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Data sheet 3RT2646-1NP35

capacitor contactor, AC-6b 100 kVAr, / 400 V, 3-pole, 175-280 V AC/DC, 50/60 Hz, with integrated varistor, auxiliary contacts: 2 NC, screw terminal, size: S3

product brand name	SIRIUS
product designation	capacitor contactors
product type designation	3RT26
General technical data	
size of contactor	S3
product extension auxiliary switch	Yes
power loss [W] for rated value of the current	
● at AC in hot operating state per pole	6.5 W
● without load current share typical	3 W
type of calculation of power loss current-dependent	quadratic
insulation voltage	
● of main circuit with degree of pollution 3 rated value	1 000 V
● of auxiliary circuit with degree of pollution 3 rated value	690 V
surge voltage resistance	
● of main circuit rated value	8 kV
● of auxiliary circuit rated value	6 kV
maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1	400 V
shock resistance at rectangular impulse	
● at AC	10.3 g / 5 ms, 6,7 g / 10 ms
● at DC	6.7 g / 5 ms, 4 g / 10 ms
shock resistance with sine pulse	
● at AC	16.3 g / 5 ms, 10.5 g / 10 ms
● at DC	10.6 g / 5 ms, 6.3 g / 10 ms
mechanical service life (operating cycles)	
● of the contactor with added auxiliary switch block typical	3 000 000
electrical endurance (operating cycles)	120 000
reference code according to IEC 81346-2	Q
Substance Prohibitance (day/month/year)	06/26/2017
SVHC substance name	Lead CAS-No. 7439-92-1 Lead monoxide (lead oxide) CAS-No. 1317-36-8 2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one CAS-No. 71868-10-5 Melamine CAS-No. 108-78-1
Net Weight	1.803 kg
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

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relative humidity minimum	10 %
relative humidity at 55 °C according to IEC 60068-2-30 maximum	95 %
Main circuit	
number of poles for main current circuit	3
number of NO contacts for main contacts	3
number of NC contacts for main contacts	0
operational current at AC-6b at 690 V at ambient temperature 60 °C rated value	144 A
operating reactive power at AC-6b	
● at 230 V at 50/60 Hz at ambient temperature 60 °C rated value	19 ... 57 kvar
● at 400 V at 50/60 Hz at ambient temperature 60 °C rated value	33 ... 100 kvar
● at 500 V at 50/60 Hz at ambient temperature 60 °C rated value	41 ... 125 kvar
● at 690 V at 50/60 Hz at ambient temperature 60 °C rated value	57 ... 172 kvar
no-load switching frequency	
● at AC	500 1/h
● at DC	500 1/h
operating frequency at AC-6b	
● at 230 V maximum	150 1/h
● at 240 V maximum	150 1/h
● at 400 V maximum	60 1/h
● at 480 V maximum	40 1/h
● at 500 V maximum	40 1/h
● at 600 V maximum	20 1/h
● at 690 V maximum	20 1/h
Control circuit/ Control	
type of voltage	AC/DC
type of voltage of the control supply voltage	AC/DC
control supply voltage at AC	
● at 50 Hz rated value	175 ... 280 V
● at 60 Hz rated value	175 ... 280 V
control supply voltage frequency	
● 1 rated value	50 Hz
● 2 rated value	60 Hz
control supply voltage at DC rated value	175 ... 280 V
operating range factor control supply voltage rated value of magnet coil at DC	
● initial value	0.8
● full-scale value	1.1
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
inrush current peak	65 A
duration of inrush current peak	5 µs
pickup current mean value	0.44 A
pickup current peak	1.2 A
duration of pickup current	150 ms
holding current mean value	10 mA
apparent pick-up power of magnet coil at AC	163 V·A
apparent holding power of magnet coil at AC	3.1 V·A
closing power of magnet coil at DC	76 W
holding power of magnet coil at DC	1.8 W
closing delay	
● at AC	50 ... 70 ms
● at DC	50 ... 70 ms
opening delay	

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● at AC	38 ... 57 ms
● at DC	38 ... 57 ms
arcing time	10 ... 20 ms
control version of the switch operating mechanism	Standard A1 - A2
Auxiliary circuit	
number of NC contacts for auxiliary contacts	2
● attachable	1
● instantaneous contact	2
number of NO contacts for auxiliary contacts	0
● attachable	1
● instantaneous contact	0
operational current of auxiliary contacts at AC-12 maximum	10 A
operational current of auxiliary contacts at AC-15	
● at 230 V	6 A
● at 400 V	3 A
● at 690 V	0 A
operational current of auxiliary contacts at DC-13	
● at 24 V	6 A
● at 60 V	2 A
● at 110 V	1 A
● at 125 V	0.9 A
● at 220 V	0.3 A
contact reliability of auxiliary contacts	0.00000001
UL/CSA ratings	
contact rating of auxiliary contacts according to UL	A600 / Q600
Short-circuit protection	
design of the miniature circuit breaker for short-circuit protection of the auxiliary circuit up to 230 V	C characteristic: 10 A; 0.4 kA
design of the fuse link	
● for short-circuit protection of the main circuit with type of coordination 1 required	gG: 250 A (690 V, 50 kA)
● for short-circuit protection of the auxiliary switch required	gG: 10 A (690 V, 1 kA)
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 DIN rail according to DIN EN 50022
height	140 mm
width	80 mm
depth	152 mm
required spacing	
● with side-by-side mounting at the side	10 mm
● for grounded parts at the side	10 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 terminal
type of connectable conductor cross-sections for main contacts	
● solid	2x (10 ... 16 mm²)
● stranded	2x (10 ... 70 mm²), 1x (10 ... 70 mm²)
● solid or stranded	2x (10 ... 70 mm²), 1x (10 ... 70 mm²)
● finely stranded with core end processing	2x (10 ... 50 mm²)
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)
● for AWG cables for auxiliary contacts	2x (20 ... 16), 2x (18 ... 14), 2x 12

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type of minimum connectable cross-sections for main contacts at AC-6b	
● at 40 °C	1x 70 mm²
● at 60 °C	2x 50 mm²
AWG number as coded connectable conductor cross section for main contacts	8

Safety related data

product function	
● **mirror contact according to IEC 60947-4-1**	No
● **positively driven operation according to IEC 60947-5-1**	No

Electrical Safety

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

Approvals Certificates

Environmental Product Declaration

● global warming potential [CO2 eq] / during manufacturing	2.47 kg
● global warming potential [CO2 eq] / during operation	104 kg
● global warming potential [CO2 eq] / after end of life	-0.226 kg
● global warming potential [CO2 eq] / total	106 kg

Environment

Environmental Confirmations

General Product Approval

General Product Approval

EMV

Test Certificates

Type Test Certificates/Test Report

Maritime application

Maritime application

other

Confirmation

Dangerous goods

Transport Information

Further information

Information on the packaging
https://support.industry.siemens.com/cs/ww/en/view/109813875
Information for data generation and storage
https://support.industry.siemens.com/cs/ww/en/view/109995012
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=3RT2646-1NP35
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
https://support.industry.siemens.com/cs/ww/en/ps/3RT2646-1NP35
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2646-1NP35&lang=en
Cax online generator
https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2646-1NP35
Kennlinien
https://curves.simaris.siemens.com/curves/3RT2646-1NP35

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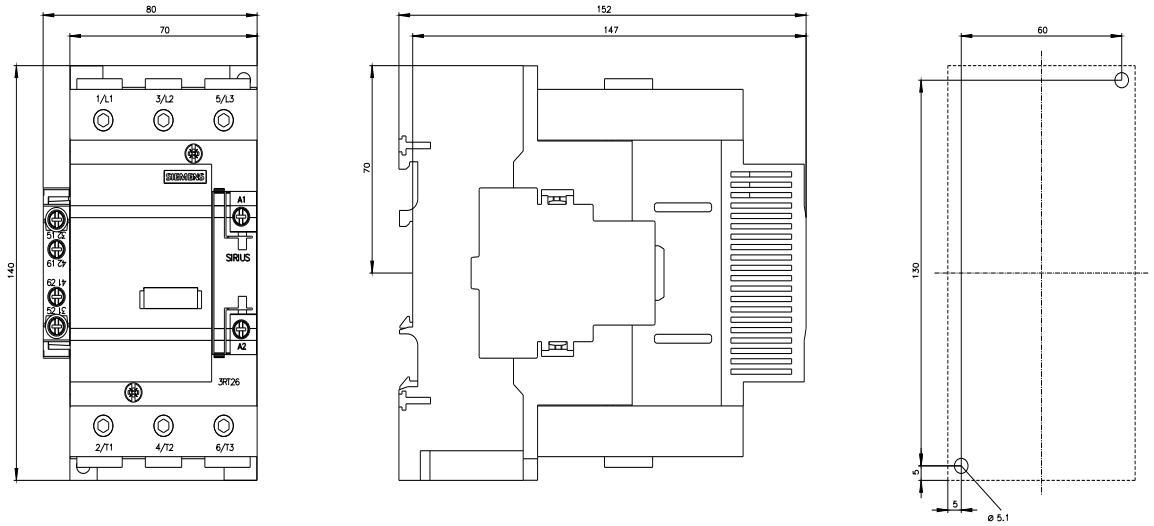

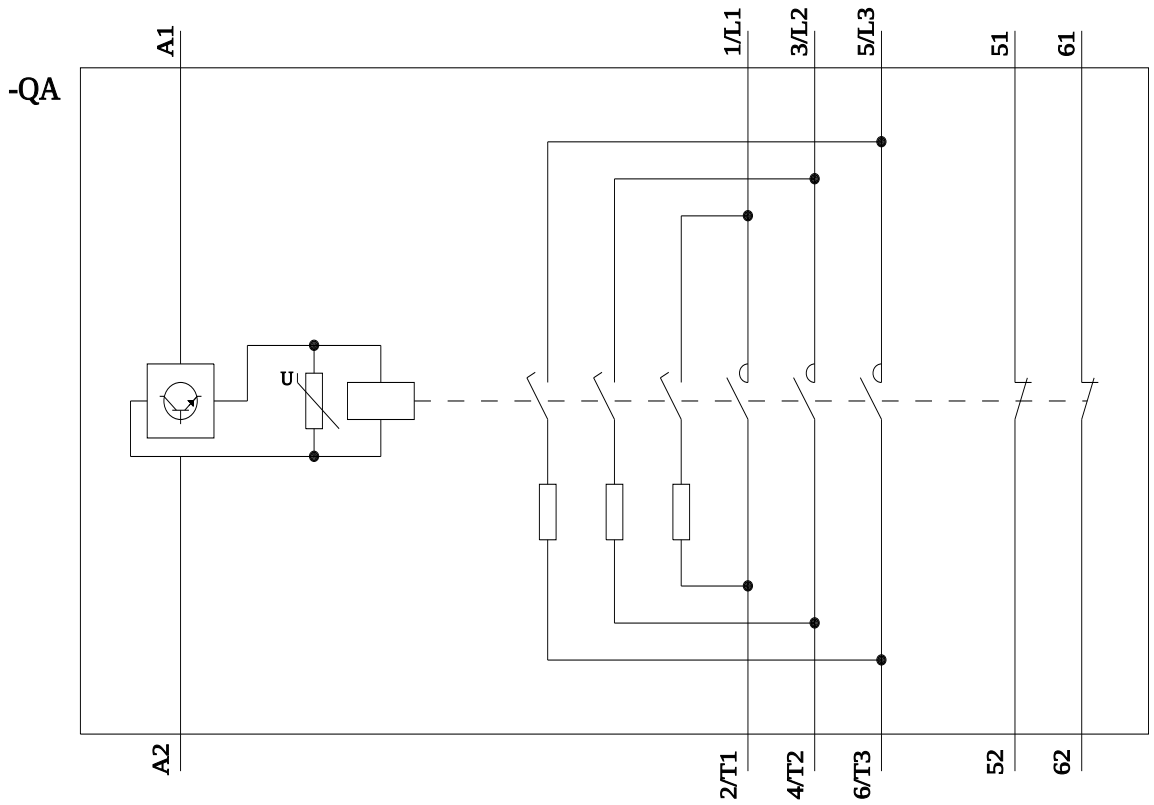

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