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Data sheet 3RT5036-1AN20



Contactor AC 220 V 50/60 HZ AC3 22 kW 400 V 3-pole, size S2 screw terminal

product brand name	SIRIUS
product designation	Power contactor
product type designation	3RT5
General technical data	
size of contactor	S2
product extension auxiliary switch	Yes
insulation voltage rated value	690 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	400 V
shock resistance at rectangular impulse	
● at AC	10g / 5 ms, 5g / 10 ms
shock resistance with sine pulse	
● at AC	15g / 5 ms, 8g / 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 Prohibitance (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	690 V
operational current	
● at AC-1 up to 690 V	
— at ambient temperature 40 °C rated value	60 A
— at ambient temperature 60 °C rated value	55 A
● at AC-3	
— at 400 V rated value	50 A
— at 690 V rated value	24 A
● at AC-3e	
— at 400 V rated value	50 A
— at 690 V rated value	24 A

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connectable conductor cross-section in main circuit at AC-1	
● at 60 °C minimum permissible	16 mm²
● at 40 °C minimum permissible	16 mm²
operational current for approx. 200000 operating cycles at AC-4	
● at 400 V rated value	24 A
● at 690 V rated value	12.6 A
operating power	
● at AC-1	
— at 230 V at 60 °C rated value	22 kW
— at 400 V at 60 °C rated value	38 kW
— at 690 V at 60 °C rated value	66 kW
● at AC-3	
— at 230 V rated value	15 kW
— at 400 V rated value	22 kW
— at 690 V rated value	22 kW
● at AC-3e	
— at 400 V rated value	22 kW
— at 690 V rated value	22 kW
operating power for approx. 200000 operating cycles at AC-4	
● at 400 V rated value	12.6 kW
● at 690 V rated value	11.4 kW
no-load switching frequency	
● at AC	5 000 1/h
operating frequency	
● at AC-1 maximum	1 000 1/h
● at AC-3 maximum	800 1/h
● at AC-3e maximum	800 1/h
● at AC-4 maximum	300 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	220 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	
● at 50 Hz	170 VA
● at 60 Hz	170 VA
inductive power factor with closing power of the coil	
● at 50 Hz	0.76
● at 60 Hz	0.76
apparent holding power of magnet coil at AC	
● at 50 Hz	15 VA
● at 60 Hz	15 VA
inductive power factor with the holding power of the coil	
● at 50 Hz	0.35
● at 60 Hz	0.35
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	

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● 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	40 hp
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: 160 A
— with type of assignment 2 required	fuse gL/gG: 80 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 DIN rail according to DIN EN 50022
● side-by-side mounting	Yes
height	112 mm
width	55 mm
depth	115 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 (0.75 ... 16 mm²)
— finely stranded with core end processing	2x (0.75 ... 16 mm²)
— finely stranded without core end processing	2x (0.75 ... 16 mm²)
● for AWG cables for main contacts	2x (18 ... 2)
type of connectable conductor cross-sections	
● for auxiliary contacts	
— 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), 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

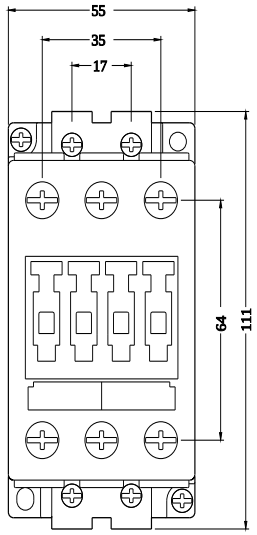
General Product Approval					EMC
CSA	Confirmation	CCC	UL	EAC	RCM

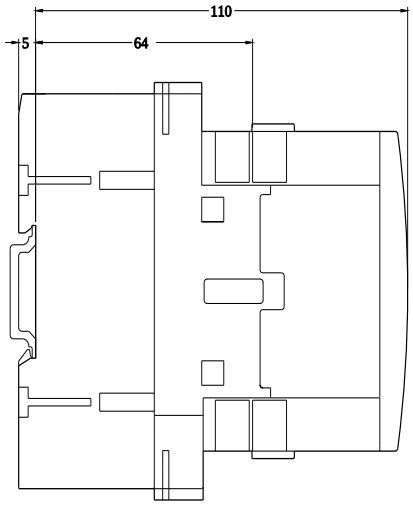
Declaration of Conformity	other	
EG-Konf.	Confirmation	Confirmation

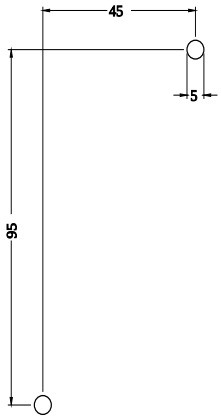
Further information

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
https://support.industry.siemens.com/cs/products?pnid=16027&lc=en-CN

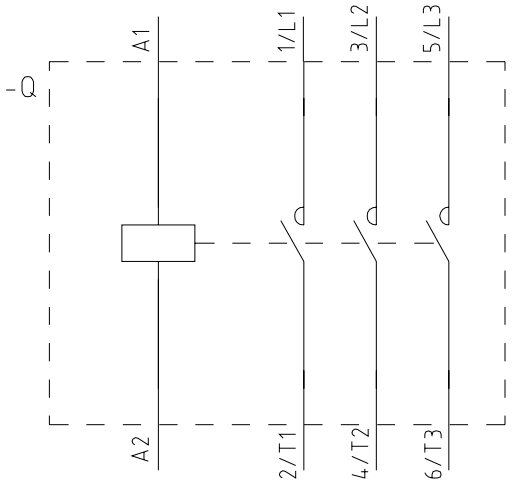
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