



## **Electric Automation**

Automation specialists

Reference: 3RT1016-1BB42

CONTACTOR, AC-3 4 KW/400 V, 1 NC, DC 24 V, 3-POLE, SIZE S00, SCREW CONNECTION

Buy it at Electric Automation Network



product brand name	SIRIUS	
Product designation	power contactor	
General technical data:		
Size of contactor	S00	
Degree of pollution	3	
Protection class IP		
on the front	IP20	
of the terminal	IP20	
Mechanical service life (switching cycles)		
of contactor typical	30 000 000	
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	
Main circuit:		
Number of NO contacts for main contacts	3	
Number of NC contacts for main contacts	0	
Operating current		
at AC-1 at 400 V		

- at ambient temperature 40 °C rated value22 Aat AC-1I- up to 690 V at ambient temperature 60 °C rated value20 A- at 400 V rated value0 A- at 400 V rated value9 AOperating currentI- at 24 V rated value20 A- at 24 V rated value20 A- at 110 V rated value20 A- at 24 V rated value20 A- at 24 V rated value20 A- at 110 V rated value20 A- at 24 V rated value20 A- at 110 V rated value20 A- at 24 V rated value20 A- at 110 V rated value20 A- at 24 V rated value20 A- at 110 V rated value20 A- at 24 V rated value20 A- at 110 V rated value20 A- at 24 V rate		
up to 690 V at ambient temperature 40 °C rated value22 A- up to 690 V at ambient temperature 60 °C rated value20 Aat AC-3 at 400 V rated value9 AOperating current at 24 V rated value20 A- at 10 V rated value20 A- at 110 V rated value20 A- at 24 V rated value20 A- at 110 V rated value20 A- at 24 V rated value20 A- at 10 V rated value20 A- at 24 V rated value20 A- at 24 V rated value20 A- at 10 V rated value20 A- at 110 V rated value0.5 A- at 110 V rated value0.35 A- at 110 V rated value0.35 A- at 24 V rated value20 A- at 24 V rated value0.35 A- at 24 V rated value20 A- at 24 V rated value20 A- at 24 V rated value20 A- at 24 V rated value3.5 A- at 24 V rated value20 A- at 24 V rated value20 A- at 400 V rated value4.10- at 400 V rated value3.1 A- at 400 V rated value4.10- at 400 V rated value4.10 <trr>- at 400 V rated value4.10</trr>	<ul> <li>at ambient temperature 40 °C rated value</li> </ul>	22 A
value22 A- up to 690 V at ambient temperature 60 °C reted value20 Aat AC-39A- at 400 V rated value9AOperating current20 A- at 24 V rated value20 A- at 24 V rated value20 A- at 110 V rated value20 A- at 24 V rated value20 A- at 24 V rated value20 A- at 24 V rated value20 A- at 110 V rated value20 A- at 110 V rated value20 A- at 24 V rated value20 A- at 24 V rated value20 A- at 110 V rated value20 A- at 24 V rated value20 A- at 110 V rated value20 A- at 24 V rated value20 A- at 24 V rated value20 A- at 110 V rated value20 A- at 110 V rated value20 A- at 110 V rated value20 A- at 24 V rated value20 A- at 40 V rated value20 A- at 40 V rated value31 KW- at 400 V rated value41 KW- at 400 V rated value41 KW- at 400 V rated value4 KW- at 400 V rated value55 KW- at 400 V rated value55 KW	at AC-1	
value         20 A           at AC-3         -           - at 400 V rated value         9 A           Operating current         -           at 1 current path at DC-1         -           - at 24 V rated value         20 A           - at 110 V rated value         20 A           - at 24 V rated value         20 A           - at 124 V rated value         20 A           - at 24 V rated value         20 A           - at 24 V rated value         20 A           - at 124 V rated value         20 A           - at 124 V rated value         20 A           - at 124 V rated value         20 A           - at 120 V rated value         20 A           - at 120 V rated value         20 A           - at 124 V rated value         20 A           - at 124 V rated value         20 A           - at 124 V rated value         20 A           - at 110 V rated value         0.15 A           - at 110 V rated value         0.35 A           - at 110 V rated value         20 A           - at 24 V rated value         20 A           - at 24 V rated value         20 A           - at 100 V rated value         20 A           - at 24 V rated value         20 A<		22 A
- at 400 V rated value9 ÅOperating current-at 1 current path at DC-1 at 24 V rated value20 Å- at 10 V rated value20 Å- at 24 V rated value20 Å- at 110 V rated value20 Å- at 24 V rated value20 Å- at 24 V rated value20 Å- at 110 V rated value20 Å- at 110 V rated value20 Å- at 110 V rated value20 Å- at 24 V rated value20 Å- at 24 V rated value20 Å- at 110 V rated value		20 A
Operating current         Image: current path at DC-1           - at 24 V rated value         20 A           - at 10 V rated value         2.1 A           with 2 current paths in series at DC-1         -           - at 24 V rated value         20 A           - at 10 V rated value         20 A           - at 11 V rated value         20 A           - at 24 V rated value         20 A           - at 400 V rated value         13 kW	at AC-3	
at 1 current path at DC-120 A- at 24 V rated value20 A- at 110 V rated value2.1 Awith 2 current paths in series at DC-1 at 24 V rated value20 A- at 110 V rated value20 A- at 24 V rated value20 A- at 110 V rated value20 A- at 120 V rated value20 A- at 24 V rated value20 A- at 120 V rated value20 A- at 24 V rated value20 A- at 110 V rated value20 A- at 24 V rated value20 A- at 24 V rated value20 A- at 110 V rated value20 A- at 24 V rated value31 kW- at 400 V rated value13 kWat AC-1 at 400 V rated value4 kW- at 400 V rated value4.5 kW- at 600 V rated value5.5 kW- at 600 V rated value5.5 kW- at 600 V rated value5.5 kW	— at 400 V rated value	9 A
- at 24 V rated value20 A- at 110 V rated value2.1 Awith 2 current paths in series at DC-120 A- at 24 V rated value20 A- at 110 V rated value12 Awith 3 current paths in series at DC-1 at 24 V rated value20 A- at 24 V rated value20 A- at 110 V rated value20 A- at 110 V rated value20 A- at 24 V rated value20 A- at 110 V rated value20 A0 perating current20 A- at 24 V rated value20 A- at 110 V rated value20 A- at 110 V rated value0.15 A- at 110 V rated value20 A- at 24 V rated value20 A- at 400 V rated value13 kW- at 400 V rated value13 kW- at 400 V rated value4 kW- at 400 V rated value4 kW- at 400 V rated value5.5 kW- at 600 V rated value5.5 kW- at 600 V rated value5.5 kW	Operating current	
- at 110 V rated value         2.1 A           with 2 current paths in series at DC-1         20 A           - at 24 V rated value         20 A           - at 110 V rated value         12 A           with 3 current paths in series at DC-1         -           - at 24 V rated value         20 A           - at 110 V rated value         20 A           - at 24 V rated value         20 A           - at 110 V rated value         20 A           - at 110 V rated value         20 A           - at 24 V rated value         20 A           - at 110 V rated value         20 A           - at 24 V rated value         20 A           - at 110 V rated value         20 A           - at 110 V rated value         0.15 A           - at 110 V rated value         0.35 A           - at 110 V rated value         20 A           - at 24 V rated value         20 A           - at 110 V rated value         20 A           - at 110 V rated value         20 A           - at 24 V rated value         20 A           - at 400 V rated value         13 kW           - at 400 V rated value         13 kW           - at 400 V rated value         4 kW           - at 400 V rated value         4 kW	at 1 current path at DC-1	
with 2 current paths in series at DC-120 A- at 24 V rated value20 Awith 3 current paths in series at DC-1 at 24 V rated value20 A- at 24 V rated value20 A- at 110 V rated value20 A- at 24 V rated value20 A- at 24 V rated value0.15 A- at 110 V rated value0.35 A- at 110 V rated value20 A- at 110 V rated value20 A- at 110 V rated value20 A- at 24 V rated value20 A- at 110 V rated value20 A- at 110 V rated value20 A- at 110 V rated value13 KW- at 100 V rated value13 kW- at 400 V rated value4 kW- at 400 V rated value4 kW- at 400 V rated value5 kW- at 600 V rated value5 kW- at 600 V rated value5 kW	— at 24 V rated value	20 A
- at 24 V rated value20 A- at 110 V rated value12 Awith 3 current paths in series at DC-120 A- at 24 V rated value20 A- at 110 V rated value20 AOperating current20 Aat 1 current path at DC-3 at DC-5 at 24 V rated value20 A- at 110 V rated value0.15 A- at 110 V rated value0.35 A- at 110 V rated value20 A- at 110 V rated value0.35 A- at 124 V rated value20 A- at 124 V rated value20 A- at 10 V rated value20 A- at 10 V rated value12 A- at 40 V rated value13 kW- at 400 V rated value4 kWat AC-3 at 400 V rated value4 kW- at 400 V rated value5.5 kW- at 600 V rated value5.5 kW	— at 110 V rated value	2.1 A
- at 110 V rated value         12 A           with 3 current paths in series at DC-1         -           - at 24 V rated value         20 A           - at 110 V rated value         20 A           Operating current         -           at 1 current path at DC-3 at DC-5         -           - at 110 V rated value         0.15 A           - at 110 V rated value         0.35 A           - at 110 V rated value         0.35 A           - at 24 V rated value         20 A           - at 110 V rated value         20 A           - at 110 V rated value         0.35 A           - at 110 V rated value         20 A           with 3 current paths in series at DC-3 at DC-5         -           - at 24 V rated value         20 A           operating power         20 A           - at 24 V rated value         20 A           Operating power         20 A           at AC-1         -           - at 400 V rated value         13 kW           at AC-3         -           - at 400 V rated value         4 kW           - at 400 V rated value         4 kW           - at 400 V rated value         5.5 kW           - at 600 V rated value         5.5 kW	with 2 current paths in series at DC-1	
with 3 current paths in series at DC-120 A- at 24 V rated value20 A- at 110 V rated value20 AOperating current-at 1 current path at DC-3 at DC-5 at 24 V rated value20 A- at 110 V rated value0.15 Awith 2 current paths in series at DC-3 at DC-5 at 110 V rated value0.35 A- at 110 V rated value20 A- at 24 V rated value20 A- at 24 V rated value20 A- at 110 V rated value20 A- at 24 V rated value20 Awith 3 current paths in series at DC-3 at DC-5 at 110 V rated value20 Aoperating power at 400 V rated value13 kWat AC-1 at 400 V rated value4 kW- at 400 V rated value5.5 kW- at 600 V rated value5.5 kW- at 600 V rated value5.5 kW	— at 24 V rated value	20 A
- at 24 V rated value20 A- at 110 V rated value20 AOperating current-at 1 current path at DC-3 at DC-5 at 24 V rated value20 A- at 110 V rated value0.15 Awith 2 current paths in series at DC-3 at DC-5 at 110 V rated value0.35 A- at 12 V rated value0.35 A- at 24 V rated value20 Awith 3 current paths in series at DC-3 at DC-5 at 24 V rated value20 Ao at 24 V rated value20 Ao at 24 V rated value20 A- at 110 V rated value20 A- at 24 V rated value13 kWoperating power at 400 V rated value4 kWat AC-3 at 400 V rated value4 kW- at 400 V rated value5.5 kW- at 690 V rated value5.5 kWPower loss [W] at AC-3 at 400 V for rated value of the power loss [W] at AC-3 at 400 V for rated value of the current per conductor	— at 110 V rated value	12 A
- at 110 V rated value         20 A           Operating current         -           at 1 current path at DC-3 at DC-5         -           - at 24 V rated value         20 A           - at 110 V rated value         0.15 A           with 2 current paths in series at DC-3 at DC-5         -           - at 110 V rated value         0.35 A           - at 24 V rated value         0.35 A           - at 24 V rated value         20 A           - at 110 V rated value         20 A           - at 110 V rated value         0.35 A           - at 24 V rated value         20 A           with 3 current paths in series at DC-3 at DC-5         -           - at 110 V rated value         20 A           0 parating power         20 A           at AC-1         -           - at 400 V rated value         13 kW           at AC-2 at 400 V rated value         4 kW           at AC-3         -           - at 400 V rated value         4 kW           - at 400 V rated value         5.5 kW           - at 600 V rated value         6.5 kW	with 3 current paths in series at DC-1	
Operating currentImage: current path at DC-3 at DC-5- at 24 V rated value20 A- at 110 V rated value0.15 Awith 2 current paths in series at DC-3 at DC-5Image: current paths in series at DC-3 at DC-5- at 110 V rated value0.35 A- at 24 V rated value20 Awith 3 current paths in series at DC-3 at DC-5Image: current paths in series at DC-3 at DC-5- at 110 V rated value20 A- at 110 V rated value20 A- at 24 V rated value20 A- at 24 V rated value10 A- at 24 V rated value20 A- at 24 V rated value20 A- at 24 V rated value20 A- at 400 V rated value13 kWat AC-1Image: current path cur	— at 24 V rated value	20 A
at 1 current path at DC-3 at DC-520 A- at 24 V rated value20 A- at 110 V rated value0.15 Awith 2 current paths in series at DC-3 at DC-5 at 110 V rated value0.35 A- at 24 V rated value20 Awith 3 current paths in series at DC-3 at DC-5 at 110 V rated value20 A- at 24 V rated value10 AOperating power-at AC-1 at 400 V rated value13 kWat AC-2 at 400 V rated value4 kW- at 400 V rated value5.5 kW- at 690 V rated value5.5 kWPower loss [W] at AC-3 at 400 V for rated value of the Over loss [W] at AC-3 at 400 V for rated value0.7 W	— at 110 V rated value	20 A
- at 24 V rated value20 A- at 110 V rated value0.15 Awith 2 current paths in series at DC-3 at DC-5 at 110 V rated value0.35 A- at 24 V rated value20 Awith 3 current paths in series at DC-3 at DC-5 at 110 V rated value20 A- at 110 V rated value20 A- at 24 V rated value20 A- at 24 V rated value20 A- at 24 V rated value10 A- at 24 V rated value10 A- at 24 V rated value20 A- at 24 V rated value13 kWat AC-1 at 400 V rated value4 kWat AC-3 at 400 V rated value5.5 kW- at 690 V rated value0.7 W	Operating current	
- at 110 V rated value0.15 Åwith 2 current paths in series at DC-3 at DC-5 at 110 V rated value0.35 Å- at 24 V rated value20 Åwith 3 current paths in series at DC-3 at DC-5 at 110 V rated value20 Å- at 110 V rated value20 Å- at 24 V rated value20 Å- at 24 V rated value10 Å- at 24 V rated value13 ÅOperating power at 400 V rated value13 kWat AC-3 at 400 V rated value4 kW- at 500 V rated value5.5 kW- at 690 V rated value0.7 W	at 1 current path at DC-3 at DC-5	
with 2 current paths in series at DC-3 at DC-5	— at 24 V rated value	20 A
- at 110 V rated value0.35 A- at 24 V rated value20 Awith 3 current paths in series at DC-3 at DC-520 A- at 110 V rated value20 A- at 24 V rated value20 AOperating power1at AC-1 at 400 V rated value13 kWat AC-2 at 400 V rated value4 kWat AC-3 at 500 V rated value5.5 kW- at 690 V rated value0.7 W	— at 110 V rated value	0.15 A
- at 24 V rated value       20 A         with 3 current paths in series at DC-3 at DC-5       20 A         - at 110 V rated value       20 A         - at 24 V rated value       20 A         Operating power       20 A         at AC-1       -         - at 400 V rated value       13 kW         at AC-2 at 400 V rated value       4 kW         at AC-3       -         - at 400 V rated value       5.5 kW         - at 690 V rated value       5.5 kW	with 2 current paths in series at DC-3 at DC-5	
with 3 current paths in series at DC-3 at DC-5- at 110 V rated value20 A- at 24 V rated value20 AOperating power20 Aat AC-1 at 400 V rated value13 kWat AC-2 at 400 V rated value4 kWat AC-3 at 400 V rated value4 kW- at 600 V rated value5.5 kW- at 690 V rated value0.7 W	— at 110 V rated value	0.35 A
- at 110 V rated value       20 A         - at 24 V rated value       20 A         Operating power       20 A         at AC-1       -         - at 400 V rated value       13 kW         at AC-2 at 400 V rated value       4 kW         at AC-3       -         - at 400 V rated value       5.5 kW         - at 690 V rated value       0.7 W	— at 24 V rated value	20 A
- at 24 V rated value       20 A         Operating power       -         at AC-1       -         - at 400 V rated value       13 kW         at AC-2 at 400 V rated value       4 kW         at AC-3       -         - at 400 V rated value       5.5 kW         - at 690 V rated value       0.7 W	with 3 current paths in series at DC-3 at DC-5	
Operating power         Image: Comparison of the system of the syste	— at 110 V rated value	20 A
at AC-1       I         - at 400 V rated value       13 kW         at AC-2 at 400 V rated value       4 kW         at AC-3       I         - at 400 V rated value       4 kW         - at 400 V rated value       4 kW         - at 690 V rated value       5.5 kW         Power loss [W] at AC-3 at 400 V for rated value of the operating current per conductor       0.7 W	— at 24 V rated value	20 A
- at 400 V rated value       13 kW         at AC-2 at 400 V rated value       4 kW         at AC-3       - at 400 V rated value         - at 400 V rated value       4 kW         - at 500 V rated value       4.5 kW         - at 690 V rated value       5.5 kW         Power loss [W] at AC-3 at 400 V for rated value of the operating current per conductor       0.7 W	Operating power	
A AC-2 at 400 V rated value4 kWat AC-3- at 400 V rated value- at 400 V rated value4 kW- at 500 V rated value4.5 kW- at 690 V rated value5.5 kWPower loss [W] at AC-3 at 400 V for rated value of the operating current per conductor0.7 W	at AC-1	
at AC-3         4 kW           - at 400 V rated value         4 kW           - at 500 V rated value         4.5 kW           - at 690 V rated value         5.5 kW           Power loss [W] at AC-3 at 400 V for rated value of the operating current per conductor         0.7 W	— at 400 V rated value	13 kW
- at 400 V rated value     4 kW       - at 500 V rated value     4.5 kW       - at 690 V rated value     5.5 kW       Power loss [W] at AC-3 at 400 V for rated value of the operating current per conductor     0.7 W	at AC-2 at 400 V rated value	4 kW
- at 500 V rated value     4.5 kW       - at 690 V rated value     5.5 kW       Power loss [W] at AC-3 at 400 V for rated value of the operating current per conductor     0.7 W	at AC-3	
- at 690 V rated value     5.5 kW       Power loss [W] at AC-3 at 400 V for rated value of the operating current per conductor     0.7 W	— at 400 V rated value	4 kW
Power loss [W] at AC-3 at 400 V for rated value of the operating current per conductor 0.7 W	— at 500 V rated value	4.5 kW
operating current per conductor	— at 690 V rated value	5.5 kW
Control circuit/ Control:		0.7 W
	Control circuit/ Control:	

Type of voltage of the control supply voltage	DC
Control supply voltage at DC	
rated value	24 V
Operating range factor control supply voltage rated value of magnet coil at DC	0.85 1.1
Closing power of magnet coil at DC	3.3 W
Holding power of magnet coil at DC	3.3 W
Auxiliary circuit:	
Number of NC contacts	
for auxiliary contacts	
— instantaneous contact	1
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: 35 A
— with type of assignment 2 required	fuse gL/gG: 20 A
for short-circuit protection of the auxiliary switch required	fuse gL/gG: 10 A
Installation/ mounting/ dimensions:	
Mounting type	screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 50022
Side-by-side mounting	Yes

Height	57.5 mm
Witd>	45 mm
Depth	72 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 (0.5 1.5 mm²), 2x (0.75 2.5 mm²), max. 2x (0.75 4 mm²)
— single or multi-stranded	2x (0,5 1,5 mm²), 2x (0,75 2,5 mm²), max. 2x (0,75 4 mm²)
- finely stranded with core end processing	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
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 mm²), 2x (0.75 2.5 mm²), max. 2x (0.75 4 mm²)
- finely stranded with core end processing	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
at AWG conductors for auxiliary contacts	2x (20 16), 2x (18 14), 1x 12