm²
• for auxiliary contacts  — solid or stranded — finely stranded with core end processing 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)  • 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 • suitable for safety function  • suitable for safety function  ves  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 failure rate [FIT] with low demand rate according to SN 31920  failure rate [FIT] with low demand rate according	finely stranded with core end processing	0.5 2.5 mm <sup>2</sup>
solid or stranded finely stranded with core end processing finely stranded with core end processing for AWG cables for auxiliary contacts for AWG cables for auxiliary contacts for main contacts for main contacts for main contacts for auxiliary contact	type of connectable conductor cross-sections	
- finely stranded with core end processing  • for AWG cables for auxiliary contacts  2x (20 16), 2x (18 14)  AWG number as coded connectable conductor cross section  • for main contacts • for auxiliary contacts  • for auxiliary contacts  • for auxiliary contacts  • for auxiliary 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 • 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  • 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	<ul> <li>for auxiliary contacts</li> </ul>	
for AWG cables for auxiliary contacts  AWG number as coded connectable conductor cross section      for main contacts     for auxiliary contacts      for auxiliary c	<ul> <li>solid or stranded</li> </ul>	2x (0.5 1.5 mm²), 2x (0.75 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 • suitablify 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 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	<ul> <li>finely stranded with core end processing</li> </ul>	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
e for main contacts for auxiliary contacts for auxiliary contacts  e for auxiliary contacts  20 14  Safety related data  product function e mirror contact according to IEC 60947-4-1 e positively driven operation according to IEC 60947-5-1 e suitable for safety function  yes  suitablity for use safety-related switching OFF yes service life maximum 20 a test wear-related service life necessary yes  proportion of dangerous failures e with low demand rate according to SN 31920 e 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 ISC 61508 safety device type according to IEC 61508-2  Type A	<ul> <li>for AWG cables for auxiliary contacts</li> </ul>	2x (20 16), 2x (18 14)
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     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     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		
• 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  • 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  IEC 61508  safety device type according to IEC 61508-2  Type A	section	
product function		
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 function  suitability for use safety-related switching OFF  yes  service life maximum  20 a  test wear-related service life necessary  yres  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  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		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     suitable for safety function     suitability for use safety-related switching OFF     yes     service life maximum     20 a     test wear-related service life necessary     yres     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     IEC 61508     safety device type according to IEC 61508-2  Type A	Safety related data	
positively driven operation according to IEC 60947-5-1     suitable for safety function     yes  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  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	product function	
suitable for safety function     suitability for use safety-related switching OFF     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	<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	<ul> <li>positively driven operation according to IEC 60947-5-1</li> </ul>	No
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	suitable for safety function	Yes
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	suitability for use safety-related switching OFF	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	service life maximum	20 a
<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>	test wear-related service life necessary	Yes
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	proportion of dangerous failures	
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	<ul> <li>with low demand rate according to SN 31920</li> </ul>	40 %
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	with high demand rate according to SN 31920	73 %
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	B10 value with high demand rate according to SN 31920	1 000 000
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		100 FIT
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	ISO 13849	
overdimensioning according to ISO 13849-2 necessary  IEC 61508  safety device type according to IEC 61508-2  Type A		3
IEC 61508 safety device type according to IEC 61508-2 Type A		
	IEC 61508	
Electrical Safety		Туре А
	Electrical Safety	

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

Approvals Certificates

## **General Product Approval**







Confirmation



<u>KC</u>

General Product Approval

EMV

**Functional Saftey** 

**Test Certificates** 

Marine / Shipping





Type Examination Certificate

Type Test Certificates/Test Report

Special Test Certificate



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=3RT2047-1NB30-0CC0

Cax online generator

 $\underline{\text{http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en\&mlfb=3RT2047-1NB30-0CC0}$ 

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT2047-1NB30-0CC0

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

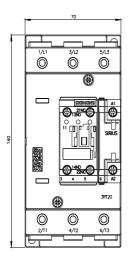
http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RT2047-1NB30-0CC0&lang=en

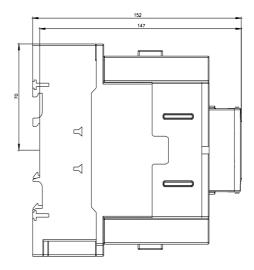
Characteristic: Tripping characteristics, I2t, Let-through current

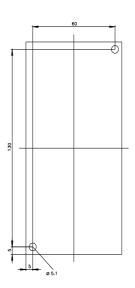
https://support.industry.siemens.com/cs/ww/en/ps/3RT2047-1NB30-0CC0/char

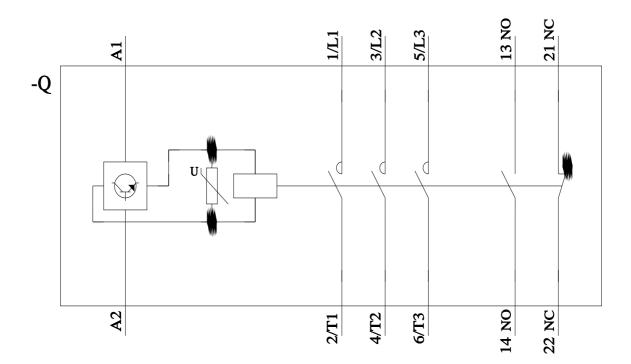
Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2047-1NB30-0CC0&objecttype=14&gridview=view1









last modified:

