SIEMENS

Data sheet

3RB2056-1FW2

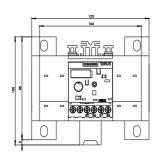


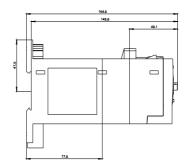
Overload relay 50...200 A for motor protection Size S6, Class 10E Contactor mounting/stand-alone installation Main circuit: straight-through transformer Auxiliary circuit: Screw terminal Manual-Automatic-Reset

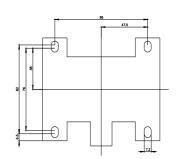
product brand name	SIRIUS
product designation	solid-state overload relay
product type designation	3RB2
General technical data	
size of overload relay	S6
size of contactor can be combined company-specific	S6
insulation voltage with degree of pollution 3 at AC rated value	1 000 V
surge voltage resistance rated value	8 kV
maximum permissible voltage for protective separation	
 in networks with ungrounded star point between auxiliary and auxiliary circuit 	300 V
 in networks with grounded star point between auxiliary and auxiliary circuit 	300 V
 in networks with ungrounded star point between main and auxiliary circuit 	600 V
 in networks with grounded star point between main and auxiliary circuit 	690 V
shock resistance	15g / 11 ms
according to IEC 60068-2-27	15g / 11 ms
thermal current	200 A
reference code according to IEC 81346-2	F
Substance Prohibitance (Date)	07/01/2006
SVHC substance name	Lead - 7439-92-1 Lead monoxide (lead oxide) - 1317-36-8
Weight	0.712 kg
Ambient conditions	
installation altitude at height above sea level maximum	2 000 m
ambient temperature	
during operation	-25 +60 °C
during storage	-40 +80 °C
during transport	-40 +80 °C
temperature compensation	-25 +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	50 200 A
operating voltage	
rated value	1 000 V
 at AC-3e rated value maximum 	1 000 V
operating frequency rated value	50 60 Hz
operational current rated value	200 A

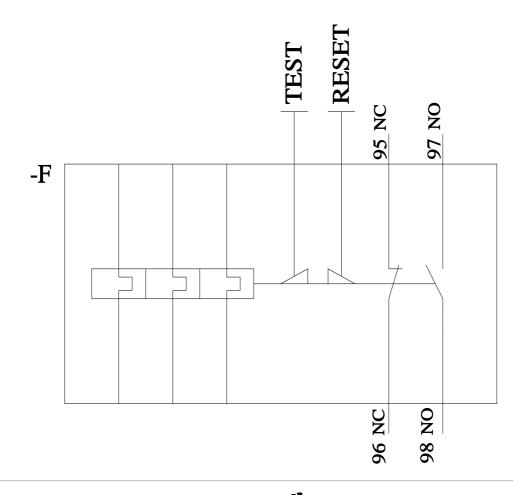
operational current at AC-3e at 400 V rated value	200 A
operating power	
• for 3-phase motors at 400 V at 50 Hz	30 90 kW
• for AC motors at 500 V at 50 Hz	30 132 kW
• for AC motors at 690 V at 50 Hz	55 160 kW
Auxiliary circuit	
	integrated
design of the auxiliary switch	integrated
number of NC contacts for auxiliary contacts	1
• note	for contactor disconnection
number of NO contacts for auxiliary contacts	1
note	for message "tripped"
number of CO contacts for auxiliary contacts	0
operational current of auxiliary contacts at AC-15	
• at 24 V	4 A
• at 110 V	4 A
• at 120 V	4 A
• at 125 V	4 A
• at 230 V	3 A
operational current of auxiliary contacts at DC-13	
• at 24 V	2 A
• at 60 V	0.55 A
• at 110 V	0.3 A
• at 125 V	0.3 A
• at 220 V	0.11 A
Protective and monitoring functions	
trip class	CLASS 10E
design of the overload release	electronic
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
• at 480 V rated value	200 A
• at 600 V rated value	200 A
contact rating of auxiliary contacts according to UL	B600 / R300
Short-circuit protection	
design of the fuse link	
for short-circuit protection of the main circuit	
- with type of coordination 1 required	gG: 355 A, Class L: 601 A
- with type of assignment 2 required	gG: 315 A
 for short-circuit protection of the auxiliary switch required 	fuse gG: 6 A
Installation/ mounting/ dimensions	
mounting position	any Osata ta manufica (stand stand installation
fastening method	Contactor mounting/stand-alone installation
height	119 mm
width	120 mm
depth	155 mm
Connections/ Terminals	
product component removable terminal for auxiliary and control circuit	Yes
type of electrical connection	
 for main current circuit 	straight-through transformers
 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 auxiliary contacts	
-	$1 \times (0.5 - 4 \text{ mm}^2) 2 \times (0.5 - 2.5 \text{ mm}^2)$
— solid	1x (0.5 4 mm ²), 2x (0.5 2.5 mm ²)
— solid or stranded	1x (0,5 4 mm ²), 2x (0,5 2,5 mm ²)
 finely stranded with core end processing 	1x (0.5 2.5 mm ²), 2x (0.5 1.5 mm ²)
 for AWG cables for auxiliary contacts 	2x (20 14)
tightening torque	
 for auxiliary contacts with screw-type terminals 	0.8 1.2 N·m
design of the thread of the connection screw	

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 Communication/ Protocol type of voltage supply via input/output link master No Electromagnetic compatibility conductor-conductor surge according to IEC 61000-4-4 2 kV (power ports), 1 kV (signal ports) corresponds to degree of severity 3 • due to burst according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 61000-4-5 2 kV (power ports), 1 kV (signal ports) corresponds to degree of severity 3 • due to high-frequency radiation according to IEC 61000-4-5 • due to high-frequency radiation according to IEC 61000-4-5 10 V in frequency range 0.15 to 80 MHz, modulation 80 % AM with 1 kHz • delectrostatic discharge according to IEC 61000-4-2 10 V/m electrostatic discharge according to IEC 61000-4-2 6 kV contact discharge / 8 kV air discharge Display display version for switching status Slide switch Approvals Certificates General Product Approval Confirmation EMV For use in hazard- ous locations Test Certificates Marine / Shipping
touch protection on the front according to IEC 60529 finger-safe, for vertical contact from the front Communication/ Protocol type of voltage supply via input/output link master No Electromagnetic compatibility No Electromagnetic compatibility conducted interference 4 2 kV (power ports), 1 kV (signal ports) corresponds to degree of severity 3 4 4 due to conductor-earth surge according to IEC 61000-4-5 2 kV (line to earth) corresponds to degree of severity 3 4 4 due to conductor-conductor surge according to IEC 61000-4-5 1 kV (line to line) corresponds to degree of severity 3 4 4 due to bigh-frequency radiation according to IEC 61000-4-3 10 V in frequency range 0.15 to 80 MHz, modulation 80 % AM with 1 kHz field-based interference according to IEC 61000-4-2 10 V/m electrostatic discharge according to IEC 61000-4-2 6 kV contact discharge / 8 kV air discharge Display display version for switching status Approvals Certificates Slide switch Centeral Product Approval Confirmation EMV For use in hazard- ous locations Test Certificates Marine / Shipping
Communication/ Protocol type of voltage supply via input/output link master No Electromagnetic compatibility conducted interference • due to burst according to IEC 61000-4-4 • due to conductor-conductor surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 61000-4-5 • due to high-frequency radiation according to IEC 61000- 4-6 field-based interference according to IEC 61000-4-3 electrostatic discharge according to IEC 61000-4-2 Display display version for switching status Approvals Cortificates Confirmation Confirmation Confirmation Emv For use in hazard- ous locations KC KC KC
type of voltage supply via input/output link master No Electromagnetic compatibility conducted interference • due to burst according to IEC 61000-4-4 2 kV (power ports), 1 kV (signal ports) corresponds to degree of severity 3 • due to conductor-earth surge according to IEC 61000-4-5 2 kV (line to earth) corresponds to degree of severity 3 • due to conductor-conductor surge according to IEC 61000-4-5 1 kV (line to line) corresponds to degree of severity 3 • due to high-frequency radiation according to IEC 61000-4-5 10 V in frequency range 0.15 to 80 MHz, modulation 80 % AM with 1 kHz • field-based interference according to IEC 61000-4-3 10 V/m electrostatic discharge according to IEC 61000-4-2 10 V/m electrostatic discharge according to IEC 61000-4-2 10 V/m display version for switching status Slide switch Approvals Confirmation General Product Approval Confirmation EMV For use in hazard- ous locations Test Certificates Marine / Shipping KC Type Test Certific:
Electromagnetic compatibility conducted interference • due to burst according to IEC 61000-4-4 • due to conductor-earth surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 61000-4-5 • due to conductor-conductor surge according to IEC 61000-4-5 • due to high-frequency radiation according to IEC 61000-4-5 • due to high-frequency radiation according to IEC 61000-4-3 • due to high-frequency radiation according to IEC 61000-4-3 • due to high-frequency radiation according to IEC 61000-4-3 • due to static discharge according to IEC 61000-4-2 • field-based interference according to IEC 61000-4-2 • due to fight base according to IEC 61000-4-2 • due to fight base according to IEC 61000-4-2 • due to conductor sutching status Slide switch Approvals Certificates General Product Approval EMV For use in hazard- ous locations For use in hazard- ous locations Test Certificates Marine / Shipping
conducted interference • due to burst according to IEC 61000-4-4 2 kV (power ports), 1 kV (signal ports) corresponds to degree of severity 3 2 kV (line to earth) corresponds to degree of severity 3 1 kV (line to earth) corresponds to degree of severity 3 1 kV (line to line) corresponds to degree of severity 3 10 V /m electrostatic discharge according to IEC 61000-4-2 for switching status Slide switch Approvals Certificates Confirmation EMV For use in hazard- ous locations Type Test Certific. Special Test Certific. Special T
 e due to burst according to IEC 61000-4-4 due to conductor-earth surge according to IEC 61000-4-5 e due to conductor-conductor surge according to IEC 61000-4-5 e due to interference according to IEC 61000-4-3 e lectrostatic discharge according to IEC 61000-4-3 b V in frequency range 0.15 to 80 MHz, modulation 80 % AM with 1 kHz Maine / Shipping Confirmation EMV For use in hazard- ous locations KC KC Type Test Certific: Special Test Certific:
 e due to conductor-earth surge according to IEC 61000-4-5 e due to conductor-conductor surge according to IEC 61000-4-5 e due to high-frequency radiation according to IEC 61000-4-6 field-based interference according to IEC 61000-4-3 electrostatic discharge according to IEC 61000-4-2 for Use in hazard- ous locations EMV
 e due to conductor-conductor surge according to IEC 61000-4-5 e due to high-frequency radiation according to IEC 61000-4-3 field-based interference according to IEC 61000-4-3 i V Vim electrostatic discharge according to IEC 61000-4-2 i V Vom electrostatic discharge according to IEC 61000-4-2 i V Contact discharge / 8 kV air discharge Display display version for switching status Slide switch Approvals Certificates General Product Approval EEK EG-Kont. For use in hazard-ous locations KC KC Type Test Certific: Special Test Certific:
61000-4-5 10 V in frequency range 0.15 to 80 MHz, modulation 80 % AM with 1 kHz 4-6 10 V in frequency range 0.15 to 80 MHz, modulation 80 % AM with 1 kHz field-based interference according to IEC 61000-4-3 10 V/m electrostatic discharge according to IEC 61000-4-2 6 kV contact discharge / 8 kV air discharge Display display version for switching status Slide switch Approvals Certificates General Product Approval Confirmation EMV For use in hazard- ous locations Test Certificates Marine / Shipping
4-6 10 V/m field-based interference according to IEC 61000-4-3 10 V/m electrostatic discharge according to IEC 61000-4-2 6 kV contact discharge / 8 kV air discharge Display display version for switching status Slide switch Approvals Certificates General Product Approval Confirmation UKK E. Konf. Confirmation E. Konf. EMV For use in hazard- ous locations Test Certificates
electrostatic discharge according to IEC 61000-4-2 6 kV contact discharge / 8 kV air discharge Display display version for switching status Slide switch Approvals Certificates General Product Approval Confirmation UKK EEK Eccc Confirmation EMV For use in hazard- ous locations Test Certificates Marine / Shipping
Display display version for switching status Approvals Certificates General Product Approval UK Confirmation EEMV For use in hazard- ous locations Test Certificates Marine / Shipping
display version for switching status Slide switch Approvals Certificates General Product Approval UKE CE EMV For use in hazard- ous locations For use in hazard- ous locations Test Certificates Marine / Shipping
Approvals Certificates General Product Approval UK CE EGG Confirmation UK For use in hazard- ous locations Test Certificates Marine / Shipping
General Product Approval Confirmation End (Confirmation) End (Confirmation) EMV For use in hazard- ous locations Test Certificates Marine / Shipping
UK CE Confirmation Effective Effective EMV For use in hazard- ous locations Test Certificates Marine / Shipping
EMV For use in hazard- ous locations Test Certificates Marine / Shipping KC Type Test Certific- Special Test Certific- Special Test Certific- Certific- Special Test Certific- Certific-
EMV Ous locations Test Certificates Marine / Shipping KC Type Test Certific- Special Test Certific-
Marine / Shipping other Environment
Miscellaneous Confirmation Environmental Confirmations DNV US RNA Miscellaneous Confirmation
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=3RB2056-1FW2
Cax online generator
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RB2056-1FW2 Service&Support (Manuals, Certificates, Characteristics, FAQs,)
<u>https://support.industry.siemens.com/cs/ww/en/ps/3RB2056-1FW2</u> Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros,)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RB2056-1FW2⟨=en
Characteristic: Tripping characteristics, I ² t, Let-through current
https://support.industry.siemens.com/cs/ww/en/ps/3RB2056-1FW2/char Further characteristics (e.g. electrical endurance, switching frequency)









3/11/2024 🖸