

Fail-safe D-O-L starter electronic switching electr. overload protection up to 1.1 KW/400 V; 0.9A to 3A Option: 3DI/LC module PROFInergy



Figure similar

Product brand name	SIMATIC
Product category	Motor starter
Product type designation	ET 200SP

General technical data	
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> </ul>	Yes
<ul style="list-style-type: none"> <li>Intrinsic device protection</li> </ul>	Yes
<ul style="list-style-type: none"> <li>Remote firmware update</li> </ul>	Yes
<ul style="list-style-type: none"> <li>for power supply Reverse polarity protection</li> </ul>	Yes
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>	0.2 W
Insulation voltage	
<ul style="list-style-type: none"> <li>rated value</li> </ul>	500 V
Degree of pollution	2
Overvoltage category	III
Surge voltage resistance rated value	6 kV

<b>maximum permissible voltage for safe isolation</b>	
<ul style="list-style-type: none"> <li>• between main and auxiliary circuit</li> </ul>	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>	
<ul style="list-style-type: none"> <li>• of the main contacts typical</li> </ul>	15 000 000
<b>Type of assignment</b>	1
<b>Usage category</b>	
<ul style="list-style-type: none"> <li>• acc. to IEC 60947-4-2</li> </ul>	AC53a: 3A: (8-0,7: 70-32)
<b>Equipment marking</b>	
<ul style="list-style-type: none"> <li>• acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750</li> </ul>	Q
<ul style="list-style-type: none"> <li>• acc. to DIN EN 61346-2</li> </ul>	A
<b>Product function</b>	
<ul style="list-style-type: none"> <li>• direct start</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• reverse starting</li> </ul>	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>Trip class</b>	CLASS 5 and 10 adjustable
<b>Maximum short-circuit current breaking capacity (Icu)</b>	
<ul style="list-style-type: none"> <li>• at 400 V rated value</li> </ul>	55 kA
<ul style="list-style-type: none"> <li>• at 500 V rated value</li> </ul>	55 kA
<ul style="list-style-type: none"> <li>• at 500 V acc. to UL 60947 rated value</li> </ul>	100 kA
<b>Maximum short-circuit current breaking capacity (Icu) in the IT network</b>	
<ul style="list-style-type: none"> <li>• at 400 V rated value</li> </ul>	55 kA
<ul style="list-style-type: none"> <li>• at 500 V rated value</li> </ul>	55 kA

### Electromagnetic compatibility

<b>EMC emitted interference</b>	
<ul style="list-style-type: none"> <li>• acc. to IEC 60947-1</li> </ul>	class A
<b>EMI immunity acc. to IEC 60947-1</b>	Class A
<b>Conducted interference</b>	
<ul style="list-style-type: none"> <li>• due to burst acc. to IEC 61000-4-4</li> </ul>	3 kV
<ul style="list-style-type: none"> <li>• due to conductor-earth surge acc. to IEC 61000-4-5</li> </ul>	4 kV
<ul style="list-style-type: none"> <li>• due to conductor-conductor surge acc. to IEC 61000-4-5</li> </ul>	2 kV
<ul style="list-style-type: none"> <li>• due to high-frequency radiation acc. to IEC 61000-4-6</li> </ul>	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	1 300 000
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
Service life maximum	20 y
Safe state	Load circuit open
Protection against electrical shock	finger-safe

### Inputs/ Outputs

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

### Response times

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

### 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	0.9 ... 3 A
Minimum load [% of IM]	50 %
Type of the motor protection	solid-state

<b>Operating voltage</b>	
• rated value	48 ... 500 V
<b>Operating frequency 1 rated value</b>	50 Hz
<b>Operating frequency 2 rated value</b>	60 Hz
<b>Relative symmetrical tolerance of the operating frequency</b>	5 %
<b>Operating range relative to the operating voltage at AC</b>	
• at 50 Hz	48 ... 500 V
<b>Operating current</b>	
• at AC at 400 V rated value	3 A
<b>Ampacity when starting maximum</b>	30 A
<b>Operating power for three-phase motors at 400 V at 50 Hz</b>	0.37 ... 1.1 kW

### Supply voltage

<b>Type of voltage of the supply voltage</b>	DC
<b>Supply voltage 1 at DC rated value</b>	
• minimum permissible	20.4 V
• maximum permissible	28.8 V
<b>Supply voltage at DC rated value</b>	24 V
<b>Consumed current for rated value of supply voltage</b>	
• in standby mode	95 mA
• during operation	160 mA
• when switching on	250 mA
<b>Power loss [W] for rated value of supply voltage</b>	
• in switching state OFF with bypass circuit	2.3 W
• in switching state ON with bypass circuit	3.8 W

### Installation/ mounting/ dimensions

<b>Mounting position</b>	Vertical, horizontal, flat (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>	
• with side-by-side mounting	
— upwards	50 mm
— downwards	50 mm

### Ambient conditions

<b>Installation altitude at height above sea level</b>	
• maximum	2 000 m; For derating see manual
<b>Ambient temperature</b>	
• during operation	-25 ... +60 °C

<ul style="list-style-type: none"> <li>during operation maximum</li> <li>during storage</li> <li>during transport</li> </ul>	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 PROFlenergy measured values</li> <li>supports PROFlenergy shutdown</li> </ul>	Yes Yes
<b>Address space memory of address range</b>	
<ul style="list-style-type: none"> <li>of inputs</li> <li>of 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>	
<ul style="list-style-type: none"> <li>at 480 V rated value</li> </ul>	3 A
<b>Current with locked rotor (LRA) for three-phase AC motor at 480 V rated value</b>	24 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 110/120 V rated value</li> <li>at 230 V rated value</li> </ul> </li> </ul>	0.1 hp 0.25 hp

- for three-phase AC motor
  - at 200/208 V rated value 0.5 hp
  - at 220/230 V rated value 0.5 hp
  - at 460/480 V rated value 1.5 hp

<b>Operating voltage</b>	
• at AC at 60 Hz acc. to CSA and UL rated value	480 V

### Certificates/approvals

<b>General Product Approval</b>			<b>For use in hazardous locations</b>	<b>Functional Safety/Safety of Machinery</b>
 CCC	 CSA	 UL		 ATEX
<a href="#">Type Examination Certificate</a>				

<b>Declaration of Conformity</b>	<b>Test Certificates</b>	<b>Shipping Approval</b>	<b>other</b>	
 EG-Konf.	<a href="#">Type Test Certificates/Test Report</a>	 ABS	 LRS	<a href="#">Environmental Confirmations</a>
<a href="#">Confirmation</a>				

### other

[PROFINET-Certification](#)

### Further information

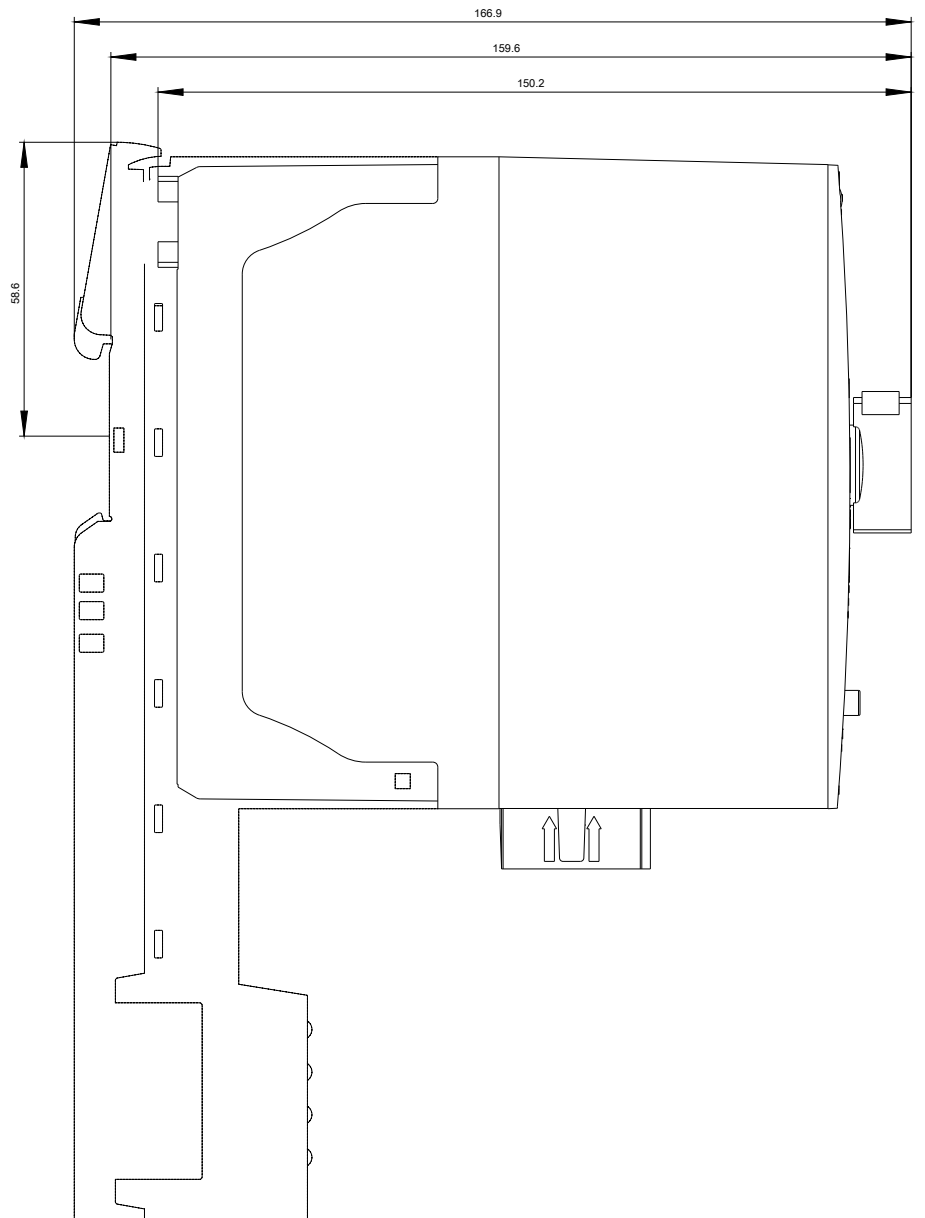
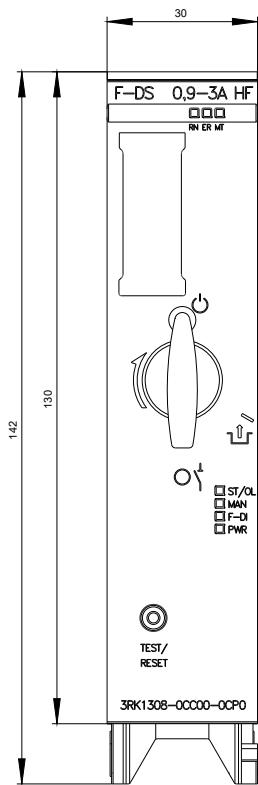
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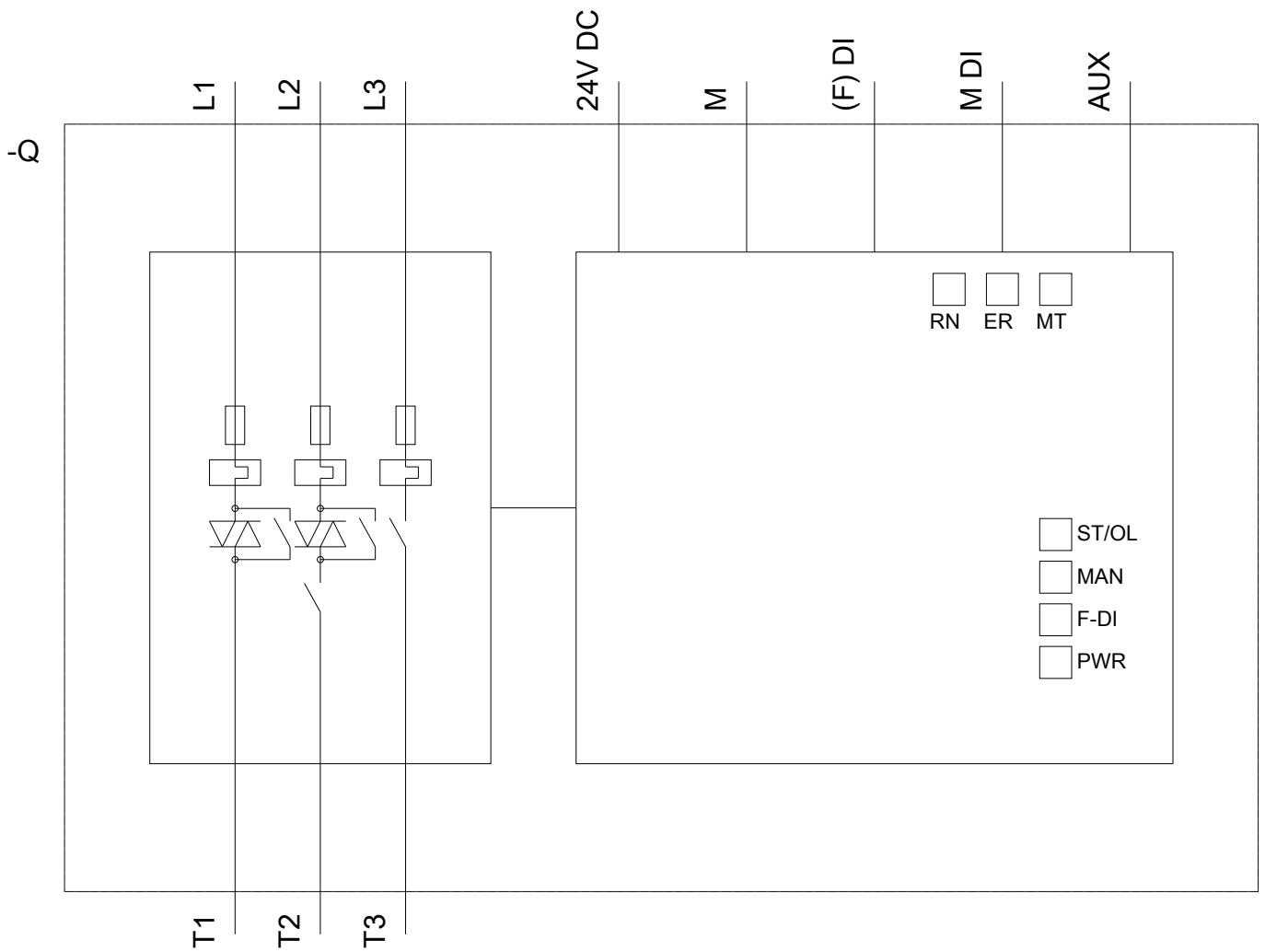
**Industry Mall (Online ordering system)**  
<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RK1308-0CC00-0CP0>

**Cax online generator**  
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**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**  
<https://support.industry.siemens.com/cs/ww/en/ps/3RK1308-0CC00-0CP0>

**Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)**  
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RK1308-0CC00-0CP0&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RK1308-0CC00-0CP0&lang=en)





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