

Circuit breaker size S2 for motor protection, CLASS 10 A-release
54...65 A N-release 845 A screw terminal Standard switching
capacity



Product brand name	SIRIUS
Product designation	Circuit breaker
Design of the product	For motor protection
Product type designation	3RV2

General technical data	
Size of the circuit-breaker	S2
Size of contactor can be combined company-specific	S2
Product extension	
• Auxiliary switch	Yes
Power loss [W] total typical	19 W
Surge voltage resistance rated value	6 kV
maximum permissible voltage for safe isolation	
• in networks with grounded star point between main and auxiliary circuit	400 V
• in networks with grounded star point between main and auxiliary circuit	400 V
Protection class IP	
• on the front	IP20
• of the terminal	IP00

Shock resistance	
<ul style="list-style-type: none"> • acc. to IEC 60068-2-27 	25g / 11 ms Sinus
Mechanical service life (switching cycles)	
<ul style="list-style-type: none"> • of the main contacts typical 	20 000
<ul style="list-style-type: none"> • of auxiliary contacts typical 	20 000
Electrical endurance (switching cycles)	
<ul style="list-style-type: none"> • typical 	20 000
Certificate of suitability according to ATEX directive 2014/34/EU	DMT 02 ATEX F 001
Protection against electrical shock	finger-safe when touched vertically from front acc. to IEC 60529
Reference code acc. to DIN EN 81346-2	Q

Ambient conditions

Installation altitude at height above sea level	
<ul style="list-style-type: none"> • maximum 	2 000 m
Temperature compensation	-20 ... +60 °C
Relative humidity during operation	10 ... 95 %

Main circuit

Number of poles for main current circuit	3
Adjustable pick-up value current of the current-dependent overload release	54 ... 65 A
Operating voltage	
<ul style="list-style-type: none"> • rated value 	690 V
<ul style="list-style-type: none"> • at AC-3 rated value maximum 	690 V
Operating frequency rated value	50 ... 60 Hz
Operating current rated value	65 A
Operating current	
<ul style="list-style-type: none"> • at AC-3 	
<ul style="list-style-type: none"> — at 400 V rated value 	65 A
Operating power	
<ul style="list-style-type: none"> • at AC-3 	
<ul style="list-style-type: none"> — at 230 V rated value 	18 500 W
<ul style="list-style-type: none"> — at 400 V rated value 	30 000 W
<ul style="list-style-type: none"> — at 500 V rated value 	45 000 W
<ul style="list-style-type: none"> — at 690 V rated value 	55 000 W
Operating frequency	
<ul style="list-style-type: none"> • at AC-3 maximum 	15 1/h

Protective and monitoring functions

Product function	
<ul style="list-style-type: none"> • Ground fault detection 	No
<ul style="list-style-type: none"> • Phase failure detection 	Yes
Trip class	CLASS 10

Design of the overload release	thermal
Operational short-circuit current breaking capacity (Ics) at AC	
• at 240 V rated value	100 kA
• at 400 V rated value	30 kA
• at 500 V rated value	5 kA
• at 690 V rated value	2 kA
Maximum short-circuit current breaking capacity (Icu)	
• at AC at 240 V rated value	65 kA
• at AC at 400 V rated value	65 kA
• at AC at 500 V rated value	8 kA
• at AC at 690 V rated value	4 kA
• at 480 AC Y/277 V acc. to UL 489 rated value	30 A
Response value current	
• of instantaneous short-circuit trip unit	845 A

UL/CSA ratings

Full-load current (FLA) for three-phase AC motor	
• at 480 V rated value	65 A
• at 600 V rated value	62 A
Yielded mechanical performance [hp]	
• for three-phase AC motor	
— at 200/208 V rated value	20 hp
— at 220/230 V rated value	25 hp
— at 460/480 V rated value	50 hp
— at 575/600 V rated value	60 hp

Short-circuit protection

Product function Short circuit protection	Yes
Design of the short-circuit trip	magnetic
Design of the fuse link for IT network for short-circuit protection of the main circuit	
• at 240 V	none required
• at 400 V	160
• at 500 V	125
• at 690 V	100

Installation/ mounting/ dimensions

Mounting position	any
Mounting type	screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715
Height	140 mm
Width	55 mm
Depth	149 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 	<ul style="list-style-type: none"> 0 mm 0 mm 50 mm 50 mm 0 mm 0 mm 0 mm 50 mm 10 mm 50 mm 0 mm 0 mm 50 mm 50 mm 10 mm

Connections/Terminals

Product function <ul style="list-style-type: none"> • removable terminal for auxiliary and control circuit 	No
Type of electrical connection <ul style="list-style-type: none"> • for main current circuit 	screw-type terminals
Arrangement of electrical connectors for main current circuit	Top and bottom
Type of connectable conductor cross-sections <ul style="list-style-type: none"> • for main contacts <ul style="list-style-type: none"> — single or multi-stranded — finely stranded with core end processing • at AWG conductors for main contacts 	<ul style="list-style-type: none"> 2x (1 ... 35 mm²), 1x (1 ... 50 mm²) 2x (1 ... 25 mm²), 1x (1 ... 35 mm²) 2x (18 ... 2), 1x (18 ... 1)
Tightening torque <ul style="list-style-type: none"> • for main contacts with screw-type terminals 	3 ... 4.5 N·m
Design of screwdriver shaft	Diameter 5 to 6 mm
Size of the screwdriver tip	Pozidriv 2
Design of the thread of the connection screw <ul style="list-style-type: none"> • for main contacts 	M6

Safety related data

B10 value <ul style="list-style-type: none"> • with high demand rate acc. to SN 31920 	5 000
---	-------

Proportion of dangerous failures	
<ul style="list-style-type: none"> with low demand rate acc. to SN 31920 with high demand rate acc. to SN 31920 	50 % 50 %
Failure rate [FIT]	
<ul style="list-style-type: none"> with low demand rate acc. to SN 31920 	50 FIT
T1 value for proof test interval or service life acc. to IEC 61508	10 y
Display version	
<ul style="list-style-type: none"> for switching status 	Handle

Certificates/approvals

General Product Approval	For use in hazardous locations
---------------------------------	---------------------------------------



[KC](#)



For use in hazardous locations	Declaration of Conformity	Test Certificates	Marine / Shipping
---------------------------------------	----------------------------------	--------------------------	--------------------------



[Miscellaneous](#)

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



Marine / Shipping



other	Railway
--------------	----------------

[Confirmation](#)



[Vibration and Shock](#)

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=3RV2031-4JA10>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2031-4JA10>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2031-4JA10>

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

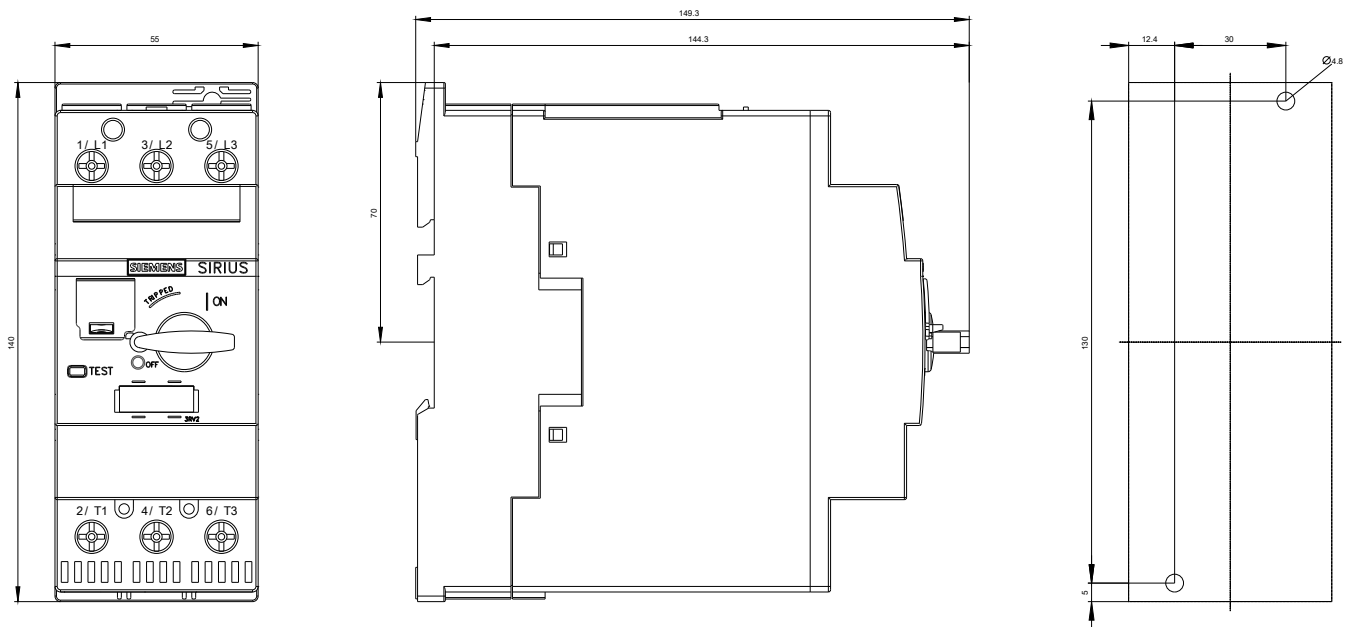
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2031-4JA10&lang=en

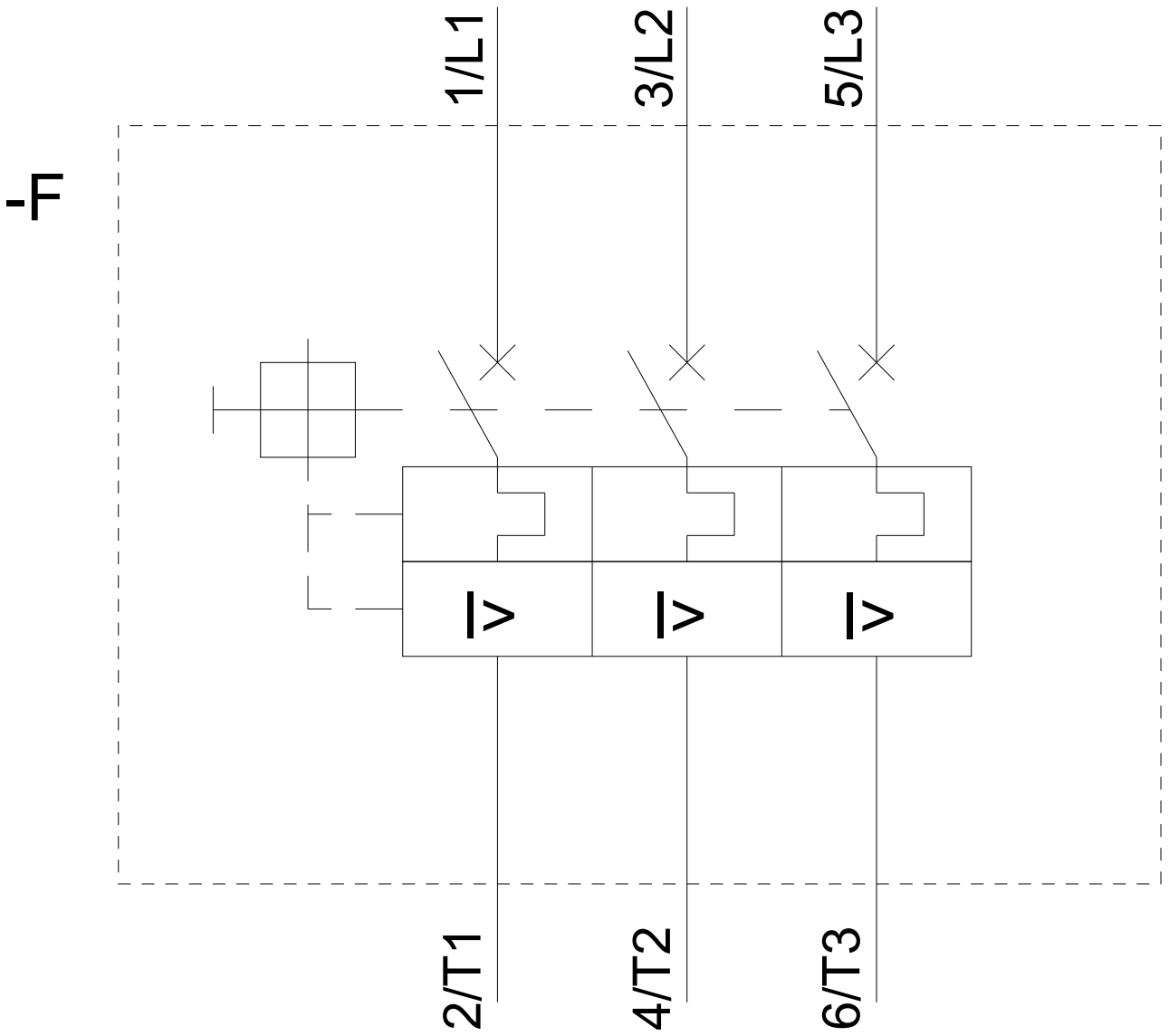
Characteristic: Tripping characteristics, I²t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2031-4JA10/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2031-4JA10&objecttype=14&gridview=view1>





last modified:

06/07/2019