## SIEMENS

## Data sheet

## 3RT2046-1AK60-0UA0



power contactor, AC-3 95 A, 45 kW / 400 V 1 NO + 1 NC, 110 V AC, 50 Hz Hz 120 V/60 Hz 3-pole, 3 NO, Size S3 screw terminal

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>	No
auxiliary switch	Yes
power loss [W] for rated value of the current at AC in hot operating state	19.8 W
• per pole	6.6 W
power loss [W] for rated value of the current without load current share typical	22 W
insulation voltage	
<ul> <li>of main circuit with degree of pollution 3 rated value</li> </ul>	1 000 V
<ul> <li>of auxiliary circuit with degree of pollution 3 rated value</li> </ul>	690 V
surge voltage resistance	
<ul> <li>of main circuit rated value</li> </ul>	8 kV
<ul> <li>of auxiliary circuit rated value</li> </ul>	6 kV
maximum permissible voltage for safe isolation between coil and main contacts acc. to EN 60947-1	690 V
shock resistance at rectangular impulse	
• at AC	6.7 g / 5 ms, 4.0 g / 10 ms
shock resistance with sine pulse	
• at AC	10.6 g / 5 ms, 6.3 g / 10 ms
mechanical service life (switching 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
<ul> <li>of the contactor with added auxiliary switch block typical</li> </ul>	10 000 000
reference code acc. to IEC 81346-2	Q
Substance Prohibitance (Date)	01.03.2017
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 acc. to IEC 60068-2-30	95 %

maximum	
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	1 000 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	00.4
— at 400 V rated value	90 A 95 A
— at 500 V rated value	
— at 690 V rated value	78 A
<ul> <li>at 1000 V rated value</li> <li>at AC-3e</li> </ul>	30 A
	95 A
— at 400 V rated value	95 A 95 A
— at 500 V rated value — at 690 V rated value	95 A 78 A
	30 A
<ul> <li>— at 1000 V rated value</li> <li>at AC-4 at 400 V rated value</li> </ul>	30 A 80 A
<ul> <li>at AC-5a up to 690 V rated value</li> </ul>	114 A
<ul> <li>at AC-5b up to 400 V rated value</li> <li>at AC-5b up to 400 V rated value</li> </ul>	95 A
• at AC-6a	33 A
<ul> <li>at AC-ba</li> <li>up to 230 V for current peak value n=20 rated value</li> </ul>	84.4 A
<ul> <li>— up to 400 V for current peak value n=20 rated value</li> </ul>	84.4 A
— up to 500 V for current peak value n=20 rated value	84.4 A
— up to 690 V for current peak value n=20 rated value	58 A
• at AC-6a	50.0.4
— up to 230 V for current peak value n=30 rated value	56.3 A
— up to 400 V for current peak value n=30 rated value — up to 500 V for current peak value n=30 rated	56.3 A 56.3 A
value — up to 690 V for current peak value n=30 rated	56.3 A
value	50 mm <sup>2</sup>
rated value operational current for approx. 200000 operating	
cycles at AC-4	
at 400 V rated value	42 A
at 690 V rated value	30 A
operational current	
at 1 current path at DC-1	400 A
- at 24 V rated value	100 A 9 A
— at 110 V rated value	9 A 2 A
— at 220 V rated value	
— at 440 V rated value — at 600 V rated value	0.6 A 0.4 A
	U.4 A
<ul> <li>with 2 current paths in series at DC-1</li> <li>— at 24 V rated value</li> </ul>	100 A
— at 24 V rated value — at 110 V rated value	100 A 100 A
— at 220 V rated value	10 A

— at 440 V rated value	1.8 A
— at 600 V rated value	1 A
<ul> <li>with 3 current paths in series at DC-1</li> </ul>	
— at 24 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
<ul> <li>at 1 current path at DC-3 at DC-5</li> </ul>	
— at 24 V rated value	40 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
<ul> <li>with 2 current paths in series at DC-3 at DC-5</li> </ul>	
— at 24 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
<ul> <li>with 3 current paths in series at DC-3 at DC-5</li> </ul>	
— at 24 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	
• at AC-2 at 400 V rated value	45 kW
• at AC-3	
— at 230 V rated value	22 kW
— at 400 V rated value	45 kW
— at 500 V rated value	55 kW
— at 690 V rated value	75 kW
— at 1000 V rated value	37 kW
• at AC-3e	
— at 1000 V rated value	37 kW
— at 230 V rated value	22 kW
— at 400 V rated value	45 kW
— at 500 V rated value	55 kW
— at 690 V rated value	75 kW
operating power for approx. 200000 operating cycles at AC-4	
at 400 V rated value	22 kW
at 690 V rated value	27.4 kW
operating apparent power at AC-6a	
• up to 230 V for current peak value n=20 rated value	33 kVA
• up to 400 V for current peak value n=20 rated value	58 kVA
• up to 500 V for current peak value n=20 rated value	73 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	22.4 kVA
• up to 400 V for current peak value n=30 rated value	39 kVA
• up to 500 V for current peak value n=30 rated value	48.7 kVA
• up to 690 V for current peak value n=30 rated value	67.3 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>	1 725 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 5 s switching at zero current maximum</li> </ul>	1 297 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 10 s switching at zero current maximum</li> </ul>	946 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 30 s switching at zero current maximum</li> </ul>	610 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 60 s switching at zero current maximum</li> </ul>	486 A; Use minimum cross-section acc. to AC-1 rated value

• at AC       5 000 1/h         operating frequency       900 1/h         • at AC-1 maximum       900 1/h         • at AC-2 maximum       350 1/h         • at AC-3 maximum       850 1/h         • at AC-4 maximum       850 1/h         • at AC-4 maximum       250 1/h         Control circuit/ Control       110 V         type of voltage of the control supply voltage       AC         control supply voltage at AC       110 V         • at 60 Hz rated value       110 V         • at 60 Hz rated value       120 V         operating range factor control supply voltage rated       0.8 1.1         • at 60 Hz       0.8 1.1         apparent pick-up power of magnet coil at AC       0.8 1.1         • at 60 Hz       0.8 1.1         apparent pick-up power of magnet coil at AC       0.8 1.1         • at 60 Hz       0.8 1.1         apparent holding power of magnet coil at AC       0.62         • at 60 Hz       0.22 VA         • at 60 Hz       0.36         • at 60 Hz       0.36         • at 60 Hz       0.36	<ul> <li>at AC</li> <li>rating frequency</li> <li>at AC-1 maximum</li> <li>at AC-2 maximum</li> <li>at AC-2 maximum</li> <li>at AC-3 maximum</li> <li>at AC-3 maximum</li> <li>at AC-3 maximum</li> <li>at AC-4 maximum</li> <li>at AC-4 maximum</li> <li>rol circuit/ Control</li> <li>e of voltage of the control supply voltage</li> <li>trol supply voltage at AC</li> <li>at 50 Hz rated value</li> <li>at 60 Hz rated value</li> <li>rating range factor control supply voltage rated</li> <li>re of magnet coil at AC</li> <li>at 50 Hz</li> </ul>	900 1/h 350 1/h 850 1/h 250 1/h 250 1/h AC 110 V
operating frequency900 1/h• at AC-1 maximum900 1/h• at AC-2 maximum350 1/h• at AC-3 maximum850 1/h• at AC-3 maximum850 1/h• at AC-4 maximum250 1/hControl circuit/ Control250 1/hControl supply voltage at ACAC• at 50 Hz rated value110 V• at 60 Hz rated value120 Voperating range factor control supply voltage rated0.8 1.1• at 60 Hz0.8 1.1• at 60 Hz326 VA• at 60 Hz326 VA• at 60 Hz0.62• at 50 Hz0.55• at 60 Hz0.55• at 60 Hz22 VA• at 60 Hz22 VA• at 60 Hz22 VA• at 60 Hz0.36• at 60 Hz0.36• at 60 Hz0.36• at 60 Hz0.4• at 60 Hz0.36• at 60 Hz0.36• at 60 Hz0.36• at 60 Hz0.36• at 60 Hz0.4• at 60 Hz0	rating frequency         • at AC-1 maximum         • at AC-2 maximum         • at AC-3 maximum         • at AC-3 maximum         • at AC-3 maximum         • at AC-3 maximum         • at AC-4 maximum         rol circuit/ Control         • at S0 Hz rated value         • at 60 Hz rated value         rating range factor control supply voltage rated         re of magnet coil at AC         • at 50 Hz	900 1/h 350 1/h 850 1/h 250 1/h 250 1/h AC 110 V
• at AC-1 maximum900 1/h• at AC-2 maximum350 1/h• at AC-3 maximum850 1/h• at AC-3 maximum850 1/h• at AC-4 maximum250 1/hControl circult/ Controltype of voltage of the control supply voltageACcontrol supply voltage at AC10 V• at 50 Hz rated value110 V• at 60 Hz rated value120 Voperating range factor control supply voltage rated08 1.1• at 60 Hz0.8 1.1• at 60 Hz0.62• at 60 Hz0.62• at 60 Hz0.55apparent bick-up power of magnet coil at AC• at 60 Hz0.55apparent holding power of magnet coil at AC• at 60 Hz0.62• at 60 Hz0.55apparent holding power of magnet coil at AC• at 60 Hz0.36• at 60 Hz0.36• at 60 Hz0.4• at 60 Hz0.4• at 60 Hz0.36• at 60 Hz0.4• at 60 Hz0.4• at 60 Hz0.36• at 60 Hz0.36• at 60 Hz0.4• at 60 Hz0.36• at 60 Hz0.36• at 60 Hz0.36• at 60 Hz0.4• at 60 Hz0.36• at 60 Hz0.4• at 60 Hz0.4• at 60 Hz0.4<	<ul> <li>at AC-1 maximum</li> <li>at AC-2 maximum</li> <li>at AC-3 maximum</li> <li>at AC-3e maximum</li> <li>at AC-4 maximum</li> <li>at AC-4 maximum</li> <li>rol circuit/ Control</li> <li>at AC-4 maximum</li> <li>rol circuit/ Control</li> <li>at AC-4 maximum</li> <li>at 50 Hz rated value</li> <li>at 50 Hz</li> </ul>	350 1/h 850 1/h 850 1/h 250 1/h AC 110 V
• at AC-2 maximum       350 1/h         • at AC-3 maximum       850 1/h         • at AC-3 maximum       850 1/h         • at AC-4 maximum       250 1/h         • at AC-4 maximum       250 1/h         Control Circuit/ Control       1/h         type of voltage of the control supply voltage       AC         control supply voltage at AC       110 V         • at 60 Hz rated value       120 V         operating range factor control supply voltage rated value of magnet coil at AC       0.8 1.1         • at 60 Hz       0.62         • at 60 Hz       0.62         • at 60 Hz       0.62         • at 60 Hz       0.4         • at 60 Hz       22 VA         • at 60 Hz       0.36         • at 60 Hz       0.4         • at 60 Hz       0.4	<ul> <li>at AC-2 maximum</li> <li>at AC-3 maximum</li> <li>at AC-3e maximum</li> <li>at AC-4e maximum</li> <li>at AC-4 maximum</li> <li>rol circuit/ Control</li> <li>at AC-4 maximum</li> <li>at 50 Hz rated value</li> <li>at 50 Hz</li> </ul>	350 1/h 850 1/h 850 1/h 250 1/h AC 110 V
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• at AC-3e maximum     850 1/h       • at AC-4 maximum     250 1/h       Control circuit/ Control     250 1/h       type of voltage of the control supply voltage     AC       • at 50 Hz rated value     110 V       • at 60 Hz rated value     120 V       operating range factor control supply voltage rated value of magnet coil at AC     0.8 1.1       • at 50 Hz     0.8 1.1       • at 60 Hz     0.8 1.1       • at 60 Hz     0.8 1.1       • at 60 Hz     0.8 0.8 1.1       • at 60 Hz     0.8 0.8 1.1       • at 60 Hz     0.8 0.	<ul> <li>at AC-3e maximum</li> <li>at AC-4 maximum</li> <li>rol circuit/ Control</li> <li>a of voltage of the control supply voltage</li> <li>trol supply voltage at AC</li> <li>at 50 Hz rated value</li> <li>at 60 Hz rated value</li> <li>rating range factor control supply voltage rated</li> <li>ue of magnet coil at AC</li> <li>at 50 Hz</li> </ul>	850 1/h 250 1/h AC 110 V
• at AC-4 maximum       250 1/h         Control circuit/ Control       AC         • at 50 Hz rated value       110 V         • at 50 Hz rated value       120 V         operating range factor control supply voltage rated value of magnet coil at AC       0.8 1.1         • at 60 Hz       0.8 1.1         • at 60 Hz       326 VA         • at 60 Hz       0.8 1.1         • at 60 Hz       0.62         • at 60 Hz       0.55         apparent holding power of magnet coil at AC       0.4         • at 60 Hz       0.55         apparent holding power of the coil       0.36         • at 60 Hz       0.36         • at 60 Hz       0.4         coloring delay       0.4         coloring delay       0.4         • at AC       0.4         coloring delay       0.4 AC	at AC-4 maximum     rol circuit/ Control     e of voltage of the control supply voltage     trol supply voltage at AC     • at 50 Hz rated value     rating range factor control supply voltage rated     ie of magnet coil at AC     • at 50 Hz	250 1/h AC 110 V
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<ul> <li>at 50 Hz</li> <li>at 60 Hz</li> <li>22 VA</li> <li>at 60 Hz</li> <li>22 VA</li> <li>inductive power factor with the holding power of the coil</li> <li>at 50 Hz</li> <li>0.36</li> <li>at 60 Hz</li> <li>0.4</li> <li>closing delay</li> <li>at AC</li> <li>13 50 ms</li> <li>opening delay</li> <li>at AC</li> <li>10 21 ms</li> </ul>	• at 60 Hz	0.55
• at 60 Hz22 VAinductive power factor with the holding power of the coil0.36• at 50 Hz0.36• at 60 Hz0.4closing delay • at AC13 50 msopening delay • at AC10 21 ms	arent holding power of magnet coil at AC	
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• at 60 Hz     0.4       closing delay     13 50 ms       • at AC     13 50 ms       opening delay     10 21 ms		
closing delay       • at AC       13 50 ms       opening delay       • at AC       10 21 ms	● at 50 Hz	0.36
• at AC         13 50 ms           opening delay         10 21 ms	• at 60 Hz	0.4
opening delay       • at AC       10 21 ms	ing delay	
• at AC 10 21 ms		13 50 ms
arcing time 10 20 ms		
control version of the switch operating mechanism Standard A1 - A2		Standard A1 - A2
Auxiliary circuit		
number of NC contacts for auxiliary contacts instantaneous contact	antaneous contact	
number of NO contacts for auxiliary contacts instantaneous contact	antaneous contact	
operational current at AC-12 maximum 10 A		10 A
operational current at AC-15		
• at 230 V rated value 6 A	at 230 V rated value	
	at 400 V rated value	
	• at 500 V rated value	
operational current at DC-12	<ul><li>at 500 V rated value</li><li>at 690 V rated value</li></ul>	1 A
	at 500 V rated value     at 690 V rated value rational current at DC-12	
	<ul> <li>at 500 V rated value</li> <li>at 690 V rated value</li> <li>rational current at DC-12</li> <li>at 24 V rated value</li> </ul>	10 A
	<ul> <li>at 500 V rated value</li> <li>at 690 V rated value</li> <li>rational current at DC-12</li> <li>at 24 V rated value</li> <li>at 48 V rated value</li> </ul>	10 A 6 A
	<ul> <li>at 500 V rated value</li> <li>at 690 V rated value</li> <li>rational current at DC-12</li> <li>at 24 V rated value</li> <li>at 48 V rated value</li> <li>at 60 V rated value</li> </ul>	10 A 6 A 6 A
	<ul> <li>at 500 V rated value</li> <li>at 690 V rated value</li> <li>rational current at DC-12</li> <li>at 24 V rated value</li> <li>at 48 V rated value</li> <li>at 60 V rated value</li> <li>at 110 V rated value</li> </ul>	10 A 6 A 6 A 3 A
	<ul> <li>at 500 V rated value</li> <li>at 690 V rated value</li> <li>rational current at DC-12</li> <li>at 24 V rated value</li> <li>at 48 V rated value</li> <li>at 60 V rated value</li> <li>at 110 V rated value</li> <li>at 125 V rated value</li> </ul>	10 A 6 A 6 A 3 A 2 A
	<ul> <li>at 500 V rated value</li> <li>at 690 V rated value</li> <li>rational current at DC-12</li> <li>at 24 V rated value</li> <li>at 48 V rated value</li> <li>at 60 V rated value</li> <li>at 110 V rated value</li> <li>at 125 V rated value</li> <li>at 220 V rated value</li> </ul>	10 A 6 A 6 A 3 A 2 A 1 A
operational current at DC-13	<ul> <li>at 500 V rated value</li> <li>at 690 V rated value</li> <li>rational current at DC-12</li> <li>at 24 V rated value</li> <li>at 48 V rated value</li> <li>at 60 V rated value</li> <li>at 110 V rated value</li> <li>at 125 V rated value</li> <li>at 220 V rated value</li> <li>at 600 V rated value</li> </ul>	10 A 6 A 6 A 3 A 2 A
	<ul> <li>at 500 V rated value</li> <li>at 690 V rated value</li> <li>rational current at DC-12</li> <li>at 24 V rated value</li> <li>at 48 V rated value</li> <li>at 60 V rated value</li> <li>at 110 V rated value</li> <li>at 125 V rated value</li> <li>at 220 V rated value</li> <li>at 600 V rated value</li> <li>at 600 V rated value</li> <li>rational current at DC-13</li> </ul>	10 A 6 A 6 A 3 A 2 A 1 A 0.15 A
	<ul> <li>at 500 V rated value</li> <li>at 690 V rated value</li> <li>rational current at DC-12</li> <li>at 24 V rated value</li> <li>at 48 V rated value</li> <li>at 60 V rated value</li> <li>at 110 V rated value</li> <li>at 125 V rated value</li> <li>at 220 V rated value</li> <li>at 600 V rated value</li> <li>at 600 V rated value</li> <li>at 600 V rated value</li> <li>at 220 V rated value</li> <li>at 24 V rated value</li> <li>at 24 V rated value</li> </ul>	10 A 6 A 6 A 3 A 2 A 1 A 0.15 A 10 A
	<ul> <li>at 500 V rated value</li> <li>at 690 V rated value</li> <li>rational current at DC-12</li> <li>at 24 V rated value</li> <li>at 48 V rated value</li> <li>at 60 V rated value</li> <li>at 110 V rated value</li> <li>at 125 V rated value</li> <li>at 220 V rated value</li> <li>at 600 V rated value</li> <li>at 600 V rated value</li> <li>at 24 V rated value</li> </ul>	10 A 6 A 6 A 3 A 2 A 1 A 0.15 A 10 A 2 A
	<ul> <li>at 500 V rated value</li> <li>at 690 V rated value</li> <li>rational current at DC-12</li> <li>at 24 V rated value</li> <li>at 48 V rated value</li> <li>at 60 V rated value</li> <li>at 110 V rated value</li> <li>at 125 V rated value</li> <li>at 220 V rated value</li> <li>at 600 V rated value</li> <li>at 220 V rated value</li> <li>at 24 V rated value</li> <li>at 24 V rated value</li> <li>at 48 V rated value</li> <li>at 48 V rated value</li> </ul>	10 A 6 A 6 A 3 A 2 A 1 A 0.15 A 10 A 2 A 2 A
at 125 V rated value     0.9 A	<ul> <li>at 500 V rated value</li> <li>at 690 V rated value</li> <li>rational current at DC-12</li> <li>at 24 V rated value</li> <li>at 48 V rated value</li> <li>at 60 V rated value</li> <li>at 110 V rated value</li> <li>at 125 V rated value</li> <li>at 220 V rated value</li> <li>at 600 V rated value</li> <li>at 48 V rated value</li> <li>at 600 V rated value</li> <li>at 48 V rated value</li> <li>at 60 V rated value</li> <li>at 60 V rated value</li> <li>at 60 V rated value</li> </ul>	10 A 6 A 6 A 3 A 2 A 1 A 0.15 A 10 A 2 A 2 A 1 A

a at 220 V rated value	0.2.4
at 220 V rated value	0.3 A
t 600 V rated value     contact reliability of auxiliary contacts	0.1 A 1 faulty switching per 100 million (17 V, 1 mA)
	Tradity switching per 100 million (17 V, TMA)
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor • at 480 V rated value	96 A
at 400 V rated value     at 600 V rated value	96 A 77 A
yielded mechanical performance [hp]	
• for 3-phase AC motor	
— at 200/208 V rated value	25 hp
— at 220/230 V rated value	30 hp
— at 460/480 V rated value	50 hp
— at 575/600 V rated value	50 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)
— with type of assignment 2 required	gG: 160 A (690 V, 100 kA), aM: 100 A (690 V, 100 kA), BS88: 125 A (415 V, 80 kA)
<ul> <li>for short-circuit protection of the auxiliary switch required</li> </ul>	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° on vertical mounting surface
fastening method	screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715
<ul> <li>side-by-side mounting</li> </ul>	Yes
height	140 mm
width	70 mm
depth	152 mm
required spacing	
with side-by-side mounting	
— forwards	20 mm
— upwards	10 mm
— downwards	10 mm
— at the side	0 mm
for grounded parts     forwards	20 mm
— forwards	20 mm 10 mm
— upwards — at the side	10 mm
— downwards	10 mm
• for live parts	
— forwards	20 mm
— upwards	10 mm
— downwards	10 mm
— at the side	10 mm
Connections/ Terminals	
type of electrical connection	
for main current circuit	screw-type terminals
<ul> <li>for auxiliary and control circuit</li> </ul>	screw-type terminals
<ul> <li>at contactor for auxiliary contacts</li> </ul>	Screw-type terminals
• of magnet coil	Screw-type terminals
type of connectable conductor cross-sections	
for main contacts	
<ul> <li>finely stranded with core end processing</li> </ul>	2x (2.5 35 mm <sup>2</sup> ), 1x (2.5 50 mm <sup>2</sup> )
at AWG cables for main contacts  connectable conductor cross-section for main contacts	2x (10 1/0), 1x (10 2)
solid	2.5 16 mm²

<ul> <li>Index stranded with core and processing contactable conductor cross-sections index stranded with core and processing Verset of a sublary contacts </li></ul>	<ul> <li>stranded</li> </ul>		6.	70 mm²			
contexts       0.52.5 mm <sup>2</sup> Vpr of connectable conductor cross-sections       0.52.5 mm <sup>2</sup> - odd or standed       2x (0.51.5 mm <sup>2</sup> ), 2x (0.752.6 mm <sup>2</sup> )         - odd or standed       2x (0.51.5 mm <sup>2</sup> ), 2x (0.752.5 mm <sup>2</sup> )         - of auxiliary contacts       2x (0.51.5 mm <sup>2</sup> ), 2x (0.752.5 mm <sup>2</sup> )         - of auxiliary contacts       102         - of auxiliary contacts       102         - of auxiliary contacts       1015 mm <sup>2</sup> ), 2x (0.752.5 mm <sup>2</sup> )         - of auxiliary contacts       102         - of auxiliary contacts       102         - of auxiliary contacts       1015 mm <sup>2</sup> ), 2x (0.752.5 mm <sup>2</sup> )         - of auxiliary contacts       102         - of auxiliary contacts       1016 (0.000         - or auxiliary contacts       1016 (0.000         - with low demand rate acc. to SN 31920       100.000         - with low demand rate acc. to SN 31920       100.011         - twith low demand rate acc. to SN 31920       100.011         - twith low demand rate acc. to SN 31920       100.011         - twitteratereft [FT] with low demand rate acc. to SN 31920				5 50 mm²			
9. solid or stranded       0.5 2.5 mm <sup>3</sup> 9. for auxiliary contacts       0.5 2.5 mm <sup>3</sup> 9. for auxiliary contacts       2x (0.5 1.5 mm <sup>3</sup> ), 2x (0.75 2.5 mm <sup>3</sup> )         9. at AVG calles for auxiliary contacts       2x (0.5 1.5 mm <sup>3</sup> ), 2x (0.75 2.5 mm <sup>3</sup> )         9. at AVG calles for auxiliary contacts       10 2         9. at AVG calles for auxiliary contacts       10 2         9. at AVG calles for auxiliary contacts       10 2         9. at AVG calles for auxiliary contacts       10 2         9. at AVG calles for auxiliary contacts       10 2         9. at AVG calles for auxiliary contacts       10 2         9. at AVG calles for auxiliary contacts       10 2         9. attacts data       10 2         9. attact with high demand rate acc. to SN 31820       100 000         9. attact with high demand rate acc. to SN 31820       100 000         9. attact with high demand rate acc. to SN 31820       73 %         10 Attact for the forta acc. to SN 31820       100 00 FIT         11. attact for the forta acc. to SN 31820       100 FIT         12. attact for auxiliary of the forta acc. to SN 31820       100 FIT         12. attact for auxiliary of the forta acc. to SN 31820       100 FIT         12. attact for the forta acc. to SN 31820       100 FIT		ctor cross-section for aux	iliary				
index standed with core and processing       index standed with represented acc. to EIC 60947-5-1       No       index standed with represented acc. to EIC 60947-5-1       No       index standed with represented acc. to EIC 60947-5-1       No       index standed with represented acc. to EIC 60947-5-1       No       index standed with represented acc. to EIC 60947-5-1       No       index standed with represented acc. to EIC 60947-5-1       No       index standed       with hip demand rate acc. to EN 31920       To with proce forter interval or service IIF acc.       index standed       index sta		hd	0.4	$5 25 \text{ mm}^2$			
Type of connectable conductor cross-sections <ul> <li>a differentiation</li> <li>a differentiation</li></ul>							
• for auxiliary contacts       2x (0 5 15 mm?), 2x (0 7 5 25 mm?)         • a AWG cables to rauxiliary contacts       2x (0 5 15 mm?), 2x (0 7 5 25 mm?)         • a auxiliary contacts       10 2         • for auxiliary contacts       20 14         • for auxiliary contacts       10 2         • for auxiliary contacts       10 2         • for auxiliary contacts       10 2         • for auxiliary contacts       10 15 mm?), 2x (0 7 5 25 mm?)         • for auxiliary contacts       10 16 mm?), 2x (0 7 5 25 mm?)         • for auxiliary contacts       10 16 mm?), 2x (0 7 5 25 mm?)         • for auxiliary contacts       10 16 mm?), 2x (0 7 5 25 mm?)         • for auxiliary contacts       10 16 mm?), 2x (0 7 5 25 mm?)         • for auxiliary contacts       10.0.00         • for auxiliary contacts       10.00 00         • for auxiliary contacts       10.00 00         • for auxiliary contacts       10 15 mm?), 2x (0				J 2.0 mm			
			0				
	-		2x	$(0.5 \ 1.5 \ \text{mm}^2) \ 2x \ (0.75)$	$2.5 \text{ mm}^2$		
at AWC cables for auxiliary contacts       2x (20 14)         Awd and a contacts       10 2         6 or auxiliary contacts       10 2         9 or auxiliary contacts       10 2         9 or auxiliary contacts       10 2         9 or auxiliary contacts       10 14         Awd and a contact acc. 10 IEC 60947-61       Yes         9 or auxiliary contact acc. 10 IEC 60947-61       Yes         9 or auxiliary downand rate acc. 10 SN 31920       1000 000         Propolicit function       100 0 TIT         9 with high demand rate acc. 10 SN 31920       1000 FIT         17 value for profest intervol service life acc. to 1       20 y         18 or auxiliary downand rate acc. to SN 31920       1000 FIT         17 value for profest intervol service life acc. to 1       20 y         18 or auxiliary downand rate acc. to SN 31920       1000 FIT         17 value for profest intervol or service life acc. to 1       20 y         18 or auxiliary downand rate acc. to SN 31920       1000 FIT         17 value for profest intervol or service life acc. to 1       20 y         18 or allow and rate acc. to SN 31920       1000 FIT         19 or auxiliary for auxiliary downand rate acc. to SN 31920       1000 FIT         19 or auxiliary for auxiliary for auxiliary for auxiliary for auxiliary for au				· · · · · ·			
Awise and the section of the sectin of the sectin of the section of the section	•		•	. , .			
• Or main contacts       10 2         • for auxiliary contacts       20 14         Sectory related data       No         • mirror contact acc. to IEC 60947-6-1       No         • To auxiliary contact acc. to IEC 60947-6-1       No         • With high demand rate acc. to SN 31920       1000 000 <b>Proportion of dangerous failuresian</b> 100 000         • with high demand rate acc. to SN 31920       73 %         • Filter tate (FIT) with low demand rate acc. to SN 31920       73 %         • Direction class IP on the front acc. to IEC 60529       100 FIT         • sidely-related subtching on       Yes         • address of the front acc. to IEC 60529       100 FIT         • address of the front acc. to IEC 60529       100 FIT         • address of the front acc. to IEC 60529       100 FIT         • address of the front acc. to IEC 60529       100 FIT         • address of the front acc. to IEC 60529       100 FIT         • address of the front acc. to IEC 60529       100 FIT         • address of the front acc. to IEC 60529       100 FIT         • address of the front acc. to IEC 60529       100 FIT         • address of the front acc. to IEC 60529       100 FIT         • address of the front acc. to IEC 60529       100 FIT         • addres front acc </td <td>AWG number as coo</td> <td></td> <td></td> <td>(</td> <td></td> <td></td>	AWG number as coo			(			
• for auxiliary contacts       2014         Statey related data       Product function         • univor contact acc. to IEC 60947-5-1       No         • positively driven operation acc. to IEC 60947-5-1       No         • with high demand rate acc. to SN 31920       1000 000         Properties of dangerous failures       40 %         • with high demand rate acc. to SN 31920       73 %         failure rate [F1] with wo demand rate acc. to SN 31920       73 %         failure rate [F1] with wo demand rate acc. to SN 31920       73 %         failure rate [F1] with wo demand rate acc. to SN 31920       73 %         failure rate [F1] with wo demand rate acc. to IEC 60529       IP20         touch protection on the front acc. to IEC 60529       IP20         touch protection on the front acc. to IEC 60529       IP20         earley-related sulthing on       Yes         • astely-related sulthing OFF       Yes         Confirmation       Yes         earley-related sulthing on       Yes         earley-related sulthing on       Yes         earley-related sulthing on       Yes         functional       Confirmation         Martine / Shipping       Inter of Conformity         Inter of Conformity       Inter of Conformity         Inter Shipp		ts	10	2			
Staty related data       product function       minror contract acc. to EC 60947-4-1     Yes       => positively driven operation acc. to EC 60947-5-1     1000 000       B10 value with high demand rate acc. to SN 31920     40 %       =========     40 %       ======     40 %       =====     40 %       ====     40 %       ====     40 %       ===     40 %       ===     40 %       ===     40 %       ===     40 %       ==     40 %       ==     40 %       ==     40 %       ==     40 %       ==     40 %       ==     40 %       ==     40 %       ==     40 %       ==     40 %       ==     40 %       ==     40 %       ==     40 %       ==     40 %       ==     20 y       ==     100 ET       ==     100 ET <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>							
product function     • infror contact acc. to IEC 60947-4-1     Yes       • existive driven operation acc. to IEC 60947-5-1     No       B10 value with high demand rate acc. to SN 31920     1 000 000       proportion of dangerous failures     40 %       • with high demand rate acc. to SN 31920     73 %       1 1 000 000     73 %       1 1 000 fbr     1 000 fbr       1 1 000 fbr     20 y       1 1 000 fbr     1 000 fbr       1 1 000 fbr     20 y       1 1 000 fbr     1 000 fbr       1 1 000 fbr     20 y       1 1 000 fbr     1 000 fbr       1 1 000 fbr     1 000	-	lidolo	20				
• mirror contact acc. to IEC 60947-4-1       Yes         • positively driven operation acc. to IEC 60947-5-1       No         • With low demand rate acc. to SN 31920       1000 000         • with low demand rate acc. to SN 31920       100 FIT         • with low demand rate acc. to SN 31920       100 FIT         • Yes       20 y         protection of dangerous failures       100 FIT         • Yes       20 y         protection class IP on the front acc. to IEC 60529       IP20         protection on the front acc. to IEC 60529       IP20         safety-related switching OFF       Yes         • safety-related switching OFF       Yes         • safety-related switching OFF       Yes         • Confirmation       Yes         • Confirmation       Yes         • Confirmation       Yes         • Safety-related switching OFF       Yes         • Confirmation       Yes         • Safety-related switching OFF       Yes         • Confirmation       Yes         Safety-related switching OFF       Yes         • Confirmation       Yes         Safety-related switching OFF       Yes         • Confirmation       Safety-relates       Marine / Shipping         Safety-Safety			_				
Positively driven operation acc. to EC 60947-5-1       No         BTO value with high demand rate acc. to SN 31920       1000 000         Proportion of dangerous failures interval or service life acc. to SN 31920       40 %         With high demand rate acc. to SN 31920       73 %         Failure rate [FIT] with low demand rate acc. to SN 31920       100 FTT         Direction class IP on the front acc. to IEC 60529       1920         Protection class IP on the front acc. to IEC 60529       1920         Suitability for use       1920         • eafedy-related switching of Fit       Yes         • aftery-related switching of Fit       Yes         • aftery-related switching of Fit       Yes         • Confirmation       Yes         Suitability for use       KC         • aftery-related switching of Fit       Yes         • aftery-related switching of Fit       Yes         • aftery-related switching of Fit       Yes         • Confirmation       Yes         • Confirmation       Yes         • Confirmation       Yes         • Staty/Safety of Machiney       Declaration of Conformity       Test Certificates       Marine / Shipping         • Type Examination       UK Declaration of Conformity       Special Test Certifics ate       Test Certificate       Sp	•	acc. to IEC 60047.4.1	Ve				
B10 value with high demand rate acc. to SN 31920       1 000 000         proportion of dangerous failures       40 %         • with high demand rate acc. to SN 31920       73 %         failure rate [F1] with low demand rate acc. to SN 31920       73 %         failure rate [F1] with low demand rate acc. to SN 31920       100 F1T         20 y       100 F1T         20 y       100 F1T         20 y       1920         fouch protection interval or service life acc. to       100 F1T         20 y       1920         fouch protection on the front acc. to IEC 60529       1920         suitability for use       9 y         eastery-related switching on       Yes         eastery-related switching OFF       Yes         Confirmation       Yes         Confirmation       Yes         Confirmation       Yes         Confirmation       Yes         Uk Declaration of Conformity       Yes         Type Examination       UK Declaration of Conformity         Conformity       Yes         Type Examination of Conformity       Secial Test Certific: ate         Type Examination of Conformity       Secial Test Certific: ate         Confirmation of Low       Secial Test Certific: ate         C							
proportion of dangerous failures     40 %       • with low demand rate acc. to SN 31920     73 %       failure rate [FIT] with low demand rate acc. to SN 31920     100 FIT       T1 value for proof test interval or service life acc. to     20 y       protection class IP on the front acc. to IEC 60529     1920       touch protection on the front acc. to IEC 60529     1920       isofety-related switching OF     Yes       • safety-related switching OFF     Yes       Cortificates/ approval     EMC       General Product Approval     EMC       Functional Safety/Safety of Machinery     Declaration of Conformity     Test Certificates     Marine / Shipping       Type Samination Confirmation     UK Declaration of Conformity     Escent     Special Test Certificates     Marine / Shipping       Marine / Shipping     If Shipping     If Shipping     If Shipping     If Shipping       Marine / Shipping     If Shipping     If Shipping     If Shipping       If Shipping     If Shipping     If Shipping     If Shipping		•					
• with low demand rate acc. to SN 31920       40 %         • with ligh demand rate acc. to SN 31920       73 %         failure rate [FT] with low demand rate acc. to SN 31920       100 FTT         T value for proof test interval or service life acc. to       20 y         protection class IP on the front acc. to IEC 60529       100 FTT         suitability for use       100 FTT         • safety-related switching OFF       Yes         • safety-related switching OFF       Yes         Confirmation       Yes         • confirmation       Yes         • use for root is to Conformity       KC         Functional Safety/Safety of Conformity       Effect         Safety/Safety of Conformity       Declaration of Conformity         Type Examination Conformity       Effect         Confirmation       Effect         With Declaration of Conformity       Special Test Certificates         Type Examination Conformity       Effect         Use Safety of Safety of Low Conformity       Special Test Certificates         Type Examination Conformity       Effect         Use Safety       Special Test Certificates         Line / Shipping       Special Test Certificates         Safety       Special Test Certificates         Line K       Special Test			20 10	000 000			
• with high demand rate acc. to SN 31920       73 %         fullue rate [FT] with low demand rate acc. to SN 31920       100 FT         TV value for proof test interval or service life acc. to       20 y         protection class IP on the front acc. to IEC 60529       IP20         isafety-related switching off       Yes         • safety-related switching OFF       Yes         • Curtificates/ approval       EMC         Image: Safety off       Confirmation         Yupe Examination       Marine / Shipping         Type Examination       Mc Declaration of Conformity       Test Certificates/         Type Examination       Mc Declaration of Conformity       Special Test Certificates/         Type Examination       Mc Declaration of Conformity       Special Test Certificates/         Type Examination       Mc Declaration of Conformity       Special Test Certificates       Marine / Shipping         Marine / Shipping       If Declaration of Conformity       Special Test Certificates       Type Test Certificates       Special Test Certificates         Marine / Shipping       If Declaration of Conformity       If Declaration of Conformity       Special Test Certificates       Type Test Certificates       Special Test Certificates			40	0/			
failure rate [FIT] with low demand rate acc. to SN 31920       100 FIT         T value for proof test interval or service life acc. to       20 y         Ince 61630       Protection class IP on the front acc. to IEC 60529       1920         rucu protection on the front acc. to IEC 60529       IP20         suitability for use       • safety-related switching on       Yes         • safety-related switching OFF       Yes         Confirmation       Yes         Confirmation       EMC         Confirmation       Confirmation         Safety/Safety of Machinery       Declaration of Conformity         Type Examination       UK Declaration of Conformity         Type Examination       UK Declaration of Conformity         Type Examination Conformity       Confirmation         Type Examination Conformity       Confirmation         Confirmation       UK Declaration of Conformity         Confirmity       Confirmity         Type Examination Conformity       Confirmation         Use Confirmity       Confirmity         Type Examination Conformity       Confirmity         Use Confirmity       Confirmity         Use Confirmity       Confirmation         Use Confirmity       Confirmation         Use Confirmation       Co							
Invalue for proof test interval or service life acc. to IEC 60529       20 y         protection class IP on the front acc. to IEC 60529       IP20         touch protection on the front acc. to IEC 60529       Inger-safe, for vertical contact from the front         suitability for use       • safely-related switching on       Yes         • safely-related switching OFF       Yes         Confirmation       Yes         Confirmation       Yes         Up to take       Yes         Confirmation       Yes         Vertificates/approvals       EMC         Confirmation       Yes         Vertificates/approvals       EMC         Confirmation       Yes         Vertificates/approvals       EMC         Confirmation       Yes         Vertificates/approvals       EMC         Functional       Declaration of Conformity       Test Certificates       Marine / Shipping         Type Examination       UK Declaration of Conformity       Special Test Certificate       Yes         Vertificates       UK Declaration of Conformity       Special Test Certificate       Yes         Image: Shipping       Vertificates       Yes       Yes       Yes         Image: Shipping       Vertificates       Yes       Yes							
IEC 64508       IP20         protection class IP on the front acc. to IEC 60529       IP20         suitability for use       IP20         • safely-related switching on       Yes         • confirmation       Yes         Confirmation       KC         Efficience       Marine / Shipping         Marine / Shipping       Marine							
touch protection on the front acc. to IEC 60529       finger-safe, for vertical contact from the front         suitability for use       • safety-related switching on       Yes         • safety-related switching OFF       Yes         Cortificates/ approvals       EMC         General Product Approval       EMC         Functional Safety/Safety of Machinery       Declaration of Conformity       Test Certificates         Type Examination Certificates       UK Declaration of Conformity       Special Test Certificates       Marine / Shipping         Type Examination Certificate       UK Declaration of Conformity       Special Test Certificates       Type Test Certificates         Marine / Shipping       UK Declaration of Conformity       Special Test Certificates       Type Test Certificates         Marine / Shipping       UK Declaration of Conformity       Special Test Certificates       Type Test Certificates         Marine / Shipping       UK Declaration of Conformity       Special Test Certificates       Type Test Certificates         Marine / Shipping       UK Declaration of Conformity       Special Test Certificates       Type Test Certificates       Type Test Certificates         Marine / Shipping       UK Declaration of Conformity       Special Test Certificates       Test Certificates       Test Certificates       Confirmation         US       US	•		acc. 10 20	y			
suitability for use       Yes         • safety-related switching on       Yes         • safety-related switching OFF       Yes         Confirmation       KC       EMC         Evencional Safety/Safety of Machinery       Confirmation       KC       EMC         Functional Safety/Safety of Machinery       Declaration of Conformity       Test Certificates       Marine / Shipping         Type Examination Certificate       UK Declaration of Conformity       Effect       Special Test Certificates       Marine / Shipping         Marine / Shipping       UK Declaration of Conformity       Effect       Special Test Certificate       Type Test Certific- ates/Test Report       Special Test Certificate         Marine / Shipping       Effect       Special Test Certificate       Type Test Certific- ates/Test Report       Special Test Certificate       Spe	protection class IP of	on the front acc. to IEC 60	529 IP:	20			
• safety-related switching OFF       Yes         • safety-related switching OFF       Yes         Certificates/ approvals       EMC         Confirmation       Image: Confirmation of Conformity       Image: Confirmation of Conformity         Vige Examination Certificates       UK Declaration of Conformity       Test Certificates       Marine / Shipping         Type Examination Certificate       UK Declaration of Conformity       Image: Confirmation of Confirmation of Conformity       Image: Confirmation of C	touch protection on	the front acc. to IEC 6052	2 <b>9</b> fin	ger-safe, for vertical conta	ct from the front		
• safety-related switching OFF       Yes         Cortificates/ approval       EMC         General Product Approval       KC       EMC         General Product Approval       KC       EMC         General Product Approval       KC       EMC         General Product Approval       Marine / Shipping       Marine / Shipping         Functional Safety/Safety of Machinery       Declaration of Conformity       Test Certificates       Myre Test Certific ates/ Test Certi	suitability for use						
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## **Further information**

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

https://www.siemens.com/ic10 Industry Mall (Online ordering system)

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT2046-1AK60-0UA0

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2046-1AK60-0UA0

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT2046-1AK60-0UA0

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

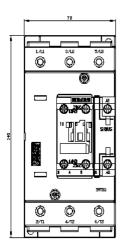
http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RT2046-1AK60-0UA0&lang=en

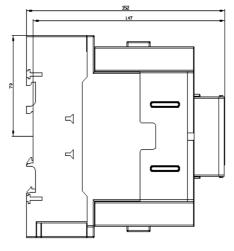
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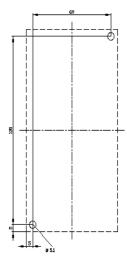
https://support.industry.siemens.com/cs/ww/en/ps/3RT2046-1AK60-0UA0/char

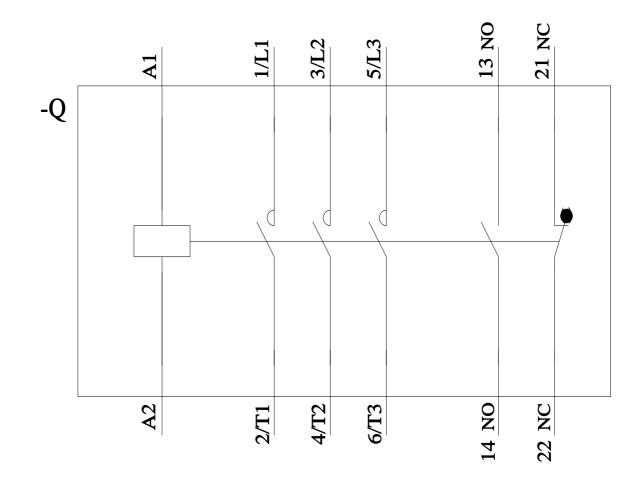
Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2046-1AK60-0UA0&objecttype=14&gridview=view1









last modified:

2/15/2022 🖸