SIEMENS

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 depending on pole	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	10.3g / 5 ms, 6,.g / 10 ms
• at DC	6.7 g / 5 ms, 4g / 10 ms
shock resistance with sine pulse	
• at AC	16.3g / 5 ms, 10.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 (Date)	06/26/2017
SVHC substance name	Lead - 7439-92-1 Lead monoxide (lead oxide) - 1317-36-8 2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one - 71868-10-5
Weight	1.895 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
relative humidity minimum	10 %
relative humidity at 55 °C according to IEC 60068-2-30 maximum	95 %

Environmental footprint	
Environmental Product Declaration(EPD)	Yes
global warming potential [CO2 eq] total	106 kg
global warming potential [CO2 eq] during manufacturing	2.47 kg
global warming potential [CO2 eq] during manufacturing	104 kg
global warming potential [CO2 eq] after end of life	-0.226 kg
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	144 A
60 °C rated value	
operating reactive power at AC-6b	
 at 230 V at 50/60 Hz at ambient temperature 60 °C rated value 	19 57 kvar
\bullet at 400 V at 50/60 Hz at ambient temperature 60 $^{\circ}\text{C}$ rated value	33 100 kvar
\bullet at 500 V at 50/60 Hz at ambient temperature 60 $^{\circ}\text{C}$ 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	470.40
• at 230 V maximum	150 1/h
at 240 V maximum at 400 V maximum	150 1/h
at 480 V maximum at 480 V maximum	60 1/h 40 1/h
at 480 V maximumat 500 V maximum	40 1/h
at 500 V maximum at 600 V maximum	20 1/h
• at 690 V maximum	20 1/h
Control circuit/ Control	
Control circuit/ Control type of voltage	AC/DC
type of voltage type of voltage of the control supply voltage	AC/DC AC/DC
type of voltage	
type of voltage type of voltage of the control supply voltage	
type of voltage type of voltage of the control supply voltage control supply voltage at AC	AC/DC
type of voltage type of voltage of the control supply voltage control supply voltage at AC • at 50 Hz rated value	AC/DC 175 280 V
type of voltage type of voltage of the control supply voltage control supply voltage at AC • at 50 Hz rated value • at 60 Hz rated value	AC/DC 175 280 V
type of voltage type of voltage of the control supply voltage control supply voltage at AC • at 50 Hz rated value • at 60 Hz rated value control supply voltage frequency	AC/DC 175 280 V 175 280 V
type of voltage type of voltage of the control supply voltage control supply voltage at AC • at 50 Hz rated value • at 60 Hz rated value control supply voltage frequency • 1 rated value	AC/DC 175 280 V 175 280 V 50 Hz
type of voltage type of voltage of the control supply voltage control supply voltage at AC • at 50 Hz rated value • at 60 Hz rated value control supply voltage frequency • 1 rated value • 2 rated value	AC/DC 175 280 V 175 280 V 50 Hz 60 Hz
type of voltage type of voltage of the control supply voltage control supply voltage at AC • at 50 Hz rated value • at 60 Hz rated value control supply voltage frequency • 1 rated value • 2 rated value control supply voltage at DC rated value operating range factor control supply voltage rated value of	AC/DC 175 280 V 175 280 V 50 Hz 60 Hz
type of voltage type of voltage of the control supply voltage control supply voltage at AC • at 50 Hz rated value • at 60 Hz rated value control supply voltage frequency • 1 rated value • 2 rated value control supply voltage at DC rated value operating range factor control supply voltage rated value of magnet coil at DC	AC/DC 175 280 V 175 280 V 50 Hz 60 Hz 175 280 V
type of voltage type of voltage of the control supply voltage control supply voltage at AC • at 50 Hz rated value • at 60 Hz rated value control supply voltage frequency • 1 rated value • 2 rated value control supply voltage at DC rated value operating range factor control supply voltage rated value of magnet coil at DC • initial value	AC/DC 175 280 V 175 280 V 50 Hz 60 Hz 175 280 V
type of voltage type of voltage of the control supply voltage control supply voltage at AC • at 50 Hz rated value • at 60 Hz rated value control supply voltage frequency • 1 rated value • 2 rated value control supply voltage at DC rated value control supply voltage at DC rated value operating range factor control supply voltage rated value of magnet coil at DC • initial value • full-scale value operating range factor control supply voltage rated value of	AC/DC 175 280 V 175 280 V 50 Hz 60 Hz 175 280 V
type of voltage type of voltage of the control supply voltage control supply voltage at AC • at 50 Hz rated value • at 60 Hz rated value control supply voltage frequency • 1 rated value • 2 rated value control supply voltage at DC rated value control supply voltage at DC rated value operating range factor control supply voltage rated value of magnet coil at DC • initial value • full-scale value operating range factor control supply voltage rated value of magnet coil at AC	AC/DC 175 280 V 175 280 V 50 Hz 60 Hz 175 280 V 0.8 1.1
type of voltage type of voltage of the control supply voltage control supply voltage at AC • at 50 Hz rated value • at 60 Hz rated value control supply voltage frequency • 1 rated value • 2 rated value control supply voltage at DC rated value control supply voltage at DC rated value operating range factor control supply voltage rated value of magnet coil at DC • initial value • full-scale value operating range factor control supply voltage rated value of magnet coil at AC • at 50 Hz	AC/DC 175 280 V 175 280 V 50 Hz 60 Hz 175 280 V 0.8 1.1
type of voltage type of voltage of the control supply voltage control supply voltage at AC • at 50 Hz rated value • at 60 Hz rated value control supply voltage frequency • 1 rated value • 2 rated value control supply voltage at DC rated value control supply voltage at DC rated value operating range factor control supply voltage rated value of magnet coil at DC • initial value • full-scale value operating range factor control supply voltage rated value of magnet coil at AC • at 50 Hz • at 60 Hz	AC/DC 175 280 V 175 280 V 50 Hz 60 Hz 175 280 V 0.8 1.1 0.8 1.1 0.8 1.1 65 A 5 μs
type of voltage type of voltage of the control supply voltage control supply voltage at AC • at 50 Hz rated value • at 60 Hz rated value control supply voltage frequency • 1 rated value • 2 rated value control supply voltage at DC rated value control supply voltage at DC rated value operating range factor control supply voltage rated value of magnet coil at DC • initial value • full-scale value operating range factor control supply voltage rated value of magnet coil at AC • at 50 Hz • at 60 Hz inrush current peak duration of inrush current peak locked-rotor current mean value	AC/DC 175 280 V 175 280 V 50 Hz 60 Hz 175 280 V 0.8 1.1 0.8 1.1 0.8 1.1 65 A 5 μs 0.44 A
type of voltage type of voltage of the control supply voltage control supply voltage at AC	AC/DC 175 280 V 175 280 V 50 Hz 60 Hz 175 280 V 0.8 1.1 0.8 1.1 0.8 1.1 65 A 5 μs 0.44 A 1.2 A
type of voltage type of voltage of the control supply voltage control supply voltage at AC	AC/DC 175 280 V 175 280 V 50 Hz 60 Hz 175 280 V 0.8 1.1 0.8 1.1 65 A 5 μs 0.44 A 1.2 A 150 ms
type of voltage type of voltage of the control supply voltage control supply voltage at AC at 50 Hz rated value at 60 Hz rated value control supply voltage frequency 1 rated value 2 rated value control supply voltage at DC rated value operating range factor control supply voltage rated value of magnet coil at DC initial value full-scale value operating range factor control supply voltage rated value of magnet coil at AC at 50 Hz at 60 Hz inrush current peak duration of inrush current peak locked-rotor current mean value locked-rotor current mean value locked-rotor current mean value	AC/DC 175 280 V 175 280 V 50 Hz 60 Hz 175 280 V 0.8 1.1 0.8 1.1 0.8 1.1 65 A 5 μs 0.44 A 1.2 A 150 ms 10 mA
type of voltage type of voltage of the control supply voltage control supply voltage at AC • at 50 Hz rated value • at 60 Hz rated value control supply voltage frequency • 1 rated value • 2 rated value control supply voltage at DC rated value operating range factor control supply voltage rated value of magnet coil at DC • initial value • full-scale value operating range factor control supply voltage rated value of magnet coil at AC • at 50 Hz • at 60 Hz inrush current peak duration of inrush current peak locked-rotor current mean value locked-rotor current mean value apparent pick-up power of magnet coil at AC	AC/DC 175 280 V 175 280 V 50 Hz 60 Hz 175 280 V 0.8 1.1 0.8 1.1 0.8 1.1 65 A 5 μs 0.44 A 1.2 A 150 ms 10 mA 163 VA
type of voltage type of voltage of the control supply voltage control supply voltage at AC at 50 Hz rated value at 60 Hz rated value control supply voltage frequency 1 rated value 2 rated value control supply voltage at DC rated value operating range factor control supply voltage rated value of magnet coil at DC initial value full-scale value operating range factor control supply voltage rated value of magnet coil at AC at 50 Hz at 60 Hz inrush current peak duration of inrush current peak locked-rotor current mean value locked-rotor current mean value apparent pick-up power of magnet coil at AC apparent holding power of magnet coil at AC	AC/DC 175 280 V 175 280 V 50 Hz 60 Hz 175 280 V 0.8 1.1 0.8 1.1 0.8 1.1 65 A 5 μs 0.44 A 1.2 A 150 ms 10 mA 163 VA 3.1 VA
type of voltage of the control supply voltage control supply voltage at AC at 50 Hz rated value at 60 Hz rated value control supply voltage frequency 1 rated value 2 rated value control supply voltage at DC rated value control supply voltage at DC rated value operating range factor control supply voltage rated value of magnet coil at DC initial value full-scale value operating range factor control supply voltage rated value of magnet coil at AC at 50 Hz at 60 Hz inrush current peak duration of inrush current peak locked-rotor current mean value locked-rotor current mean value apparent pick-up power of magnet coil at AC apparent holding power of magnet coil at AC closing power of magnet coil at DC	AC/DC 175 280 V 175 280 V 50 Hz 60 Hz 175 280 V 0.8 1.1 0.8 1.1 0.8 1.1 65 A 5 μs 0.44 A 1.2 A 150 ms 10 mA 163 VA 3.1 VA 76 W
type of voltage type of voltage of the control supply voltage control supply voltage at AC at 50 Hz rated value at 60 Hz rated value control supply voltage frequency 1 rated value 2 rated value control supply voltage at DC rated value operating range factor control supply voltage rated value of magnet coil at DC initial value full-scale value operating range factor control supply voltage rated value of magnet coil at AC at 50 Hz at 60 Hz inrush current peak duration of inrush current peak locked-rotor current mean value locked-rotor current mean value apparent pick-up power of magnet coil at AC apparent holding power of magnet coil at AC closing power of magnet coil at DC holding power of magnet coil at DC	AC/DC 175 280 V 175 280 V 50 Hz 60 Hz 175 280 V 0.8 1.1 0.8 1.1 0.8 1.1 65 A 5 μs 0.44 A 1.2 A 150 ms 10 mA 163 VA 3.1 VA
type of voltage type of voltage of the control supply voltage control supply voltage at AC • at 50 Hz rated value • at 60 Hz rated value control supply voltage frequency • 1 rated value control supply voltage at DC rated value control supply voltage at DC rated value operating range factor control supply voltage rated value of magnet coil at DC • initial value • full-scale value operating range factor control supply voltage rated value of magnet coil at AC • at 50 Hz • at 60 Hz inrush current peak duration of inrush current peak locked-rotor current mean value locked-rotor current mean value apparent pick-up power of magnet coil at AC apparent holding power of magnet coil at AC closing power of magnet coil at DC holding power of magnet coil at DC closing delay	AC/DC 175 280 V 175 280 V 50 Hz 60 Hz 175 280 V 0.8 1.1 0.8 1.1 0.8 1.1 65 A 5 μs 0.44 A 1.2 A 150 ms 10 mA 163 VA 3.1 VA 76 W 1.8 W
type of voltage type of voltage of the control supply voltage control supply voltage at AC at 50 Hz rated value at 60 Hz rated value control supply voltage frequency 1 rated value 2 rated value control supply voltage at DC rated value operating range factor control supply voltage rated value of magnet coil at DC initial value full-scale value operating range factor control supply voltage rated value of magnet coil at AC at 50 Hz at 60 Hz inrush current peak duration of inrush current peak locked-rotor current mean value locked-rotor current mean value apparent pick-up power of magnet coil at AC apparent holding power of magnet coil at AC closing power of magnet coil at DC holding power of magnet coil at DC	AC/DC 175 280 V 175 280 V 50 Hz 60 Hz 175 280 V 0.8 1.1 0.8 1.1 0.8 1.1 65 A 5 μs 0.44 A 1.2 A 150 ms 10 mA 163 VA 3.1 VA 76 W

opening delay	
• 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
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
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 fuse link ■ for short-circuit protection of the main circuit with type of coordination 1 required	gG: 250 A (690 V, 50 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-type terminals
type of connectable conductor cross-sections for main contacts	
type of connectable conductor cross-sections for main contacts • solid	2x (10 16 mm²)
	2x (10 16 mm²) 2x (10 70 mm²), 1x (10 70 mm²)
• solid	
solidstranded	2x (10 70 mm²), 1x (10 70 mm²)
solidstrandedsolid or stranded	2x (10 70 mm²), 1x (10 70 mm²) 2x (10 70 mm²), 1x (10 70 mm²)
 solid stranded solid or stranded finely stranded with core end processing 	2x (10 70 mm²), 1x (10 70 mm²) 2x (10 70 mm²), 1x (10 70 mm²)
 solid stranded solid or stranded finely stranded with core end processing type of connectable conductor cross-sections	2x (10 70 mm²), 1x (10 70 mm²) 2x (10 70 mm²), 1x (10 70 mm²)
 solid stranded solid or stranded finely stranded with core end processing type of connectable conductor cross-sections for auxiliary contacts 	2x (10 70 mm²), 1x (10 70 mm²) 2x (10 70 mm²), 1x (10 70 mm²) 2x (10 50 mm²)
 solid stranded solid or stranded finely stranded with core end processing type of connectable conductor cross-sections for auxiliary contacts solid 	2x (10 70 mm²), 1x (10 70 mm²) 2x (10 70 mm²), 1x (10 70 mm²) 2x (10 50 mm²) 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²), 2x 4 mm²
solid stranded solid or stranded finely stranded with core end processing type of connectable conductor cross-sections for auxiliary contacts — solid — solid or stranded	2x (10 70 mm²), 1x (10 70 mm²) 2x (10 70 mm²), 1x (10 70 mm²) 2x (10 50 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 4 mm²
solid stranded solid or stranded finely stranded with core end processing type of connectable conductor cross-sections for auxiliary contacts	2x (10 70 mm²), 1x (10 70 mm²) 2x (10 70 mm²), 1x (10 70 mm²) 2x (10 50 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 4 mm² 2x (0.5 1.5 mm²), 2x (0.75 2.5 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	

General Product Approval









<u>KC</u>



EMV Test Certificates Marine / Shipping other



Type Test Certificates/Test Report







Confirmation

Dangerous goods

Environment

Transport Information



Environmental Confirmations

Further information

Information on the packaging

https://support.industry.siemens.com/cs/ww/en/view/109813875

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

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&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, ...)

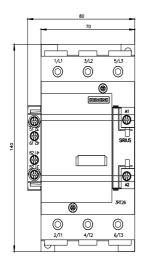
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2646-1NP35&lang=en

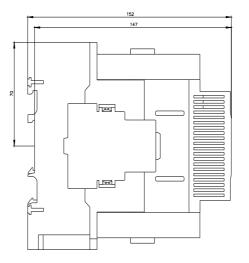
Characteristic: Tripping characteristics, I²t, Let-through current

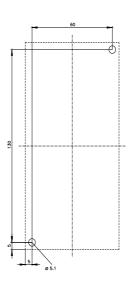
https://support.industry.siemens.com/cs/ww/en/ps/3RT2646-1NP35/char

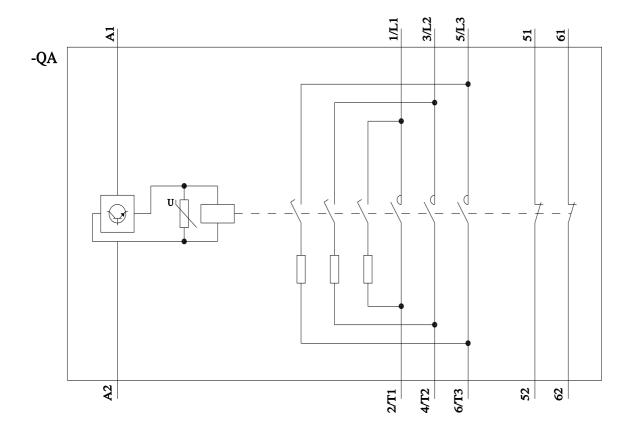
Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2646-1NP35&objecttype=14&gridview=view1









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