

Reference: 3RT1526-1AD20

CONTACTOR, AC-3 40 A, 11KW/400V, AC
42 V, 50/60 HZ 4-POLE, 2 NO + 2 NC,
SIZE S0, SCREW CONNECTION
AVAILABLE MARCH'98

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product brand name	SIRIUS
Product designation	power contactor
General technical data:	
Size of contactor	S0
Insulation voltage	
rated value	690 V
Degree of pollution	3
Protection class IP	
on the front	IP20
Mechanical service life (switching cycles)	
of contactor typical	10 000 000
of the contactor with atd>	5 000 000
of the contactor with atd>	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 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	40 A
— up to 690 V at ambient temperature 60 °C rated value	35 A
at AC-2 at AC-3 at 400 V	
— per NO contact rated value	25 A
— per NC contact rated value	25 A
Connectable conductor cross-section in main circuit at AC-1	
at 60 °C minimum permissible	10 mm ²
at 40 °C minimum permissible	10 mm ²
Operating current	
at 1 current path at DC-1	
— at 24 V rated value	35 A
— at 110 V rated value	4.5 A
— at 220 V rated value	1 A
— at 440 V rated value	0.4 A
with 2 current paths in series at DC-1	
— at 24 V rated value	35 A
— at 110 V rated value	35 A
— at 220 V rated value	5 A
— at 440 V rated value	1 A
Operating current	
at 1 current path at DC-3 at DC-5	
— at 24 V per NC contact rated value	20 A
— at 24 V per NO contact rated value	20 A
— at 110 V per NC contact rated value	1.25 A
— at 110 V per NO contact rated value	2.5 A
— at 220 V per NC contact rated value	0.5 A
— at 220 V per NO contact rated value	1 A
— at 440 V per NC contact rated value	0.045 A
— at 440 V per NO contact rated value	0.09 A
with 2 current paths in series at DC-3 at DC-5	
— at 110 V per NC contact rated value	7.5 A
— at 110 V per NO contact rated value	15 A
— at 220 V per NC contact rated value	1.5 A
— at 220 V per NO contact rated value	3 A

— at 24 V per NC contact rated value	35 A
— at 24 V per NO contact rated value	35 A
— at 440 V per NC contact rated value	0.135 A
— at 440 V per NO contact rated value	0.27 A
Operating power	
at AC-1	
— at 230 V rated value	15 kW
— at 400 V rated value	26 kW
at AC-2 at AC-3	
— at 230 V per NC contact rated value	5.5 kW
— at 230 V per NO contact rated value	5.5 kW
— at 400 V per NC contact rated value	11 kW
— at 400 V per NO contact rated value	11 kW
Power loss [W] at AC-3 at 400 V for rated value of the operating current per conductor	1.6 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	42 V
at 60 Hz rated value	42 V
Operating range factor control supply voltage rated value of magnet coil at AC	
at 50 Hz	0.8 ... 1.1
at 60 Hz	0.8 ... 1.1
Apparent pick-up power of magnet coil at AC	64 V·A
at 50 Hz	64 V·A
Inductive power factor with closing power of the coil	0.72
at 50 Hz	0.72
Apparent holding power of magnet coil at AC	8.4 V·A
at 50 Hz	8.4 V·A
Inductive power factor with the holding power of the coil	0.24
at 60 Hz	0.24
Closing delay	
at AC	6 ... 30 ms
at DC	30 ... 90 ms
Opening delay	
at AC	13 ... 25 ms

at DC	13 ... 40 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	0.006 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: 63 A
— with type of assignment 2 required	fuse gL/gG: 35 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	85 mm
Width	61 mm
Depth	91 mm
Required spacing	
for grounded parts	
— at the side	6 mm
Connections/Terminals:	
Type of electrical connection	
for main current circuit	screw-type terminals
for auxiliary and control current circuit	screw-type terminals
Type of connectable conductor cross-sections	
for main contacts	
— solid	2x (1 ... 2.5 mm ²), 2x (2.5 ... 6 mm ²), max. 2x 10 mm ²
— single or multi-stranded	2x (1 ... 2,5 mm ²), 2x (2,5 ... 6 mm ²), max. 2x 10 mm ²
— finely stranded with core end processing	2x (1 ... 2.5 mm ²), 2x (2.5 ... 6 mm ²)
at AWG conductors for main contacts	2x (20 ... 16), 2x (18 ... 14), 1x 12
Type of connectable conductor cross-sections	
for auxiliary contacts	
— solid	2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²), max. 2x (0.75 ... 4 mm ²)
— single or multi-stranded	2x (0,5 ... 1,5 mm ²), 2x (0,75 ... 2,5 mm ²), max. 2x (0,75 ... 4 mm ²)
— finely stranded with core end processing	2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²)
at AWG conductors for auxiliary contacts	2x (20 ... 16), 2x (18 ... 14), 1x 12
Safety related data:	
Failure rate [FIT]	
with low demand rate acc. to SN 31920	100 FIT