SIEMENS

Data sheet 3RT2517-1AK60



Contactor, 2NO + 2NC, AC-3, 5.5 kW, 110 V AC, 50 Hz, 120 V, 60Hz, 4-pole, 2NO + 2NC, Size S00, Screw terminal

product brand name	SIRIUS
product designation	contactor
product type designation	3RT25
General technical data	
size of contactor	S00
product extension	
 function module for communication 	No
auxiliary switch	Yes
insulation voltage	
 of main circuit with degree of pollution 3 rated value 	690 V
 of auxiliary circuit with degree of pollution 3 rated value 	690 V
surge voltage resistance	
 of main circuit rated value 	6 kV
 of auxiliary circuit rated value 	6 kV
maximum permissible voltage for safe isolation between coil and main contacts according to EN 60947-1	400 V
shock resistance at rectangular impulse	
• at AC	7,3g / 5 ms, 4,7g / 10 ms
shock resistance with sine pulse	
• at AC	11,4g / 5 ms, 7,3g / 10 ms
mechanical service life (operating cycles)	
 of contactor typical 	30 000 000
 of the contactor with added electronically optimized auxiliary switch block typical 	5 000 000
 of the contactor with added auxiliary switch block typical 	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	95 %
maximum	
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	
 at ambient temperature 40 °C rated value 	22 A
 at ambient temperature 60 °C rated value 	20 A
 at AC-2 at AC-3 at 400 V 	
 per NO contact rated value 	12 A
 per NC contact rated value 	9 A
minimum cross-section in main circuit at maximum AC-1	4 mm ²
rated value	
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 	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	3 kW
at 400 V per NC contact rated value	4 kW
at 400 V per NO contact rated value	5.5 kW
short-time withstand current in cold operating state	
up to 40 °C	
 limited to 1 s switching at zero current maximum 	125 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 5 s switching at zero current maximum 	123 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 10 s switching at zero current maximum 	96 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 30 s switching at zero current maximum 	74 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 60 s switching at zero current maximum 	61 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	1.2 W
operational current per conductor	
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	AC
control supply voltage at AC	
at 50 Hz rated value	110 V
at 60 Hz rated value at 60 Hz rated value	120 V
operating range factor control supply voltage rated	
value of magnet coil at AC	
• at 50 Hz	0.8 1.1
• at 60 Hz	0.8 1.1
apparent pick-up power of magnet coil at AC	43 VA
	43 VA
• at 50 Hz	43 VA 43 VΔ
at 50 Hzat 60 Hz	43 VA
• at 50 Hz	

● at 60 Hz	0.77
apparent holding power of magnet coil at AC	6.5 VA
● at 50 Hz	6.5 VA
● at 60 Hz	6.5 VA
inductive power factor with the holding power of the	0.25
coil	
● at 50 Hz	0.25
● at 60 Hz	0.25
closing delay	
• at AC	9 35 ms
opening delay	
● at AC	4 15 ms
arcing time	10 15 ms
residual current of the electronics for control with	
signal <0>	
at AC at 230 V maximum permissible	0.004 A
Auxiliary circuit	
number of NC contacts for auxiliary contacts	0
instantaneous 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
	3 A
at 400 V rated value approximate of DC 12	
operational current at DC-12 • at 48 V rated value	6 A
at 46 V rated value at 60 V rated value	6 A
	3 A
at 110 V rated value at 125 V rated value	2 A
at 125 V rated value at 230 V rated value	1 A
at 220 V rated value at 600 V rated value	
at 600 V rated value	0.15 A
operational current at DC-13	40.4
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	
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
factoring mathed	
fastening method	screw and snap-on mounting onto 35 mm DIN 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
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General Product Approval	EMC	
Certificates/ approvals		
touch protection on the front according to IEC 60529	finger-safe, for vertical contact from the front	
protection class IP on the front according to IEC 60529	IP20	
T1 value for proof test interval or service life according to IEC 61508	20 y	
 positively driven operation according to IEC 60947- 5-1 	No No	
mirror contact according to IEC 60947-4-1	Yes; with 3RH29	
product function		
Safety related data		
for auxiliary contacts — solid — solid or stranded — finely stranded with core end processing • at AWG cables for auxiliary contacts AWG number as coded connectable conductor cross section for main contacts	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²), 2x 4 mm² 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²), 2x 4 mm² 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) 2x (20 16), 2x (18 14), 2x 12 20 12	
type of connectable conductor cross-sections		
 — solid — solid or stranded — finely stranded with core end processing • at AWG cables for main contacts 	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²), 2x 4 mm² 2x (0,5 1,5 mm²), 2x (0,75 2,5 mm²), 2x 4 mm² 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) 2x (20 16), 2x (18 14), 2x 12	
type of connectable conductor cross-sections o for main contacts		
of magnet coil	Screw-type terminals	
 at contactor for auxiliary contacts 	Screw-type terminals	
 for auxiliary and control circuit 	screw-type terminals	
for main current circuit	screw-type terminals	
type of electrical connection		
Connections/ Terminals		
— at the side	6 mm	
— downwards	0 mm	
— upwards	0 mm	
— backwards	0 mm	
for live partsforwards	0 mm	
— downwards	0 mm	
— at the side	6 mm	
— upwards	0 mm	
— backwards	0 mm	
— forwards	0 mm	
 for grounded parts 		
— at the side	0 mm	
— downwards	0 mm	
— upwards	0 mm	
— backwards	0 mm	

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



Marine / Shipping













other

Railway

Confirmation



Vibration and Shock

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=3RT2517-1AK60

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2517-1AK60

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT2517-1AK60

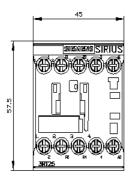
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

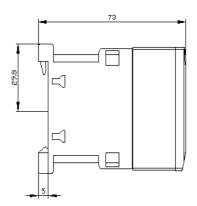
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2517-1AK60&lang=en

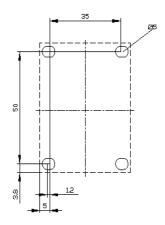
Characteristic: Tripping characteristics, I2t, Let-through current

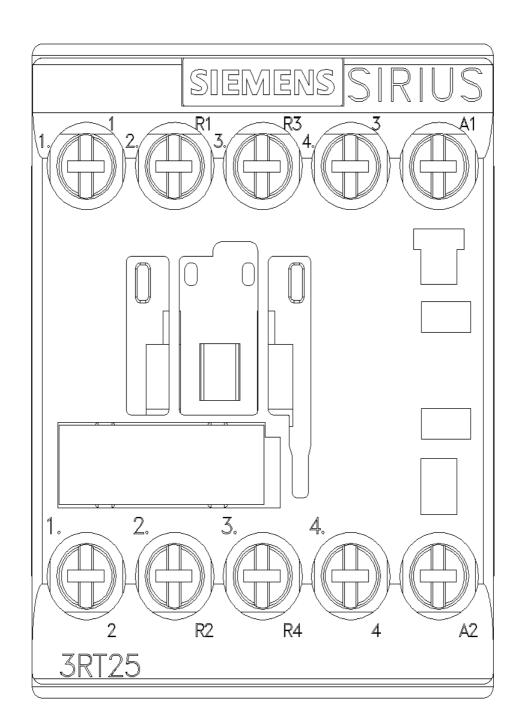
https://support.industry.siemens.com/cs/ww/en/ps/3RT2517-1AK60/char

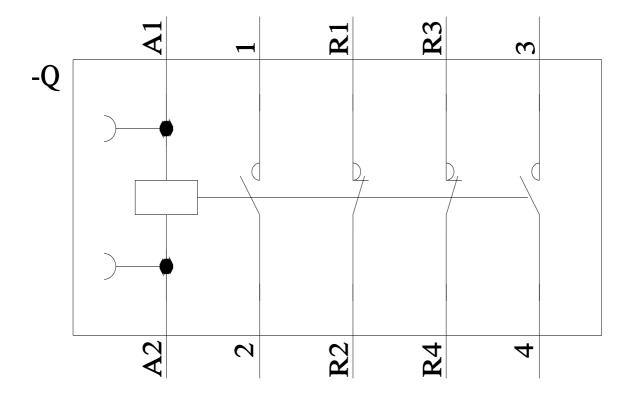
Further characteristics (e.g. electrical endurance, switching frequency)
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2517-1AK60&objecttype=14&gridview=view1











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