# **SIEMENS**

Data sheet 3RT2026-1BD40

power contactor, AC-3 25 A, 11 kW / 400 V 1 NO + 1 NC, 42 V DC, 3-pole, Size S0 screw terminal



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

General technical data	
size of contactor	S0
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	5.9 W
load current share typical	
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</li> </ul>	400 V
60947-1	

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)	
of contactor typical	10 000 000
<ul> <li>of the contactor with added electronics-</li> </ul>	5 000 000
compatible auxiliary switch block typical	
of the contactor with added auxiliary switch	10 000 000
block typical	2
reference code acc. to DIN EN 81346-2	Q
Ambient conditions	
• installation altitude at height above sea level	2 000 m
maximum	
ambient temperature	05
• during operation	-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	
at AC-3 rated value maximum	690 V
operating current	
• at AC-1 at 400 V	
<ul> <li>— at ambient temperature 40 °C rated value</li> </ul>	40 A
• at AC 1	40 A
• at AC-1	
<ul> <li>at AC-1</li> <li>— up to 690 V at ambient temperature 40 °C rated value</li> </ul>	40 A
— up to 690 V at ambient temperature 40 $^{\circ}\text{C}$	
<ul> <li>— up to 690 V at ambient temperature 40 °C rated value</li> <li>— up to 690 V at ambient temperature 60 °C</li> </ul>	40 A
<ul> <li>up to 690 V at ambient temperature 40 °C rated value</li> <li>up to 690 V at ambient temperature 60 °C rated value</li> </ul>	40 A
<ul> <li>up to 690 V at ambient temperature 40 °C rated value</li> <li>up to 690 V at ambient temperature 60 °C rated value</li> <li>at AC-3</li> </ul>	40 A 35 A
<ul> <li>up to 690 V at ambient temperature 40 °C rated value</li> <li>up to 690 V at ambient temperature 60 °C rated value</li> <li>at AC-3</li> <li>at 400 V rated value</li> </ul>	40 A 35 A 25 A
<ul> <li>up to 690 V at ambient temperature 40 °C rated value</li> <li>up to 690 V at ambient temperature 60 °C rated value</li> <li>at AC-3</li> <li>at 400 V rated value</li> <li>at 500 V rated value</li> </ul>	40 A 35 A 25 A 18 A
<ul> <li>up to 690 V at ambient temperature 40 °C rated value</li> <li>up to 690 V at ambient temperature 60 °C rated value</li> <li>at AC-3</li> <li>at 400 V rated value</li> <li>at 500 V rated value</li> <li>at 690 V rated value</li> </ul>	40 A 35 A 25 A 18 A 13 A
<ul> <li>up to 690 V at ambient temperature 40 °C rated value</li> <li>up to 690 V at ambient temperature 60 °C rated value</li> <li>at AC-3</li> <li>at 400 V rated value</li> <li>at 500 V rated value</li> <li>at 690 V rated value</li> <li>at AC-4 at 400 V rated value</li> </ul>	40 A 35 A 25 A 18 A 13 A 15.5 A

— up to 230 V for current peak value n=20	20.2 A
rated value	20:27
<ul><li>— up to 400 V for current peak value n=20 rated value</li></ul>	20.2 A
<ul> <li>up to 500 V for current peak value n=20 rated value</li> </ul>	20.2 A
<ul> <li>up to 690 V for current peak value n=20 rated value</li> </ul>	12.9 A
• at AC-6a	
<ul><li>up to 230 V for current peak value n=30 rated value</li></ul>	13.5 A
<ul> <li>up to 400 V for current peak value n=30 rated value</li> </ul>	13.5 A
<ul> <li>up to 500 V for current peak value n=30 rated value</li> </ul>	13.5 A
<ul><li>— up to 690 V for current peak value n=30 rated value</li></ul>	13 A
minimum cross-section in main circuit	
<ul> <li>at maximum AC-1 rated value</li> </ul>	10 mm²
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	
• at 1 current path at DC-1	
— 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
— at 440 V rated value	2.9 A
— at 600 V rated value	1.4 A
operating current	

• at 1 current path at DC-3 at DC-5	
— 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
• with 2 current paths in series at DC-3 at DC-5	
— 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
• with 3 current paths in series at DC-3 at DC-5	
— 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-2 at 400 V rated value	11 kW
• 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 maximum</li> </ul>	375 A; Use minimum cross-section acc. to AC-1 rated value
<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 maximum</li> </ul>	128 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 60 s switching at zero current maximum</li> </ul>	106 A; Use minimum cross-section acc. to AC-1 rated value
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
at AC-4 maximum  Control circuit/ Control	250 1/h
	250 1/h DC
Control circuit/ Control	
Control circuit/ Control type of voltage of the control supply voltage	
Control circuit/ Control type of voltage of the control supply voltage control supply voltage at DC	DC
Control circuit/ Control  type of voltage of the control supply voltage  control supply voltage at DC  • rated value  operating range factor control supply voltage rated	DC
Control circuit/ Control  type of voltage of the control supply voltage  control supply voltage at DC  • rated value  operating range factor control supply voltage rated value of magnet coil at DC	DC 42 V
Control circuit/ Control type of voltage of the control supply voltage control supply voltage at DC • rated value  operating range factor control supply voltage rated value of magnet coil at DC • initial value	DC 42 V 0.8
Control circuit/ Control  type of voltage of the control supply voltage  control supply voltage at DC  • rated value  operating range factor control supply voltage rated value of magnet coil at DC  • initial value  • full-scale value	DC 42 V 0.8 1.1
Control circuit/ Control  type of voltage of the control supply voltage  control supply voltage at DC  • rated value  operating range factor control supply voltage rated value of magnet coil at DC  • initial value  • full-scale value  closing power of magnet coil at DC	DC 42 V 0.8 1.1 5.9 W
Control circuit/ Control  type of voltage of the control supply voltage  control supply voltage at DC  • rated value  operating range factor control supply voltage rated value of magnet coil at DC  • initial value  • full-scale value  closing power of magnet coil at DC  holding power of magnet coil at DC	DC 42 V 0.8 1.1 5.9 W
Control circuit/ Control  type of voltage of the control supply voltage  control supply voltage at DC  • rated value  operating range factor control supply voltage rated value of magnet coil at DC  • initial value  • full-scale value  closing power of magnet coil at DC  holding power of magnet coil at DC  closing delay	DC 42 V 0.8 1.1 5.9 W 5.9 W
type of voltage of the control supply voltage control supply voltage at DC	DC 42 V 0.8 1.1 5.9 W 5.9 W
type of voltage of the control supply voltage control supply voltage at DC         • rated value  operating range factor control supply voltage rated value of magnet coil at DC         • initial value         • full-scale value  closing power of magnet coil at DC  holding power of magnet coil at DC  closing delay         • at DC  opening delay	DC  42 V  0.8  1.1  5.9 W  5.9 W
type of voltage of the control supply voltage control supply voltage at DC	DC  42 V  0.8  1.1  5.9 W  5.9 W  50 170 ms
type of voltage of the control supply voltage  control supply voltage at DC  • rated value  operating range factor control supply voltage rated value of magnet coil at DC  • initial value  • full-scale value  closing power of magnet coil at DC  holding power of magnet coil at DC  closing delay  • at DC  opening delay  • at DC  arcing time	DC  42 V  0.8  1.1  5.9 W  5.9 W  50 170 ms  15 17.5 ms  10 10 ms
type of voltage of the control supply voltage control supply voltage at DC	DC  42 V  0.8  1.1  5.9 W  5.9 W  50 170 ms  15 17.5 ms  10 10 ms
Control circuit/ Control  type of voltage of the control supply voltage  control supply voltage at DC  • rated value  operating range factor control supply voltage rated value of magnet coil at DC  • initial value  • full-scale value  closing power of magnet coil at DC  holding power of magnet coil at DC  closing delay  • at DC  opening delay  • at DC  arcing time  control version of the switch operating mechanism	DC  42 V  0.8  1.1  5.9 W  5.9 W  50 170 ms  15 17.5 ms  10 10 ms

• instantaneous contact	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	
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
• for three-phase AC motor	
— at 200/208 V rated value	5 hp
<ul> <li>at 220/230 V rated value</li> </ul>	7.5 hp
<ul> <li>at 460/480 V rated value</li> </ul>	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

gG: 100 A (690 V, 100 kA), aM: 50 A (690 V, 100 kA), BS88: 100 — with type of coordination 1 required

A (415 V, 80 kA)

gG: 35A (690V, 100kA), aM: 20A (690V, 100kA), BS88: 35A — with type of assignment 2 required

(415V, 80kA)

• 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
mounting type	screw and snap-on mounting onto 35 mm standard mounting rai according to DIN EN 60715
• side-by-side mounting	Yes
height	85 mm
width	45 mm
depth	107 mm
required spacing	
<ul><li>with side-by-side mounting</li></ul>	
— 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
<ul> <li>for auxiliary and control current 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	
— solid	2x (1 2.5 mm²), 2x (2.5 10 mm²)
— single or multi-stranded	2x (1 2,5 mm²), 2x (2,5 10 mm²)

<ul> <li>finely stranded with core end processing</li> </ul>	2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm²
<ul> <li>at AWG conductors for main contacts</li> </ul>	2x (16 12), 2x (14 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 10 mm²
connectable conductor cross-section for auxiliary	
contacts	
• single or multi-stranded	0.5 2.5 mm²
<ul> <li>finely stranded with core end processing</li> </ul>	0.5 2.5 mm²
• type of connectable conductor cross-sections	
for auxiliary contacts	
<ul><li>— single or multi-stranded</li></ul>	2x (0,5 1,5 mm²), 2x (0,75 2,5 mm²)
<ul> <li>finely stranded with core end processing</li> </ul>	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
• type of connectable conductor cross-sections at	2x (20 16), 2x (18 14)
AWG conductors for auxiliary contacts	
AWG number as coded connectable conductor cross	
section	
• for main contacts	16 8
• for auxiliary contacts	20 14

Safety related data	
B10 value	
<ul> <li>with high demand rate acc. to SN 31920</li> </ul>	1 000 000
proportion of dangerous failures	
<ul> <li>with low demand rate acc. to SN 31920</li> </ul>	40 %
<ul> <li>with high demand rate acc. to SN 31920</li> </ul>	73 %
failure rate [FIT]	
<ul> <li>with low demand rate acc. to SN 31920</li> </ul>	100 FIT
product function	
<ul> <li>mirror contact acc. to IEC 60947-4-1</li> </ul>	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**







KC





**EMC** 

Functional Safety/Safety of Machinery	Declaration of Conformity	Test Certificates	Marine / Ship- ping
Type Examination  Certificate	Miscellaneous  EG-Konf.	Type Test Certificates/Test Report Special Test Certificate	ABS

# Marine / Shipping













other

Confirmation

#### other



## 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=3RT2026-1BD40

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2026-1BD40

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT2026-1BD40

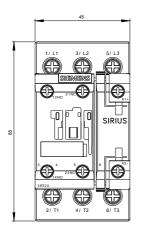
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RT2026-1BD40&lang=en

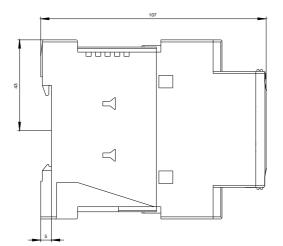
Characteristic: Tripping characteristics, I2t, Let-through current

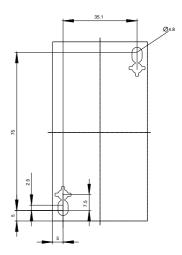
https://support.industry.siemens.com/cs/ww/en/ps/3RT2026-1BD40/char

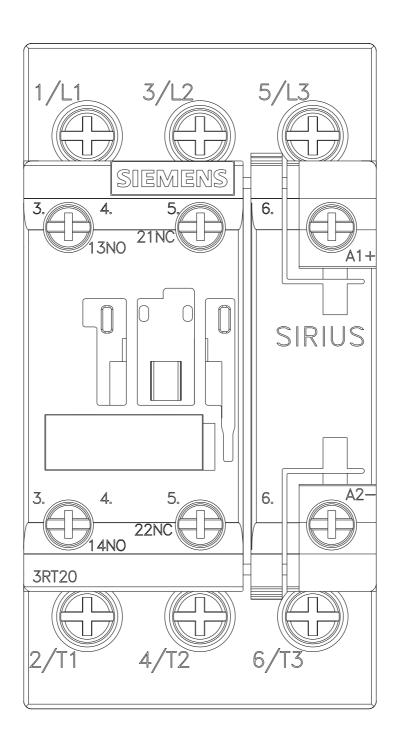
Further characteristics (e.g. electrical endurance, switching frequency)

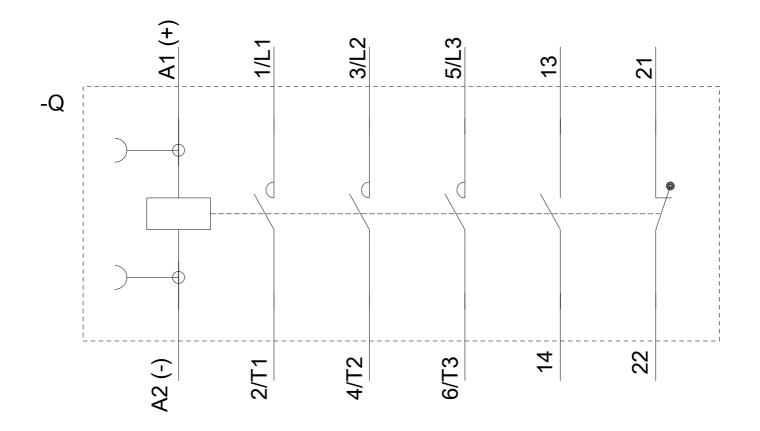
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2026-1BD40&objecttype=14&gridview=view1











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