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Data sheet 3RV2041-4HA10

Circuit breaker size S3 for motor protection, CLASS 10 A-release 36...50 A N-release 650 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	S3
size of contactor can be combined company-specific	S3
product extension auxiliary switch	Yes
power loss [W] for rated value of the current	
● at AC in hot operating state	27 W
● at AC in hot operating state per pole	9 W
insulation voltage with degree of pollution 3 at AC rated value	1 000 V
surge voltage resistance rated value	8 kV
shock resistance according to IEC 60068-2-27	25g / 11 ms Sinus
mechanical service life (operating cycles)	
● of the main contacts typical	25 000
● of auxiliary contacts typical	25 000
electrical endurance (operating cycles) typical	25 000
type of protection according to ATEX directive 2014/34/EU	Ex II (2) GD
certificate of suitability according to ATEX directive 2014/34/EU	DMT 02 ATEX F 001
reference code according to IEC 81346-2	Q
Substance Prohibitance (Date)	03/01/2017
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 %
Main circuit	
number of poles for main current circuit	3
adjustable current response value current of the current-dependent overload release	36 ... 50 A
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	50 A

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operational current	
● at AC-3 at 400 V rated value	50 A
● at AC-3e at 400 V rated value	50 A
operating power	
● at AC-3	
— at 230 V rated value	11 kW
— at 400 V rated value	22 kW
— at 500 V rated value	30 kW
— at 690 V rated value	45 kW
● at AC-3e	
— at 230 V rated value	11 kW
— at 400 V rated value	22 kW
— at 500 V rated value	30 kW
— at 690 V rated value	45 kW
operating frequency	
● at AC-3 maximum	15 1/h
● at AC-3e maximum	15 1/h
Protective and monitoring functions	
product function	
● ground fault detection	No
● phase failure detection	Yes
trip class	CLASS 10
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	65 kA
● at AC at 500 V rated value	12 kA
● at AC at 690 V rated value	6 kA
operating 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	6 kA
● at 690 V rated value	3 kA
response value current of instantaneous short-circuit trip unit	650 A
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
● at 480 V rated value	50 A
● at 600 V rated value	50 A
yielded mechanical performance [hp]	
● for single-phase AC motor	
— at 110/120 V rated value	5 hp
— at 230 V rated value	10 hp
● for 3-phase AC motor	
— at 200/208 V rated value	15 hp
— at 220/230 V rated value	20 hp
— at 460/480 V rated value	40 hp
— at 575/600 V rated value	50 hp
Short-circuit protection	
product function short circuit protection	Yes
design of the short-circuit trip	magnetic
Installation/ mounting/ dimensions	
mounting position	any
fastening method	screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715
height	165 mm
width	70 mm
depth	176 mm
required spacing	
● with side-by-side mounting at the side	0 mm
● for grounded parts at 400 V	
— downwards	70 mm

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

Connections/ Terminals

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 mm²)
— solid or stranded	2x (2,5 ... 50 mm²), 1x (10 ... 70 mm²)
— finely stranded with core end processing	2x (2.5 ... 35 mm²), 1x (2.5 ... 50 mm²)
— finely stranded without core end processing	2x (10 ... 35 mm²), 1x (10 ... 50 mm²)
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 according to SN 31920	5 000
proportion of dangerous failures	
● with low demand rate according to SN 31920	50 %
● with high demand rate according to SN 31920	50 %
T1 value for proof test interval or service life according to IEC 61508	10 a
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 version for switching status	Handle

Certificates/ approvals

General Product Approval				For use in hazardous locations
CCC	Confirmation	UL	KC	EAC ATEX

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

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IECEx

EG-Konf.

UK CA

Type Test Certificates/Test Report

Special Test Certificate

ABS

Marine / Shipping

BUREAU VERITAS

DNV

LRS

PRS

RINA

RMRS

other

Confirmation

VDE

Railway

Vibration and Shock

Further information

Information on the packaging
https://support.industry.siemens.com/cs/ww/en/view/109813875
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=3RV2041-4HA10
Cax online generator
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2041-4HA10
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
https://support.industry.siemens.com/cs/ww/en/ps/3RV2041-4HA10
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2041-4HA10&lang=en
Characteristic: Tripping characteristics, I²t, Let-through current
https://support.industry.siemens.com/cs/ww/en/ps/3RV2041-4HA10/char
Further characteristics (e.g. electrical endurance, switching frequency)
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2041-4HA10&objecttype=14&gridview=view1

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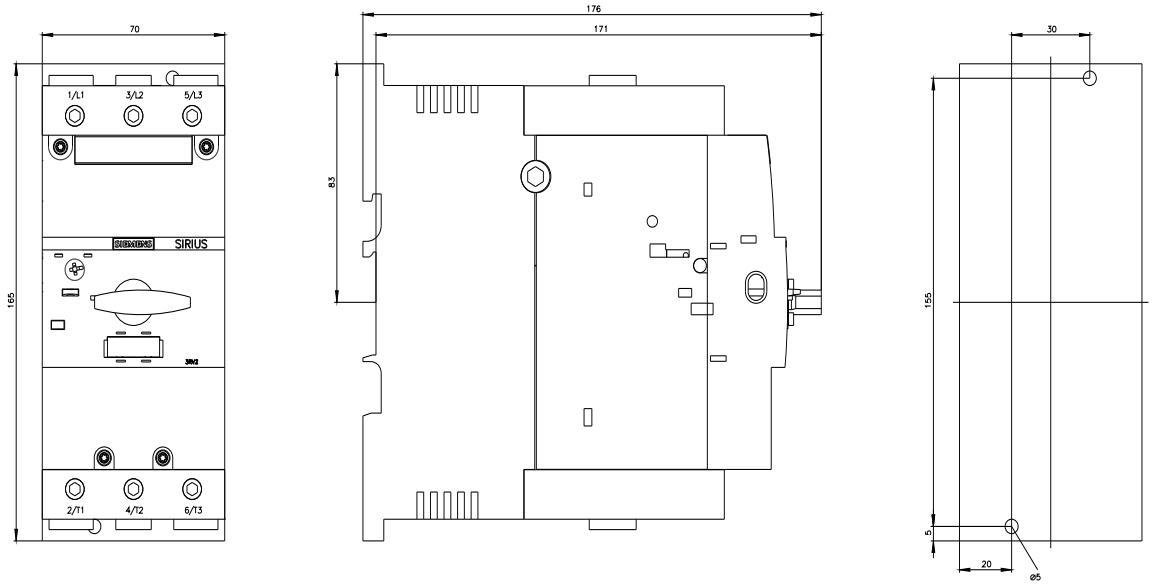

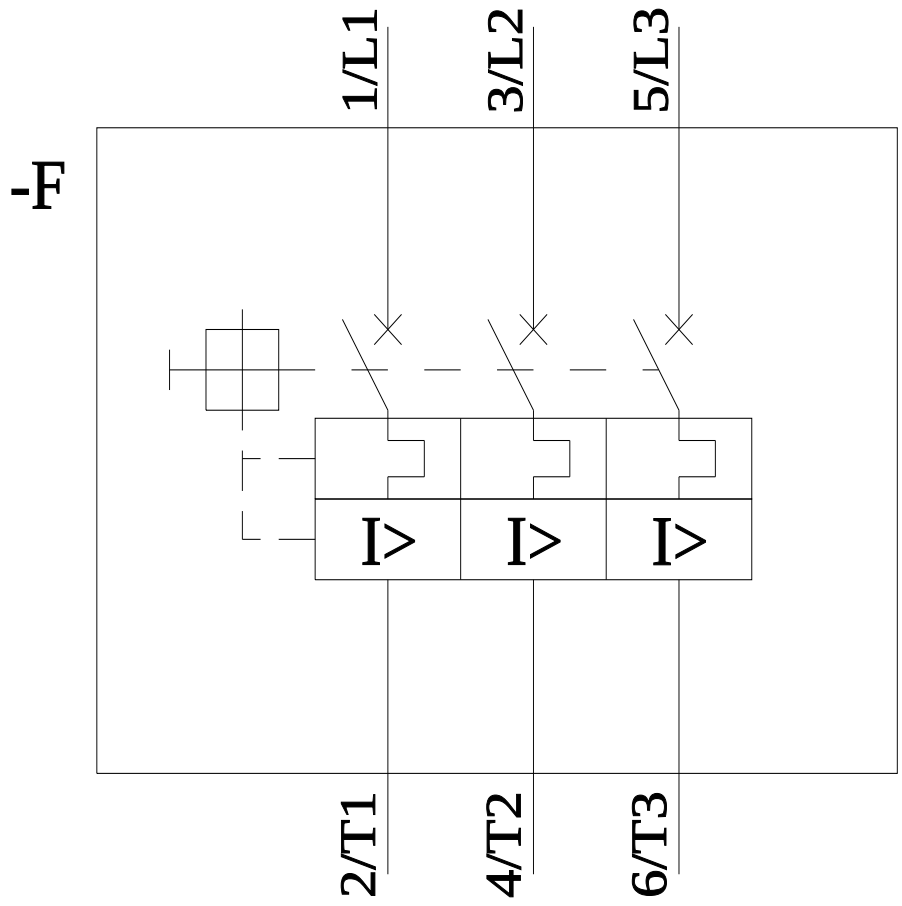

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