

Data sheet

3RB2046-1EW1

Overload relay 25...100 A For motor protection Size S3, Class 10
 Stand-alone installation Main circuit: straight-through transformer
 Auxiliary circuit: Screw terminal Manual-Automatic-Reset !!! Phased-
 out product !!! Successor is SIRIUS 3RB3 Preferred successor type
 is >>3RB3046-1XW1<<



Product brand name	SIRIUS
Product designation	solid-state overload relay

General technical data

Size of contactor can be combined company-specific	S3
Power loss [W] total typical	0.05 W
Insulation voltage	
• with degree of pollution 3 rated value	1 000 V
Surge voltage resistance rated value	8 kV
Protection class IP	
• on the front	IP20
Shock resistance	15g / 11 ms
Type of protection	PTB 06 ATEX 3001 Ex II (2) GD
Reference code acc. to DIN EN 81346-2	F

Ambient conditions

Installation altitude at height above sea level	
• maximum	2 000 m
Ambient temperature	
• during operation	-25 ... +60 °C

<ul style="list-style-type: none"> during storage 	-40 ... +80 °C
<ul style="list-style-type: none"> during transport 	-40 ... +80 °C
Relative humidity during operation	100 %

Main circuit

Number of poles for main current circuit	3
Adjustable pick-up value current of the current-dependent overload release	25 ... 100 A
Operating voltage <ul style="list-style-type: none"> at AC-3 rated value maximum 	1 000 V

Auxiliary circuit

Number of NC contacts for auxiliary contacts	1
Number of NO contacts for auxiliary contacts	1
Number of CO contacts <ul style="list-style-type: none"> for auxiliary contacts 	0
Operating current of auxiliary contacts at AC-15 <ul style="list-style-type: none"> at 24 V at 110 V at 120 V at 125 V at 230 V 	4 A 4 A 4 A 4 A 3 A
Operating current of auxiliary contacts at DC-13 <ul style="list-style-type: none"> at 24 V at 60 V at 110 V at 125 V at 220 V 	2 A 0.55 A 0.3 A 0.3 A 0.11 A

Protective and monitoring functions

Trip class	CLASS 10E
------------	-----------

Short-circuit protection

Design of the fuse link <ul style="list-style-type: none"> for short-circuit protection of the auxiliary switch required 	fuse gL/gG: 6 A
---	-----------------

Installation/ mounting/ dimensions

Mounting position	any
Mounting type	stand-alone installation
Height	106 mm
Width	70 mm
Depth	124 mm
Required spacing <ul style="list-style-type: none"> with side-by-side mounting <ul style="list-style-type: none"> — forwards 	0 mm

— Backwards	0 mm
— upwards	0 mm
— downwards	0 mm
— at the side	0 mm
• for grounded parts	
— forwards	0 mm
— Backwards	0 mm
— upwards	0 mm
— at the side	6 mm
— downwards	0 mm
• for live parts	
— forwards	0 mm
— Backwards	0 mm
— upwards	0 mm
— downwards	0 mm
— at the side	6 mm

Connections/Terminals

Product function	
• removable terminal for auxiliary and control circuit	Yes
Type of electrical connection	
• for main current circuit	straight-through transformers
• for auxiliary and control current circuit	screw-type terminals
Type of connectable conductor cross-sections	
• for auxiliary contacts	
— solid	0.5 ... 4 mm ² , 2x (0.5 ... 2.5 mm ²)
— finely stranded with core end processing	0.5 ... 2.5 mm ² , 2x (0.5 ... 1.5 mm ²)
• at AWG conductors for auxiliary contacts	2x (20 ... 14)

Electromagnetic compatibility

Conducted interference	
• due to burst acc. to IEC 61000-4-4	2 kV (power ports), 1 kV (signal ports) corresponds to degree of severity 3
• due to conductor-earth surge acc. to IEC 61000-4-5	2 kV (line to earth) corresponds to degree of severity 3
• due to conductor-conductor surge acc. to IEC 61000-4-5	1 kV (line to line) corresponds to degree of severity 3
Field-bound parasitic coupling acc. to IEC 61000-4-3	10 V/m
Electrostatic discharge acc. to IEC 61000-4-2	6 kV contact discharge / 8 kV air discharge

Certificates/approvals

General Product Approval	EMC	For use in hazardous locations
--------------------------	-----	--------------------------------



Declaration of Conformity	Test Certificates	Marine / Shipping
---------------------------	-------------------	-------------------



[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



Marine / Shipping	other
-------------------	-------



[Miscellaneous](#)

[Confirmation](#)

Further information

Information- and Downloadcenter (Catalogs, Brochures,...)

<http://www.siemens.com/industrial-controls/catalogs>

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RB2046-1EW1>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RB2046-1EW1>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RB2046-1EW1>

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

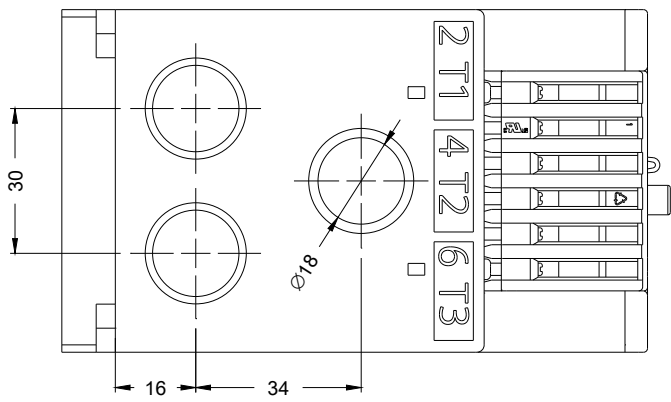
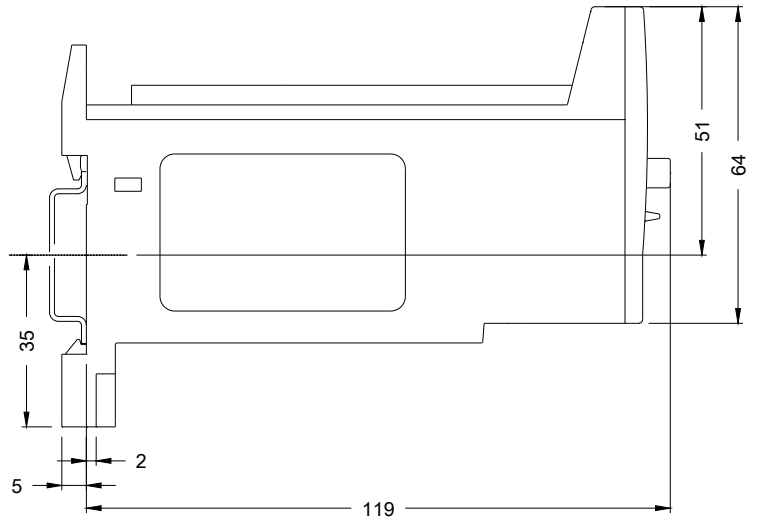
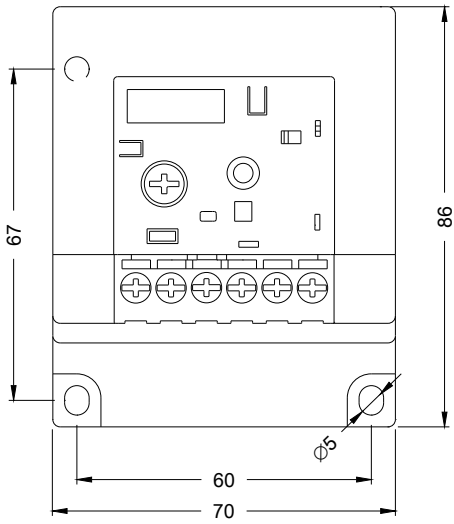
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RB2046-1EW1&lang=en

Characteristic: Tripping characteristics, I²t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RB2046-1EW1/char>

Further characteristics (e.g. electrical endurance, switching frequency)

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RB2046-1EW1&objecttype=14&gridview=view1>



last modified:

07/20/2018