SIEMENS

Data sheet 3RV2042-4HB10



Circuit breaker size S3 for motor protection, Class 20 A-release 36...50 A N-release 650 A screw terminal Increased switching capacity 100 kA $\,$

product designation Circuit breaker design of the product For motor protection product type designation Size of the circuit-breaker size of contactor can be combined company-specific product extension auxiliary switch Yes power loss [W] for rated value of the current at AC in hot operating state per pole insulation voltage with degree of politution 3 at AC rated value shock resistance according to IEC 80068-2.27 25g /11 ms Sinus mechanical service life (operating cycles) of the main contacts typical of auxiliary contacts typical electrical endurance (operating cycles) yptical electrical endurance (operating cycles) yptical electrical endurance (operating to IEC 81346-2 Substance Prohibitance (Date) 3VHC substance name Lead -7439-92-1 Ambient conditions installation altitude at height above sea level maximum during storage during storage during storage during transport during storage during transport during storage during transport solution from the current-dependent overload release Operating voltage operating voltage operating voltage at AC-3 arted value maximum at AC-3 arted value maximum et at AC-3 arted value maximum at AC-3 arted value maximum et at AC-3 arted value uncent response value current of poreational current response value current operational current response value current of poreational current response value current operational current response value current operational current response value current of SO A operating frequency rated value operational current of AC-3 arted value of AC-3 art	product brand name	SIRIUS
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• during storage • during transport 7-50 +80 °C relative humidity during operation 10 95 % Main circuit number of poles for main current circuit adjustable current response value current of the current-dependent overload release operating voltage • rated value • rated value • at AC-3 rated value maximum • at AC-3e rated value maximum 690 V operating frequency rated value operational current rated value 50 60 Hz operational current operational current	ambient temperature	
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adjustable current response value current of the current- dependent overload release operating voltage • rated value • at AC-3 rated value maximum • at AC-3e rated value maximum operating frequency rated value operational current rated value operational current 36 50 A 20 690 V 690 V 690 V operational current rated value 50 60 Hz operational current	Main circuit	
dependent overload release operating voltage • rated value • at AC-3 rated value maximum • at AC-3e rated value maximum 690 V operating frequency rated value operational current rated value operational current	number of poles for main current circuit	3
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• at AC-3e rated value maximum operating frequency rated value operational current rated value operational current 50 60 Hz operational current	rated value	20 690 V
operating frequency rated value 50 60 Hz operational current rated value 50 A operational current	 at AC-3 rated value maximum 	690 V
operational current rated value 50 A operational current	at AC-3e rated value maximum	690 V
operational current	operating frequency rated value	50 60 Hz
	operational current rated value	50 A
• at AC-3 at 400 V rated value 50 A	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 20
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	100 kA
at AC at 500 V rated value	15 kA
at AC at 690 V rated value	10 kA
operating short-circuit current breaking capacity (Ics) at AC	10 NA
• at 240 V rated value	100 kA
at 400 V rated value	50 kA
at 500 V rated value at 500 V rated value	7.5 kA
at 690 V rated value	5 kA
response value current of instantaneous short-circuit trip unit	650 A
UL/CSA ratings	050 A
full-load current (FLA) for 3-phase AC motor	
	50 A
at 480 V rated value	50 A
at 600 V rated value	50 A
yielded mechanical performance [hp]	
• for single-phase AC motor	F.L.
— at 110/120 V rated value	5 hp
— at 230 V rated value	10 hp
• for 3-phase AC motor	45 ha
— 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
— upwards	70 mm
— at the side	10 mm

e for live parts at 400 V	
 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	Top and bottom
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	2.4 (10 00 11111), 1.4 (10 00 11111)
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	10 111111
for main contacts with screw-type terminals	4.5 6 N·m
Safety related data	4.0 0 IV III
product function suitable for safety function	Yes
suitability for use	165
•	No
safety-related switching on	No
safety-related switching OFF	Yes
service life maximum	10 a
test wear-related service life necessary	Yes
proportion of dangerous failures	
 with low demand rate according to SN 31920 	40 %
with high demand rate according to SN 31920	50 %
B10 value with high demand rate according to SN 31920	5 000
failure rate [FIT] with low demand rate according to SN 31920	50 FIT
ISO 13849	
	3
device type according to ISO 13849-1 overdimensioning according to ISO 13849-2 necessary	Yes
IEC 61508	160
	Type A
safety device type according to IEC 61508-2	Type A
T1 value	40 -
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	

Handle

Approvals Certificates

General Product Approval



Confirmation







<u>KC</u>

General Product Approval

Test Certificates

Marine / Shipping



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

Type Test Certificates/Test Report







Marine / Shipping

other









Confirmation

Miscellaneous



Railway

Environment

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



Siemens EcoTech



Environmental Confirmations

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=3RV2042-4HB10

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2042-4HB10

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

https://support.industry.siemens.com/cs/ww/en/ps/3RV2042-4HB10

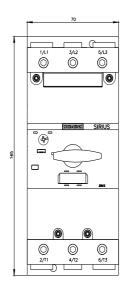
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

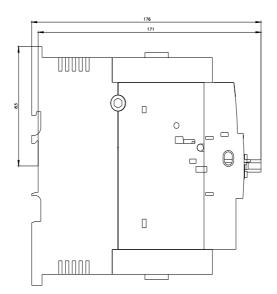
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2042-4HB10&lang=en

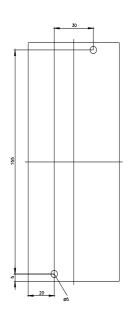
Characteristic: Tripping characteristics, I²t, Let-through current

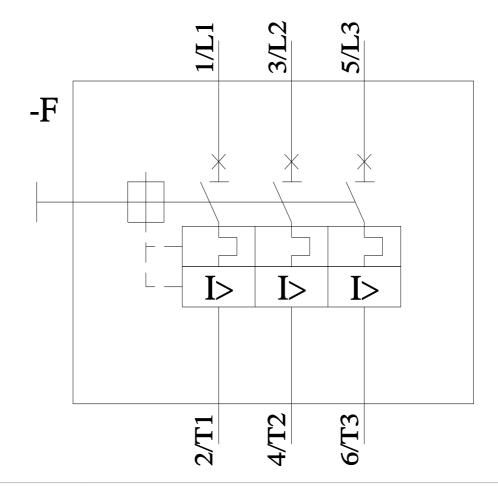
https://support.industry.siemens.com/cs/ww/en/ps/3RV2042

Further characteristics (e.g. electrical endurance, switching frequency)
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2042-4HB10&objecttype=14&gridview=view1



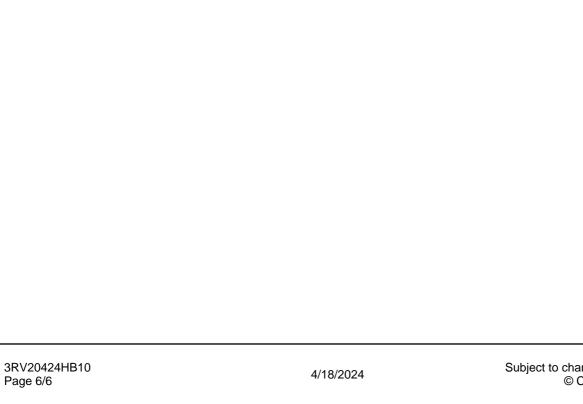






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