

MOTOR STARTER SIRIUS 3RM1 REVERSING STARTER 500 V;  
0,4-2,0 A; 110-230 V AC PUSH-IN CONNECTION SYSTEM

General technical data	
product brandname	SIRIUS
Product category	Motor starter
Product designation	Reversing starter
Design of the product	with electronic overload protection
Trip class	CLASS 10A
Protection class IP	IP20
Suitability for operation Device connector 3ZY12	No
Product function Intrinsic device protection	Yes
Type of the motor protection	solid-state
Product function Adjustable current limitation	Yes
Installation altitude at height above sea level maximum	4 000 m
Ambient temperature	
• during operation	-25 ... +60 °C
• during transport	-40 ... +70 °C
• during storage	-40 ... +70 °C
Relative humidity during operation	10 ... 95 %
Air pressure acc. to SN 31205	900 ... 1 060 hPa
Shock resistance	6g / 11 ms
Vibration resistance	1 ... 6 Hz, 15 mm; 20 m/s <sup>2</sup> , 500 Hz
Surge voltage resistance rated value	6 kV
Insulation voltage rated value	500 V
Mechanical service life (switching cycles) typical	30 000 000
Conducted interference	
• due to conductor-conductor surge acc. to IEC 61000-4-5	1 kV
• due to conductor-earth surge acc. to IEC 61000-4-5	2 kV
• due to burst acc. to IEC 61000-4-4	3 kV / 5 kHz
• due to high-frequency radiation acc. to IEC 61000-4-6	10 V
Electrostatic discharge acc. to IEC 61000-4-2	4 kV contact discharge / 8 kV air discharge
Field-bound HF-interference emission acc. to CISPR11	Class B for domestic, business and commercial environments; Class A for industrial environments at 110 V DC
Conducted HF-interference emissions acc. to CISPR11	Class B for domestic, business and commercial environments; Class A for industrial environments at 110 V DC

<b>maximum permissible voltage for safe isolation</b>	
• between main and auxiliary circuit	500 V
• between control and auxiliary circuit	250 V
<b>Equipment marking acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750</b>	Q
<b>Equipment marking acc. to DIN EN 61346-2</b>	Q

#### Safety related data

<b>Protection against electrical shock</b>	finger-safe
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#### Main circuit

<b>Number of poles for main current circuit</b>	3
<b>Operating voltage rated value</b>	48 ... 500 V
<b>Relative symmetrical tolerance of the operating voltage</b>	10 %
<b>Operating frequency</b>	
• 1 rated value	50 Hz
• 2 rated value	60 Hz
<b>Relative symmetrical tolerance of the operating frequency</b>	10 %
<b>Operating current at AC-53a at 400 V at ambient temperature 40 °C rated value</b>	2 A
<b>Minimum load [% of IM]</b>	20 %
<b>Power loss [W] typical</b>	0.3 W
<b>Adjustable pick-up value current of the current-dependent overload release</b>	0.4 ... 2 A
<b>Operating power for three-phase motors at 400 V at 50 Hz</b>	0.09 ... 0.75 kW
<b>Operating frequency maximum</b>	1 1/s

#### Control circuit/ Control

<b>Type of voltage of the control supply voltage</b>	AC/DC
<b>Control supply voltage 1</b>	
• at DC rated value	110 V
• at AC	
— at 50 Hz	110 ... 230 V
— at 60 Hz	110 ... 230 V
<b>Operating range factor control supply voltage rated value</b>	
• at DC	0.85 ... 1.1
• at AC	
— at 50 Hz	0.85 ... 1.1
— at 60 Hz	1.1 ... 0.85
<b>Control current</b>	
• at AC	

<ul style="list-style-type: none"> <li>— at 230 V <ul style="list-style-type: none"> <li>— in standby mode</li> <li>— during operation</li> <li>— when switching on</li> </ul> </li> <li>— at 110 V <ul style="list-style-type: none"> <li>— in standby mode</li> <li>— during operation</li> <li>— when switching on</li> </ul> </li> <li>• at DC <ul style="list-style-type: none"> <li>— in standby mode</li> <li>— during operation</li> <li>— when switching on</li> </ul> </li> </ul>	9 mA 22 mA 33 mA  16 mA 36 mA 55 mA  6 mA 30 mA 15 mA
<b>Input voltage at digital input</b> <ul style="list-style-type: none"> <li>• for signal &lt;1&gt; <ul style="list-style-type: none"> <li>— at DC</li> <li>— at AC</li> </ul> </li> <li>• with signal &lt;0&gt; <ul style="list-style-type: none"> <li>— at AC</li> <li>— at DC</li> </ul> </li> </ul>	79 ... 121 V 93 ... 253 V  0 ... 40 V 0 ... 40 V
<b>Input current at digital input</b> <ul style="list-style-type: none"> <li>• for signal &lt;1&gt; <ul style="list-style-type: none"> <li>— at AC at 230 V</li> <li>— at AC at 110 V</li> <li>— at DC</li> </ul> </li> <li>• with signal &lt;0&gt; <ul style="list-style-type: none"> <li>— at AC at 230 V</li> <li>— at AC at 110 V</li> <li>— at DC</li> </ul> </li> </ul>	2.3 mA 1.1 mA 1.5 mA  0.4 mA 0.2 mA 0.25 mA
<b>Switch-on delay time</b>	60 ... 90 ms
<b>Off-delay time</b>	60 ... 90 ms
<b>Auxiliary circuit</b>	
<b>Number of CO contacts for auxiliary contacts</b>	1
<b>Design of the switching contact as NO contact for signaling function</b>	OUT, electronic, 24 V DC, 15 mA
<b>Operating current of auxiliary contacts</b> <ul style="list-style-type: none"> <li>• at AC-15 at 230 V maximum</li> <li>• at DC-13 at 24 V maximum</li> </ul>	3 A 1 A
<b>Installation/ mounting/ dimensions</b>	
<b>Mounting position</b>	vertical, horizontal, standing
<b>Mounting type</b>	screw and snap-on mounting onto 35 mm standard mounting rail
<b>Width</b>	22.5 mm

Height	100 mm
Depth	141.6 mm

## Connections/Terminals

<b>Type of electrical connection</b> <ul style="list-style-type: none"> <li>• for main current circuit</li> <li>• for auxiliary and control current circuit</li> </ul>	PUSH-IN connection (spring-loaded connection) PUSH-IN connection (spring-loaded connection)
<b>Type of connectable conductor cross-sections for main contacts</b> <ul style="list-style-type: none"> <li>• solid</li> <li>• finely stranded               <ul style="list-style-type: none"> <li>— with core end processing</li> <li>— without core end processing</li> </ul> </li> </ul>	1x (0.5 ... 4 mm <sup>2</sup> )  1x (0.5 ... 2.5 mm <sup>2</sup> ) 1x (0.5 ... 4 mm <sup>2</sup> )
<b>Type of connectable conductor cross-sections at AWG conductors for main contacts</b>	1x (20 ... 12)
<b>Type of connectable conductor cross-sections for auxiliary contacts</b> <ul style="list-style-type: none"> <li>• solid</li> <li>• finely stranded               <ul style="list-style-type: none"> <li>— with core end processing</li> <li>— without core end processing</li> </ul> </li> </ul>	1x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.5 ... 1.5 mm <sup>2</sup> )  1x (0.5 ... 1.0 mm <sup>2</sup> ), 2x (0.5 ... 1.0 mm <sup>2</sup> ) 1x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.5 ... 1.5 mm <sup>2</sup> )
<b>Type of connectable conductor cross-sections at AWG conductors for auxiliary contacts</b>	1x (20 ... 16), 2x (20 ... 16)

## UL ratings

<b>Full-load current (FLA) for three-phase AC motor at 480 V rated value</b>	2 A
<b>Yielded mechanical performance [hp]</b> <ul style="list-style-type: none"> <li>• for single-phase AC motor               <ul style="list-style-type: none"> <li>— at 230 V rated value</li> </ul> </li> <li>• for three-phase AC motor               <ul style="list-style-type: none"> <li>— at 200/208 V rated value</li> <li>— at 220/230 V rated value</li> <li>— at 460/480 V rated value</li> </ul> </li> </ul>	0.125 hp  0.333 hp 0.333 hp 0.75 hp

## Certificates/approvals

General Product Approval	Declaration of Conformity
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CCC



CSA



GOST



UL



EG-Konf.

Test Certificates	other
<a href="#">Type Test Certificates/Test Report</a>	<a href="#">Special Test Certificate</a>
	<a href="#">Environmental Confirmations</a>
	<a href="#">Confirmation</a>

#### 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=3RM1202-2AA14>

**Cax online generator**

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RM1202-2AA14>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RM1202-2AA14>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RM1202-2AA14&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RM1202-2AA14&lang=en)

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