# 3RT2038-3XB40-0LA2





traction contactor, AC-3e/AC-3, 80 A, 37 kW / 400 V, 3-pole, 24 V DC, 0.7-1.25\* Us, electronic drive, with integrated varistor, auxiliary contacts: 1 NO + 1 NC, main circuit: screw terminal, control and auxiliary circuit: spring-loaded terminal, size: S2

product brand name	SIRIUS
product designation	Power contactor
design of the product	With extended operating range
product type designation	3RT2
General technical data	
size of contactor	S2
product extension	
<ul> <li>function module for communication</li> </ul>	No
auxiliary switch	Yes
power loss [W] for rated value of the current	
<ul> <li>at AC in hot operating state</li> </ul>	17.1 W
at AC in hot operating state per pole	5.7 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
of auxiliary circuit with degree of pollution 3 rated value	690 V
surge voltage resistance	
of main circuit rated value	6 kV
of auxiliary circuit rated value	6 kV
maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1	400 V
shock resistance at rectangular impulse	
• at DC	7.7g / 5 ms, 4.5g / 10 ms
shock resistance with sine pulse	
• at DC	12g / 5 ms, 7g / 10 ms
mechanical service life (operating cycles)	
<ul> <li>of contactor typical</li> </ul>	10 000 000
<ul> <li>of the contactor with added electronically optimized auxiliary switch block typical</li> </ul>	5 000 000
<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)	10/01/2014
SVHC substance name	Lead - 7439-92-1 Lead monoxide (lead oxide) - 1317-36-8
Weight	1.106 kg
Ambient conditions	
installation altitude at height above sea level maximum	2 000 m
ambient temperature	
during operation	-40 +70 °C
during storage	-55 +80 °C
relative humidity minimum	10 %

relative humidity at 55 °C according to IEC 60068-2-30 maximum	95 %
Environmental footprint	
Environmental Product Declaration(EPD)	Yes
Global Warming Potential [CO2 eq] total	107 kg
Global Warming Potential [CO2 eq] during manufacturing	5.88 kg
Global Warming Potential [CO2 eq] during operation	102 kg
Global Warming Potential [CO2 eq] after end of life	-0.988 kg
Main circuit	
number of poles for main current circuit	3
number of NO contacts for main contacts	3
operating voltage	
at AC-3 rated value maximum	690 V
at AC-3e rated value maximum	690 V
operational current	
• at AC-1 at 400 V at ambient temperature 40 °C rated	90 A
value	
• at AC-1	
— up to 690 V at ambient temperature 40 $^{\circ}\text{C}$ rated value	90 A
— up to 690 V at ambient temperature 60 °C rated value	80 A
<ul><li>at AC-2 at 400 V rated value</li><li>at AC-3</li></ul>	80 A
— at 400 V rated value	80 A
— at 500 V rated value	80 A
— at 690 V rated value	58 A
• at AC-3e	
— at 400 V rated value	80 A
— at 500 V rated value	80 A
— at 690 V rated value	58 A
at AC-4 at 400 V rated value	55 A
minimum cross-section in main circuit	
at maximum AC-1 rated value	35 mm²
at maximum Ith rated value	35 mm²
operational current for approx. 200000 operating cycles at AC-4	
• at 400 V rated value	30 A
at 690 V rated value	24 A
operational current	
at 1 current path at DC-1	
— at 24 V rated value	55 A
— at 110 V rated value	4.5 A
— at 220 V rated value	1 A
— at 440 V rated value	0.4 A
— at 600 V rated value	0.25 A
<ul> <li>with 2 current paths in series at DC-1</li> </ul>	
— at 24 V rated value	55 A
— at 110 V rated value	45 A
— at 220 V rated value	5 A
— at 440 V rated value	1 A
<ul> <li>at 600 V rated value</li> </ul>	0.8 A
<ul><li>— at 600 V rated value</li><li>with 3 current paths in series at DC-1</li></ul>	0.8 A
	0.8 A 55 A
• with 3 current paths in series at DC-1	
<ul> <li>with 3 current paths in series at DC-1</li> <li>at 24 V rated value</li> </ul>	55 A
<ul> <li>with 3 current paths in series at DC-1</li> <li>— at 24 V rated value</li> <li>— at 110 V rated value</li> </ul>	55 A 55 A
<ul> <li>with 3 current paths in series at DC-1</li> <li>— at 24 V rated value</li> <li>— at 110 V rated value</li> <li>— at 220 V rated value</li> <li>— at 440 V rated value</li> </ul>	55 A 55 A 45 A
<ul> <li>with 3 current paths in series at DC-1</li> <li>— at 24 V rated value</li> <li>— at 110 V rated value</li> <li>— at 220 V rated value</li> <li>— at 440 V rated value</li> <li>— at 600 V rated value</li> </ul>	55 A 55 A 45 A 2.9 A
<ul> <li>with 3 current paths in series at DC-1</li> <li>— at 24 V rated value</li> <li>— at 110 V rated value</li> <li>— at 220 V rated value</li> <li>— at 440 V rated value</li> <li>— at 600 V rated value</li> <li>• at 1 current path at DC-3 at DC-5</li> </ul>	55 A 55 A 45 A 2.9 A 1.4 A
<ul> <li>with 3 current paths in series at DC-1</li> <li>— at 24 V rated value</li> <li>— at 110 V rated value</li> <li>— at 220 V rated value</li> <li>— at 440 V rated value</li> <li>— at 600 V rated value</li> </ul>	55 A 55 A 45 A 2.9 A

— at 440 V rated value	0.1 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	55 A
— at 110 V rated value	25 A
— at 220 V rated value	5 A
— at 440 V rated value	0.27 A
— at 600 V rated value	0.16 A
	0.10 A
with 3 current paths in series at DC-3 at DC-5	FF A
— at 24 V rated value	55 A
— at 110 V rated value	55 A
— at 220 V rated value	25 A
— at 440 V rated value	0.6 A
— at 600 V rated value	0.35 A
operating power	
<ul> <li>at AC-2 at 400 V rated value</li> </ul>	37 kW
• at AC-3	
— at 230 V rated value	22 kW
— at 400 V rated value	37 kW
— at 500 V rated value	37 kW
— at 690 V rated value	45 kW
• at AC-3e	
— at 230 V rated value	22 kW
— at 400 V rated value	37 kW
— at 500 V rated value	37 kW
— at 690 V rated value	45 kW
operating power for approx. 200000 operating cycles at AC-	40 KVV
4	
at 400 V rated value	15.8 kW
at 690 V rated value	21.8 kW
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>	1 298 A; Use minimum cross-section acc. to AC-1 rated value
Iimited to 5 s switching at zero current maximum	898 A; Use minimum cross-section acc. to AC-1 rated value
Ilmited to 10 s switching at zero current maximum	640 A; Use minimum cross-section acc. to AC-1 rated value
	414 A; Use minimum cross-section acc. to AC-1 rated value
Ilmited to 30 s switching at zero current maximum	333 A; Use minimum cross-section acc. to AC-1 rated value
Iimited to 60 s switching at zero current maximum	555 A, Ose millimum cross-section acc. to AC-1 rated value
no-load switching frequency	4 500 4 %
• at DC	1 500 1/h
operating frequency	
<ul> <li>at AC-2 at AC-3e maximum</li> </ul>	350 1/h
at AC-4 maximum	150 1/h
Ratings for railway applications	
thermal current (Ith) up to 690 V	
<ul> <li>up to 40 °C according to IEC 60077 rated value</li> </ul>	90 A
up to 70 °C according to IEC 60077 rated value	75 A
Control circuit/ Control	
type of voltage	DC
type of voltage of the control supply voltage	DC
control supply voltage at DC rated value	24 V
operating range factor control supply voltage rated value of magnet coil at DC	
• initial value	0.7
full-scale value	1.25
design of the surge suppressor	with varistor
inrush current peak	3 A
duration of inrush current peak	50 μs
locked-rotor current mean value	1A
locked-rotor current peak	2.6 A
·	
duration of locked-rotor current	230 ms
duration of locked-rotor current holding current mean value	230 ms 40 mA

Application		22.11
Section   Sect	closing power of magnet coil at DC	23 W
a at DC   30 55 ms   10 25		1 W
opening delay ** at DC** arcing time         30 25 ms           control version of the switch operating mechanism         30 20 ms           Activality yelemit         Toward A 1 - A2           number of NC contacts for auxiliary contacts ** instantaneous contact         1           number of NO contacts for auxiliary contacts ** instantaneous contact         1           operational current at AC-15         1           at 230 V ratiod value         3A           at 400 V ratiod value         3A           at 400 V ratiod value         1A           at 600 V ratiod value         1A           at 480 V ratiod value         1A           at 480 V rated value         6A           at 480 V rated value         6A           at 480 V rated value         3A           at 481 V rated value         6A           at 220 V rated value         1A           at 220 V rated value         2A           at 220 V rated value         3A           at 220 V rated value         3A		
## IDC   10.20 ms   10		35 110 ms
Incomposition   Incompositio		
control version of the switch operating mechanism         Sindard A1 - A2           Auxiliary circuits         1           number of NC contacts for auxiliary contacts         1           number of NC contacts for fauxiliary contacts         1           a instantaneous contact         1           operational current at AC-15         4           at 20 V rated value         3 A           at 20 V rated value         2 A           at 20 V rated value         1 A           at 24 V rated value         1 A           at 24 V rated value         6 A           at 25 V rated value         6 A           at 21 V rated value         6 A           at 21 V rated value         1 A           at 22 V rated value         1 A           at 21 V rated value         2 A           at 21 V rated value         1 A           at 22 V rated value         1 A           at 22 V rated value         1 A           at 22 V rated value         1 DA           at 24 V rated value         2 A           at 22 V rated value         2 A           at 22 V rated value         2 A           at 22 V rated value         3 A           at 22 V rated value         3 A           at		
Audillary circuit  number of NC contacts for auxillary contacts  instantaneous contact  operational current at AC-15  at 230 Y rated value  at 800 Y rated value  at 800 Y rated value  at 100 Y rated value  at 110 Y rated value  at 110 Y rated value  at 110 Y rated value  at 120 Y rated value  at 125 Y rated value  at 120 Y rated value  by 100 A  at 120 Y rated value  at 120 Y rated value  by 100 A  at 120 Y rated value  at 120 Y rated value  at 120 Y rated value  by 100 A  at 120 Y rated value  by 100 A  at 120 Y rated value  by 100 A  at 120 Y rated value  contact rating of auxiliary contacts according to UL  Short-current protection  on at 400 V rated value  at 600 V rated value  contact rating of auxiliary contacts according to UL  short-current protection  with type of coordination 1 required  af 67 shown countries protection  with type of coordination 1 required  af 67 shown countries protection  with type of coordination 1 required  af 67 shown countries protection  with type of coordination 1 required  af 67 shown countries protection  with type of coordination 1 required  af 67 shown countries protection  with type of coordination 1 required  af 67 shown countries protection  af 67 shown countries protection  with type of coor		
mumber of NC contacts for auxiliary contacts   1   1   1   1   1   1   1   1   1		Standard A1 - A2
Insulantaneous contact   1	Auxiliary circuit	
Installation   Inst	number of NC contacts for auxiliary contacts	1
Part	instantaneous contact	1
Operational current at AC-15   maximum   10 A   1	number of NO contacts for auxiliary contacts	1
10 A	instantaneous contact	1
10 A	operational current at AC-12 maximum	10 A
• at 400 V rated value	operational current at AC-15	
• at 500 V rated value 1A  opt f800 V rated value 1A  opt f800 V rated value 1D  • at 24 V rated value 6A  • at 48 V rated value 6A  • at 40 V rated value 6A  • at 100 V rated value 3A  • at 110 V rated value 3A  • at 110 V rated value 2A  • at 220 V rated value 3A  • at 220 V rated value 3A  • at 220 V rated value 3A  • at 24 V rated value 3A  • at 48 V rated value 3A  • at 48 V rated value 3A  • at 48 V rated value 3A  • at 100 V rated value 3A  • at 100 V rated value 3A  • at 100 V rated value 3A  • at 220 V rated value 3A  • at 600 V rated value 3A  • at 200 V rated value 3A  • at 600 V rated value 3A  • at 600 V rated value 3A  • at 600 V rated value 3A  • at 200 V rated value 3A  • at	at 230 V rated value	10 A
• al 690 V rated value	• at 400 V rated value	3 A
Operational current at DC-12	• at 500 V rated value	2 A
• at 24 V rated value • at 48 V rated value • at 48 V rated value • at 60 V rated value • at 110 V rated value • at 125 V rated value • at 22 A • at 125 V rated value • at 600 V rated value • at 600 V rated value • at 600 V rated value • at 80 V rated value • at 125 V rated value • at 80 V rated value • at 80 V rated value • at 125 V rated value • at 220 V rated value • at 220 V rated value • at 36 0V V rated value • at 37 0V V rated value • at 48 V V rated value • at 50 0V V rated value • 55 A • at 600 V rated value • at 600 V rated value • at 200 V rated value • 50 A • at 600 V rated value • 50 A • at 600 V rated value • 65 A • at 100 V rated value • 67 3-phase AC motor  - at 100 V 20 V rated value • for 3-phase AC motor  - at 200 V rated value • for 3-phase AC motor  - at 200 V rated value • for 3-phase AC motor  - at 2000 V rated value • for 3-phase AC motor  - at 2000 V rated value • for 3-phase AC motor  - at 2000 V rated value • for 3-phase AC motor  - at 2000 V rated value • for 5-phase AC motor  - at 2000 V rated value • for 3-phase AC motor  - at 2000 V rated value • for 3-phase AC motor  - at 2000 V rated value • for 3-phase AC motor  - at 600 V rated value • for 3-phase AC motor  - at 600 V rated value • for 3-phase AC motor  - at 600 V rated value • for 3-phase AC motor  - at 600 V rated value • for 3-phase AC motor  - at 600 V rated value • for 3-phase AC motor  - at 600 V rated value • for 3-phase AC motor  - at 600 V rated value • for 3-phase AC motor  - at 600 V rated value • for 3-phase AC motor  - at 600 V rated value • for 3-phase AC motor  - at 600 V rated value • for 5-phonomace (ph)  - for 6-phonomace (ph)  - for 6-phono	at 690 V rated value	1 A
• at 48 V rated value	operational current at DC-12	
• at 16 V rated value	• at 24 V rated value	10 A
* at 110 V rated value	• at 48 V rated value	6 A
• at 125 V rated value	at 60 V rated value	6 A
• at 220 V rated value	• at 110 V rated value	3 A
• at 600 V rated value	• at 125 V rated value	2 A
e at 24 V rated value 10 A 2 A 2 A 2 A 2 A 2 A 2 A 2 A 2 A 2 A	• at 220 V rated value	1 A
• at 24 V rated value 2 A   • at 48 V rated value 2 A   • at 60 V rated value 1 A   • at 100 V rated value 1 A   • at 125 V rated value 1 A   • at 220 V rated value 1 A   • at 800 V rated value 1 A   • for 3-phase AC motor 1 A   • at 220 V rated value 1 A   • for 3-phase AC motor 1 A   • at 220/230 V rated value 1 A   • for 3-phase AC motor 1 A   • at 220/230 V rated value 1 A   • for 3-phase AC motor 1 A   • at 220/230 V rated value 1 A   • for 3-phase AC motor 1 A   • at 800/200 V rated value 1 A   • for 3-phase AC motor 1 A   • at 800/200 V rated value 1 A   • for 3-phase AC motor 1 A   • at 800/200 V rated value 1 A   • for 3-phase AC motor 1 A   • at 800/200 V rated value 1 A   • for 3-phase AC motor 1 A   • at 800/200 V rated value 1 A   • for 3-phase AC motor 1 A   • for 3-phase AC	at 600 V rated value	0.15 A
	operational current at DC-13	
• at 60 V rated value 2 A • at 110 V rated value 0.9 A • at 125 V rated value 0.9 A • at 220 V rated value 0.1 A  UL/CSA ratings  full-load current (FLA) for 3-phase AC motor • at 480 V rated value 65 A • at 600 V rated value 15 hp • for single-phase AC motor — at 110/120 V rated value 15 hp • for 3-phase AC motor — at 230 V rated value 15 hp • for 3-phase AC motor — at 220/230 V rated value 20 hp — at 220/230 V rated value 25 hp — at 460/480 V rated value 50 hp — at 575/600 V rated value 60 hp  contact rating of auxiliary contacts according to UL A600 / P600  Short-circuit protection  product function short circuit protection Mo  design of the fuse link • for short-circuit protection of the main circuit — with type of coordination 1 required (AA) • for short-circuit protection of the auxiliary switch required • for short-circuit protection of the auxiliary switch required Installation/ mounting/ dimensions  mounting position  1 A 400 / P600  A 500 V, 100 kA), aM: 160 A (690 V, 100 kA), BS88: 200 A (415 V, 80 kA)  GG: 160A (690 V, 100 kA), aM: 80A (690 V, 100 kA), BS88: 125A (415V,80 kA)  GG: 160A (690 V, 100 kA), aM: 80A (690 V,100 kA), BS88: 200 A (415 V,80 kA)  For short-circuit protection of the auxiliary switch required (GR) (FR) (FR) (FR) (FR) (FR) (FR) (FR) (F	at 24 V rated value	10 A
at 110 V rated value at 125 V rated value 0.9 A at 220 V rated value 0.1 A  UL/CSA ratings  full-load current (FLA) for 3-phase AC motor at 480 V rated value 65 A at 600 V rated value 65 A at 600 V rated value 65 A yielded mechanical performance [hp] for single-phase AC motor —at 110/120 V rated value 5 hp —at 230 V rated value 15 hp  for 3-phase AC motor —at 200/208 V rated value 20 hp —at 220/230 V rated value 25 hp —at 220/230 V rated value 50 hp —at 575/600 V rated value 60 hp  contact rating of auxiliary contacts according to UL 8600 / P600  Short-circuit protection  product function short circuit protection  design of the fuse link for short-circuit protection of the main circuit — with type of assignment 2 required for short-circuit protection of the auxiliary switch required for short-c	• at 48 V rated value	2 A
at 125 V rated value at 220 V rated value at 600 V rated value 0.1 A  UL/CSA ratings  full-load current (FLA) for 3-phase AC motor at 480 V rated value 65 A at 800 V rated value 65 A yielded mechanical performance [hp]  of ro single-phase AC motor — at 110/120 V rated value 5 hp — at 230 V rated value 5 hp — at 230 V rated value 5 hp  of ro 3-phase AC motor — at 200/208 V rated value 20 hp — at 220/230 V rated value 25 hp — at 460/480 V rated value 25 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 8600 / P600  Short-circuit protection  product function short circuit protection design of the fuse link of or short-circuit protection of the main circuit — with type of assignment 2 required yes 25 on 4 (690 V, 100 kA), aM: 160 A (690 V, 100 kA), BS88: 200 A (415 V, 80 kA) with type of assignment 2 required yes: 160 A (690 V, 100 kA), aM: 80A (690 V, 100 kA), BS88: 125A (415V,80kA) yes for short-circuit protection of the auxiliary switch required yes: 160 A (690 V, 100 kA), aM: 80A (690 V,100kA), BS88: 125A (415V,80kA) yes for short-circuit protection of the auxiliary switch required yes: 160 A (690 V, 100 kA), aM: 80A (690 V,100kA), BS88: 125A (415V,80kA) yes for short-circuit protection of the auxiliary switch required hostaltation/mounting/dimensions	• at 60 V rated value	2 A
• at 220 V rated value  • at 800 V rated value  0.1 A  UL/CSA ratings  full-load current (FLA) for 3-phase AC motor  • at 480 V rated value  65 A  • at 600 V rated value  65 A  • at 600 V rated value  9 (65 A  • at 10/120 V rated value  • for single-phase AC motor  — at 110/120 V rated value  • for 3-phase AC motor  — at 230 V rated value  • for 3-phase AC motor  — at 200/280 V rated value  • for 3-phase AC motor  — at 220/280 V rated value  • for 3-phase AC motor  — at 460/480 V rated value  20 hp  — at 460/480 V rated value  50 hp  — at 460/480 V rated value  50 hp  — at 575/600 V rated value  60 hp  contact rating of auxiliary contacts according to UL  Short-circuit protection  product function short circuit protection  design of the fuse link  • for short-circuit protection of the main circuit  — with type of assignment 2 required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  Installation/ mounting/ dimensions  mounting position  1. A 480 V rated value  65 A  69 A  69 A  80 P	• at 110 V rated value	1 A
• at 600 V rated value  DL/CSA ratings  full-load current (FLA) for 3-phase AC motor  • at 480 V rated value • at 600 V rated value • at 600 V rated value  pielded mechanical performance [hp] • for single-phase AC motor — at 110/120 V rated value • for 3-phase AC motor — at 230 V rated value • for 3-phase AC motor — at 200/208 V rated value • at 220/230 V rated value — at 220/230 V rated value — at 220/230 V rated value — at 460/480 V rated value — at 460/480 V rated value — at 575/600 V rated value — at 575/600 V rated value — with type of coordination 1 required — with type of coordination 1 required • for short-circuit protection of the main circuit — with type of assignment 2 required • for short-circuit protection of the auxiliary switch required • for short-circuit protection of the auxiliary switch required 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;	• at 125 V rated value	0.9 A
full-load current (FLA) for 3-phase AC motor  • at 480 V rated value • at 600 V rated value • at 600 V rated value  • at 700 V rated value  • at 100 V rated value  • at 110/120 V rated value  — at 110/120 V rated value  — at 230 V rated value  • for 3-phase AC motor  — at 220/230 V rated value  — at 220/230 V rated value  — at 460/480 V rated value  — at 460/480 V rated value  — at 575/600 V rated value  — at 755/600 V rated value  50 hp  contact rating of auxiliary contacts according to UL  Short-circuit protection  product function short circuit protection  for short-circuit protection of the main circuit  — with type of coordination 1 required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required of 100 V, 100 kA), am: 80A (690 V, 100 kA), BS88: 125A (415 V, 80 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; can be tilted forward and backward by +/- 22.5° on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mount	• at 220 V rated value	0.3 A
full-load current (FLA) for 3-phase AC motor  • at 480 V rated value 65 A  • at 600 V rated value 62 A  yielded mechanical performance [hp]  • for single-phase AC motor  — at 110/120 V rated value 5 hp  — at 230 V rated value 15 hp  • for 3-phase AC motor  — at 200/208 V rated value 20 hp  — at 220/230 V rated value 25 hp  — at 460/480 V rated value 50 hp  — at 75/5600 V rated value 50 hp  — at 75/5600 V rated value 60 hp  contact rating of auxiliary contacts according to UL A600 / P600  Short-circuit protection No  design of the fuse link  • for short-circuit protection of the main circuit  — 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: 160A (690V,100kA), aM: 80A (690V,100kA), BS88: 125A (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° on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface;	• at 600 V rated value	0.1 A
at 480 V rated value  at 65 A  at 600 V rated value  yielded mechanical performance [hp]  for single-phase AC motor  — at 110/120 V rated value  5 hp  at 230 V rated value  for 3-phase AC motor  — at 200/208 V rated value  at 220/230 V rated value  20 hp  at 460/480 V rated value  50 hp  at 460/480 V rated value  50 hp  contact rating of auxiliary contacts according to UL  Short-circuit protection  product function short circuit protection  design of the fuse link  for short-circuit protection of the main circuit  — with type of coordination 1 required  for short-circuit protection of the main circuit  with type of assignment 2 required  for short-circuit protection of the auxiliary switch required  for short-circuit protection of the of save auxiliary switch required  for short-circuit protection of the auxiliary switch required of the auxil	UL/CSA ratings	
• at 600 V rated value  yielded mechanical performance [hp]  • for single-phase AC motor  — at 110/120 V rated value 5 hp — at 230 V rated value 15 hp  • for 3-phase AC motor  — at 200/208 V rated value 20 hp — at 220/230 V rated value 25 hp — at 460/480 V rated value 25 hp — at 460/480 V rated value 50 hp — at 575/600 V rated value 60 hp  contact rating of auxiliary contacts according to UL  Short-circuit protection  product function short circuit protection  design of the fuse link • for short-circuit protection of the main circuit — with type of assignment 2 required • for short-circuit protection of the auxiliary switch required • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the au	full-load current (FLA) for 3-phase AC motor	
yielded mechanical performance [hp]  • for single-phase AC motor  — at 110/120 V rated value 5 hp  — at 230 V rated value 15 hp  • for 3-phase AC motor  — at 200/208 V rated value 20 hp  — at 220/230 V rated value 25 hp  — at 460/480 V rated value 50 hp  — at 460/480 V rated value 60 hp  contact rating of auxiliary contacts according to UL A600 / P600  Short-circuit protection No  design of the fuse link  • for short-circuit protection of the main circuit  — with type of assignment 2 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: 10 A (500 V, 1 kA)  • for short-circuit protection of the auxiliary switch required gG: 10 A (500 V, 1 kA)  Installation/ mounting/ dimensions  #/180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface;	• at 480 V rated value	65 A
• for single-phase AC motor  — at 110/120 V rated value 5 hp  — at 230 V rated value 15 hp  • for 3-phase AC motor  — at 200/208 V rated value 20 hp  — at 220/230 V rated value 25 hp  — at 460/480 V rated value 50 hp  — at 575/600 V rated value 60 hp  contact rating of auxiliary contacts according to UL A600 / P600  Short-circuit protection  product function short circuit protection No  design of the fuse link  • for short-circuit protection of the main circuit  — 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: 160A (690V, 100kA), aM: 80A (690V, 100kA), BS88: 125A (415V,80kA)  • for short-circuit protection of the auxiliary switch required nounting dimensions  mounting position +/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface;	at 600 V rated value	62 A
- at 110/120 V rated value 5 hp - at 230 V rated value 15 hp  • for 3-phase AC motor - at 200/208 V rated value 20 hp - at 220/230 V rated value 25 hp - at 460/480 V rated value 50 hp - at 575/600 V rated value 60 hp  contact rating of auxiliary contacts according to UL A600 / P600  Short-circuit protection  product function short circuit protection No  design of the fuse link • for short-circuit protection of the main circuit - 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: 160A (690V, 100kA), aM: 80A (690V, 100kA), BS88: 125A (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° on vertical mounting surface	yielded mechanical performance [hp]	
- at 230 V rated value  • for 3-phase AC motor  — at 200/208 V rated value — at 220/230 V rated value — at 460/480 V rated value — at 575/600 V rated value — 50 hp — at 575/600 V rated value — 60 hp  contact rating of auxiliary contacts according to UL  Short-circuit protection  product function short circuit protection  design of the fuse link  • for short-circuit protection of the main circuit — with type of coordination 1 required — with type of assignment 2 required • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short	<ul> <li>for single-phase AC motor</li> </ul>	
for 3-phase AC motor          — at 200/208 V rated value         — at 220/230 V rated value         — at 460/480 V rated value         — at 460/480 V rated value         — at 575/600 V rated value         — at 575/600 V rated value         — 60 hp          contact rating of auxiliary contacts according to UL          A600 / P600  Short-circuit protection  product function short circuit protection  Mo  design of the fuse link         — for short-circuit protection of the main circuit         — with type of coordination 1 required	— at 110/120 V rated value	5 hp
- at 220/230 V rated value 25 hp - at 220/230 V rated value 50 hp - at 460/480 V rated value 50 hp - at 575/600 V rated value 60 hp  contact rating of auxiliary contacts according to UL A600 / P600  Short-circuit protection  product function short circuit protection No  design of the fuse link  • for short-circuit protection of the main circuit  - 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: 160A (690V,100kA), aM: 80A (690V,100kA), BS88: 125A (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° on vertical mounting surface	— at 230 V rated value	15 hp
- at 220/230 V rated value - at 460/480 V rated value 50 hp - at 575/600 V rated value 60 hp  contact rating of auxiliary contacts according to UL  Short-circuit protection  product function short circuit protection  design of the fuse link  • for short-circuit protection of the main circuit - with type of coordination 1 required 9G: 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 9G: 160A (690V,100kA), aM: 80A (690V,100kA), BS88: 125A (415V,80kA) 9 for short-circuit protection of the auxiliary switch required 9G: 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	• for 3-phase AC motor	
- at 460/480 V rated value 50 hp  - at 575/600 V rated value 60 hp  contact rating of auxiliary contacts according to UL A600 / P600  Short-circuit protection  product function short circuit protection No  design of the fuse link  • for short-circuit protection of the main circuit  — 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: 160A (690V,100kA), aM: 80A (690V,100kA), BS88: 125A (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° on vertical mounting surface	— at 200/208 V rated value	20 hp
- at 575/600 V rated value  contact rating of auxiliary contacts according to UL  A600 / P600  Short-circuit protection  product function short circuit protection  design of the fuse link  • for short-circuit protection of the main circuit  — with type of coordination 1 required  — with type of assignment 2 required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  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	— at 220/230 V rated value	25 hp
contact rating of auxiliary contacts according to UL  Short-circuit protection  product function short circuit protection  design of the fuse link  • for short-circuit protection of the main circuit  — with type of coordination 1 required  — with type of assignment 2 required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  Installation/ mounting/ dimensions  #/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface	— at 460/480 V rated value	50 hp
product function short circuit protection  design of the fuse link  ● for short-circuit protection of the main circuit  — with type of coordination 1 required  — with type of assignment 2 required  ● for short-circuit protection of the auxiliary switch required  ● for short-circuit protection of the auxiliary switch required  ■ for short-circuit protection of the auxiliary switch required  ■ for short-circuit protection of the auxiliary switch required  ■ for short-circuit protection of the auxiliary switch required  ■ for short-circuit protection of the auxiliary switch required  ■ for short-circuit protection of the auxiliary switch required  ■ for short-circuit protection of the auxiliary switch required  ■ for short-circuit protection of the auxiliary switch required  ■ for short-circuit protection of the auxiliary switch required  ■ for short-circuit protection of the auxiliary switch required  ■ for short-circuit protection of the auxiliary switch required  ■ for short-circuit protection of the auxiliary switch required  ■ for short-circuit protection of the auxiliary switch required  ■ for short-circuit protection of the auxiliary switch required  ■ for short-circuit protection of the auxiliary switch required  ■ for short-circuit protection of the auxiliary switch required  ■ for short-circuit protection of the auxiliary switch required  ■ for short-circuit protection of the auxiliary switch required  ■ for short-circuit protection of the auxiliary switch required  ■ for short-circuit protection of the auxiliary switch required  ■ for short-circuit protection of the auxiliary switch required  ■ for short-circuit protection of the auxiliary switch required  ■ for short-circuit protection of the auxiliary switch required  ■ for short-circuit protection of the auxiliary switch required  ■ for short-circuit protection of the auxiliary switch required  ■ for short-circuit protection of the auxiliary switch required  ■ for short-circuit protection of the auxiliary switch required  ■ for short-circuit protect	— at 575/600 V rated value	60 hp
product function short circuit protection  design of the fuse link  • for short-circuit protection of the main circuit  — 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  • for short-circuit protection of the auxiliary switch required  for short-circuit protection of the auxiliary switch required  gG: 160A (690V,100kA), aM: 80A (690V,100kA), BS88: 125A (415V,80kA)  gG: 10 A (500 V, 1 kA)  Installation/ mounting/ dimensions  #/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface	contact rating of auxiliary contacts according to UL	A600 / P600
design of the fuse link  • for short-circuit protection of the main circuit  — 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  • for short-circuit protection of the auxiliary switch required  gG: 160A (690V,100kA), aM: 80A (690V,100kA), BS88: 125A (415V,80kA)  • for short-circuit protection of the auxiliary switch required  gG: 10 A (500 V, 1 kA)  Installation/ mounting/ dimensions  #/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface	Short-circuit protection	
for short-circuit protection of the main circuit     — with type of coordination 1 required     — with type of assignment 2 required     — with type of assignment 2 required     — with type of assignment 2 required     — for short-circuit protection of the auxiliary switch required     — with type of assignment 2 required     — for short-circuit protection of the auxiliary switch required  Installation/ mounting/ dimensions  #/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface  • for short-circuit protection of the auxiliary switch required  #/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface	product function short circuit protection	No
— with type of coordination 1 required  — with type of assignment 2 required  — with type of assignment 2 required  • for short-circuit protection of the auxiliary switch required  — with type of assignment 2 required  • for short-circuit protection of the auxiliary switch required  — with type of assignment 2 required  • for short-circuit protection of the auxiliary switch required  — with type of assignment 2 required  — with type of assignment 2 required  — gG: 160A (690V,100kA), aM: 80A (690V,100kA), BS88: 125A (415V,80kA)  — gG: 10 A (500 V, 1 kA)  — with type of assignment 2 required  — with type of assignment 2 required  — yellow (690V,100kA), aM: 80A (690V,100kA), BS88: 125A (415V,80kA)  — yellow (690V,100kA), aM: 80A (690V,100kA), BS88: 125A (415V,80kA)  — yellow (690V,100kA), aM: 80A (690V,100kA), BS88: 125A (415V,80kA)  — yellow (690V,100kA), aM: 80A (690V,100kA), BS88: 125A (415V,80kA)  — yellow (690V,100kA), aM: 80A (690V,100kA), BS88: 125A (415V,80kA)  — yellow (690V,100kA), aM: 80A (690V,100kA), BS88: 125A (415V,80kA)  — yellow (690V,100kA), aM: 80A (690V,100kA), BS88: 125A (415V,80kA)  — yellow (690V,100kA), aM: 80A (690V,100kA), BS88: 125A (415V,80kA)  — yellow (690V,100kA), aM: 80A (690V,100kA), BS88: 125A (415V,80kA)  — yellow (690V,100kA), aM: 80A (690V,100kA), BS88: 125A (415V,80kA)  — yellow (690V,100kA), aM: 80A (690V,100kA), BS88: 125A (415V,80kA)  — yellow (690V,100kA), aM: 80A (690V,100kA), BS88: 125A (415V,80kA)  — yellow (690V,100kA), aM: 80A (690V,100kA), BS88: 125A (415V,80kA)  — yellow (690V,100kA), aM: 80A (690V,100kA), BS88: 125A (415V,80kA)  — yellow (690V,100kA), aM: 80A (690V,100kA), BS88: 125A (415V,80kA)  — yellow (690V,100kA), aM: 80A (690V,100kA), BS88: 125A (415V,80kA)  — yellow (690V,100kA), aM: 80A (690V,100kA), BS88: 125A (415V,80kA)  — yellow (690V,100kA), aM: 80A (690V,100kA), BS88: 125A (415V,80kA)  — yellow (690V,100kA), aM: 80A (690V,100kA), BS88: 125A (415V,80kA)  — yellow (690V,100kA), aM: 80A (690V,100kA), BS88: 125A (415V,80kA)  — yellow (690V,100kA), aM: 80	design of the fuse link	
— with type of assignment 2 required  of or short-circuit protection of the auxiliary switch required  for short-circuit protection of the auxiliary switch required  gG: 160A (690V,100kA), aM: 80A (690V,100kA), BS88: 125A (415V,80kA)  gG: 10 A (500 V, 1 kA)  Installation/ mounting/ dimensions  #/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface	• for short-circuit protection of the main circuit	
● 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° on vertical mounting surface	— with type of coordination 1 required	
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	<ul> <li>— with type of assignment 2 required</li> </ul>	gG: 160A (690V,100kA), aM: 80A (690V,100kA), BS88: 125A (415V,80kA)
mounting position +/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface	• for short-circuit protection of the auxiliary switch required	gG: 10 A (500 V, 1 kA)
mounting position +/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface	Installation/ mounting/ dimensions	
fastening method screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715		
	fastening method	screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715

height	114 mm
width	55 mm
depth	130 mm
required spacing	
with side-by-side mounting	
— forwards	10 mm
— upwards	10 mm
— downwards	10 mm
— at the side	0 mm
for grounded parts	
— forwards	10 mm
— upwards	10 mm
— at the side	6 mm
— downwards	10 mm
• for live parts	
— forwards	10 mm
— upwards	10 mm
— downwards	10 mm
— at the side	6 mm
Connections/ Terminals	
type of electrical connection	
for main current circuit	screw-type terminals
for auxiliary and control circuit	spring-loaded terminals
at contactor for auxiliary contacts	Spring-type terminals
of magnet coil	Spring-type terminals
type of connectable conductor cross-sections for main contacts	
solid or stranded	2x (1 35 mm²), 1x (1 50 mm²)
finely stranded with core end processing	2x (1 25 mm²), 1x (1 35 mm²)
type of connectable conductor cross-sections	
• for auxiliary contacts	
solid or stranded	2x (0.5 2.5 mm²)
<ul> <li>finely stranded with core end processing</li> </ul>	2x (0.5 1.5 mm²)
finely stranded without core end processing	2x (0.5 2.5 mm²)
for AWG cables for auxiliary contacts	2x (20 14)
AWG number as coded connectable conductor cross section	
• for main contacts	18 1
• for auxiliary contacts	20 14
Safety related data	
product function	
<ul> <li>mirror contact according to IEC 60947-4-1</li> </ul>	Yes
<ul> <li>positively driven operation according to IEC 60947-5-1</li> </ul>	No
suitable for safety function	Yes
suitability for use safety-related switching OFF	Yes
service life maximum	20 a
test wear-related service life necessary	Yes
proportion of dangerous failures	
<ul> <li>with low demand rate according to SN 31920</li> </ul>	40 %
<ul> <li>with high demand rate according to SN 31920</li> </ul>	73 %
B10 value with high demand rate according to SN 31920	1 000 000
failure rate [FIT] with low demand rate according to SN 31920	100 FIT
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	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
Communication/ Protocol	

#### Approvals Certificates

## General Product Approval

Confirmation









<u>KC</u>

General Product Approval

EMV

**Functional Saftey** 

**Test Certificates** 

Marine / Shipping





Type Examination Certificate

Special Test Certificate

Type Test Certificates/Test Report



Marine / Shipping









Confirmation

other

Special Test Certificate

Railway

Railway

#### Environment

Type Test Certificates/Test Report



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=3RT2038-3XB40-0LA2

Cax online generator

 $\underline{\text{http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en\&mlfb=3RT2038-3XB40-0LA2}$ 

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT2038-3XB40-0LA2

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

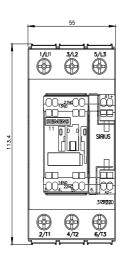
http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RT2038-3XB40-0LA2&lang=en

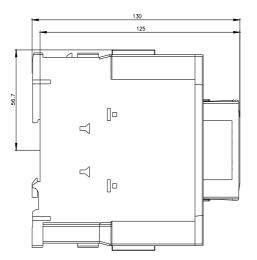
Characteristic: Tripping characteristics, I²t, Let-through current

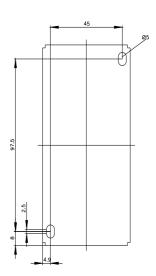
https://support.industry.siemens.com/cs/ww/en/ps/3RT2038-3XB40-0LA2/char

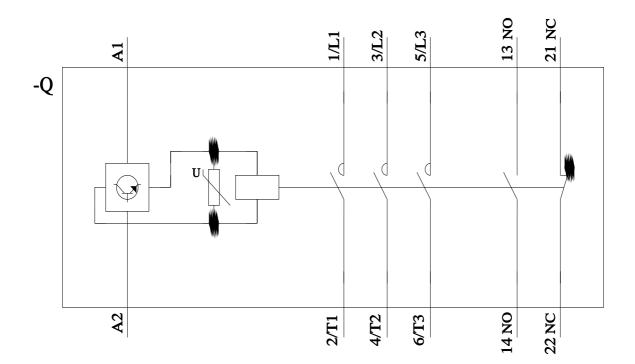
Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2038-3XB40-0LA2&objecttype=14&gridview=view1









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