

Circuit breaker size S3 for motor protection, Class 20 A-release
45...63 A N-release 819 A screw terminal Increased switching
capacity 100 kA



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	S3
size of contactor can be combined company-specific	S3
product extension	Yes
<ul style="list-style-type: none"> • auxiliary switch 	Yes
power loss [W] for rated value of the current	
<ul style="list-style-type: none"> • at AC in hot operating state 	34 W
<ul style="list-style-type: none"> • at AC in hot operating state per pole 	11.3 W
insulation voltage with degree of pollution 3 at AC rated value	1 000 V
surge voltage resistance rated value	8 kV
maximum permissible voltage for safe isolation	
<ul style="list-style-type: none"> • in networks with grounded star point between main and auxiliary circuit 	400 V

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protection class IP	
<ul style="list-style-type: none"> • on the front • of the terminal 	IP20 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 • of auxiliary contacts typical 	25 000 25 000
electrical endurance (switching cycles)	
<ul style="list-style-type: none"> • typical 	25 000
reference code acc. to DIN EN 81346-2	Q

Ambient conditions

<ul style="list-style-type: none"> • installation altitude at height above sea level maximum 	2 000 m
ambient temperature	
<ul style="list-style-type: none"> • during operation • during storage • during transport 	-20 ... +60 °C -50 ... +80 °C -50 ... +80 °C
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	45 ... 63 A
operating voltage	
<ul style="list-style-type: none"> • rated value • at AC-3 rated value maximum 	690 V 690 V
operating frequency rated value	50 ... 60 Hz
operating current rated value	63 A
operating current	
<ul style="list-style-type: none"> • at AC-3 <ul style="list-style-type: none"> — at 400 V rated value 	63 A
operating power	
<ul style="list-style-type: none"> • at AC-3 <ul style="list-style-type: none"> — at 230 V rated value — at 400 V rated value — at 500 V rated value — at 690 V rated value 	18 500 W 30 000 W 37 000 W 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 • phase failure detection 	No Yes
trip class	Class 20
design of the overload release	thermal
operational short-circuit current breaking capacity (Ics) at AC	
<ul style="list-style-type: none"> • at 240 V rated value • at 400 V rated value • at 500 V rated value • at 690 V rated value 	100 000 A 50 000 A 7 500 A 4 000 A
maximum short-circuit current breaking capacity (Icu)	
<ul style="list-style-type: none"> • at AC at 240 V rated value • at AC at 400 V rated value • at AC at 500 V rated value 	100 kA 100 kA 15 kA
response value current	
<ul style="list-style-type: none"> • of instantaneous short-circuit trip unit 	819 A
UL/CSA ratings	
full-load current (FLA) for three-phase AC motor	
<ul style="list-style-type: none"> • at 480 V rated value • at 600 V rated value 	63 A 63 A
yielded mechanical performance [hp]	
<ul style="list-style-type: none"> • for single-phase AC motor <ul style="list-style-type: none"> — at 110/120 V rated value — at 230 V rated value • for three-phase AC motor <ul style="list-style-type: none"> — at 200/208 V rated value — at 220/230 V rated value — at 460/480 V rated value — at 575/600 V rated value 	5 hp 15 hp 20 hp 25 hp 50 hp 60 hp
Short-circuit protection	
product function short circuit protection	Yes
design of the short-circuit trip	magnetic
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	165 mm
width	70 mm
depth	176 mm

required spacing

• for grounded parts at 400 V	
— downwards	70 mm
— upwards	70 mm
— backwards	0 mm
— at the side	10 mm
— forwards	0 mm
• for live parts at 400 V	
— downwards	70 mm
— upwards	70 mm
— backwards	0 mm
— at the side	10 mm
— forwards	0 mm
• for grounded parts at 500 V	
— downwards	110 mm
— upwards	110 mm
— backwards	0 mm
— at the side	10 mm
— forwards	0 mm
• for live parts at 500 V	
— downwards	110 mm
— upwards	110 mm
— backwards	0 mm
— at the side	10 mm
— forwards	0 mm
• for grounded parts at 690 V	
— downwards	150 mm
— upwards	150 mm
— backwards	0 mm
— at the side	30 mm
— forwards	0 mm
• for live parts at 690 V	
— downwards	150 mm
— upwards	150 mm
— backwards	0 mm
— at the side	30 mm
— forwards	0 mm

Connections/ Terminals**product function**

• removable terminal for auxiliary and control circuit	No
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type of electrical connection • for main current circuit	screw-type terminals
arrangement of electrical connectors for main current circuit	Top and bottom
type of connectable conductor cross-sections • for main contacts — solid — single or multi-stranded — finely stranded with core end processing — finely stranded without core end processing	2x (2.5 ... 16 mm ²) 2x (2,5 ... 50 mm ²), 1x (10 ... 70 mm ²) 2x (2.5 ... 35 mm ²), 1x (2.5 ... 50 mm ²) 2x (10 ... 35 mm ²), 1x (10 ... 50 mm ²)
tightening torque • for main contacts for ring cable lug	4.5 ... 6 N·m
outer diameter of the usable ring cable lug maximum	19 mm
tightening torque • for main contacts with screw-type terminals	4.5 ... 6 N·m

Safety related data

B10 value • with high demand rate acc. to SN 31920	5 000
proportion of dangerous failures • with low demand rate acc. to SN 31920 • with high demand rate acc. to SN 31920	50 % 50 %
T1 value for proof test interval or service life acc. to IEC 61508	10 y
display version • for switching status	Handle

Certificates/ approvals

General Product Approval	Declaration of Conformity
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[KC](#)



Declaration of Conformity	Test Certificates	Marine / Shipping
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[Miscellaneous](#)

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



Marine / Shipping	other
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[Confirmation](#)



Railway

[Vibration and Shock](#)

[Confirmation](#)

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=3RV2042-4JB10>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2042-4JB10>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2042-4JB10>

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

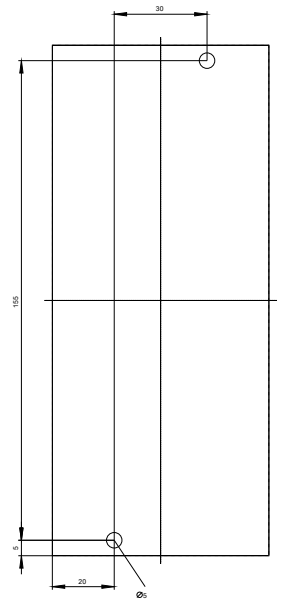
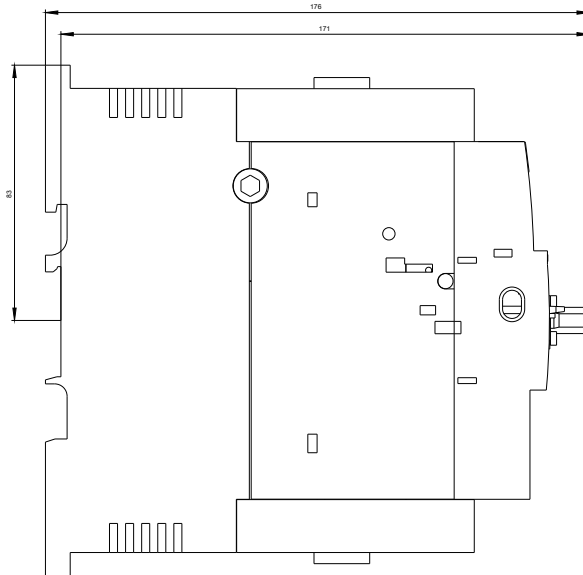
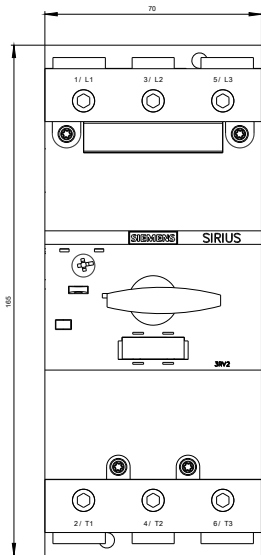
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2042-4JB10&lang=en

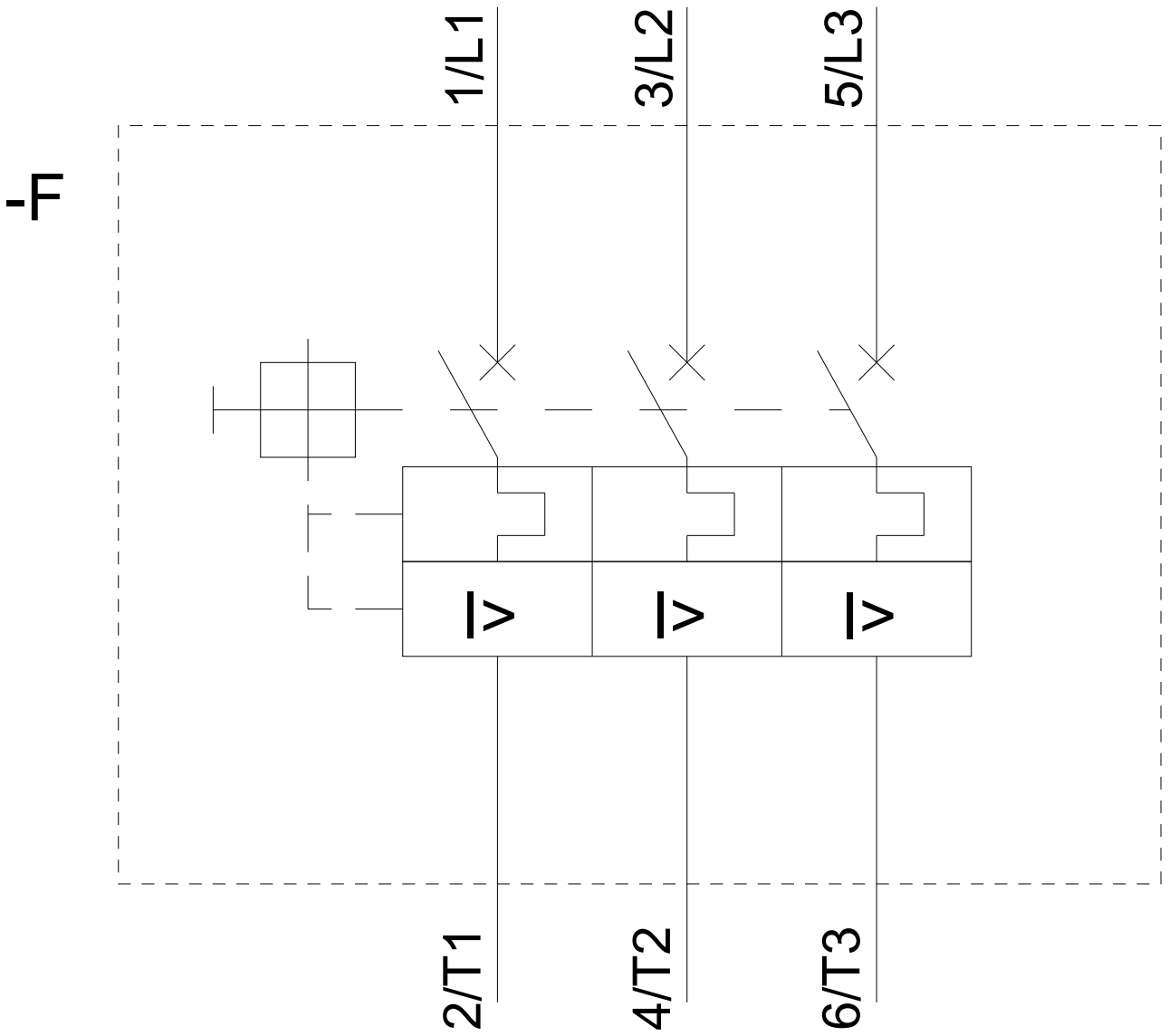
Characteristic: Tripping characteristics, I²t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2042-4JB10/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2042-4JB10&objecttype=14&gridview=view1>





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