SIEMENS

Data sheet 3RT2518-1BB40



Power contactor, AC-3 16 A, 7.5 kW, 400 V 2 NO + 2 NC 24 V DC 4-pole Size S00 screw terminals

product designation groduct type designation 3RT25 Social and September 1	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 auxiliary circuit with degree of pollution 3 rated value • of main circuit trated value • of main circuit rated value • of main circuit rated value • of auxiliary circuit rated value • of auxiliary circuit rated value • of main circuit rated value • of auxiliary circuit rated value • of auxiliary circuit rated value • of waxiliary circuit with degree of pollution 3 rated value • of the contactor with sine pulse • of the contactor with added electronically optimized auxiliary switch 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 auxilia	product designation	contactor
size of contactor product extension • function module for communication • auxiliary switch insulation voltage • of main 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 circuit rated value • of auxiliary circuit rated value • of was main circuit rated value • of was main circuit rated value • of auxiliary circuit rated value • of was main circuit rated value • of auxiliary circuit rated value • of was main circuit rated value • of was main circuit rated value • of was main circuit rated value • of auxiliary circuit rated value • of was main circuit value at value • of was main circuit value at value • of was main circuit and value • of was main circuit and value • of was main circuit and value • of	product type designation	3RT25
product extension • function module for communication • auxiliary switch insulation voltage • 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 with degree of pollution 3 rated value surge voltage resistance • of main circuit rated value • of auxiliary circuit rated value • of main circuit rated value • of main circuit rated value • of main circuit rated value • of suxiliary circuit rated value • of main circuit rated value • of maximum permissible voltage for safe isolation between coil and main contacts acc. to EN 60947-1 shock resistance at rectangular impulse • at DC shock resistance with sine pulse • at DC rechanical 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 • 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 reference code acc. to IEC 81346-2 Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during operation • during operation • during storage relative humidity minimum 10 % relative humidity minimum 10 % relative humidity at 55 °C acc. to IEC 60068-2-30 maximum mumber of poles for main current circuit 4	General technical data	
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auxiliary switch Yes	product extension	
Insulation voltage of main circuit with degree of pollution 3 rated value of auxiliary circuit with degree of pollution 3 rated value surge voltage resistance of main circuit rated value of auxiliary circuit rated value of kV maximum permissible voltage for safe isolation between coil and main contacts acc. to EN 60947-1 shock resistance at rectangular impulse of at DC of contacts acc. to EN 60947-1 shock resistance with sine pulse of the contactor with sine pulse of the 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 acc. 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 acc. to IEC 60068-2-30 maximum Main circuit number of poles for main current circuit 4	 function module for communication 	No
of main circuit with degree of pollution 3 rated value of auxiliary circuit with degree of pollution 3 rated value surge voltage resistance of main circuit rated value of auxiliary circuit rated value maximum permissible voltage for safe isolation between coil and main contacts acc. to EN 60947-1 shock resistance at rectangular impulse • at DC shock resistance with sine pulse • at DC	auxiliary switch	Yes
of auxiliary circuit with degree of pollution 3 rated value surge voltage resistance of main circuit rated value of auxiliary circuit rated value of kV maximum permissible voltage for safe isolation between coil and main contacts acc. to EN 60947-1 shock resistance at rectangular impulse ot DC	insulation voltage	
surge voltage resistance of main circuit rated value of auxiliary circuit rated value for auxiliary circuit rated value of auxiliary circuit rated value for auxiliary switch sine pulse for at DC for at DC for at DC for contactor vith sine pulse for at DC for contactor vith added electronically optimized auxiliary switch block typical for the contactor with added electronically optimized auxiliary switch block typical for the contactor with added auxiliary switch block typical for the contactor with added auxiliary switch block typical for the contactor with added auxiliary switch block typical for the contactor with added auxiliary switch block typical for the contactor with added auxiliary switch block typical for the contactor with added auxiliary switch block typical for the contactor with added auxiliary switch block typical for the contactor with added auxiliary switch block typical for the contactor with added auxiliary switch block typical for the contactor with added auxiliary switch block typical for the contactor with added auxiliary switch block typical for the contactor with added auxiliary switch block typical for the contactor with added auxiliary switch block for the	 of main circuit with degree of pollution 3 rated value 	690 V
of main circuit rated value of auxiliary circuit rated value aximum permissible voltage for safe isolation between coil and main contacts acc. to EN 60947-1 shock resistance at rectangular impulse o at DC factor of contactor with sine pulse of contactor typical of the contactor with added electronically optimized auxiliary switch block typical of the contactor with added	, ,	690 V
of auxiliary circuit rated value maximum permissible voltage for safe isolation between coil and main contacts acc. to EN 60947-1 shock resistance at rectangular impulse ot DC shock resistance with sine pulse ot DC mechanical service life (switching cycles) of contactor typical of the 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 prohibitance (Date) ambient conditions installation altitude at height above sea level maximum ambient temperature ouring operation during operation eluring storage relative humidity minimum relative humidity minimum mumber of poles for main current circuit 100 V 100 000 100	surge voltage resistance	
maximum permissible voltage for safe isolation between coil and main contacts acc. to EN 60947-1 shock resistance at rectangular impulse • 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 acc. to IEC 81346-2 Questance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage relative humidity minimum relative humidity minimum relative humidity minimum Main circuit number of poles for main current circuit 400 V 7.3g / 5 ms, 4.7g / 10 ms 7.3g / 6 ms, 4.7g / 10 ms 7.3g /	of main circuit rated value	6 kV
coil and main contacts acc. to EN 60947-1 shock resistance at rectangular impulse	of auxiliary circuit rated value	6 kV
at DC shock resistance with sine pulse at DC		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 acc. to IEC 81346-2 Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature oduring operation oduring storage relative humidity minimum relative humidity at 55 °C acc. to IEC 60068-2-30 maximum Main circuit number of poles for main current circuit 4	• at DC	7.3g / 5 ms, 4.7g / 10 ms
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 acc. to IEC 81346-2 Question Substance Prohibitance (Date) Ambient 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 acc. to IEC 60068-2-30 maximum Main circuit number of poles for main current circuit 4	shock resistance with sine pulse	
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of the contactor with added electronically optimized auxiliary switch block typical of the contactor with added auxiliary switch block typical reference code acc. to IEC 81346-2 Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature oduring operation oduring storage relative humidity minimum relative humidity at 55 °C acc. to IEC 60068-2-30 maximum Main circuit number of poles for main current circuit 5 000 000 10 000 000 10 000 000 10 000 00	mechanical service life (switching cycles)	
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reference code acc. to IEC 81346-2 Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature during operation during storage during storage relative humidity minimum relative humidity at 55 °C acc. to IEC 60068-2-30 maximum Main circuit number of poles for main current circuit quantity 01.10.2009 00:00:00 00.110.2009 00:00:00 01.10.2009 00:00 01.10.2	, ·	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 acc. to IEC 60068-2-30 maximum Main circuit number of poles for main current circuit 01.10.2009 00:00:00 02.00 03.10.2009 00:00:00 04.10.2009 00:00:00 04.10.2009 00:00:00 04.10.2009 00:00:00 05.10.2009 00:00:00 05.10.2009 00:00:00 06.10.2009 00:00:00 06.10.2009 00:00:00 07.10.2009 00:00 07.1		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 acc. to IEC 60068-2-30 maximum Main circuit number of poles for main current circuit 2 000 m -25 +60 °C -25 +80 °C 95 % 95 %	reference code acc. to IEC 81346-2	Q
installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during storage -55 +80 °C relative humidity minimum relative humidity at 55 °C acc. to IEC 60068-2-30 maximum Main circuit number of poles for main current circuit 4	Substance Prohibitance (Date)	01.10.2009 00:00:00
ambient temperature	Ambient conditions	
● during operation • during storage • during storage relative humidity minimum 10 % relative humidity at 55 °C acc. to IEC 60068-2-30 maximum Main circuit number of poles for main current circuit 4	installation altitude at height above sea level maximum	2 000 m
● during storage relative humidity minimum relative humidity at 55 °C acc. 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 acc. 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 acc. to IEC 60068-2-30 95 % maximum 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	relative humidity minimum	10 %
number of poles for main current circuit 4	•	95 %
·	Main circuit	
number of NO contacts for main contacts 2	number of poles for main current circuit	4
	number of NO contacts for main contacts	2

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number of NC contacts for main contacts	2		
operational current			
• at AC-1 up to 690 V			
— at ambient temperature 40 °C rated value	22 A		
— at ambient temperature 40 °C rated value	20 A		
at AC-2 at AC-3 at 400 V	20 A		
— per NO contact rated value	16 A		
— per NC contact rated value	16 A 9 A		
minimum cross-section in main circuit at maximum AC-1	4 mm ²		
rated value	7 11111		
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		
operational current			
at 1 current path at DC-3 at DC-5			
— at 24 V per NC contact rated value	20 A		
— at 24 V per NO contact rated value	20 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	20 A		
— at 24 V per NO contact rated value	20 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 at 230 V per NO contact rated value	4 kW		
at 400 V per NC contact rated value	4 kW		
at 400 V per NO contact rated value at 400 V per NO contact rated value	7.5 kW		
short-time withstand current in cold operating state	7.O KVV		
up to 40 °C			
 limited to 1 s switching at zero current maximum 	165 A; Use minimum cross-section acc. to AC-1 rated value		
 limited to 5 s switching at zero current maximum 	165 A; Use minimum cross-section acc. to AC-1 rated value		
 limited to 10 s switching at zero current maximum 	128 A; Use minimum cross-section acc. to AC-1 rated value		
 limited to 30 s switching at zero current maximum 	92 A; Use minimum cross-section acc. to AC-1 rated value		
 limited to 60 s switching at zero current maximum 	74 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	2.2 W		
operational current per conductor			
no-load switching frequency	40,000,4%		
• 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	24 V		
operating range factor control supply voltage rated			
value of magnet coil at DC	0.0		
• initial value	0.8		
• full-scale value	1.1		
inductive power factor with closing power of the coil	0.8		

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
arcing time	10 15 ms
Auxiliary circuit	
number of NC contacts for auxiliary contacts instantaneous contact	0
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	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	2 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	7,0007 @000
design of the fuse link	
• for short-circuit protection of the main circuit	~C. 25 A (COO)/ 400 kA)
— 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 required	fuse gG: 10 A
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				
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					
T1 value for proof test interval or service life acc. to IEC 61508	20 y				
protection class IP on the front acc. to IEC 60529	IP20				
touch protection on the front acc. to IEC 60529	finger-safe, for vertical conta	act from the front			
Certificates/ approvals					
			Functional		













Declaration of Conformity Test Certificates Marine / Shipping







Marine / Shipping other







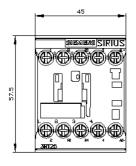


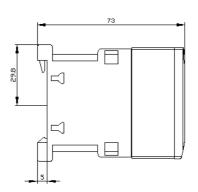


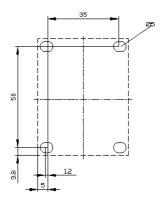
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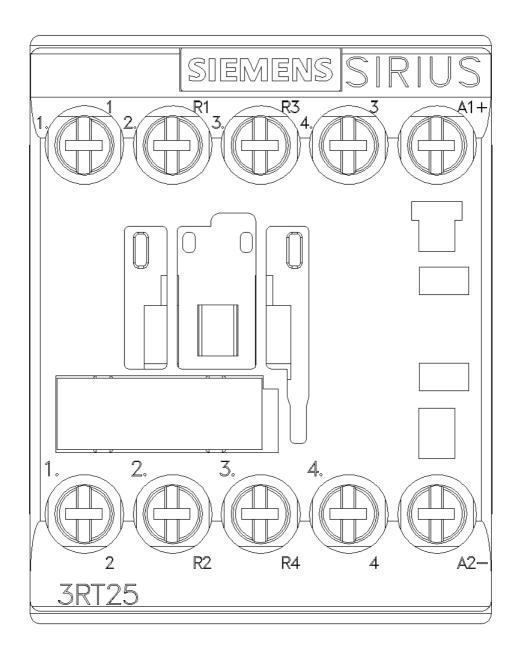


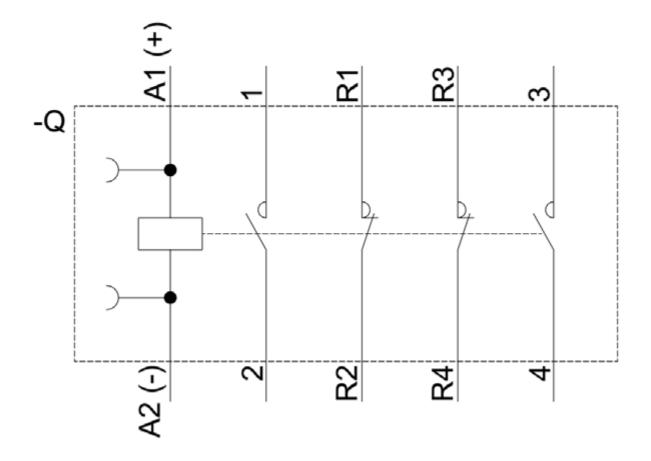
Further information











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