SIEMENS

Data sheet 3RT2516-1BM40



Power contactor, AC-3 9 A, 4 kW / 400 V 2 NO + 2 NC 220 V DC 4-pole Size S00 screw terminals

product designation product type designation size of contactor size of contactor of unction module for communication of auxiliary switch of auxiliary circuit with degree of pollution 3 rated value of auxiliary circuit with degree of pollution 3 rated value of auxiliary circuit with degree of pollution 3 rated value of auxiliary circuit rated value of auxiliary switch sine puise of the contactor with sine puise of the contactor with added electronically optimized auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the	product brand name	SIRIUS
Size of contactor product extension • function module for communication • auxiliary switch • of main circuit with degree of pollution 3 rated value • of auxiliary circuit with degree of pollution 3 rated value • of auxiliary circuit with degree of pollution 3 rated value • of main circuit rated value • of auxiliary sircuit rated value • of auxiliary circuit rated value • of auxiliary sivint block typical • of the contactor with added electronically optimized auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch blo	product designation	contactor
size of contactor product extension	product type designation	3RT25
product extension • function module for communication • auxiliary switch • auxiliary switch • of main circuit with degree of pollution 3 rated value • of auxiliary circuit with degree of pollution 3 rated value • of auxiliary circuit with degree of pollution 3 rated value • of auxiliary circuit rated value • of work maximum permissible voltage for safe isolation between coil and main contacts according to EN 60947-1 shock resistance at rectangular impulse • at DC • of contactor with sine pulse • at DC • of contactor typical • of the contactor with added electronically optimized auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block	General technical data	
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value surge voltage resistance of main circuit rated value of auxiliary circuit rated value anximum permissible voltage for safe isolation between coil and main contacts according to EN 60947-1 shock resistance at rectangular impulse out DC shock resistance with sine pulse out DC sh	 of main circuit with degree of pollution 3 rated value 	690 V
of main circuit rated value of auxillary circuit rated value of auxillary circuit rated value aximum permissible voltage for safe isolation between coil and main contacts according to EN 60947-1 shock resistance at rectangular impulse at DC shock resistance with sine pulse at DC shock resistance with sine pulse at DC		690 V
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maximum permissible voltage for safe isolation between coil and main contacts according to EN 60947-1 shock resistance at rectangular impulse	of main circuit rated value	6 kV
shock resistance at rectangular impulse • at DC shock resistance with sine pulse • at DC 10,5g / 5 ms, 4,2g / 10 ms eat DC • of DC • of contactor typical • of the contactor with added electronically optimized auxiliary switch block typical • of the contactor with added	of auxiliary circuit rated value	6 kV
• at DC shock resistance with sine pulse • at DC mechanical service life (switching cycles) • of contactor typical • of the contactor with added electronically optimized auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block typical reference code according to IEC 81346-2 Questional Rubbert conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage relative humidity minimum relative humidity minimum relative humidity at 55 °C according to IEC 60068-2-30 maximum Main circuit number of poles for main current circuit 4		400 V
shock resistance with sine pulse	shock resistance at rectangular impulse	
at DC mechanical service life (switching cycles) of contactor typical of the contactor with added electronically optimized auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical reference code according to IEC 81346-2 Q Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature of during operation of during storage relative humidity minimum relative humidity at 55 °C according to IEC 60068-2-30 maximum Main circuit number of poles for main current circuit 4 30 000 000 10 000	• at DC	6,7g / 5 ms, 4,2g / 10 ms
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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		5 000 000
Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage relative humidity minimum relative humidity at 55 °C according to IEC 60068-2-30 maximum Main circuit number of poles for main current circuit 10/01/2009 2 000 m 2 000 m - 25 +60 °C - 25 +80 °C 95 % 95 %		10 000 000
installation altitude at height above sea level maximum ambient temperature during operation during storage during storage relative humidity minimum relative humidity at 55 °C according to IEC 60068-2-30 maximum Main circuit number of poles for main current circuit 2 000 m -25 +60 °C -55 +80 °C 10 % 95 %	reference code according to IEC 81346-2	Q
installation altitude at height above sea level maximum ambient temperature during operation during storage during storage relative humidity minimum relative humidity at 55 °C according to IEC 60068-2-30 maximum Main circuit number of poles for main current circuit 2 000 m -25 +60 °C -55 +80 °C 95 %	Substance Prohibitance (Date)	10/01/2009
ambient temperature • during operation • during storage relative humidity minimum relative humidity at 55 °C according to IEC 60068-2-30 maximum Main circuit number of poles for main current circuit -25 +60 °C -25 +80 °C 10 % 95 % 95 %	Ambient conditions	
 during operation during storage telative humidity minimum relative humidity at 55 °C according to IEC 60068-2-30 maximum Main circuit number of poles for main current circuit 	installation altitude at height above sea level maximum	2 000 m
• during storage relative humidity minimum relative humidity at 55 °C according to IEC 60068-2-30 maximum Main circuit number of poles for main current circuit -55 +80 °C 95 % 95 %	ambient temperature	
relative humidity minimum relative humidity at 55 °C according to IEC 60068-2-30 maximum Main circuit number of poles for main current circuit 10 % 95 % 4	 during operation 	-25 +60 °C
relative humidity at 55 °C according to IEC 60068-2-30 95 % Main circuit number of poles for main current circuit 4	during storage	-55 +80 °C
maximum Main circuit number of poles for main current circuit 4		10 %
number of poles for main current circuit 4		95 %
·	Main circuit	
	number of poles for main current circuit	4
number of NU contacts for main contacts 2	number of NO contacts for main contacts	2

number of NO contests for making a six	
number of NC contacts for main contacts	2
operational current	
• at AC-1 up to 690 V	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	0.4
— per NO contact rated value	9 A
— per NC contact rated value	9 A
minimum cross-section in main circuit at maximum AC-1 rated value	2.5 mm ²
operational current	
• at 1 current path at DC-1	
— at 24 V rated value	20 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
with 2 current paths in series at DC-1	
— at 24 V rated value	20 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	
— at 24 V per NC contact rated value	16 A
at 24 V per NO contact rated value	16 A
— at 110 V per NC contact rated value	0.075 A
at 110 V per NO contact rated value	0.15 A
at 220 V per NC contact rated value	0.375 A
— at 220 V per NO contact rated value	0.75 A
 with 2 current paths in series at DC-3 at DC-5 	
— at 24 V per NC contact rated value	16 A
— at 24 V per NO contact rated value	16 A
— at 110 V per NC contact rated value	0.175 A
— at 110 V per NO contact rated value	0.35 A
operating power at AC-2 at AC-3	
at 230 V per NC contact rated value	2.2 kW
at 230 V per NO contact rated value	2.2 kW
 at 400 V per NC contact rated value 	4 kW
at 400 V per NO contact rated value	4 kW
short-time withstand current in cold operating state	
up to 40 °C	440 At the minimum areas and the AC 4 to the
limited to 1 s switching at zero current maximum	110 A; Use minimum cross-section acc. to AC-1 rated value
limited to 5 s switching at zero current maximum limited to 4.0 a quitable of the series are surrent maximum.	110 A; Use minimum cross-section acc. to AC-1 rated value
limited to 10 s switching at zero current maximum	86 A; Use minimum cross-section acc. to AC-1 rated value
limited to 30 s switching at zero current maximum	66 A; Use minimum cross-section acc. to AC-1 rated value
Ilmited to 60 s switching at zero current maximum Payer loss PMI at AC 3 at 400 V for reted value of the	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	220 V
• rated value	220 V
operating range factor control supply voltage rated	
value of magnet coil at DC	
• initial value	0.8
_	0.8 1.1

holding power of magnet coil at DC	4 W
closing delay	
• at DC	30 100 ms
opening delay	
• at DC	7 13 ms
arcing time	10 15 ms
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 contact	0
number of NO contacts for auxiliary contacts	0
instantaneous contact	
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	1 A
at 600 V rated value	0.15 A
operational 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 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	
• for short-circuit protection of the main circuit	
— with type of coordination 1 required	gG: 35 A (690 V, 100 kA)
 — with type of assignment 2 required 	gG: 20A (690V, 100kA)
• for short-circuit protection of the auxiliary switch	fuse gG: 10 A
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
fastening method	screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 50022
side-by-side mounting	Yes
height	57.5 mm
width	45 mm
depth	73 mm
required spacing	
 with side-by-side mounting 	
— forwards	0 mm
— backwards	0 mm
— upwards	0 mm
— downwards	0 mm
— at the side	0 mm

for grounded parts	
— forwards	0 mm
— backwards	0 mm
— upwards	0 mm
— at the side	6 mm
— downwards	0 mm
for live parts	
— forwards	0 mm
— backwards	0 mm
— upwards	0 mm
— downwards	0 mm
— at the side	6 mm
Connections/ Terminals	
type of electrical connection	
 for main current circuit 	screw-type terminals
 for auxiliary and control circuit 	screw-type terminals
 at contactor for auxiliary contacts 	Screw-type terminals
of magnet coil	Screw-type terminals
type of connectable conductor cross-sections	
 for main contacts 	
— solid	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²), 2x 4 mm²
— solid or stranded	2x (0,5 1,5 mm²), 2x (0,75 2,5 mm²), 2x 4 mm²
 finely stranded with core end processing 	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
 at AWG cables for main contacts 	2x (20 16), 2x (18 14), 2x 12
type of connectable conductor cross-sections	
 for auxiliary contacts 	
— solid	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²), 2x 4 mm²
— solid or stranded	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²), 2x 4 mm²
 finely stranded with core end processing 	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
 at AWG cables for auxiliary contacts 	2x (20 16), 2x (18 14), 2x 12
AWG number as coded connectable conductor cross section for main contacts	20 12
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 61508	20 y
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
Certificates/ approvals	
General Product Approval	EMC



Confirmation









Functional Safety/Safety of Machinery

Declaration of Conformity

Test Certificates

Marine / Shipping

Type Examination Certificate





Special Test Certificate

Type Test Certificates/Test Report















other

Dangerous Good

Confirmation



<u>Transport Information</u>

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=3RT2516-1BM40

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2516-1BM40

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT2516-1BM40

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

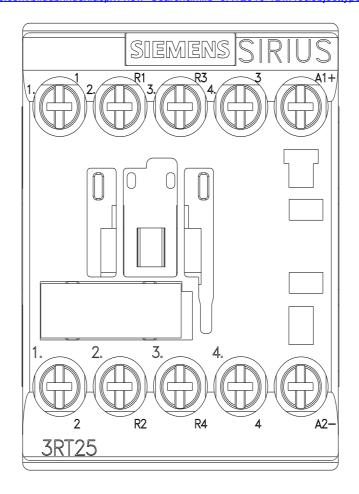
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2516-1BM40&lang=en

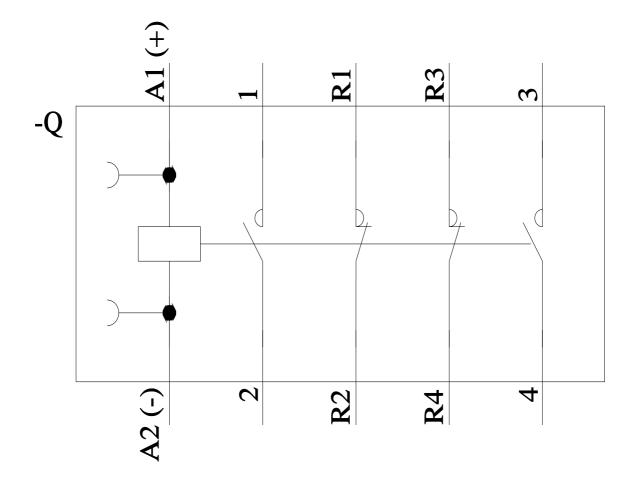
Characteristic: Tripping characteristics, I2t, Let-through current

https://support.industry.siemens.com/cs/ww/en/ps/3RT2516-1BM40/char

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

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2516-1BM40&objecttype=14&gridview=view1





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