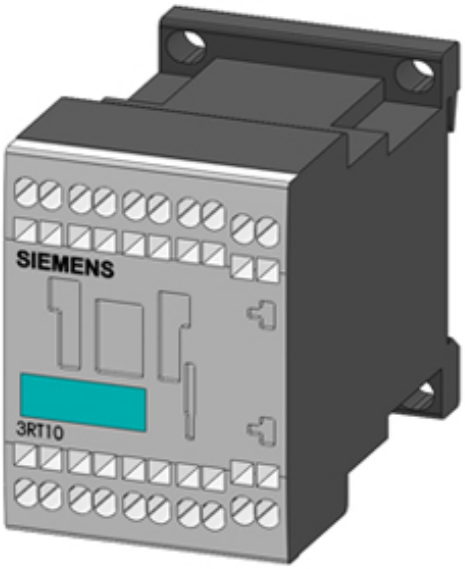
SIEMENS

Data sheet 3RT1516-2AK60

Contactor, AC-3, 4 kW / 400 V, AC-1, 18 A, 400 V AC, 50 / 60 Hz, 110 V AC, 50 Hz / 120V, 60 Hz, 4-pole, 2NO + 2NC, Size S00, spring-type connection system



Product brand name	SIRIUS
Product designation	power contactor

General technical data	
Size of contactor	S00
Insulation voltage	
• rated value	690 V
Degree of pollution	3
Protection class IP	
• on the front	IP20
• of the terminal	IP20
Mechanical service life (switching cycles)	
• of contactor typical	30 000 000
• of the contactor with added electronics-compatible auxiliary switch block typical	5 000 000
• of the contactor with added auxiliary switch block typical	10 000 000

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

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
Operating current	
• at AC-1	
— up to 690 V at ambient temperature 40 °C rated value	18 A
— up to 690 V 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
Connectable conductor cross-section in main circuit at AC-1	
• at 60 °C minimum permissible	2.5 mm²
• at 40 °C minimum permissible	2.5 mm²
Operating 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
• with 2 current paths in series at DC-1	
— 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
Operating 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-1	
— at 230 V rated value	6.5 kW
— at 400 V rated value	11 kW
• at AC-2 at AC-3	
— at 230 V per NC contact rated value	3 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	4 kW
Power loss [W] at AC-3 at 400 V for rated value of the operating current per conductor	0.7 W
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	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	0.85 ... 1.1
Apparent pick-up power of magnet coil at AC	31.7 V·A
• at 50 Hz	31.7 V·A
Inductive power factor with closing power of the coil	0.77
• at 50 Hz	0.77
Apparent holding power of magnet coil at AC	5.1 V·A
• at 50 Hz	5.1 V·A
Inductive power factor with the holding power of the coil	0.27
• at 60 Hz	0.27
Closing delay	
• at AC	8 ... 35 ms
Opening delay	
• at AC	4 ... 30 ms
Arcing time	10 ... 15 ms
Control version of the switch operating mechanism	conventional
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
Operating current at AC-12 maximum	10 A
Operating current at AC-15	
• at 230 V rated value	6 A
• at 400 V rated value	3 A
Operating current at DC-12	
• at 60 V rated value	6 A
• at 110 V rated value	3 A
• at 220 V rated value	1 A
Operating current at DC-13	
• at 24 V rated value	10 A
• at 60 V rated value	2 A
• at 110 V rated value	1 A
• at 220 V rated value	0.3 A
Contact reliability of auxiliary contacts	1 faulty switching per 100 million (17 V, 1 mA)

Short-circuit protection	
Design of the fuse link	
• for short-circuit protection of the main circuit	
— with type of coordination 1 required	fuse gL/gG: 35 A
— with type of assignment 2 required	fuse gL/gG: 20 A
• for short-circuit protection of the auxiliary switch required	fuse gL/gG: 10 A

Installation/ mounting/ dimensions	
Mounting position	with vertical mounting surface +/-180° rotatable, with vertical mounting surface +/- 30° tiltable to the front and back
Mounting type	screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 50022
• Side-by-side mounting	Yes
Height	60 mm
Width	45 mm
Depth	72 mm
Required spacing	
• for grounded parts	
— at the side	6 mm

Connections/Terminals

Type of electrical connection	
• for main current circuit	spring-loaded terminals
• for auxiliary and control current circuit	spring-loaded terminals
Type of connectable conductor cross-sections	
• for main contacts	
— solid	2x (0.25 ... 2.5 mm²)
— single or multi-stranded	2x (0,25 ... 2,5 mm²)
— finely stranded with core end processing	2x (0.25 ... 1.5 mm²)
— finely stranded without core end processing	2x (0.25 ... 2.5 mm²)
• at AWG conductors for main contacts	2x (24 ... 14)
Type of connectable conductor cross-sections	
• for auxiliary contacts	
— solid	2x (0.25 ... 2.5 mm²)
— single or multi-stranded	2x (0,25 ... 2,5 mm²)
— finely stranded with core end processing	2x (0.25 ... 1.5 mm²)
— finely stranded without core end processing	2x (0.25 ... 2.5 mm²)
• at AWG conductors for auxiliary contacts	2x (24 ... 14)

Safety related data

Failure rate [FIT]	
• with low demand rate acc. to SN 31920	100 FIT

Certificates/approvals

General Product Approval				Functional Safety/Safety of Machinery	Declaration of Conformity
CCC	CSA	UL	EAC	Type Examination Certificate	EG-Konf.

Test Certificates	Marine / Shipping				
Special Test Certificate	ABS	LRS	RINA	RMRS	

other	
Confirmation	Miscellaneous

Further information

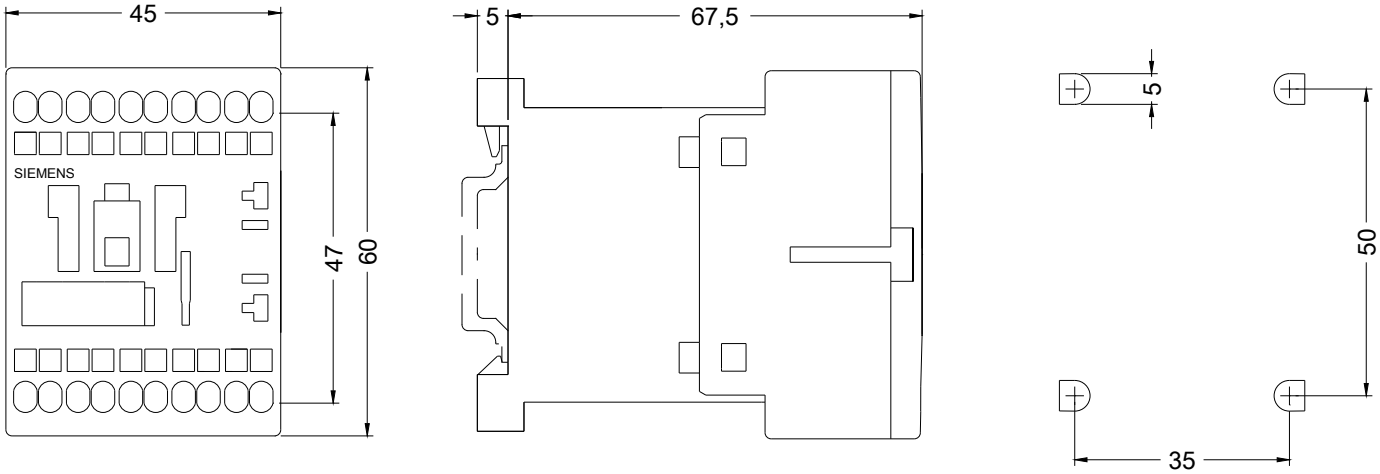
Information- and Downloadcenter (Catalogs, Brochures,…)
http://www.siemens.com/industrial-controls/catalogs

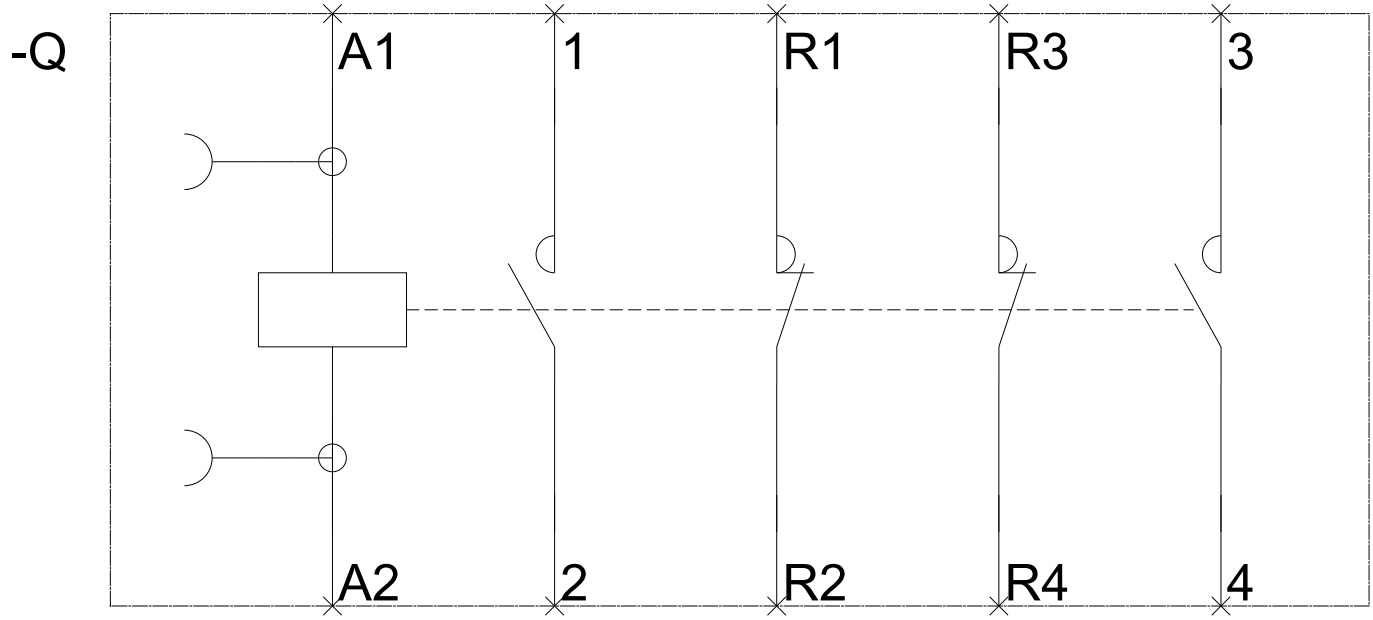
Industry Mall (Online ordering system)
https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT1516-2AK60

Cax online generator
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1516-2AK60

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
https://support.industry.siemens.com/cs/ww/en/ps/3RT1516-2AK60

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT1516-2AK60&lang=en





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