# **SIEMENS**

# Data sheet

# 3RT2026-2BW40

power contactor, AC-3 25 A, 11 kW / 400 V 1 NO + 1 NC, 48 V DC 3-pole, Size S0 Spring-type terminal



product brand name	SIRIUS
product designation	Power contactor
product type designation	3RT2

General technical data	
size of contactor	SO
product extension	
<ul> <li>function module for communication</li> </ul>	No
<ul> <li>auxiliary switch</li> </ul>	Yes
power loss [W] for rated value of the current	
<ul> <li>at AC in hot operating state</li> </ul>	4.8 W
<ul> <li>at AC in hot operating state per pole</li> </ul>	1.6 W
power loss [W] for rated value of the current without load current share typical	5.9 W
surge voltage resistance	
<ul> <li>of main circuit rated value</li> </ul>	6 kV
<ul> <li>of auxiliary circuit rated value</li> </ul>	6 kV
maximum permissible voltage for safe isolation	
<ul> <li>between coil and main contacts acc. to EN 60947-1</li> </ul>	400 V

protection class IP	
• on the front	IP20
• of the terminal	IP20
shock resistance at rectangular impulse	
• at DC	10g / 5 ms, 7,5g / 10 ms
shock resistance with sine pulse	
• at DC	15g / 5 ms, 10g / 10 ms
mechanical service life (switching cycles)	
<ul> <li>of contactor typical</li> </ul>	10 000 000
<ul> <li>of the contactor with added electronics- compatible 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 DIN EN 81346-2	Q
Ambient conditions	
<ul> <li>installation altitude at height above sea level</li> </ul>	2 000 m
maximum	
ambient temperature	
<ul> <li>during operation</li> </ul>	-25 +60 °C
● during storage	-55 +80 °C
Main circuit	
number of poles for main current circuit	3
number of NO contacts for main contacts	3
operating voltage	
<ul> <li>at AC-3 rated value maximum</li> </ul>	690 V
operating current	
• at AC-1 at 400 V	
<ul> <li>— at ambient temperature 40 °C rated value</li> <li>at AC-1</li> </ul>	40 A
— up to 690 V at ambient temperature 40 °C rated value	40 A
— up to 690 V at ambient temperature 60 °C rated value	35 A
● at AC-3	
— at 400 V rated value	25 A
— at 500 V rated value	18 A
— at 690 V rated value	13 A
• at AC-4 at 400 V rated value	15.5 A
• at AC-5a up to 690 V rated value	35.2 A
<ul> <li>at AC-5b up to 400 V rated value</li> </ul>	20.7 A
•	
● at AC-6a	

<ul> <li>— up to 230 V for current peak value n=20 rated value</li> </ul>	20.2 A
— up to 400 V for current peak value n=20 rated value	20.2 A
— up to 500 V for current peak value n=20 rated value	20.2 A
— up to 690 V for current peak value n=20 rated value	12.9 A
● at AC-6a	
— up to 230 V for current peak value n=30 rated value	13.5 A
— up to 400 V for current peak value n=30 rated value	13.5 A
— up to 500 V for current peak value n=30 rated value	13.5 A
— up to 690 V for current peak value n=30 rated value	13 A
minimum cross-section in main circuit	
<ul> <li>at maximum AC-1 rated value</li> </ul>	10 mm <sup>2</sup>
operating current for approx. 200000 operating cycles at AC-4	
• at 400 V rated value	9 A
• at 690 V rated value	9 A
operating current	
<ul> <li>at 1 current path at DC-1</li> </ul>	
— at 24 V rated value	35 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	35 A
— at 110 V rated value	35 A
— at 220 V rated value	5 A
— at 440 V rated value	1 A
— at 600 V rated value	0.8 A
<ul> <li>with 3 current paths in series at DC-1</li> </ul>	
— at 24 V rated value	35 A
— at 110 V rated value	35 A
— at 220 V rated value	35 A
	55 A
— at 440 V rated value	2.9 A
— at 440 V rated value — at 600 V rated value	

<ul> <li>at 1 current path at DC-3 at DC-5</li> </ul>	
— at 24 V rated value	20 A
— at 110 V rated value	2.5 A
— at 220 V rated value	1 A
— at 440 V rated value	0.09 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	35 A
— at 110 V rated value	15 A
— at 220 V rated value	3 A
— at 440 V rated value	0.27 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	35 A
— at 110 V rated value	35 A
— at 220 V rated value	10 A
— at 440 V rated value	0.6 A
— at 600 V rated value	0.6 A
operating power	
• at AC-3	
— at 230 V rated value	5.5 kW
— at 400 V rated value	11 kW
— at 500 V rated value	11 kW
— at 690 V rated value	11 kW
operating power for approx. 200000 operating cycles at AC-4	
• at 400 V rated value	4.4 kW
• at 690 V rated value	7.7 kW
operating apparent output at AC-6a	
<ul> <li>up to 230 V for current peak value n=20 rated value</li> </ul>	8 kV·A
<ul> <li>up to 400 V for current peak value n=20 rated value</li> </ul>	13.9 kV·A
<ul> <li>up to 500 V for current peak value n=20 rated value</li> </ul>	17.4 kV·A
<ul> <li>up to 690 V for current peak value n=20 rated value</li> </ul>	15.4 kV·A
operating apparent output at AC-6a	
<ul> <li>up to 230 V for current peak value n=30 rated value</li> </ul>	5.3 kV·A
<ul> <li>up to 400 V for current peak value n=30 rated value</li> </ul>	9.3 kV·A

<ul> <li>up to 500 V for current peak value n=30 rated value</li> </ul>	11.6 kV·A
• up to 690 V for current peak value n=30 rated	15.5 kV·A
value	
short-time withstand current in cold operating state up to 40 °C	
<ul> <li>limited to 1 s switching at zero current</li> </ul>	375 A; Use minimum cross-section acc. to AC-1 rated value
maximum	
<ul> <li>limited to 5 s switching at zero current maximum</li> </ul>	299 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 10 s switching at zero current maximum</li> </ul>	200 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 30 s switching at zero current</li> </ul>	128 A; Use minimum cross-section acc. to AC-1 rated value
maximum	
<ul> <li>limited to 60 s switching at zero current</li> </ul>	106 A; Use minimum cross-section acc. to AC-1 rated value
maximum	
no-load switching frequency	
• at DC	1 500 1/h
operating frequency	
● at AC-1 maximum	1 000 1/h
● at AC-2 maximum	750 1/h
● at AC-3 maximum	750 1/h
● at AC-4 maximum	250 1/h
Control circuit/ Control	
type of voltage of the control supply voltage	DC
control supply voltage at DC	
• rated value	48 V
operating range factor control supply voltage rated	
value of magnet coil at DC	
● initial value	0.8
• full-scale value	1.1
closing power of magnet coil at DC	5.9 W
holding power of magnet coil at DC	5.9 W
closing delay	
• at DC	50 170 ms
opening delay	
• at DC	15 17.5 ms
arcing time	10 10 ms
control version of the switch operating mechanism	Standard A1 - A2
Auxiliary circuit	
number of NC contacts for auxiliary contacts	
• instantaneous contact	1
number of NO contacts for auxiliary contacts	

<ul> <li>instantaneous contact</li> </ul>	1
operating current at AC-12 maximum	10 A
operating current at AC-15	_
• at 230 V rated value	10 A
• at 400 V rated value	3 A
• at 500 V rated value	2 A
• at 690 V rated value	1 A
operating current at DC-12	
• at 24 V rated value	10 A
• at 48 V rated value	6 A
• at 60 V rated value	6 A
• at 110 V rated value	3 A
• at 125 V rated value	2 A
• at 220 V rated value	1 A
• at 600 V rated value	0.15 A
operating current at DC-13	
• at 24 V rated value	10 A
• at 48 V rated value	2 A
• at 60 V rated value	2 A
• at 110 V rated value	1 A
• at 125 V rated value	0.9 A
• at 220 V rated value	0.3 A
• at 600 V rated value	0.1 A
contact reliability of auxiliary contacts	1 faulty switching per 100 million (17 V, 1 mA)

UL/CSA ratings	ngs
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full-load current (FLA) for three-phase AC motor	
• at 480 V rated value	21 A
• at 600 V rated value	22 A
yielded mechanical performance [hp]	
<ul> <li>for single-phase AC motor</li> </ul>	
— at 110/120 V rated value	2 hp
— at 230 V rated value	3 hp
<ul> <li>for three-phase AC motor</li> </ul>	
— at 200/208 V rated value	5 hp
— at 220/230 V rated value	7.5 hp
— at 460/480 V rated value	15 hp
— at 575/600 V rated value	20 hp
contact rating of auxiliary contacts according to UL	A600 / P600

Short-circuit protection

## design of the fuse link

• for short-circuit protection of the main circuit

— with type of coordination 1 required	gG: 100 A (690 V, 100 kA), aM: 50 A (690 V, 100 kA), BS88: 100 A (415 V, 80 kA)
— with type of assignment 2 required	gG: 35A (690V, 100kA), aM: 20A (690V, 100kA), BS88: 35A (415V, 80kA)
<ul> <li>for short-circuit protection of the auxiliary switch required</li> </ul>	gG: 10 A (500 V, 1 kA)

nounting position	+/-180° rotation possible on vertical mounting surface; can be
0 -	tilted forward and backward by +/- 22.5° on vertical mounting
	surface
nounting type	screw and snap-on mounting onto 35 mm standard mounting ra
	according to DIN EN 60715
<ul> <li>side-by-side mounting</li> </ul>	Yes
neight	102 mm
vidth	45 mm
lepth	107 mm
equired spacing	
<ul> <li>with side-by-side mounting</li> </ul>	
— forwards	10 mm
— upwards	10 mm
— downwards	10 mm
— at the side	0 mm
<ul> <li>for grounded parts</li> </ul>	
— 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
onnections/ Terminals	
ype of electrical connection	
<ul> <li>for main current circuit</li> </ul>	spring-loaded terminals
<ul> <li>for auxiliary and control current circuit</li> </ul>	spring-loaded terminals
<ul> <li>at contactor for auxiliary contacts</li> </ul>	Spring-type terminals
<ul> <li>of magnet coil</li> </ul>	Spring-type terminals
ype of connectable conductor cross-sections	
• for main contacts	
— solid	2x (1 10 mm²)
— single or multi-stranded	2x (1 10 mm²)

— finely stranded with core end processing	2x (1 6 mm²)
<ul> <li>— finely stranded without core end</li> </ul>	2x (1 6 mm <sup>2</sup> )
processing	
<ul> <li>at AWG conductors for main contacts</li> </ul>	2x (18 8)
connectable conductor cross-section for main	
contacts	
• solid	1 10 mm²
• stranded	1 10 mm²
<ul> <li>finely stranded with core end processing</li> </ul>	1 6 mm²
<ul> <li>finely stranded without core end processing</li> </ul>	1 6 mm²
connectable conductor cross-section for auxiliary contacts	
<ul> <li>single or multi-stranded</li> </ul>	0.5 2.5 mm²
<ul> <li>finely stranded with core end processing</li> </ul>	0.5 1.5 mm²
<ul> <li>finely stranded without core end processing</li> </ul>	0.5 2.5 mm²
• type of connectable conductor cross-sections for auxiliary contacts	
— single or multi-stranded	2x (0.5 2.5 mm²)
— finely stranded with core end processing	2x (0.5 1.5 mm²)
<ul> <li>finely stranded without core end processing</li> </ul>	2x (0.5 2.5 mm²)
<ul> <li>type of connectable conductor cross-sections at AWG conductors for auxiliary contacts</li> </ul>	2x (20 14)
AWG number as coded connectable conductor cross	
section	
• for main contacts	18 8
<ul> <li>for auxiliary contacts</li> </ul>	20 14
Safety related data	
B10 value	
• with high demand rate acc. to SN 31920	1 000 000
proportion of dangerous failures	
• with low demand rate 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 FIT
product function	
• mirror contact acc. to IEC 60947-4-1	Yes
T1 value for proof test interval or service life acc. to IEC 61508	20 y
protection against electrical shock	finger-safe
suitability for use safety-related switching OFF	Yes
Certificates/ approvals	

General Product Approval					EMC
CCC	(SA) CSA		<u>KC</u>	EHC	RCM
Functional Safety/Safety of Machinery	Declaration of	f Conformity	Test Certificates		Marine / Ship- ping
Type Examination Certificate	EG-Konf.	Miscellaneous	Type Test Certific- ates/Test Report	Special Test Certi- ficate	ABS
Marine / Shipping					
B U R E A U V E R I TA S	Llovd's Register LRS	PRS	RINA	RMRS	DNVGLCOM/AF
other					
Confirmation	UDE VDE				

### 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=3RT2026-2BW40

#### Cax online generator

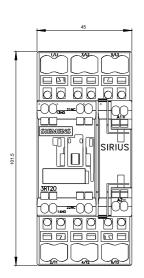
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2026-2BW40

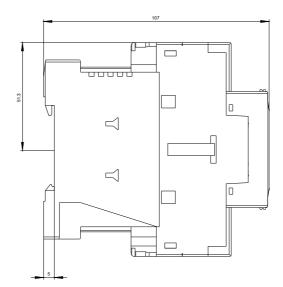
Service&Support (Manuals, Certificates, Characteristics, FAQs,...) https://support.industry.siemens.com/cs/ww/en/ps/3RT2026-2BW40

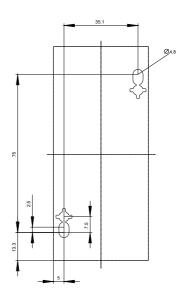
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RT2026-2BW40&lang=en

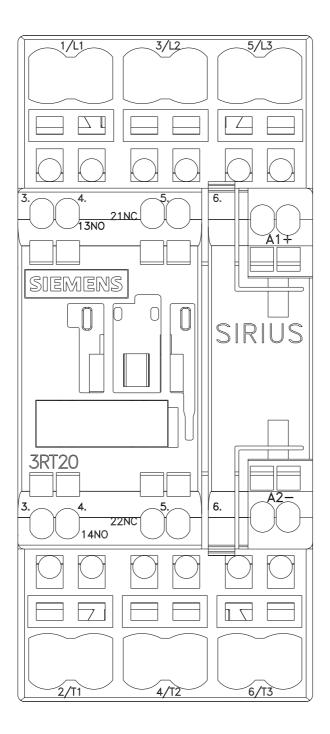
Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current https://support.industry.siemens.com/cs/ww/en/ps/3RT2026-2BW40/char

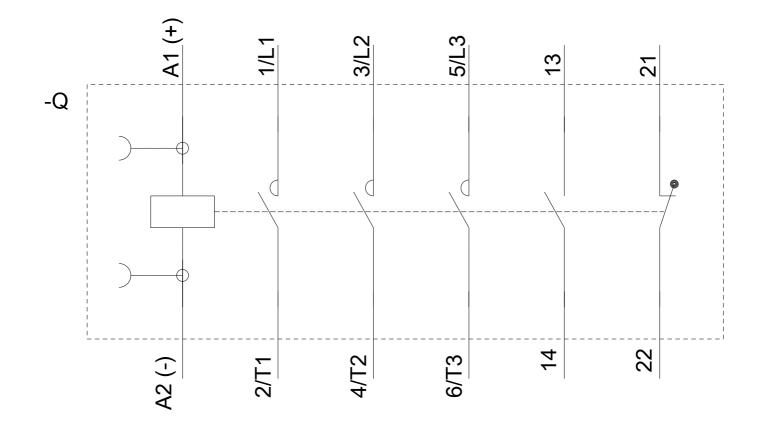
Further characteristics (e.g. electrical endurance, switching frequency) http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2026-2BW40&objecttype=14&gridview=view1











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