

Fail-safe direct-on-line starter High Feature; Electronic switching; Electronic overload protection up to 0.09 kW / 400 V; Adjustment range 0.1 .. 0.4 A; PROFlenergy; Option: 3DI/LC module



Figure similar

Product brand name	SIMATIC
Product category	Motor starter
Product designation	Direct-on-line starter
Product type designation	ET 200SP

General technical data	
Trip class	CLASS OFF / 5 / 10 adjustable
Equipment variant acc. to IEC 60947-4-2	3
Product function	Fail-safe direct-on-line starter
<ul style="list-style-type: none"> <li>• on-site operation</li> <li>• Intrinsic device protection</li> <li>• Remote firmware update</li> <li>• for power supply Reverse polarity protection</li> </ul>	<ul style="list-style-type: none"> <li>Yes</li> <li>Yes</li> <li>Yes</li> <li>Yes</li> </ul>
Power loss [W] for rated value of the current	
<ul style="list-style-type: none"> <li>• at AC in hot operating state per pole</li> </ul>	0.02 W
Insulation voltage	
<ul style="list-style-type: none"> <li>• rated value</li> </ul>	500 V
Degree of pollution	2

<b>Overvoltage category</b>	III
<b>Surge voltage resistance rated value</b>	6 kV
<b>maximum permissible voltage for safe isolation</b>	
• between main and auxiliary circuit	500 V
<b>Protection class IP</b>	IP20
<b>Shock resistance</b>	6g / 11 ms
<b>Vibration resistance</b>	15 mm to 6 Hz; 2g to 500 Hz
<b>Mechanical service life (switching cycles)</b>	
• of the main contacts typical	15 000 000
<b>Type of assignment</b>	1
<b>Reference code acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750</b>	Q
<b>Reference code acc. to DIN EN 81346-2</b>	Q
<b>Reference code acc. to DIN EN 61346-2</b>	A
<b>Product function</b>	
• direct start	Yes
• reverse starting	No
<b>Product component Motor brake output</b>	No
<b>Product function Short circuit protection</b>	Yes
<b>Design of short-circuit protection</b>	fuse
<b>Maximum short-circuit current breaking capacity (Icu)</b>	
• at 400 V rated value	55 kA
• at 500 V rated value	55 kA
• at 500 V acc. to UL 60947 rated value	100 kA
<b>Maximum short-circuit current breaking capacity (Icu) in the IT network</b>	
• at 400 V rated value	55 kA
• at 500 V rated value	55 kA

<b>Electromagnetic compatibility</b>	
<b>EMC emitted interference</b>	
• acc. to IEC 60947-1	class A
<b>EMI immunity acc. to IEC 60947-1</b>	Class A
<b>Conducted interference</b>	
• due to burst acc. to IEC 61000-4-4	3 kV
• due to conductor-earth surge acc. to IEC 61000-4-5	4 kV
• due to conductor-conductor surge acc. to IEC 61000-4-5	2 kV
• due to high-frequency radiation acc. to IEC 61000-4-6	Class A
<b>Field-bound parasitic coupling acc. to IEC 61000-4-3</b>	20 V/m
<b>Electrostatic discharge acc. to IEC 61000-4-2</b>	8 kV air discharge

Conducted HF-interference emissions acc. to CISPR11	Class A for industrial environment
Field-bound HF-interference emission acc. to CISPR11	Class A for industrial environment

#### Safety related data

Safety device type acc. to IEC 61508-2	Type B
B10d value	10 100 000
Safety Integrity Level (SIL) acc. to IEC 61508	3
Performance level (PL) acc. to EN ISO 13849-1	e
Category acc. to EN ISO 13849-1	4
Stop category acc. to DIN EN 60204-1	0
Diagnostics test interval by internal test function maximum	600 s
PFH acc. to IEC 61508 relating to SIL	0.0000000036 1/h
PFDavg with low demand rate acc. to IEC 61508	0.00000041
Hardware fault tolerance acc. to IEC 61508	1
T1 value for proof test interval or service life acc. to IEC 61508	20 y
Safe state	Load circuit open
Protection against electrical shock	finger-safe

#### Main circuit

Number of poles for main current circuit	3
Design of the switching contact	Hybrid
Adjustable pick-up value current of the current-dependent overload release	0.1 ... 0.4 A
Minimum load [%]	50 %
Type of the motor protection	solid-state
Operating voltage <ul style="list-style-type: none"> <li>• rated value</li> </ul>	48 ... 500 V
Relative symmetrical tolerance of the operating voltage	10 %
Operating frequency 1 rated value	50 Hz
Operating frequency 2 rated value	60 Hz
Relative symmetrical tolerance of the operating frequency	5 %
Relative positive tolerance of the operating frequency	5 %
Relative negative tolerance of the operating frequency	5 %
Operating current <ul style="list-style-type: none"> <li>• at AC at 400 V rated value</li> </ul>	0.4 A
Ampacity when starting maximum	4 A
Operating power for three-phase motors at 400 V at 50 Hz	0.06 ... 0.12 kW

Inputs/ Outputs	
<b>Number of digital inputs</b>	5
<ul style="list-style-type: none"> <li>Note</li> </ul>	4 via 3DI/LC module
<ul style="list-style-type: none"> <li>safety-related</li> </ul>	1
<b>Type of input characteristic</b>	Type 1 in accordance with EN 61131-2
<b>Input voltage at digital input</b>	
<ul style="list-style-type: none"> <li>at DC rated value</li> </ul>	24 V
<ul style="list-style-type: none"> <li>with signal &lt;0&gt; at DC</li> </ul>	0 ... 5 V
<ul style="list-style-type: none"> <li>for signal &lt;1&gt; at DC</li> </ul>	15 ... 30
<b>Input current at digital input</b>	
<ul style="list-style-type: none"> <li>for signal &lt;1&gt; typical</li> </ul>	0.009 A

Supply voltage	
<b>Type of voltage of the supply voltage</b>	DC
<b>Supply voltage 1 at DC rated value</b>	
<ul style="list-style-type: none"> <li>minimum permissible</li> </ul>	20.4 V
<ul style="list-style-type: none"> <li>maximum permissible</li> </ul>	28.8 V
<b>Supply voltage at DC rated value</b>	24 V
<b>Consumed current for rated value of supply voltage</b>	
<ul style="list-style-type: none"> <li>in standby mode</li> </ul>	95 mA
<ul style="list-style-type: none"> <li>during operation</li> </ul>	160 mA
<ul style="list-style-type: none"> <li>at switching on</li> </ul>	250 mA
<b>Power loss [W] for rated value of supply voltage</b>	
<ul style="list-style-type: none"> <li>in switching state OFF with bypass circuit</li> </ul>	2.3 W
<ul style="list-style-type: none"> <li>in switching state ON with bypass circuit</li> </ul>	3.8 W
<b>Inrush current peak</b>	
<ul style="list-style-type: none"> <li>at 24 V</li> </ul>	25 A; Observe the manual for group configuration
<b>Duration of inrush current peak</b>	
<ul style="list-style-type: none"> <li>at 24 V</li> </ul>	0.145 ms

Response times	
<b>Switch-on delay time</b>	35 ms
<b>Off-delay time</b>	35 ... 50 ms
<b>Off-delay time with safety-related request</b>	
<ul style="list-style-type: none"> <li>when switched off via control inputs maximum</li> </ul>	55 ms
<ul style="list-style-type: none"> <li>when switched off via supply voltage maximum</li> </ul>	120 ms

Installation/ mounting/ dimensions	
<b>Mounting position</b>	Vertical, horizontal (observe derating)
<b>Mounting type</b>	pluggable in BaseUnit
<b>Height</b>	142 mm
<b>Width</b>	30 mm
<b>Depth</b>	150 mm
<b>Required spacing</b>	

<ul style="list-style-type: none"> <li>• with side-by-side mounting <ul style="list-style-type: none"> <li>— upwards</li> <li>— downwards</li> </ul> </li> </ul>	50 mm
	50 mm

### Ambient conditions

<b>Installation altitude at height above sea level</b>	
<ul style="list-style-type: none"> <li>• maximum</li> </ul>	2 000 m; For derating see manual
<b>Ambient temperature</b>	
<ul style="list-style-type: none"> <li>• during operation</li> <li>• during storage</li> <li>• during transport</li> </ul>	-25 ... +60 °C; For derating see manual -40 ... +70 °C -40 ... +70 °C
Environmental category during operation acc. to IEC 60721	3K6 (no formation of ice, no condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices)
Relative humidity during operation	10 ... 95 %
<b>Air pressure</b>	
<ul style="list-style-type: none"> <li>• acc. to SN 31205</li> </ul>	900 ... 1 060 hPa

### Communication/ Protocol

<b>Protocol is supported</b>	
<ul style="list-style-type: none"> <li>• PROFIBUS DP protocol</li> <li>• PROFINET protocol</li> </ul>	Yes Yes
<b>Product function Bus communication</b>	Yes
<b>Protocol is supported</b>	
<ul style="list-style-type: none"> <li>• AS-Interface protocol</li> </ul>	No
<b>Product function</b>	
<ul style="list-style-type: none"> <li>• supports PROFIenergy measured values</li> <li>• supports PROFIenergy shutdown</li> </ul>	Yes Yes
<b>address range memory of address range</b>	
<ul style="list-style-type: none"> <li>• of the inputs</li> <li>• of the outputs</li> </ul>	4 byte 2 byte
<b>Type of electrical connection</b>	
<ul style="list-style-type: none"> <li>• of the communication interface</li> </ul>	Plug contact to Base Unit

### Connections/ Terminals

<b>Type of electrical connection</b>	
<ul style="list-style-type: none"> <li>• 1 for digital input signals</li> <li>• 2 for digital input signals</li> </ul>	Pluggable module - accessory Plug contact to Base Unit
<b>Type of electrical connection</b>	
<ul style="list-style-type: none"> <li>• for main energy infeed</li> <li>• for load-side outgoing feeder</li> <li>• for supply voltage line-side</li> </ul>	Plug contact to Base Unit Plug contact to Base Unit Plug contact to Base Unit
<b>Wire length for motor unshielded maximum</b>	200 m

### UL/CSA ratings

<b>Full-load current (FLA) for three-phase AC motor</b>	
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• at 480 V rated value	0.4 A
Current with locked rotor (LRA) for three-phase AC motor at 480 V rated value	3 A
Operating voltage	
• at AC at 60 Hz acc. to CSA and UL rated value	480 V

### Certificates/ approvals

General Product Approval	EMC	For use in hazardous locations
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Functional Safety/Safety of Machinery	Declaration of Conformity	Test Certificates	Marine / Shipping
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[Type Examination Certificate](#)



EG-Konf.

[Type Test Certificates/Test Report](#)



ABS



BUREAU VERITAS



LRS

Marine / Shipping	other
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[Confirmation](#)



Profibus

### Further information

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

[www.siemens.com/ic10](http://www.siemens.com/ic10)

**Industry Mall (Online ordering system)**

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RK1308-0CA00-0CP0>

**Cax online generator**

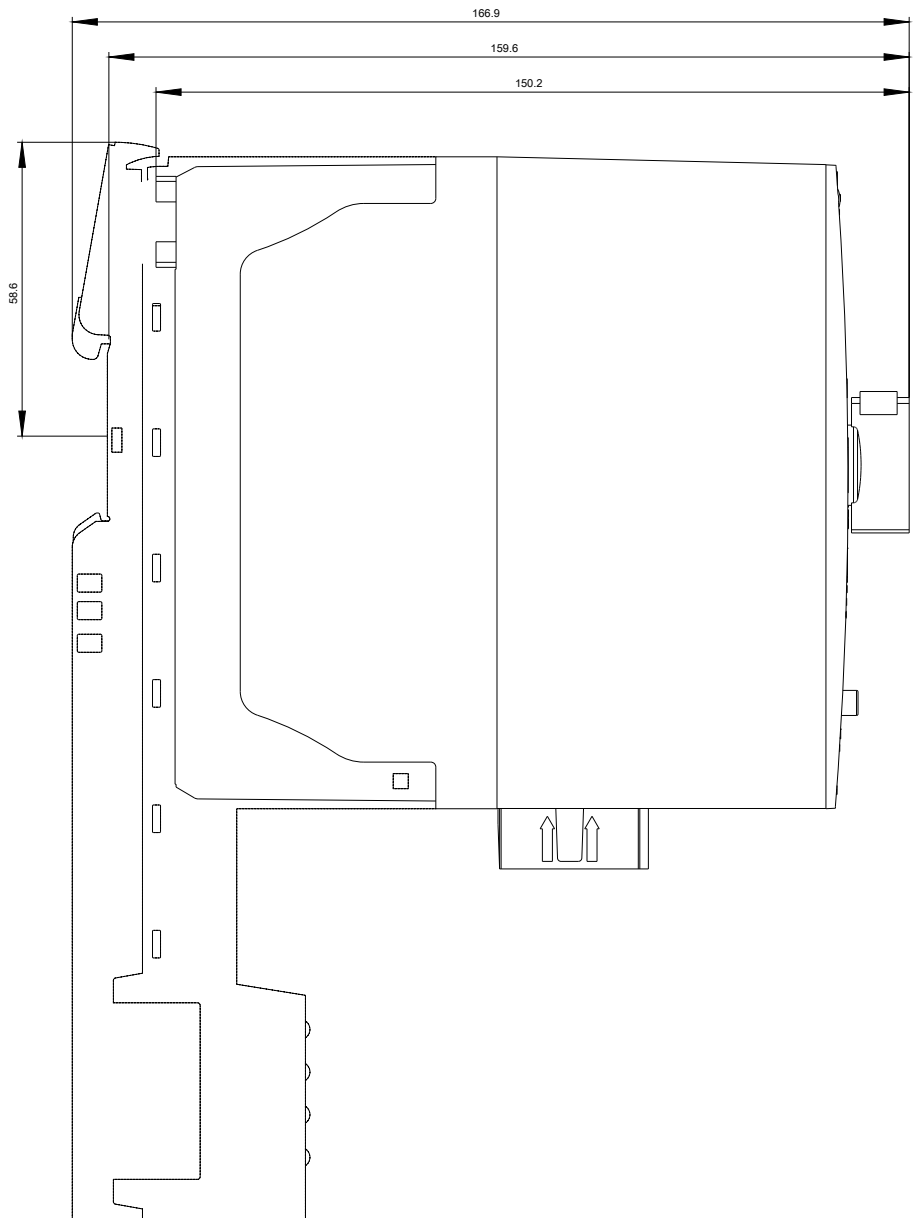
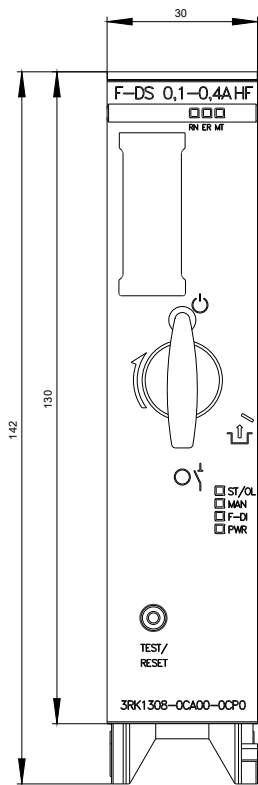
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RK1308-0CA00-0CP0>

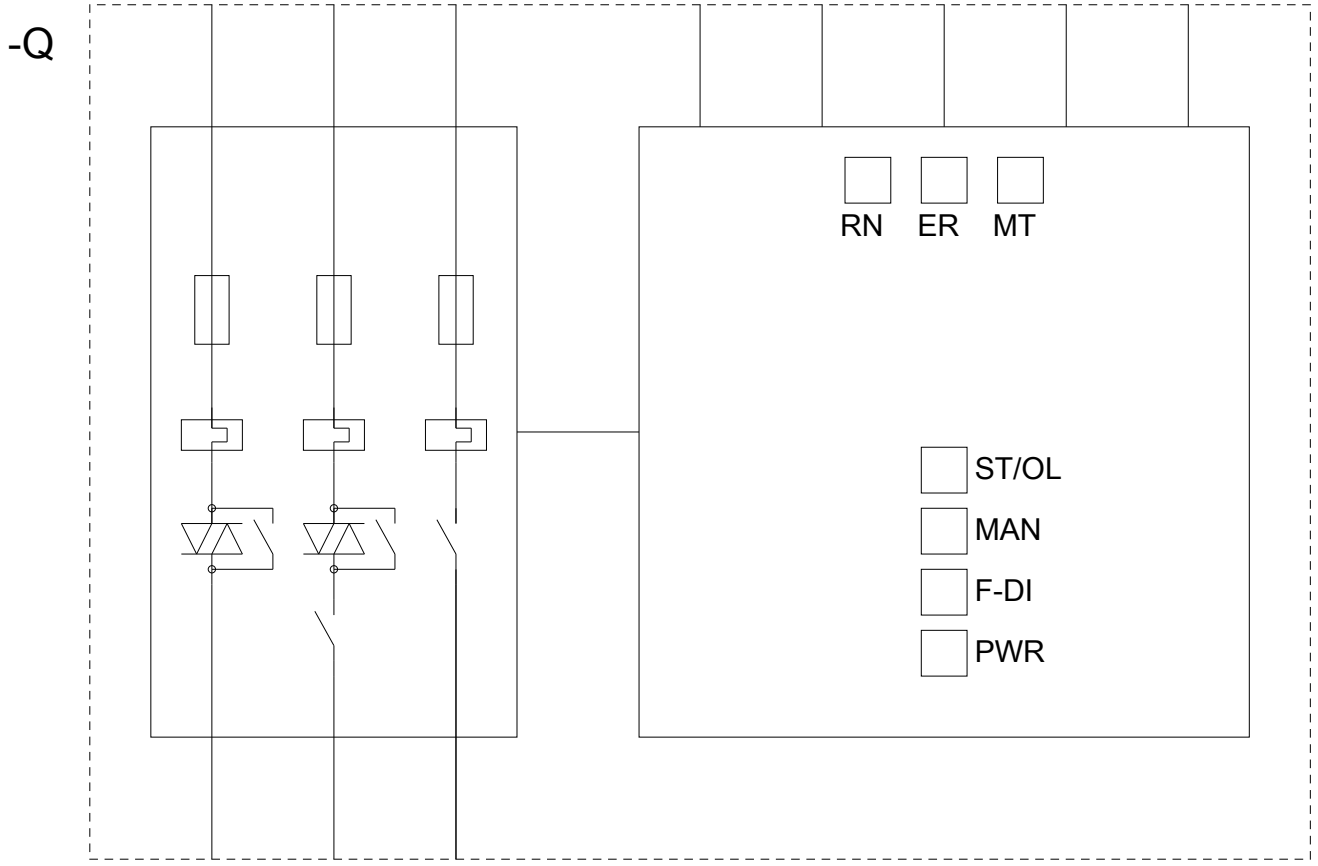
**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**

<https://support.industry.siemens.com/cs/ww/en/ps/3RK1308-0CA00-0CP0>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RK1308-0CA00-0CP0&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RK1308-0CA00-0CP0&lang=en)





last modified:

03/01/2020