SIEMENS

Data sheet 3RV2821-4BD10





circuit breaker frame size S0 for transformer protection with approval circuit breaker UL 489, CSA C22.2 no. 5-02 thermal overload release 20 A short-circuit release 325 A screw terminal standard switching capacity



product brand name	SIRIUS	
product designation	Circuit breaker	
design of the product	For transformer protection according to UL 489/CSA C22.2 No.5	
product type designation	3RV2	
General technical data		
size of the circuit-breaker	S0	
product extension auxiliary switch	Yes	
power loss [W] for rated value of the current		
 at AC in hot operating state 	10.5 W	
at AC in hot operating state per pole	3.5 W	
insulation voltage with degree of pollution 3 at AC rated value	690 V	
surge voltage resistance rated value	6 kV	
shock resistance according to IEC 60068-2-27	25 g / 11 ms (rectangular impulse and sine pulse)	
mechanical service life (operating cycles)		
 of the main contacts typical 	100 000	
of auxiliary contacts typical	100 000	
electrical endurance (operating cycles) typical	100 000	
reference code according to IEC 81346-2	Q	
Substance Prohibitance (Date)	10/01/2009	
Weight	0.516 kg	
Ambient conditions		
installation altitude at height above sea level maximum	2 000 m	
ambient temperature		
 during operation 	-20 +60 °C	
during storage	-50 +80 °C	
during transport	-50 +80 °C	
relative humidity during operation	10 95 %	
Environmental footprint		
Environmental Product Declaration(EPD)	Yes	
global warming potential [CO2 eq] total	75.078 kg	
global warming potential [CO2 eq] during manufacturing	2.68 kg	
global warming potential [CO2 eq] during sales	0.143 kg	
global warming potential [CO2 eq] during operation	72.7 kg	
global warming potential [CO2 eq] after end of life	-0.445 kg	
Siemens Eco Profile (SEP)	Siemens EcoTech	
Main circuit		
number of poles for main current circuit	3	

Aura of vallage for main annual about	40
type of voltage for main current circuit	AC
operating voltage	
• rated value	20 690 V
at AC-3 rated value maximum	690 V
at AC-3e rated value maximum	690 V
operating frequency rated value	50 60 Hz
operational current rated value	20 A
operational current	
 at AC-3 at 400 V rated value 	20 A
at AC-3e at 400 V rated value	20 A
operating power	
• at AC-3	
— at 230 V rated value	5.5 kW
— at 400 V rated value	7.5 kW
— at 500 V rated value	11 kW
— at 690 V rated value	15 kW
• at AC-3e	
— at 230 V rated value	5.5 kW
— at 400 V rated value	7.5 kW
— at 500 V rated value	11 kW
— at 690 V rated value	15 kW
operating frequency	
• at AC-3 maximum	15 1/h
at AC-3e maximum	15 1/h
Auxiliary circuit	
type of voltage for auxiliary and control circuit	AC/DC
number of NC contacts for auxiliary contacts	0
number of NO contacts for auxiliary contacts	0
number of CO contacts for auxiliary contacts	0
Protective and monitoring functions	
product function	
ground fault detection	No
phase failure detection	No
design of the overload release	thermal
maximum short-circuit current breaking capacity (Icu)	
• at AC at 240 V rated value	100 kA
 at AC at 400 V rated value 	55 kA
 at AC at 500 V rated value 	10 kA
 at AC at 690 V rated value 	4 kA
at 480 AC Y/277 V according to UL 489 rated value	50 kA
operating short-circuit current breaking capacity (Ics) at AC	
• at 240 V rated value	100 kA
• at 400 V rated value	25 kA
at 500 V rated value	5 kA
at 690 V rated value	2 kA
response value current of instantaneous short-circuit trip unit	325 A
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 400 V	gG 63 A
• at 500 V	gG 50 A
• at 690 V	gG 50 A
Installation/ mounting/ dimensions	
mounting position	any
mounting position	
fastening method	screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 50022
	screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 50022 144 mm
fastening method	144 mm 45 mm
fastening method height	144 mm

downwards	 for grounded parts at 400 V 	
at the side • for ince parts at 400 V downwards upwards at the side • for grounded parts at 500 V downwards upwards at the side • or ince parts at 500 V downwards upwards • or ince parts at 500 V downwards upwards • or or wounder parts at 500 V downwards • or or wounder parts at 500 V downwards • or or wounder parts at 500 V downwards • or or wounder parts at 500 V downwards • or or wounder parts at 500 V downwards upwards upwards upwards upwards upwards or mm backwards or mm forwards forwards or mm forwards or mm downwards or mm downwards upwards or mm forwards or mm forwards or mm forwards or mm forwards upwards upwards upwards or mm forwards or mm forwards or mm forwards or mm forwards upwards upwards upwards upwards upwards or mm forwards or mm forwards or mm forwards upwards upw	— downwards	30 mm
For Inve parts at 400 V	— upwards	30 mm
downwards	— at the side	30 mm
upwards	• for live parts at 400 V	
all the side • for gounded parts at 500 V downwards upwards at the side • for live parts at 500 V downwards upwards upwards downwards upwards at the side • for repunded parts at 690 V downwards downwards downwards downwards downwards downwards downwards downwards upwards downwards upwards downwards upwards downwards upwards at the side 30 mm forwards at the side 30 mm forwards for live parts at 690 V downwards for live parts at 690 V downwards for man forwards for man the side forwards the side -	— downwards	30 mm
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- upwards		70 mm
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failure rate [FIT] with low demand rate according to SN 31920 ISO 13849 device type according to ISO 13849-1 3 overdimensioning according to ISO 13849-2 necessary Yes		
device type according to ISO 13849-1 3 overdimensioning according to ISO 13849-2 necessary Yes	failure rate [FIT] with low demand rate according to SN	
device type according to ISO 13849-1 3 overdimensioning according to ISO 13849-2 necessary Yes		
overdimensioning according to ISO 13849-2 necessary Yes		3

safety device type according to IEC 61508-2	Type A
T1 value	
 for proof test interval or service life according to IEC 61508 	10 a
Electrical Safety	
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
Display	
display version for switching status	Handle
Approvals Certificates	

General Product Approval









<u>KC</u>



General Product Ap-

Test Certificates

Maritime application

other



Special Test Certific-<u>ate</u>

Type Test Certificates/Test Report





Miscellaneous

other

Railway

Environment



Confirmation



Special Test Certific-<u>ate</u>



Siemens **EcoTech**



Environment

Environmental Confirmations

Information on the packaging

https://support.industry.siemens.com/cs/ww/en/view/109813875

Information for data generation and storage

https://support.industry.siemens.com/cs/ww/en/view/109995012

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=3RV2821-4BD10

Cax online generator

 $\underline{\text{http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en\&mlfb=3RV2821-4BD10}$

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

https://support.industry.siemens.com/cs/ww/en/ps/3RV2821-4BD10

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

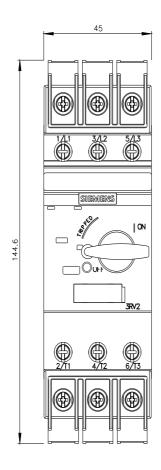
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2821-4BD10&lang=en

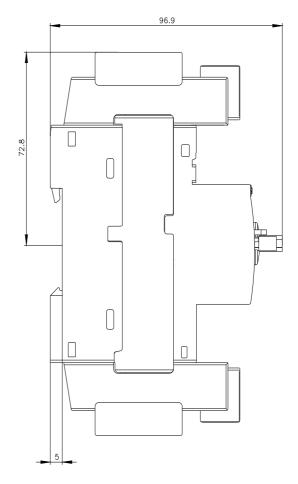
Characteristic: Tripping characteristics, I2t, Let-through current

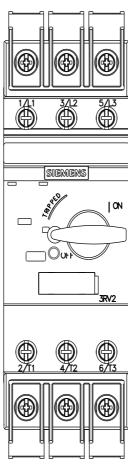
https://support.industry.siemens.com/cs/ww/en/ps/3RV2821-4BD10/char

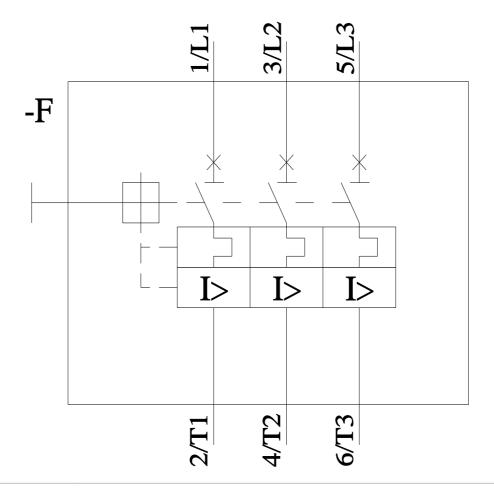
Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2821-4BD10&objecttype=14&gridview=view1









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