SIEMENS

Data sheet 3RT2325-1AC20



Contactor, AC-1, 35 A/400 V/40 °C, S0, 4-pole, 24 V AC, 50/60 Hz, 1 NO+1 NC, screw terminal

product brand name	SIRIUS
product designation	Contactor
product type designation	3RT23
General technical data	
size of contactor	S0
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 	7.6 W
 at AC in hot operating state per pole 	1.9 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 	6 kV
 of auxiliary circuit rated value 	6 kV
shock resistance at rectangular impulse	
• at AC	7,5g / 5 ms, 4,7g / 10 ms
shock resistance with sine pulse	
• at AC	11,8g / 5 ms, 7,4g / 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)	10/01/2009
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	35 A
 at AC-1 — up to 690 V at ambient temperature 40 °C 	35 A
— up to 690 V at ambient temperature 60 °C rated value	30 A
• at AC-3	
— at 400 V rated value	15.5 A
 at AC-4 at 400 V rated value 	15.5 A
minimum cross-section in main circuit at maximum AC-1 rated value	10 mm²
operating power	
at AC-3 at 400 V rated value	7.5 kW
 at AC-4 at 400 V rated value 	7.5 kW
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/h
Control circuit/ Control	. 333
type of voltage	AC
	AC
type of voltage of the control supply voltage	AC
control supply voltage at AC	0417
at 50 Hz rated value	24 V
at 60 Hz rated value	24 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
	0.00 1.1
apparent pick-up power of magnet coil at AC	04.1/4
• at 50 Hz	81 VA
• at 60 Hz	79 VA
inductive power factor with closing power of the coil	
• at 50 Hz	0.72
● at 60 Hz	0.74
apparent holding power of magnet coil at AC	
● at 50 Hz	10.5 VA
● at 60 Hz	8.5 VA
inductive power factor with the holding power of the coil	
• at 50 Hz	0.25
• at 60 Hz	0.28
closing delay	
• at AC	8 40 ms
opening delay	
• at AC	4 16 ms
arcing time	10 10 ms
control version of the switch operating mechanism	Standard A1 - A2
Auxiliary circuit	
Auxiliary circuit number of NC contacts for auxiliary contacts	1
	1 2
number of NC contacts for auxiliary contacts	
number of NC contacts for auxiliary contacts • attachable • instantaneous contact	2
number of NC contacts for auxiliary contacts • attachable	2 1
number of NC contacts for auxiliary contacts	2 1 1

operational current at AC-12 maximum	10 A
operational current at AC-12 maximum	10 A
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
operational current at DC-12	40.4
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
operational current at DC-13	
 at 24 V rated value 	10 A
 at 48 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
design of the miniature circuit breaker for short-circuit	gG: 10 A (230 V, 400 A)
protection of the auxiliary switch required	, ,
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 / Q600
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	gG: 63 A (690 V, 100 kA)
with type of assignment 2 required	gG: 20 A (690 V, 100 kA)
for short-circuit protection of the auxiliary switch	gG: 10 A (690 V, 1 kA)
required	go. 10 A (000 V, 11kA)
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	85 mm
width	60 mm
depth	97 mm
required spacing	
with side-by-side mounting	
— forwards	10 mm
— upwards	10 mm
— downwards	10 mm
— at the side	0 mm
for grounded parts	
— forwards	10 mm
— upwards	10 mm
— at the side	6 mm
— downwards	10 mm
• for live parts	
— forwards	10 mm
— upwards	10 mm
— upwards — downwards	10 mm
	O IIIIII
— at the side Connections/ Terminals	6 mm

product function		
• for auxillary and control circuit • at contactor for auxillary contacts • of magnet coil type of connectable conductor cross-sections • for main contacts • solid • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • for auxillary contacts • solid or stranded • finely stranded with core end processing • for auxillary contacts • solid or stranded • finely stranded with core end processing • for auxillary contacts • solid or stranded • finely stranded with core end processing • for auxillary contacts • solid or stranded • finely stranded with core end processing • for auxillary contacts • solid or stranded • finely stranded with core end processing • for auxillary contacts • for aux	type of electrical connection	
• at contactor for auxiliary contacts • of magnet coil type of connectable conductor cross-sections • for main contacts — solid — solid or stranded — finely stranded with core end processing • at AVMC cables for main contacts • solid • solid or stranded • solid • solid or stranded • solid • solid • solid • solid or stranded • stranded • solid • solid or stranded • stranded • solid • solid or stranded • stranded • stranded • stranded • stranded • stranded of the core end processing • solid or stranded • stranded • stranded • stranded of the core end processing • solid or stranded with core end processing • solid or stranded with core end processing • solid or stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • for auxiliary contacts • solid — solid — solid or stranded — finely stranded with core end processing • for auxiliary contacts • for auxiliary contacts • for auxiliary contacts • for finely stranded with core end processing • at AVMC cables for auxiliary contacts • for main contacts • for main contacts • for main contacts • for main contacts • for main contacts • for main contacts • for proportest interval or service life according to IEC 60598 product function • mirror contact according to IEC 60947-4-1 T1 value for proof test interval or service life according to IEC 60529 touch product function bus communication No Cortificates/approvals	for main current circuit	screw-type terminals
type of connectable conductor cross-sections • for main contacts - solid - solid or stranded - finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • for auxiliary contacts - solid or stranded • finely stranded with core end processing • for auxiliary contacts - solid or stranded • finely stranded with core end processing • for auxiliary contacts - solid or stranded • finely stranded with core end processing • for auxiliary contacts - solid - solid or stranded • finely stranded with core end processing • for auxiliary contacts - solid - solid or stranded • finely stranded with core end processing • for auxiliary contacts - solid - solid or stranded - finely stranded with core end processing • for auxiliary contacts - solid - solid or stranded - finely stranded with core end processing • for auxiliary contacts - solid - solid or stranded - finely stranded with core end processing • for auxiliary contacts - solid - solid or stranded - finely stranded with core end processing • for auxiliary contacts - solid - solid or stranded - finely stranded with core end processing • for auxiliary contacts - solid - solid or stranded - finely stranded with core end processing • for auxiliary contacts - solid - solid or stranded - finely stranded with core end processing • for auxiliary contacts - solid - solid or stranded - finely stranded with core end processing • for auxiliary contacts - solid or stranded - finely stranded with core end processing • for auxiliary contacts - solid or stranded - finely stranded with core end process	 for auxiliary and control circuit 	screw-type terminals
type of connectable conductor cross-sections of or main contacts	 at contactor for auxiliary contacts 	Screw-type terminals
• for main contacts — solid — solid or stranded — finely stranded with core end processing • at AWG cables for main contacts • solid • solid or stranded — finely stranded with core end processing • solid • solid or stranded • silvanded with core end processing connectable conductor cross-section for auxiliary contacts • solid or stranded • silvanded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • for auxiliary contacts — solid — solid or stranded — finely stranded with core end processing • at AWG cables for auxiliary contacts AWG number as coded connectable conductor cross section • for main contacts • for or main contact according to IEC 60947-4-1 T1 value for proof test interval or service life according to IEC 60529 T1 value for proof test interval or service life according to IEC 60529 touch protection on the front according to IEC 60529 touch protection on the front according to IEC 60529 finger-safe, for vertical contact from the front Communication Protocol product function bus communication No	of magnet coil	Screw-type terminals
- solid or stranded	type of connectable conductor cross-sections	
solid or stranded finely stranded with core end processing at AWG cables for main contacts solid solid or stranded solid solid or stranded solid or strande	 for main contacts 	
- finely stranded with core end processing • at AWG cables for main contacts connectable conductor cross-section for main contacts • solid • solid or stranded • stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing connectable conductor cross-section for auxiliary contacts • solid or stranded • finely stranded with core end processing connectable conductor cross-section for auxiliary contacts • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • for auxiliary contacts - solid - solid or stranded - finely stranded with core end processing • at AWG cables for auxiliary contacts AWG number as coded connectable conductor cross-section • for main contacts • for auxiliary contacts - for auxiliary contacts 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) 2x (20 1	— solid	2x (1 2.5 mm²), 2x (2.5 10 mm²)
e at AWG cables for main contacts connectable conductor cross-section for main contacts e solid e solid or stranded finely stranded with core end processing e solid or stranded finely stranded with core end processing e solid or stranded finely stranded with core end processing e solid or stranded finely stranded with core end processing e solid or stranded finely stranded with core end processing e solid or stranded finely stranded with core end processing e solid or stranded finely stranded with core end processing e for auxiliary contacts - solid - solid or stranded - solid or strander - solid or strander - solid or strander - solid or strander - solid	 solid or stranded 	2x (1 2.5 mm²), 2x (2.5 10 mm²)
connectable conductor cross-section for main contacts • solid • solid or stranded • stranded • stranded of finely stranded with core end processing connectable conductor cross-section for auxiliary contacts • solid or stranded • finely stranded with core end processing connectable conductor cross-section for auxiliary contacts • solid or stranded • finely stranded with core end processing 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 AWG number as coded connectable conductor cross-sections • for auxiliary contacts - for auxiliary contacts - finely stranded with core end processing • at AWG cables for auxiliary contacts AWG number as coded connectable conductor cross-section • for main contacts • for auxiliary contacts - f	 finely stranded with core end processing 	2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm²
e solid or stranded e solid or stranded 1 10 mm² e finely stranded with core end processing connectable conductor cross-section for auxiliary contacts e solid or stranded e finely stranded with core end processing connectable conductor cross-section for auxiliary contacts e solid or stranded e finely stranded with core end processing type of connectable conductor cross-sections e for auxiliary contacts - solid - solid or stranded - finely stranded with core end processing e at AWG cables for auxiliary contacts e for auxiliary contacts e for main contacts e for main contacts for main contacts - for auxiliary c	 at AWG cables for main contacts 	2x (16 12), 2x (14 8)
solid or stranded solid or stranded solid or stranded solid or stranded stranded with core end processing solid or stranded with core end processing solid or stranded with core end processing solid or stranded solid or strander solid or strande		
• stranded • finely stranded with core end processing connectable conductor cross-section for auxiliary contacts • solid or stranded • finely stranded with core end processing type of connectable conductor cross-sections • for auxiliary contacts — solid — solid or stranded — solid or stranded — finely stranded with core end processing • at AWG cables for auxiliary contacts • for main contacts • for auxiliary contacts — a the for auxiliary contacts — solid or stranded — finely stranded with core end processing • at AWG cables for auxiliary contacts • for auxiliary contacts • for auxiliary contacts • for auxiliary contacts 16 8 • for auxiliary contacts • for auxiliary contacts • for auxiliary contacts • for auxiliary contacts • for processing • for auxiliary contacts • for processing • for auxiliary contacts • for processing • for auxiliary contacts • for auxiliary contacts • for processing • for auxiliary contacts • for auxiliary contacts • for processing • for auxiliary contacts • for auxiliary contacts • for auxiliary contacts • for auxiliary contacts • for processing • finely stranded with core end processing • finely stranded with core end processing 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) 2x (20 16), 2x (18 14) **Safety related data** **Processing** **Processing** **The value for proof test interval or service life according to lEC 60547-4-1 **The value for proof test interval or service life according to lEC 60529 **The value for proof test interval or service life according to lEC 60529 **The value for proof test interval or service life according to lEC 60529 **The value for proof test interval or service life according to lEC 60529 **The value for proof test interval or service life according to lEC 60529 **The value for proof test interval or service life according to lEC 60529 **The value for proof test interval or service life according to lEC 60529 **The value for proof test interval or service life according to lEC 60529 **The value for proof	• solid	1 10 mm²
• finely stranded with core end processing connectable conductor cross-section for auxiliary contacts • solid or stranded • finely stranded with core end processing • for auxiliary contacts • solid or stranded • for auxiliary contacts • solid or stranded • solid or stranded • for auxiliary contacts • solid or stranded • finely stranded with core end processing • at AWG cables for auxiliary contacts AWG number as coded connectable conductor cross-section • for main contacts • for auxiliary contacts AWG number as coded connectable conductor cross-section • for main contacts • for auxiliary contacts 16 8 • for auxiliary contacts 20 14 Safety related data product function • mirror contact according to IEC 60947-4-1 T value for proof test interval or service life according to IEC 61508 protection class IP on the front according to IEC 60529 touch protection on the front according to IEC 60529 touch protection on the front according to IEC 60529 product function bus communication No Certificates/ approvals	 solid or stranded 	1 10 mm²
connectable conductor cross-section for auxiliary contacts • solid or stranded • finely stranded with core end processing • for auxiliary contacts - solid - solid or stranded - finely stranded with core end processing • for auxiliary contacts - solid - solid or stranded - finely stranded with core end processing • at AWG cables for auxiliary contacts AWG number as coded connectable conductor cross section • for main contacts • for auxiliary contacts - for auxiliary contacts - solid - solid or stranded - finely stranded with core end processing - at AWG cables for auxiliary contacts AWG number as coded connectable conductor cross section • for main contacts - for auxiliary contacts	stranded	1 10 mm²
contacts	 finely stranded with core end processing 	1 10 mm²
• finely stranded with core end processing type of connectable conductor cross-sections • for auxiliary contacts		
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 — for main contacts — for main contacts • for auxiliary contacts 16 8 • for auxiliary contacts 20 14 Safety related data product function • mirror contact according to IEC 60947-4-1 T1 value for proof test interval or service life according to IEC 60529 touch protection on the front according to IEC 60529 touch protection on the front according to IEC 60529 communication/ Protocol product function bus communication No Certificates/ approvals	 solid or stranded 	0.5 2.5 mm²
• for auxiliary contacts — solid — solid — solid or stranded — finely stranded with core end processing — at AWG cables for auxiliary contacts AWG number as coded connectable conductor cross section • for main contacts • for auxiliary contacts 16 8 • for auxiliary contacts 20 14 Safety related data product function • mirror contact according to IEC 60947-4-1 T1 value for proof test interval or service life according to IEC 60529 touch protection on the front according to IEC 60529 touch protection bus communication No Certificates/ approvals	 finely stranded with core end processing 	0.5 2.5 mm²
- solid 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) - solid or stranded 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) - finely stranded with core end processing 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) - at AWG cables for auxiliary contacts 2x (20 16), 2x (18 14) AWG number as coded connectable conductor cross section - for main contacts - for auxiliary conta	type of connectable conductor cross-sections	
- solid or stranded - finely stranded with core end processing • at AWG cables for auxiliary contacts AWG number as coded connectable conductor cross section • for main contacts • for auxiliary contacts • for auxiliary contacts • for auxiliary contacts • for auxiliary contacts • for ouxiliary contacts • mirror contact according to IEC 60947-4-1 T1 value for proof test interval or service life according to IEC 61508 protection class IP on the front according to IEC 60529 touch protection on the front according to IEC 60529 touch protection on the front according to IEC 60529 communication/ Protocol product function bus communication No Certificates/ approvals	 for auxiliary contacts 	
- finely stranded with core end processing • at AWG cables for auxiliary contacts AWG number as coded connectable conductor cross section • for main contacts • for auxiliary contacts • for auxiliary contacts • for auxiliary contacts • for auxiliary contacts • for auxiliary contacts • for auxiliary contacts • for auxiliary contacts • for auxiliary contacts • for auxiliary contacts 20 14 Safety related data product function • mirror contact according to IEC 60947-4-1 T1 value for proof test interval or service life according to IEC 61508 protection class IP on the front according to IEC 60529 touch protection on the front according to IEC 60529 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	— solid	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
at AWG cables for auxiliary contacts AWG number as coded connectable conductor cross section of or main contacts of or auxiliary contacts of or auxiliary contacts	 solid or stranded 	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
AWG number as coded connectable conductor cross section • for main contacts • for auxiliary contacts 20 14 Safety related data product function • mirror contact according to IEC 60947-4-1 T1 value for proof test interval or service life according to IEC 61508 protection class IP on the front according to IEC 60529 touch protection on the front according to IEC 60529 touch protection on the front according to IEC 60529 communication/ Protocol product function bus communication No Certificates/ approvals	 finely stranded with core end processing 	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
• for main contacts • for auxiliary contacts • for auxiliary contacts • for au	at AWG cables for auxiliary contacts	2x (20 16), 2x (18 14)
for auxiliary contacts 20 14 Safety related data product function mirror contact according to IEC 60947-4-1 T1 value for proof test interval or service life according to IEC 61508 protection class IP on the front according to IEC 60529 touch protection on the front according to IEC 60529 Communication/ Protocol product function bus communication No Certificates/ approvals		
product function	 for main contacts 	16 8
product function	 for auxiliary contacts 	20 14
mirror contact according to IEC 60947-4-1 T1 value for proof test interval or service life according to IEC 61508 protection class IP on the front according to IEC 60529 touch protection on the front according to IEC 60529 touch protection on the front according to IEC 60529 communication/ Protocol product function bus communication No Certificates/ approvals	Safety related data	
T1 value for proof test interval or service life according to IEC 61508 protection class IP on the front according to IEC 60529 touch protection on the front according to IEC 60529 Communication/ Protocol product function bus communication No Certificates/ approvals	product function	
protection class IP on the front according to IEC 60529 touch protection on the front according to IEC 60529 touch protection on the front according to IEC 60529 Communication/ Protocol product function bus communication No Certificates/ approvals	mirror contact according to IEC 60947-4-1	Yes
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		20 y
Communication/ Protocol product function bus communication No Certificates/ approvals		IP20
product function bus communication No Certificates/ approvals	touch protection on the front according to IEC 60529	finger-safe, for vertical contact from the front
Certificates/ approvals	Communication/ Protocol	
	product function bus communication	No
General Product Approval EMC	Certificates/ approvals	
	General Product Approval	EMC





Confirmation







Functional Safety/Safety of Machinery

Declaration of Conformity

Test Certificates

Marine / Shipping

Type Examination Certificate





Type Test Certificates/Test Report

Special Test Certificate



Marine / Shipping other













other



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=3RT2325-1AC20

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2325-1AC20

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT2325-1AC20

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2325-1AC20&lang=en

Characteristic: Tripping characteristics, I2t, Let-through current

https://support.industry.siemens.com/cs/ww/en/ps/3RT2325-1AC20/char

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

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2325-1AC20&objecttype=14&gridview=view1

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