



Contactora AC 220 V 50/60 HZ AC3 30 kW 400 V 3-pole, size S3 screw terminal

product brand name	SIRIUS
product designation	Power contactor
product type designation	3RT5
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	4.6 W
• without load current share typical	6.75 W
type of calculation of power loss depending on pole	quadratic
insulation voltage rated value	1 000 V
degree of pollution	3
surge voltage resistance rated value	6 kV
maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1	690 V
shock resistance at rectangular impulse	
• at AC	6.8g / 5 ms, 4g / 10 ms
shock resistance with sine pulse	
• at AC	10.6g / 5 ms, 6.2g / 10 ms
mechanical service life (operating cycles)	
• of contactor typical	10 000 000
• of the contactor with added auxiliary switch block typical	10 000 000
Substance Prohibition (Date)	03/01/2017
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	3
number of NO contacts for main contacts	3
number of NC contacts for main contacts	0
operating voltage	
• at AC-3e rated value maximum	1 000 V
operational current	
• at AC-1 up to 690 V	
— at ambient temperature 40 °C rated value	100 A
— at ambient temperature 60 °C rated value	90 A
• at AC-3	
— at 400 V rated value	65 A

<ul style="list-style-type: none"> — at 690 V rated value ● at AC-3e <ul style="list-style-type: none"> — at 400 V rated value — at 690 V rated value 	<p>47 A</p> <p>65 A</p> <p>47 A</p>
connectable conductor cross-section in main circuit at AC-1	
<ul style="list-style-type: none"> ● at 60 °C minimum permissible ● at 40 °C minimum permissible 	<p>35 mm²</p> <p>35 mm²</p>
operational current for approx. 200000 operating cycles at AC-4	
<ul style="list-style-type: none"> ● at 400 V rated value ● at 690 V rated value 	<p>28 A</p> <p>20 A</p>
operating power	
<ul style="list-style-type: none"> ● at AC-1 <ul style="list-style-type: none"> — at 230 V at 60 °C rated value — at 400 V at 60 °C rated value — at 690 V at 60 °C rated value ● at AC-3 <ul style="list-style-type: none"> — at 230 V rated value — at 400 V rated value — at 690 V rated value ● at AC-3e <ul style="list-style-type: none"> — at 400 V rated value — at 690 V rated value 	<p>34 kW</p> <p>59 kW</p> <p>102 kW</p> <p>18.5 kW</p> <p>30 kW</p> <p>45 kW</p> <p>30 kW</p> <p>45 kW</p>
operating power for approx. 200000 operating cycles at AC-4	
<ul style="list-style-type: none"> ● at 400 V rated value ● at 690 V rated value 	<p>15.1 kW</p> <p>18.6 kW</p>
no-load switching frequency	
<ul style="list-style-type: none"> ● at AC 	5 000 1/h
operating frequency	
<ul style="list-style-type: none"> ● at AC-1 maximum ● at AC-3 maximum ● at AC-3e maximum ● at AC-4 maximum 	<p>1 000 1/h</p> <p>1 000 1/h</p> <p>1 000 1/h</p> <p>300 1/h</p>
Control circuit/ Control	
type of voltage of the control supply voltage	AC
control supply voltage at AC	
<ul style="list-style-type: none"> ● at 50 Hz rated value ● at 60 Hz rated value 	<p>220 V</p> <p>220 V</p>
operating range factor control supply voltage rated value of magnet coil at AC	
<ul style="list-style-type: none"> ● at 50 Hz ● at 60 Hz 	<p>0.8 ... 1.1</p> <p>0.85 ... 1.1</p>
apparent pick-up power of magnet coil at AC	
<ul style="list-style-type: none"> ● at 50 Hz ● at 60 Hz 	<p>247 VA</p> <p>247 VA</p>
inductive power factor with closing power of the coil	
<ul style="list-style-type: none"> ● at 50 Hz ● at 60 Hz 	<p>0.62</p> <p>0.62</p>
apparent holding power of magnet coil at AC	
<ul style="list-style-type: none"> ● at 50 Hz ● at 60 Hz 	<p>25 VA</p> <p>25 VA</p>
inductive power factor with the holding power of the coil	
<ul style="list-style-type: none"> ● at 50 Hz ● at 60 Hz 	<p>0.27</p> <p>0.27</p>
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	6 A
• at 400 V rated value	3 A
operational current at DC-12	
• at 110 V rated value	3 A
• at 220 V rated value	1 A
operational current at DC-13	
• at 24 V rated value	6 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)

UL/CSA ratings

yielded mechanical performance [hp] for 3-phase AC motor at 460/480 V rated value	50 hp
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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: 250 A
— with type of assignment 2 required	fuse gL/gG: 125 A
• for short-circuit protection of the auxiliary switch required	fuse gL/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 and 75 mm DIN rail
• side-by-side mounting	Yes
height	146 mm
width	70 mm
depth	139 mm

Connections/ Terminals

type of electrical connection	
• for main current circuit	screw-type terminals
• for auxiliary and control circuit	screw-type terminals
type of connectable conductor cross-sections for main contacts	
• solid or stranded	2x (2.5 ... 16 mm ²)
• finely stranded with core end processing	2x (2.5 ... 35 mm ²)
• finely stranded without core end processing	2x (10 ... 35 mm ²)
type of connectable conductor cross-sections	
• for auxiliary contacts	
— finely stranded with core end processing	2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²)
• for AWG cables for auxiliary contacts	2x (20 ... 16), 2x (18 ... 14), 1x 12

Safety related data

product function mirror contact according to IEC 60947-4-1	Yes
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

Certificates/ approvals

General Product Approval	EMC
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[Confirmation](#)



Declaration of Conformity	other
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Further information