

COUPL. CONT., AC-3, 4KW/400V, 1NO, 24 V DC, 0.7...1.25*US, W.
INTEGRATED SUPPRESSOR DIODE, 3-POLE, SIZE S00, SCREW
TERMINALS SUITABLE FOR PLC OUTPUTS



product brand name	SIRIUS
Product designation	Coupling relay
General technical data	
Size of contactor	S00
Product extension	
<ul style="list-style-type: none"> function module for communication Auxiliary switch 	No
Insulation voltage	
<ul style="list-style-type: none"> rated value 	690 V
Degree of pollution	3
Surge voltage resistance rated value	6 kV
maximum permissible voltage for safe isolation	
<ul style="list-style-type: none"> between coil and main contacts acc. to EN 60947-1 	400 V
Protection class IP	
<ul style="list-style-type: none"> on the front of the terminal 	IP20
Shock resistance	
<ul style="list-style-type: none"> at rectangular impulse 	

<ul style="list-style-type: none"> — at DC • with sine pulse — at DC 	6,7g / 5 ms, 4,2g / 10 ms
Mechanical service life (switching cycles) <ul style="list-style-type: none"> • of contactor typical 	30 000 000

Ambient conditions

Installation altitude at height above sea level maximum	2 000 m
Ambient temperature <ul style="list-style-type: none"> • during operation • during operation Note • during storage 	-25 ... +60 °C Railway application: -40 ... 70 °C with 10 mm clearance. See catalog for other rated conditions -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 <ul style="list-style-type: none"> • at AC-3 rated value maximum 	690 V
Operating current <ul style="list-style-type: none"> • at AC-1 at 400 V <ul style="list-style-type: none"> — at ambient temperature 40 °C rated value • at AC-1 <ul style="list-style-type: none"> — up to 690 V at ambient temperature 40 °C rated value — up to 690 V at ambient temperature 60 °C rated value • at AC-2 at 400 V rated value • at AC-3 <ul style="list-style-type: none"> — at 400 V rated value — at 500 V rated value — at 690 V rated value 	22 A 22 A 20 A 9 A 9 A 7.7 A 6.7 A
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 	2.5 mm ² 4 mm ²
Operating 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 	4.1 A 3.3 A
Operating current <ul style="list-style-type: none"> • at 1 current path at DC-1 	

— at 24 V rated value	20 A
— at 110 V rated value	2.1 A
— at 220 V rated value	0.8 A
— at 440 V rated value	0.6 A
— at 600 V rated value	0.6 A
• with 2 current paths in series at DC-1	
— at 24 V rated value	20 A
— at 110 V rated value	12 A
— at 220 V rated value	1.6 A
— at 440 V rated value	0.8 A
— at 600 V rated value	0.7 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 220 V rated value	20 A
— at 440 V rated value	1.3 A
— at 600 V rated value	1 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	0.1 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	20 A
• with 3 current paths in series at DC-3 at DC-5	
— at 110 V rated value	20 A
— at 220 V rated value	1.5 A
— at 24 V rated value	20 A
— at 440 V rated value	0.2 A
— at 600 V rated value	0.2 A
Operating power	
• at AC-1	
— at 230 V rated value	7.5 kW
— at 230 V at 60 °C rated value	7.5 kW
— at 400 V rated value	13 kW
— at 400 V at 60 °C rated value	13 kW
— at 690 V rated value	22 kW
— at 690 V at 60 °C rated value	22 kW
• at AC-2 at 400 V rated value	4 kW
• at AC-3	
— at 230 V rated value	2.2 kW

— at 400 V rated value	4 kW
— at 690 V rated value	5.5 kW
Operating power for approx. 200000 operating cycles at AC-4	
• at 400 V rated value	2 kW
• at 690 V rated value	2.5 kW
Thermal short-time current limited to 10 s	72 A
Power loss [W] at AC-3 at 400 V for rated value of the operating current per conductor	0.7 W
No-load switching frequency	
• at DC	10 000 1/h
Operating frequency	
• at AC-1 maximum	1 000 1/h
• at AC-2 maximum	750 1/h
• at AC-3 maximum	750 1/h
• at AC-4 maximum	250 1/h

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	0.7 ... 1.25
Design of the surge suppressor	with suppressor diode
Closing power of magnet coil at DC	2.8 W
Holding power of magnet coil at DC	2.8 W
Closing delay	
• at DC	30 ... 100 ms
Opening delay	
• at DC	7 ... 13 ms
Arcing time	10 ... 15 ms
Residual current of the electronics for control with signal <0>	
• at AC at 230 V maximum permissible	3 mA
• at DC at 24 V maximum permissible	10 mA

Auxiliary circuit	
Number of NC contacts	
• for auxiliary contacts	
— instantaneous contact	0
Number of NO contacts	
• for auxiliary contacts	
— instantaneous contact	1
Operating current at AC-12 maximum	10 A

Operating current at AC-15	
• at 230 V rated value	10 A
• at 400 V rated value	3 A
• at 500 V rated value	2 A
• at 690 V rated value	1 A
Operating current at DC-12	
• at 24 V rated value	10 A
• at 48 V rated value	6 A
• at 60 V rated value	6 A
• at 110 V rated value	3 A
• at 125 V rated value	2 A
• at 220 V rated value	1 A
• at 600 V rated value	0.15 A
Operating current at DC-13	
• at 24 V rated value	10 A
• at 48 V rated value	2 A
• at 60 V rated value	2 A
• at 110 V rated value	1 A
• at 125 V rated value	0.9 A
• at 220 V rated value	0.3 A
• at 600 V rated value	0.1 A
Contact reliability of auxiliary contacts	1 faulty switching per 100 million (17 V, 1 mA)

UL/CSA ratings

Full-load current (FLA) for three-phase AC motor	
• at 480 V rated value	7.6 A
• at 600 V rated value	9 A
Yielded mechanical performance [hp]	
• for single-phase AC motor	
— at 110/120 V rated value	0.33 hp
— at 230 V rated value	1 hp
• for three-phase AC motor	
— at 200/208 V rated value	2 hp
— at 220/230 V rated value	3 hp
— at 460/480 V rated value	5 hp
— at 575/600 V rated value	7.5 hp
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	gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 35 A
— with type of assignment 2 required	gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 20 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
Mounting type	screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 50022
<ul style="list-style-type: none"> • Side-by-side mounting 	Yes
Height	58 mm
Width	45 mm
Depth	73 mm
Required spacing	
<ul style="list-style-type: none"> • with side-by-side mounting <ul style="list-style-type: none"> — forwards — Backwards — upwards — downwards — at the side • for grounded parts <ul style="list-style-type: none"> — forwards — Backwards — upwards — at the side — downwards • for live parts <ul style="list-style-type: none"> — forwards — Backwards — upwards — downwards — at the side 	0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 6 mm 0 mm 0 mm 0 mm 0 mm 0 mm 6 mm

Connections/Terminals

Type of electrical connection	
<ul style="list-style-type: none"> • for main current circuit • for auxiliary and control current circuit 	screw-type terminals screw-type terminals
Type of connectable conductor cross-sections	
<ul style="list-style-type: none"> • for main contacts <ul style="list-style-type: none"> — solid — single or multi-stranded — finely stranded with core end processing • at AWG conductors for main contacts 	2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²), 2x 4 mm ² 2x (0,5 ... 1,5 mm ²), 2x (0,75 ... 2,5 mm ²), 2x 4 mm ² 2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²) 2x (20 ... 16), 2x (18 ... 14), 2x 12
Type of connectable conductor cross-sections	

- for auxiliary contacts
 - single or multi-stranded
 - finely stranded with core end processing
- at AWG conductors for auxiliary contacts

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 (20 ... 16), 2x (18 ... 14), 2x 12

Safety related data

B10 value	
• with high demand rate acc. to SN 31920	1 000 000
Proportion of dangerous failures	
• with low demand rate acc. to SN 31920	40 %
• with high demand rate acc. to SN 31920	73 %
Failure rate [FIT]	
• with low demand rate acc. to SN 31920	100 FIT
Product function	
• Mirror contact acc. to IEC 60947-4-1	No
T1 value for proof test interval or service life acc. to IEC 61508	20 y

Certificates/approvals

General Product Approval	Functional Safety/Safety of Machinery
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Declaration of Conformity	Test Certificates	Shipping Approval
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Shipping Approval



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Further information

Information- and Downloadcenter (Catalogs, Brochures,...)

<http://www.siemens.com/industrial-controls/catalogs>

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT2016-1KB41>

Cax online generator

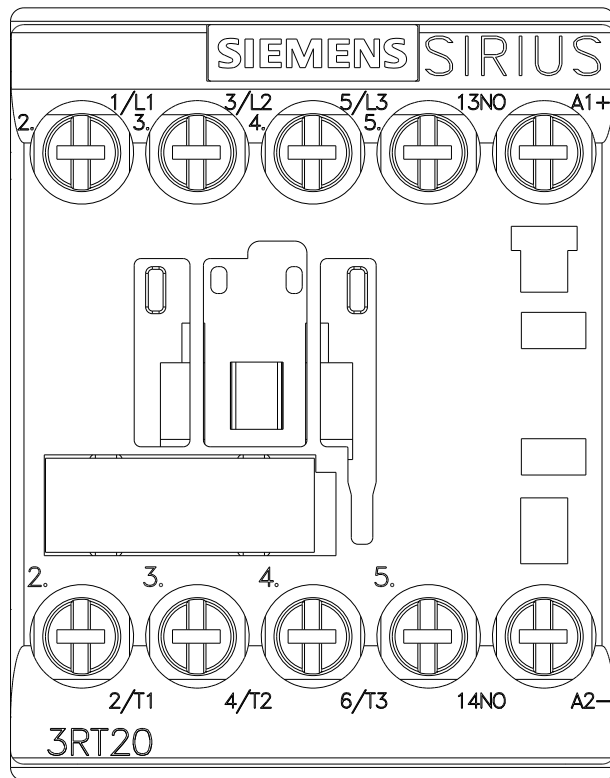
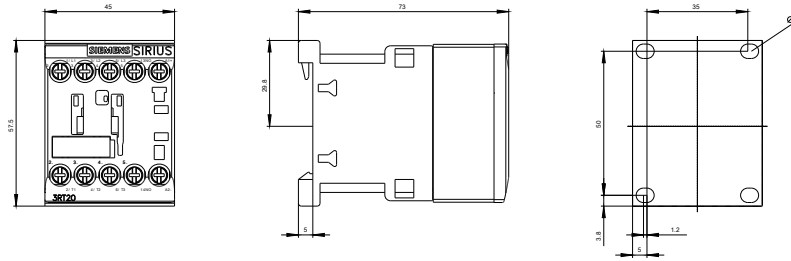
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2016-1KB41>

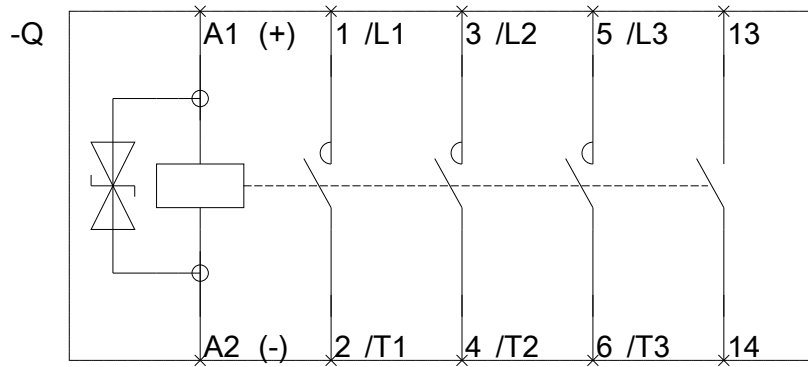
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2016-1KB41>

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2016-1KB41&lang=en





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