SIEMENS

Data sheet 3RT2516-2AP60

Power contactor, AC-3 9 A, 4 kW / 400 V 2 NO + 2 NC 220 V DC, 50 Hz/240 V, 60 Hz 4-pole Size S00 Spring-type terminals

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 acc. to EN 60947-1	400 V
shock resistance at rectangular impulse	
● at AC	6,7g / 5 ms, 4,2g / 10 ms
shock resistance with sine pulse	
● at AC	10,5g / 5 ms, 6,6g / 10 ms
mechanical service life (switching 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 acc. to IEC 81346-2	Q
Substance Prohibitance (Date)	01.10.2009 00:00:00
Ambient conditions	
installation altitude at height above sea level maximum	2 000 m
● ambient temperature during operation	-25 ... +60 °C
● ambient temperature during storage	-55 ... +80 °C
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	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 A
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	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	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	
● 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	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
● limited to 60 s switching at zero current maximum	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	AC
control supply voltage at AC	
● at 50 Hz rated value	220 V
● at 60 Hz rated value	240 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	32 V·A
● at 50 Hz	31.7 V·A
● at 60 Hz	31.7 V·A
inductive power factor with closing power of the coil	0.8
● at 50 Hz	0.77
● at 60 Hz	0.77
apparent holding power of magnet coil at AC	4.8 V·A
● at 50 Hz	4.8 V·A
● at 60 Hz	4.8 V·A
inductive power factor with the holding power of the coil	0.25
● at 50 Hz	0.25
● at 60 Hz	0.25
closing delay	
● at AC	9 ... 35 ms
opening delay	
● at AC	3.5 ... 14 ms
arcing time	10 ... 15 ms
residual current of the electronics for control with signal <0>	
● at AC at 230 V maximum permissible	0.003 A
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	1 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 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	70 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	spring-loaded terminals
● for auxiliary and control circuit	spring-loaded terminals
type of connectable conductor cross-sections	
● for main 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)
● at AWG cables for main contacts	2x (20 ... 12)
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)
● at AWG cables for auxiliary contacts	2x (20 ... 12)
AWG number as coded connectable conductor cross section for main contacts	20 ... 12
Safety related data	
product function	
● mirror contact acc. to IEC 60947-4-1	Yes; with 3RH29
● positively driven operation acc. to IEC 60947-5-1	No
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 contact from the front
Certificates/ approvals	

General Product Approval	**EMC**	**Declaration of Conformity**

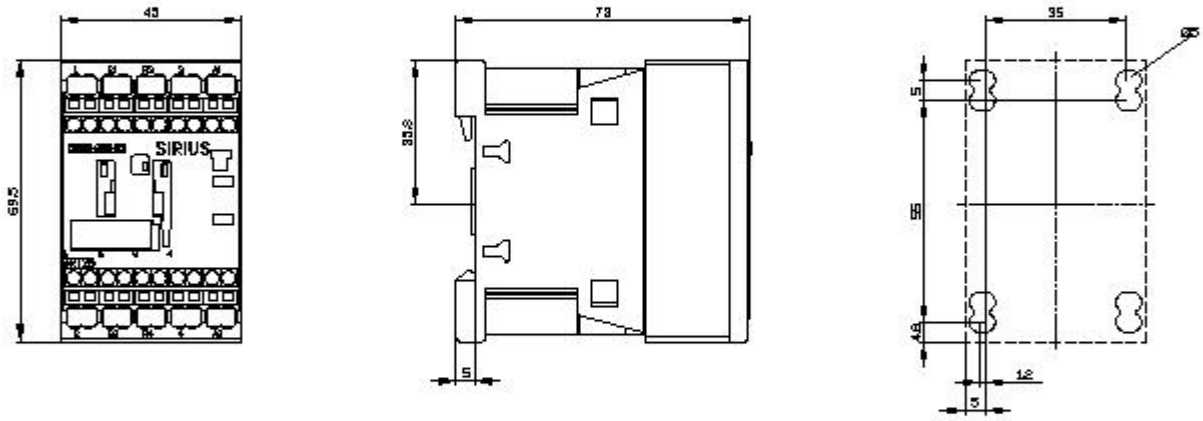
Miscellaneous

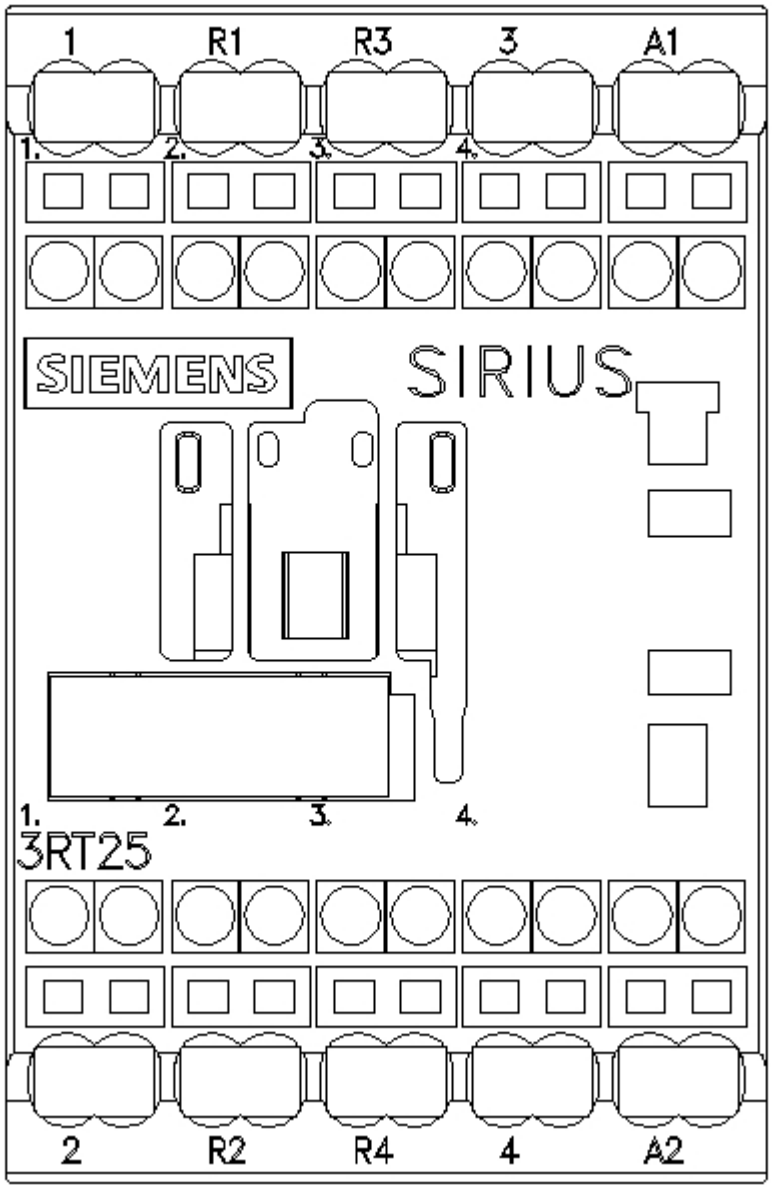
Declaration of Conformity	Test Certificates		Marine / Shipping		
EG-Konf.	Type Test Certificates/Test Report	Special Test Certificate	ABS	BUREAU VERITAS	LRS

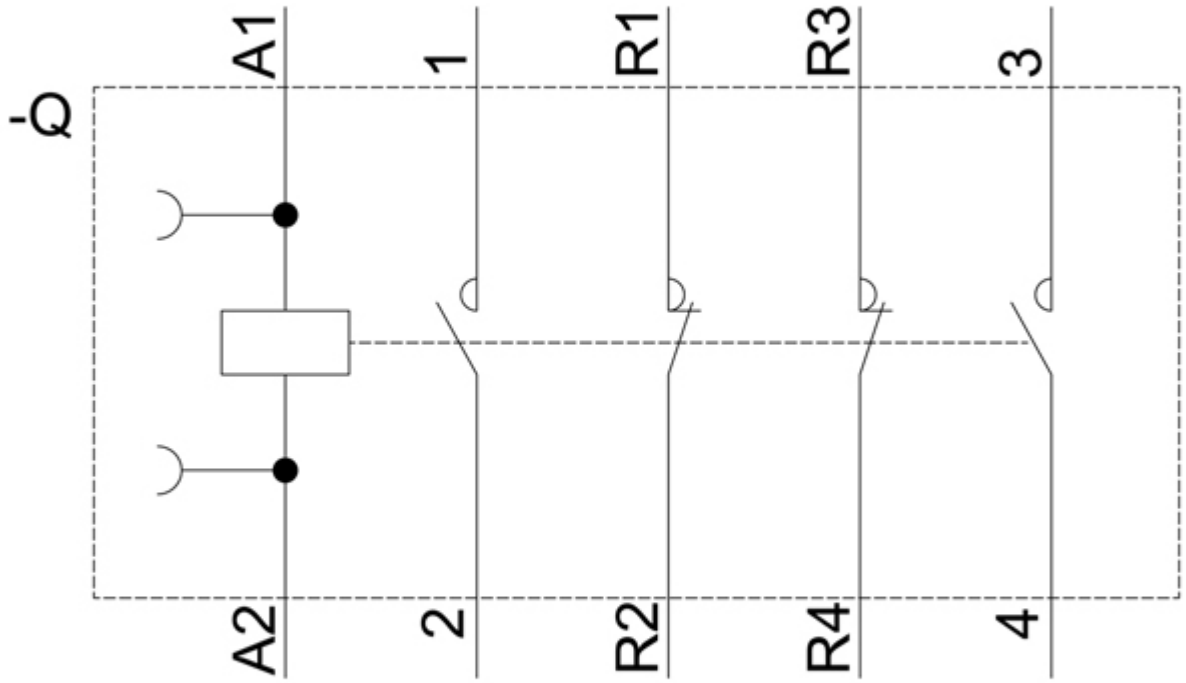
Marine / Shipping				other	
PRS	RINA	RMRS	DNV·GL	Confirmation	VDE

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=3RT2516-2AP60
Cax online generator
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2516-2AP60
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
https://support.industry.siemens.com/cs/ww/en/ps/3RT2516-2AP60
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2516-2AP60&lang=en
Characteristic: Tripping characteristics, I²t, Let-through current
https://support.industry.siemens.com/cs/ww/en/ps/3RT2516-2AP60/char
Further characteristics (e.g. electrical endurance, switching frequency)
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2516-2AP60&objecttype=14&gridview=view1







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