SIEMENS

Data sheet 3RV2041-4HA15

Circuit breaker size S3 for motor protection, CLASS 10 A-release 36...50 A N-release 650 A screw terminal Standard switching capacity with transverse auxiliary switches 1 NO+1 NC

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
maximum permissible voltage for safe isolation in networks with grounded star point	
● between main and auxiliary circuit	400 V
● between main and auxiliary circuit	400 V
shock resistance acc. to IEC 60068-2-27	25g / 11 ms Sinus
mechanical service life (switching cycles)	
● of the main contacts typical	25 000
● of auxiliary contacts typical	25 000
electrical endurance (switching 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 acc. to IEC 81346-2	Q
Ambient conditions	
installation altitude at height above sea level maximum	2 000 m
● ambient temperature during operation	-20 ... +60 °C
● ambient temperature during storage	-50 ... +80 °C
● ambient temperature 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
adjustable current response value current of the	36 ... 50 A

current-dependent overload release	
● operating voltage rated value	690 V
● operating voltage at AC-3 rated value maximum	690 V
operating frequency rated value	50 ... 60 Hz
operational current rated value	50 A
operational current at AC-3 at 400 V rated value	50 A
operating power at AC-3	
● at 230 V rated value	11 000 W
● at 400 V rated value	22 000 W
● at 500 V rated value	30 000 W
● at 690 V rated value	45 000 W
operating frequency at AC-3 maximum	15 1/h
Auxiliary circuit	
design of the auxiliary switch	transverse
number of NC contacts for auxiliary contacts	1
● note	1
number of NO contacts for auxiliary contacts	1
● note	1
operational current of auxiliary contacts at AC-15	
● at 24 V	2 A
● at 230 V	0.5 A
operational current of auxiliary contacts at DC-13	
● at 24 V	1 A
● at 60 V	0.15 A
Protective and monitoring functions	
product function	
● ground fault detection	No
● phase failure detection	Yes
trip class	CLASS 10
design of the overload release	thermal
breaking capacity operating short-circuit current (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
breaking capacity maximum short-circuit current (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
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
contact rating of auxiliary contacts according to UL	C300 / R300
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 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
— 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
— 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
type of electrical connection	
● for main current circuit	screw-type terminals
● for auxiliary and control 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)
type of connectable conductor cross-sections	
● for auxiliary contacts	
— finely stranded with core end processing	2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²)
● at AWG cables for auxiliary contacts	2x (20 ... 16), 2x (18 ... 14)
● **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
• tightening torque for auxiliary contacts with screw-type terminals	0.8 ... 1.2 N·m
design of the thread of the connection screw	
• of the auxiliary and control contacts	M3

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 %
T1 value for proof test interval or service life acc. to IEC 61508	10 y
protection class IP on the front acc. to IEC 60529	IP20
touch protection on the front acc. 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**
CSA	CCC	UL	KC	EAC	ATEX

For use in hazardous locations	**Declaration of Conformity**		**Test Certificates**		**Marine / Shipping**
IECEx	Miscellaneous	EG-Konf.	Special Test Certificate	Type Test Certificates/Test Report	ABS

Marine / Shipping					
BUREAU VERITAS	LRS	PRS	RINA	RMRS	DNV·GL

other			**Railway**
Confirmation	Confirmation	VDE	Vibration and Shock

Further information

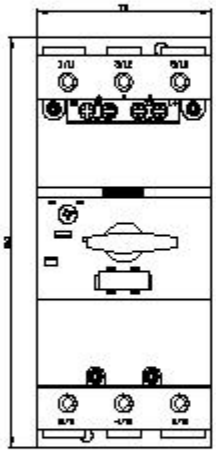
Information- and Downloadcenter (Catalogs, Brochures,…)
https://www.siemens.com/ic10
Industry Mall (Online ordering system)
https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RV2041-4HA15
Cax online generator
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2041-4HA15
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

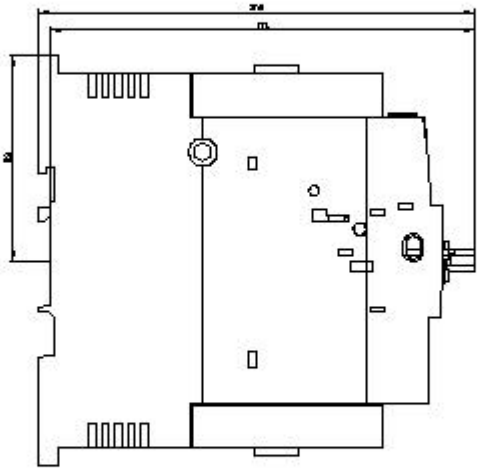
https://support.industry.siemens.com/cs/ww/en/ps/3RV2041-4HA15

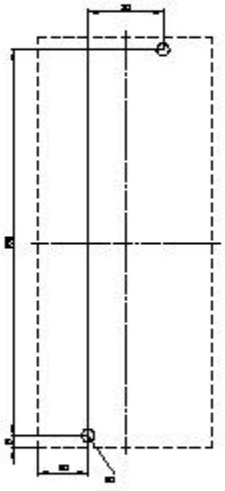
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2041-4HA15&lang=en

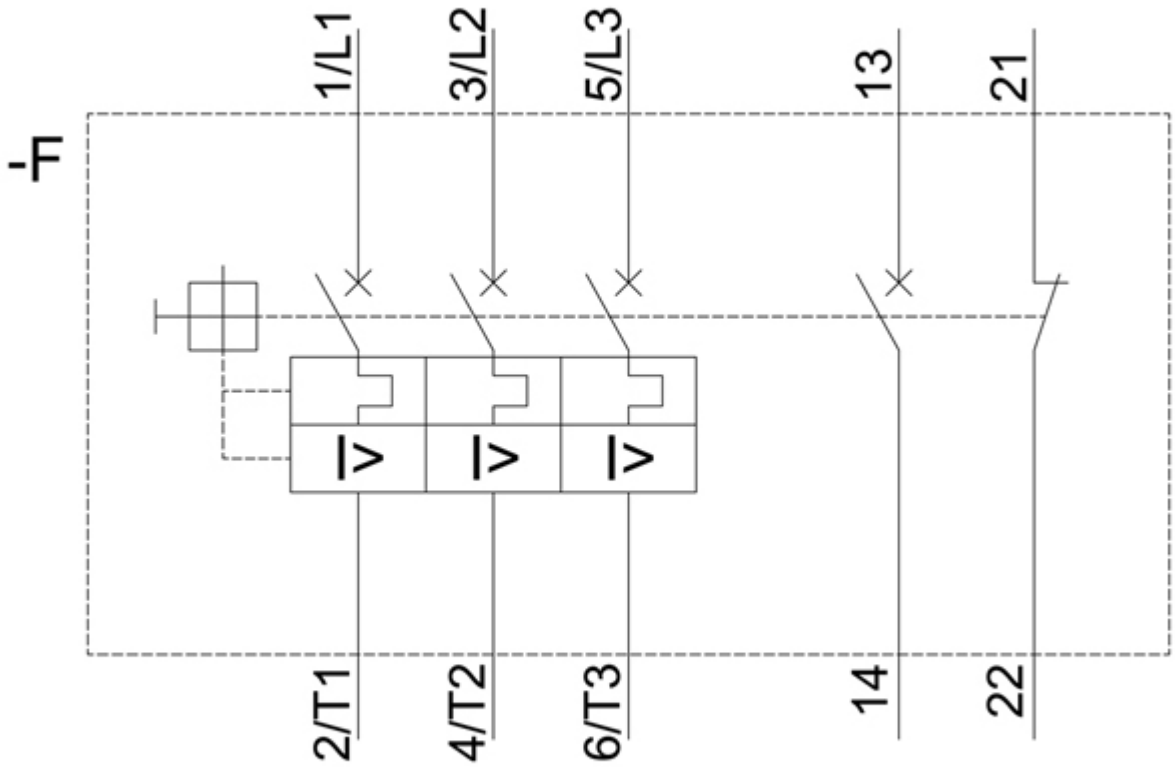
Characteristic: Tripping characteristics, I²t, Let-through current
https://support.industry.siemens.com/cs/ww/en/ps/3RV2041-4HA15/char

Further characteristics (e.g. electrical endurance, switching frequency)
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2041-4HA15&objecttype=14&gridview=view1









last modified: 12/15/2020