SIEMENS

Data sheet 3RV2031-4PB10

Circuit breaker size S2 for motor protection, Class 20 A-release 28...36 A
N-release 520 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	S2
size of contactor can be combined company-specific	S2
product extension auxiliary switch	Yes
power loss [W] for rated value of the current	
● at AC in hot operating state	20 W
● at AC in hot operating state per pole	6.7 W
insulation voltage with degree of pollution 3 at AC rated value	690 V
surge voltage resistance rated value	6 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	50 000
● of auxiliary contacts typical	50 000
electrical endurance (switching cycles) typical	50 000
reference code acc. to IEC 81346-2	Q
Substance Prohibitance (Date)	15.10.2014 00:00:00
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
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 current-dependent overload release	28 ... 36 A
operating voltage	

● rated value	690 V
● at AC-3 rated value maximum	690 V
operating frequency rated value	50 ... 60 Hz
operational current rated value	36 A
operational current at AC-3 at 400 V rated value	36 A
operating power at AC-3	
● at 400 V rated value	18.5 kW
● at 500 V rated value	22 kW
● at 690 V rated value	30 kW
operating frequency at AC-3 maximum	15 1/h
Protective and monitoring functions	
product function	
● ground fault detection	No
● phase failure detection	Yes
trip class	Class 20
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	5 kA
● at 690 V rated value	2 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	10 kA
● at AC at 690 V rated value	4 kA
response value current of instantaneous short-circuit trip unit	520 A
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
● at 480 V rated value	36 A
● at 600 V rated value	36 A
yielded mechanical performance [hp]	
● for single-phase AC motor	
— at 110/120 V rated value	3 hp
— at 230 V rated value	7.5 hp
● for 3-phase AC motor	
— at 200/208 V rated value	15 hp
— at 220/230 V rated value	15 hp
— at 460/480 V rated value	30 hp
— at 575/600 V rated value	40 hp
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 240 V	none required
● at 400 V	125
● at 500 V	100
● at 690 V	80
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	140 mm
width	55 mm
depth	149 mm
required spacing	

● for grounded parts at 400 V	
— downwards	50 mm
— upwards	50 mm
— at the side	10 mm
● for live parts at 400 V	
— downwards	50 mm
— upwards	50 mm
— at the side	10 mm
● for grounded parts at 500 V	
— downwards	50 mm
— upwards	50 mm
— at the side	10 mm
● for live parts at 500 V	
— downwards	50 mm
— upwards	50 mm
— at the side	10 mm
● for grounded parts at 690 V	
— downwards	50 mm
— upwards	50 mm
— backwards	0 mm
— at the side	10 mm
— forwards	0 mm
● for live parts at 690 V	
— downwards	50 mm
— upwards	50 mm
— backwards	0 mm
— at the side	10 mm
— forwards	0 mm
Connections/ Terminals	
product component 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 or stranded	2x (1 ... 25 mm²), 1x (1 ... 35 mm²)
— finely stranded with core end processing	2x (1 ... 16 mm²), 1x (1 ... 25 mm²)
● at AWG cables for main contacts	2x (18 ... 3), 1x (18 ... 2)
tightening torque	
● for main contacts with screw-type terminals	3 ... 4.5 N·m
design of screwdriver shaft	Diameter 5 to 6 mm
size of the screwdriver tip	Pozidriv 2
design of the thread of the connection screw	
● for main contacts	M6
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
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					Declaration of Conformity
CSA	CCC	UL	KC	EAC	CE EG-Konf.

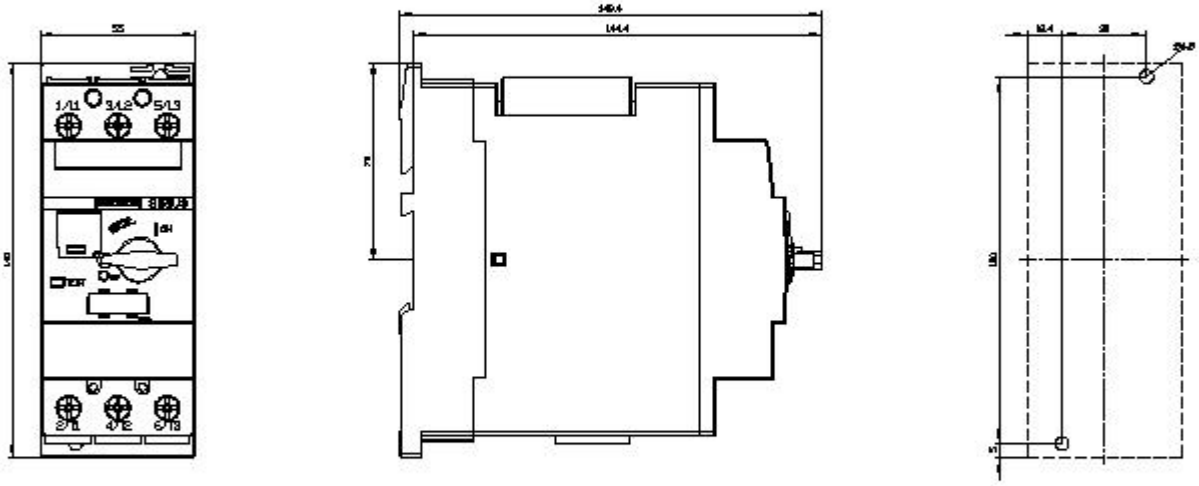
Declaration of Conformity	Test Certificates		Marine / Shipping		
UK Declaration of Conformity	Special Test Certific-ate	Type Test Certific-ates/Test Report	ABS	BUREAU VERITAS	Lloyd's Register LRS

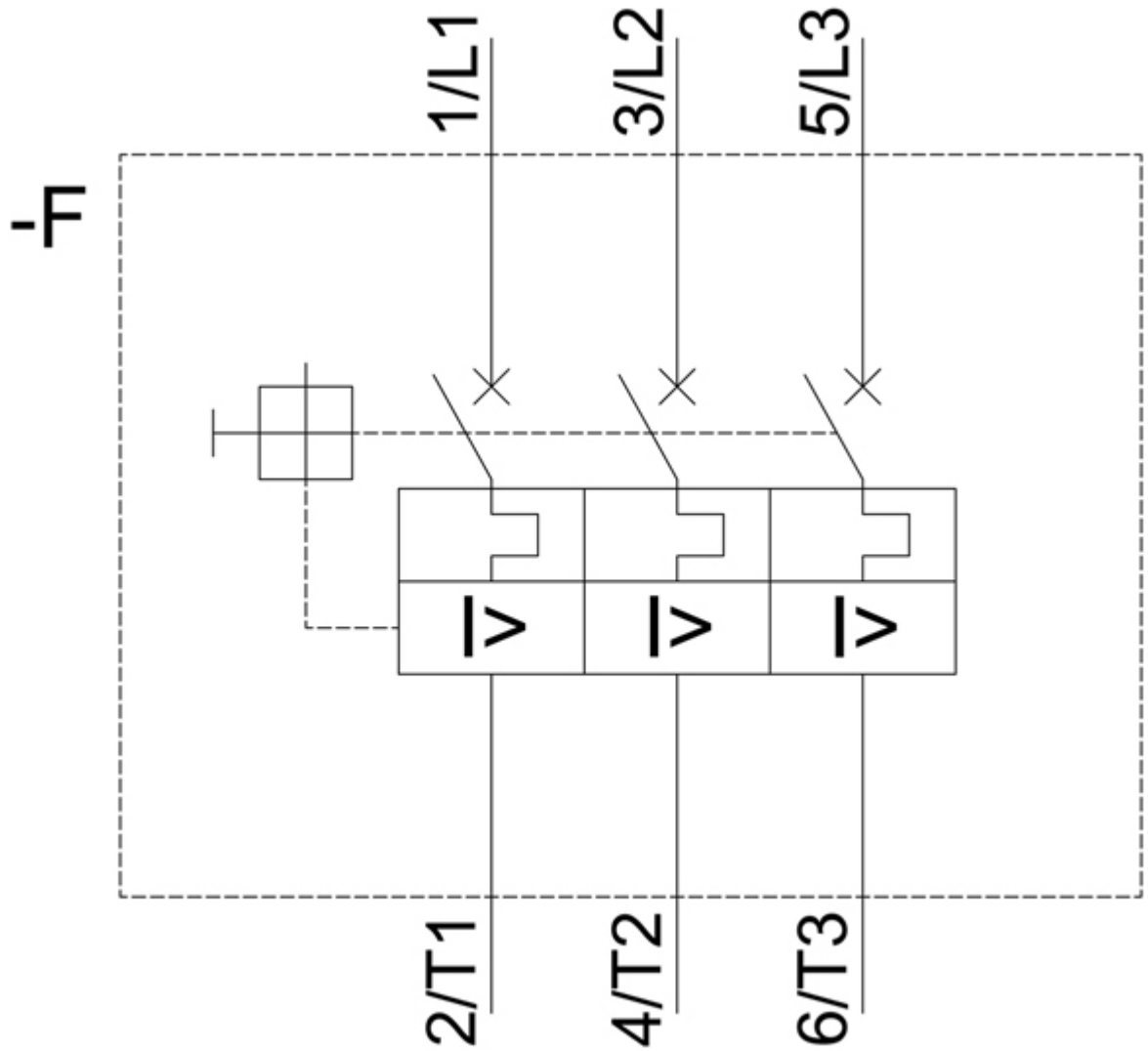
Marine / Shipping				other	
PRS	RINA	RMRS	DNV-GL	Confirmation	VDE

Railway	
Confirmation	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=3RV2031-4PB10
Cax online generator
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2031-4PB10
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
https://support.industry.siemens.com/cs/ww/en/ps/3RV2031-4PB10
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2031-4PB10&lang=en
Characteristic: Tripping characteristics, I²t, Let-through current
https://support.industry.siemens.com/cs/ww/en/ps/3RV2031-4PB10/char
Further characteristics (e.g. electrical endurance, switching frequency)
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2031-4PB10&objecttype=14&gridview=view1





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