

Circuit breaker size S3 for system protection with approval circuit breaker UL 489, CSA C22.2 No.5-02 A-release 70 A N-release 910 A screw terminal



product brand name	SIRIUS
Product designation	Circuit breaker
Design of the product	For system protection according to UL 489/CSA C22.2 No. 5
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 	23.5 W
<ul style="list-style-type: none"> at AC in hot operating state per pole 	7.8 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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<ul style="list-style-type: none"> • protection class IP on the front 	IP20
<ul style="list-style-type: none"> • Protection class IP 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 	25 000
<ul style="list-style-type: none"> • of auxiliary contacts typical 	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

Installation altitude at height above sea level	
<ul style="list-style-type: none"> • maximum 	2 000 m
Ambient temperature	
<ul style="list-style-type: none"> • during operation 	-20 ... +60 °C
<ul style="list-style-type: none"> • during storage 	-50 ... +80 °C
<ul style="list-style-type: none"> • during transport 	-50 ... +80 °C
Temperature compensation	-20 ... +60 °C
Relative humidity during operation	10 ... 95 %

Main circuit

Number of poles for main current circuit	3
Operating voltage	
<ul style="list-style-type: none"> • rated value 	690 V
Operating frequency rated value	50 ... 60 Hz
Operating current rated value	70 A
Operating current	
<ul style="list-style-type: none"> • at AC-3 <ul style="list-style-type: none"> — at 400 V rated value 	70 A
Operating power	
<ul style="list-style-type: none"> • at AC-3 <ul style="list-style-type: none"> — at 400 V rated value 	37 000 W

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 	No
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 	100 000 A

<ul style="list-style-type: none"> • at 400 V rated value 	50 000 A
Maximum short-circuit current breaking capacity (Icu)	
<ul style="list-style-type: none"> • at AC at 240 V rated value 	100 kA
<ul style="list-style-type: none"> • at AC at 400 V rated value 	100 kA
<ul style="list-style-type: none"> • at 480 AC Y/277 V acc. to UL 489 rated value 	65 000 A
Response value current	
<ul style="list-style-type: none"> • of instantaneous short-circuit trip unit 	910 A

Short-circuit protection

Product function Short circuit protection	Yes
Design of the short-circuit trip	magnetic

Installation/ mounting/ dimensions

<ul style="list-style-type: none"> • mounting position 	any
Mounting type	screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715
Height	170 mm
Width	70 mm
Depth	176 mm
Required spacing	
<ul style="list-style-type: none"> • for grounded parts at 400 V <ul style="list-style-type: none"> — downwards — upwards — Backwards — at the side — forwards 	70 mm 70 mm 0 mm 10 mm 0 mm
<ul style="list-style-type: none"> • for live parts at 400 V <ul style="list-style-type: none"> — downwards — upwards — Backwards — at the side — forwards 	70 mm 70 mm 0 mm 10 mm 0 mm
<ul style="list-style-type: none"> • for grounded parts at 500 V <ul style="list-style-type: none"> — downwards — upwards — Backwards — at the side — forwards 	110 mm 110 mm 0 mm 10 mm 0 mm
<ul style="list-style-type: none"> • for live parts at 500 V <ul style="list-style-type: none"> — downwards — upwards — Backwards — at the side 	110 mm 110 mm 0 mm 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

Connections/ Terminals

Product function	
• removable terminal for auxiliary and control circuit	No
• 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	2x (2.5 ... 16 mm ²)
— single or multi-stranded	2x (2,5 ... 50 mm ²), 1x (10 ... 70 mm ²)
— finely stranded with core end processing	2x (2.5 ... 35 mm ²), 1x (2.5 ... 50 mm ²)
— finely stranded without core end processing	2x (10 ... 35 mm ²), 1x (10 ... 50 mm ²)
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	50 %
• with high demand rate acc. to SN 31920	50 %
Failure rate [FIT]	
• 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	
• for switching status	Handle

Certificates/ approvals

General Product Approval

Declaration of
Conformity



CCC



CSA



UL

[KC](#)



EG-Konf.

Declaration of
Conformity

[Miscellaneous](#)

Test Certificates

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)

Marine / Ship-
ping



other

[Confirmation](#)



VDE

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=3RV2742-5QD10>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2742-5QD10>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2742-5QD10>

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

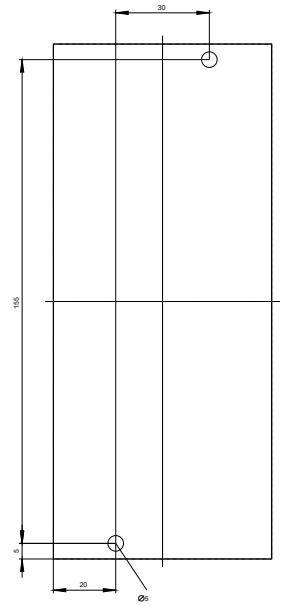
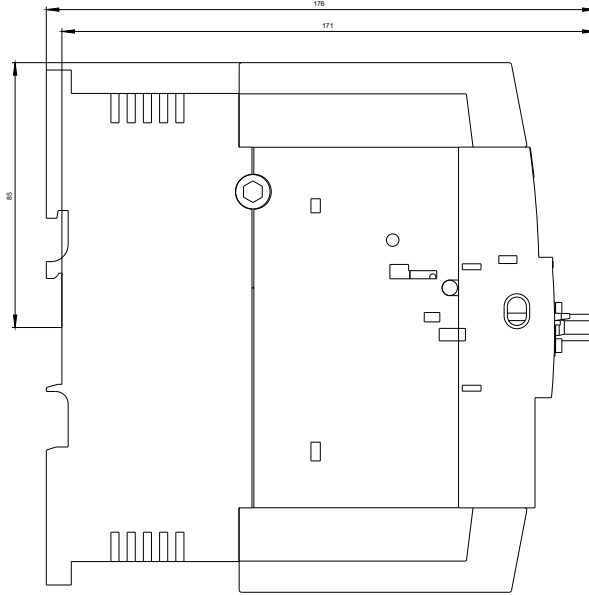
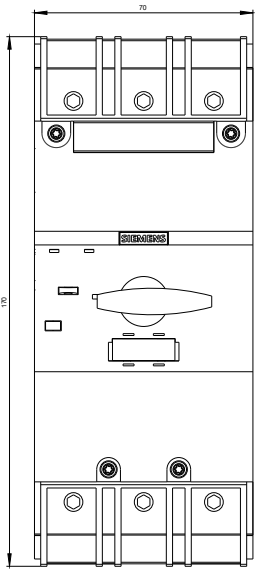
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2742-5QD10&lang=en

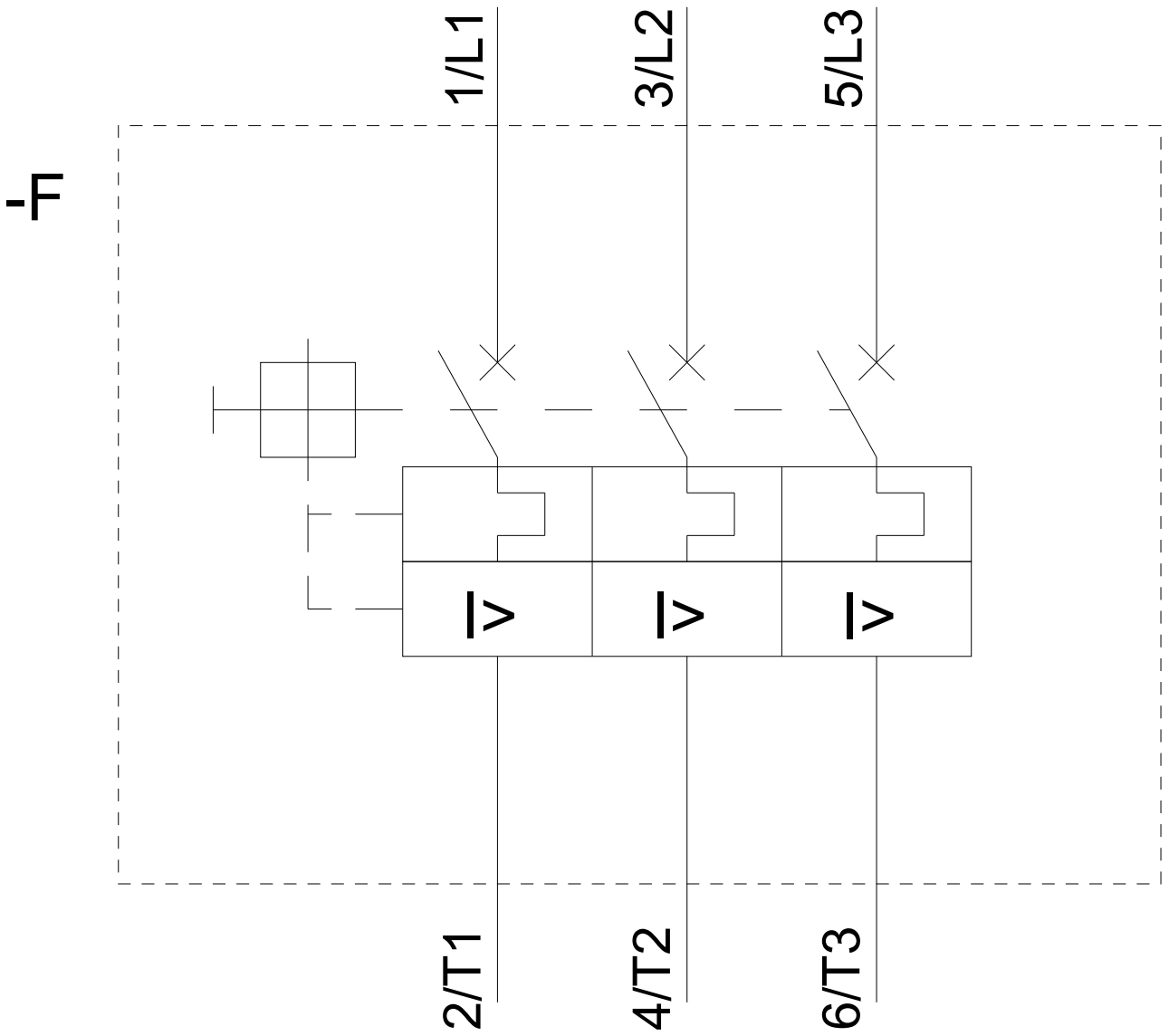
Characteristic: Tripping characteristics, I²t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2742-5QD10/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2742-5QD10&objecttype=14&gridview=view1>





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