



Contactor, AC-1, 140 A/400 V/40 °C, S3, 4-pole, 220 V AC/50 Hz, 240 V/60 Hz, 1 NO+1 NC, screw terminal

product brand name	SIRIUS
product designation	Contactor
product type designation	3RT23
General technical data	
size of contactor	S3
product extension	
• function module for communication	No
• auxiliary switch	Yes
power loss [W] for rated value of the current	
• at AC in hot operating state	47.2 W
• at AC in hot operating state per pole	11.8 W
insulation voltage	
• of main circuit with degree of pollution 3 rated value	690 V
• of the auxiliary and control circuit with degree of pollution 3 rated value	690 V
surge voltage resistance	
• of main circuit rated value	8 kV
• of auxiliary circuit rated value	6 kV
shock resistance at rectangular impulse	
• at AC	6.7 g / 5 ms, 4.0 g / 10 ms
• at DC	6.7 g / 5 ms, 4.0 g / 10 ms
shock resistance with sine pulse	
• at AC	10.6 g / 5 ms, 6.3 g / 10 ms
• at DC	10.6 g / 5 ms, 6.3 g / 10 ms
mechanical service life (switching cycles)	
• of contactor typical	10 000 000
• of the contactor with added auxiliary switch block typical	10 000 000
reference code according to IEC 81346-2	Q
Substance Prohibitance (Date)	09/01/2017
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
relative humidity minimum	10 %
relative humidity at 55 °C according to IEC 60068-2-30 maximum	95 %
Main circuit	
number of poles for main current circuit	4

number of NO contacts for main contacts	4
operational current	
at AC-1 at 400 V at ambient temperature 40 °C rated value	140 A
- at AC-1 - up to 690 V at ambient temperature 40 °C rated value	140 A
up to 690 V at ambient temperature 60 °C rated value	130 A
minimum cross-section in main circuit at maximum AC-1 rated value	50 mm ²
short-time withstand current in cold operating state up to 40 °C	
limited to 1 s switching at zero current maximum	Use minimum cross-section acc. to AC-1 rated value
limited to 5 s switching at zero current maximum	Use minimum cross-section acc. to AC-1 rated value
limited to 10 s switching at zero current maximum	Use minimum cross-section acc. to AC-1 rated value
limited to 30 s switching at zero current maximum	Use minimum cross-section acc. to AC-1 rated value
limited to 60 s switching at zero current maximum	Use minimum cross-section acc. to AC-1 rated value
no-load switching frequency	
at AC	5 000 1/h
operating frequency at AC-1 maximum	1 000 1/s
Control circuit/ Control	
type of voltage	AC
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	240 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	348 VA
at 60 Hz	296 VA
inductive power factor with closing power of the coil	
at 50 Hz	0.62
at 60 Hz	0.55
apparent holding power of magnet coil at AC	
at 50 Hz	25 VA
at 60 Hz	18 VA
inductive power factor with the holding power of the coil	
at 50 Hz	0.35
at 60 Hz	0.41
closing delay	
at AC	13 ... 50 ms
opening delay	
at AC	10 ... 21 ms
arcing time	10 ... 20 ms
control version of the switch operating mechanism	Standard A1 - A2
Auxiliary circuit	
number of NC contacts for auxiliary contacts	1
attachable	2
instantaneous contact	1
number of NO contacts for auxiliary contacts	1
attachable	2
instantaneous contact	1
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

• at 500 V rated value • at 690 V rated value	2 A 1 A
operational current at DC-12 • at 24 V rated value • at 48 V rated value • at 60 V rated value • at 110 V rated value • at 125 V rated value • at 220 V rated value • at 600 V rated value	10 A 6 A 6 A 3 A 2 A 1 A 0.15 A
operational current at DC-13 • at 24 V rated value • at 48 V rated value • at 110 V rated value • at 125 V rated value • at 220 V rated value • at 600 V rated value	10 A 2 A 1 A 0.9 A 0.3 A 0.1 A
design of the miniature circuit breaker for short-circuit protection of the auxiliary switch required	gG: 10 A (230 V, 400 A)
contact reliability of auxiliary contacts	1 faulty switching per 100 million (17 V, 1 mA)
UL/CSA ratings	
contact rating of auxiliary contacts according to UL	A600 / P600
Short-circuit protection	
product function short circuit protection	No
design of the fuse link • for short-circuit protection of the main circuit — with type of coordination 1 required — with type of assignment 2 required • for short-circuit protection of the auxiliary switch required	gG: 250 A (690 V, 100 kA) gR: 250 A (690 V, 100 kA) gG: 10 A (690 V, 1 kA)
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 standard mounting rail according to DIN EN 60715
• side-by-side mounting	Yes
height	140 mm
width	96 mm
depth	152 mm
required spacing • with side-by-side mounting — forwards — upwards — downwards — at the side • for grounded parts — forwards — upwards — at the side — downwards • for live parts — forwards — upwards — downwards — at the side	20 mm 10 mm 10 mm 0 mm 20 mm 10 mm 10 mm 10 mm 20 mm 10 mm 10 mm 10 mm
Connections/ Terminals	
type of electrical connection • for main current circuit • for auxiliary and control circuit • at contactor for auxiliary contacts	screw-type terminals screw-type terminals Screw-type terminals

• of magnet coil	Screw-type terminals
type of connectable conductor cross-sections • for main contacts — stranded — solid or stranded — finely stranded with core end processing • at AWG cables for main contacts	2x (6 ... 16 mm ²), 2x (10 ... 50 mm ²), 1x (10 ... 70 mm ²) 2x (2.5 ... 16 mm ²), 2x (6 ... 16 mm ²), 2x (10 ... 50 mm ²), 1x (10 ... 70 mm ²) 2x (2.5 ... 35 mm ²), 1x (2.5 ... 50 mm ²) 2x (10 ... 1/0), 1x (10 ... 2)
connectable conductor cross-section for main contacts • solid • solid or stranded • stranded • finely stranded with core end processing	2.5 ... 16 mm ² 4 ... 70 mm ² 6 ... 70 mm ² 2.5 ... 50 mm ²
connectable conductor cross-section for auxiliary contacts • solid or stranded • finely stranded with core end processing	0.5 ... 2.5 mm ² 0.5 ... 2.5 mm ²
type of connectable conductor cross-sections • for auxiliary contacts — solid — solid or stranded — finely stranded with core end processing • at AWG cables for auxiliary contacts	2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²) 2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²) 2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²) 2x (20 ... 16), 2x (18 ... 14)
AWG number as coded connectable conductor cross section • for main contacts • for auxiliary contacts	10 ... 2 20 ... 14
Safety related data	
product function • mirror contact according to IEC 60947-4-1 • positively driven operation according to IEC 60947-5-1	Yes No
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
Communication/ Protocol	
product function bus communication	No
Certificates/ approvals	
General Product Approval	



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EMC	Functional Safety/Safety of Machinery	Declaration of Conformity	Test Certificates
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[UK Declaration of Conformity](#)

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[Special Test Certificate](#)

Marine / Shipping



other	Railway	Dangerous Good
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Further information

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

<https://www.siemens.com/ic10>

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT2346-1AP60>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2346-1AP60>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2346-1AP60>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2346-1AP60&lang=en

Characteristic: Tripping characteristics, I^2t , Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2346-1AP60/char>

Further characteristics (e.g. electrical endurance, switching frequency)

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2346-1AP60&objecttype=14&gridview=view1>

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