## **SIEMENS**

Data sheet 3RT2516-2BM40



power contactor, AC-3, 9 A, 4 kW / 400 V, 4-pole, 220 V DC, main contacts: 2 NO + 2 NC, spring-loaded terminal, size: S00  $\,$ 

product brand name	SIRIUS
product designation	contactor
product type designation	3RT25
General technical data	
size of contactor	S00
product extension	
<ul> <li>function module for communication</li> </ul>	No
auxiliary switch	Yes
insulation voltage	
<ul> <li>of main circuit with degree of pollution 3 rated value</li> </ul>	690 V
<ul> <li>of auxiliary circuit with degree of pollution 3 rated value</li> </ul>	690 V
surge voltage resistance	
of main circuit rated value	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	6,7g / 5 ms, 4,2g / 10 ms
shock resistance with sine pulse	
• at DC	10,5g / 5 ms, 6,6g / 10 ms
mechanical service life (operating cycles)	
<ul> <li>of contactor typical</li> </ul>	30 000 000
<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)	10/01/2009
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 according to IEC 60068-2-30 maximum	95 %
Main circuit	
number of poles for main current circuit	4
number of NO contacts for main contacts	2
number of NC contacts for main contacts	2
operational current	
• at AC-1 up to 690 V	

1 1: 11 1000 1 1	40.4
— at ambient temperature 40 °C rated value	18 A
— at ambient temperature 60 °C rated value	16 A
• at AC-2 at AC-3 at 400 V	
— per NO contact rated value	9 A
— per NC contact rated value	9.4
minimum cross-section in main circuit at maximum AC-1 rated value	2.5 mm²
operational current	
• at 1 current path at DC-1	
— at 24 V rated value	16 A
— at 110 V rated value	2.1 A
— at 220 V rated value	0.8 A
— at 440 V rated value	0.6 A
<ul><li>with 2 current paths in series at DC-1</li></ul>	
— at 24 V rated value	16 A
— at 110 V rated value	12 A
— at 220 V rated value	1.6 A
— at 440 V rated value	0.8 A
• at 1 current path at DC-3 at DC-5	
<ul> <li>— at 24 V per NC contact rated value</li> </ul>	16 A
<ul> <li>— at 24 V per NO contact rated value</li> </ul>	16 A
<ul> <li>— at 110 V per NC contact rated value</li> </ul>	0.075 A
<ul> <li>at 110 V per NO contact rated value</li> </ul>	0.15 A
<ul> <li>— at 220 V per NC contact rated value</li> </ul>	0.375 A
<ul> <li>— at 220 V per NO contact rated value</li> </ul>	0.75 A
<ul> <li>with 2 current paths in series at DC-3 at DC-5</li> </ul>	
<ul> <li>— at 24 V per NC contact rated value</li> </ul>	16 A
<ul> <li>— at 24 V per NO contact rated value</li> </ul>	16 A
<ul> <li>— at 110 V per NC contact rated value</li> </ul>	0.175 A
— at 110 V per NO contact rated value	0.35 A
operating power at AC-2 at AC-3	
<ul> <li>at 230 V per NC contact rated value</li> </ul>	2.2 kW
<ul> <li>at 230 V per NO contact rated value</li> </ul>	2.2 kW
<ul> <li>at 400 V per NC contact rated value</li> </ul>	4 kW
at 400 V per NO contact rated value	4 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>	110 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 5 s switching at zero current maximum</li> </ul>	110 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 10 s switching at zero current maximum</li> </ul>	86 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 30 s switching at zero current maximum</li> </ul>	66 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 60 s switching at zero current maximum</li> </ul>	54 A; Use minimum cross-section acc. to AC-1 rated value
power loss [W] at AC-3 at 400 V for rated value of the operational current per conductor	0.7 W
no-load switching frequency	
• at AC	10 000 1/h
• at DC	10 000 1/h
operating frequency	
• at AC-1 maximum	1 000 1/h
Control circuit/ Control	
type of voltage of the control supply voltage	DC
control supply voltage at DC	
rated value	220 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	4 W
holding power of magnet coil at DC	4 W
closing delay	
• at DC	30 100 ms
opening delay	

at DC	7 13 ms
• at DC	7 13 ms 10 15 ms
arcing time	10 13 1118
residual current of the electronics for control with signal <0>	
at DC at 24 V maximum permissible	0.01 A
Auxiliary circuit	
number of NC contacts for auxiliary contacts instantaneous	0
contact	·
number of NO contacts for auxiliary contacts instantaneous contact	0
operational current at AC-12 maximum	10 A
operational current at AC-15	
at 230 V rated value	10 A
at 400 V rated value	3 A
operational current at DC-12	
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	1A
at 600 V rated value	0.15 A
operational current at DC-13	0.1071
• at 24 V rated value	10 A
at 48 V rated value     at 48 V rated value	2 A
at 48 V rated value     at 60 V rated value	2 A
	1A
• at 110 V rated value	
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	
yielded mechanical performance [hp]	
for single-phase AC motor at 230 V rated value	1 hp
for 3-phase AC motor at 460/480 V rated value	5 hp
contact rating of auxiliary contacts according to UL	A600 / Q600
Short-circuit protection	
design of the fuse link	
<ul> <li>for short-circuit protection of the main circuit</li> </ul>	
<ul> <li>— with type of coordination 1 required</li> </ul>	gG: 35 A (690 V, 100 kA)
<ul> <li>— with type of assignment 2 required</li> </ul>	gG: 20A (690V, 100kA)
• for short-circuit protection of the auxiliary switch required	fuse gG: 10 A
• for short-circuit protection of the auxiliary switch required Installation/ mounting/ dimensions	fuse gG: 10 A
	fuse gG: 10 A  +/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface
Installation/ mounting/ dimensions	+/-180° rotation possible on vertical mounting surface; can be tilted forward and
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
Installation/ mounting/ dimensions mounting position fastening method	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 50022
Installation/ mounting/ dimensions mounting position  fastening method • side-by-side mounting	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 50022 Yes
Installation/ mounting/ dimensions mounting position  fastening method	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 50022 Yes 70 mm
Installation/ mounting/ dimensions mounting position  fastening method	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 50022 Yes 70 mm 45 mm
Installation/ mounting/ dimensions  mounting position  fastening method  • side-by-side mounting  height  width  depth  required spacing	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 50022 Yes 70 mm 45 mm
Installation/ mounting/ dimensions mounting position  fastening method	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 50022 Yes 70 mm 45 mm
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0 mm - forwards - backwards 0 mm - upwards 0 mm - downwards 0 mm — at the side 6 mm type of electrical connection • for main current circuit spring-loaded 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 2x (0.5 ... 4 mm²) solid 2x (0,5 ... 4 mm²) solid or stranded • finely stranded with core end processing 2x (0.5 ... 2.5 mm²) • finely stranded without core end processing 2x (0.5 ... 2.5 mm²) type of connectable conductor cross-sections for auxiliary contacts - solid 2x (0.5 ... 4 mm²) - solid or stranded 2x (0,5 ... 4 mm²) - finely stranded with core end processing 2x (0.5 ... 2.5 mm²) - finely stranded without core end processing 2x (0.5 ... 2.5 mm²) • for AWG cables for auxiliary contacts 2x (20 ... 12) AWG number as coded connectable conductor cross section for 20 ... 12 main contacts Safety related data product function • mirror contact according to IEC 60947-4-1 Yes; with 3RH29 • positively driven operation according to IEC 60947-5-1 No T1 value for proof test interval or service life according to IEC 20 a IP20 protection class IP on the front according to IEC 60529 touch protection on the front according to IEC 60529 finger-safe, for vertical contact from the front

General Product Approval

EMC



Certificates/ approvals

Confirmation









Functional Safety/Safety of Machinery

**Declaration of Conformity** 

**Test Certificates** 

Marine / Shipping

Type Examination Certificate





Special Test Certificate

Type Test Certificates/Test Report



## Marine / Shipping













other Railway Dangerous Good Environment



## Further information

Siemens has decided to exit the Russian market (see here).

https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business

Siemens is working on the renewal of the current EAC certificates.

Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).

## 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=3RT2516-2BM40

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2516-2BM40

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT2516-2BM40

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

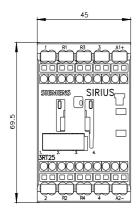
http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RT2516-2BM40&lang=en

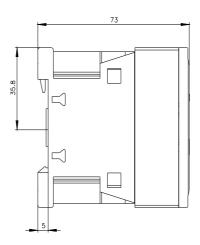
Characteristic: Tripping characteristics, I2t, Let-through current

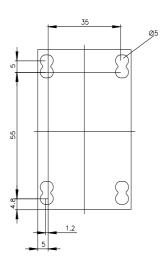
https://support.industry.siemens.com/cs/ww/en/ps/3RT2516-2BM40/char

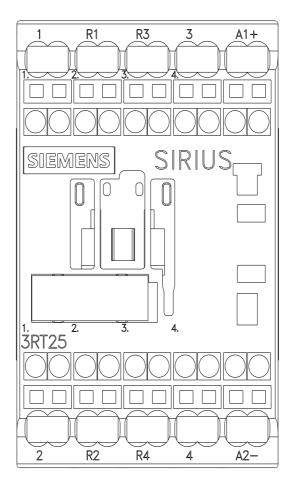
Further characteristics (e.g. electrical endurance, switching frequency)

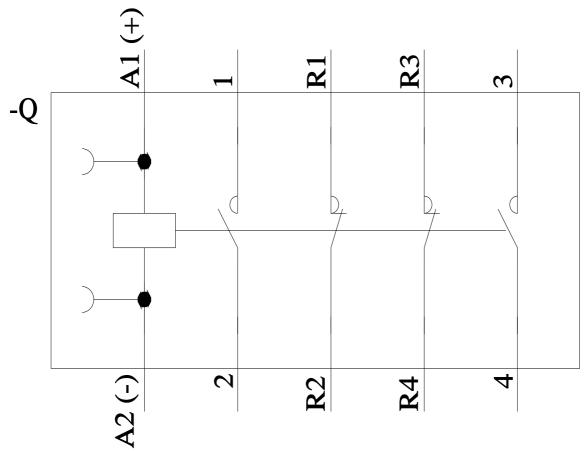
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2516-2BM40&objecttype=14&gridview=view1











last modified: 11/21/2022 🖸