

Fail-safe direct-on-line starter High Feature; Electronic switching; Electronic overload protection up to 1.1 kW / 400 V; Adjustment range 0.9 .. 3 A; PROFIenergy; Option: 3DI/LC module



|                          |                        |
|--------------------------|------------------------|
| 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> | Yes<br>Yes<br>Yes<br>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>                 | AC-53a: 3 A: (8-0,7: 70-32) |
| <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>   |                             |
| <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>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   | 3 400 000         |
| 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                       | 0.9 ... 3 A                                  |
| Minimum load [%]   | 50 %; from smallest adjustable rated current |
| 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> | 3 A  |
| Ampacity when starting maximum   | 30 A   |
| Operating power for three-phase motors at 400 V at 50 Hz   | 0.37 ... 1.1 kW                              |

| Inputs/ Outputs  |                                      |
|--|--------------------------------------|
| <b>Number of digital inputs</b>  | 5                                    |
| <ul style="list-style-type: none"> <li>Note</li> <li>safety-related</li> </ul>   | 4 via 3DI/LC module<br>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> <li>with signal &lt;0&gt; at DC</li> <li>for signal &lt;1&gt; at DC</li> </ul> | 24 V<br>0 ... 5 V<br>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> <li>maximum permissible</li> </ul>  | 20.4 V<br>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> <li>during operation</li> <li>at switching on</li> </ul>                            | 95 mA<br>160 mA<br>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> <li>in switching state ON with bypass circuit</li> </ul> | 2.3 W<br>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> <li>when switched off via supply voltage maximum</li> </ul> | 55 ms<br>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>  | 4 000 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<br>-40 ... +70 °C<br>-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<br>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<br>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<br>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<br>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<br>Plug contact to Base Unit<br>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> |  |
|---|--|

|  |         |
|--|---------|
| • at 480 V rated value   | 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>   |         |
| • for single-phase AC motor  |         |
| — at 110/120 V rated value   | 0.1 hp  |
| — at 230 V rated value   | 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>EMC</b> | <b>For use in hazardous locations</b> |
|---------------------------------|------------|---------------------------------------|



|  |                                  |                          |                          |
|--|----------------------------------|--------------------------|--------------------------|
| <b>Functional Safety/Safety of Machinery</b> | <b>Declaration of Conformity</b> | <b>Test Certificates</b> | <b>Marine / Shipping</b> |
|--|----------------------------------|--------------------------|--------------------------|

[Type Examination Certificate](#)



[Type Test Certificates/Test Report](#)



|                          |              |
|--------------------------|--------------|
| <b>Marine / Shipping</b> | <b>other</b> |
|--------------------------|--------------|



[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=3RK1308-0CC00-0CP0>

**Cax online generator**

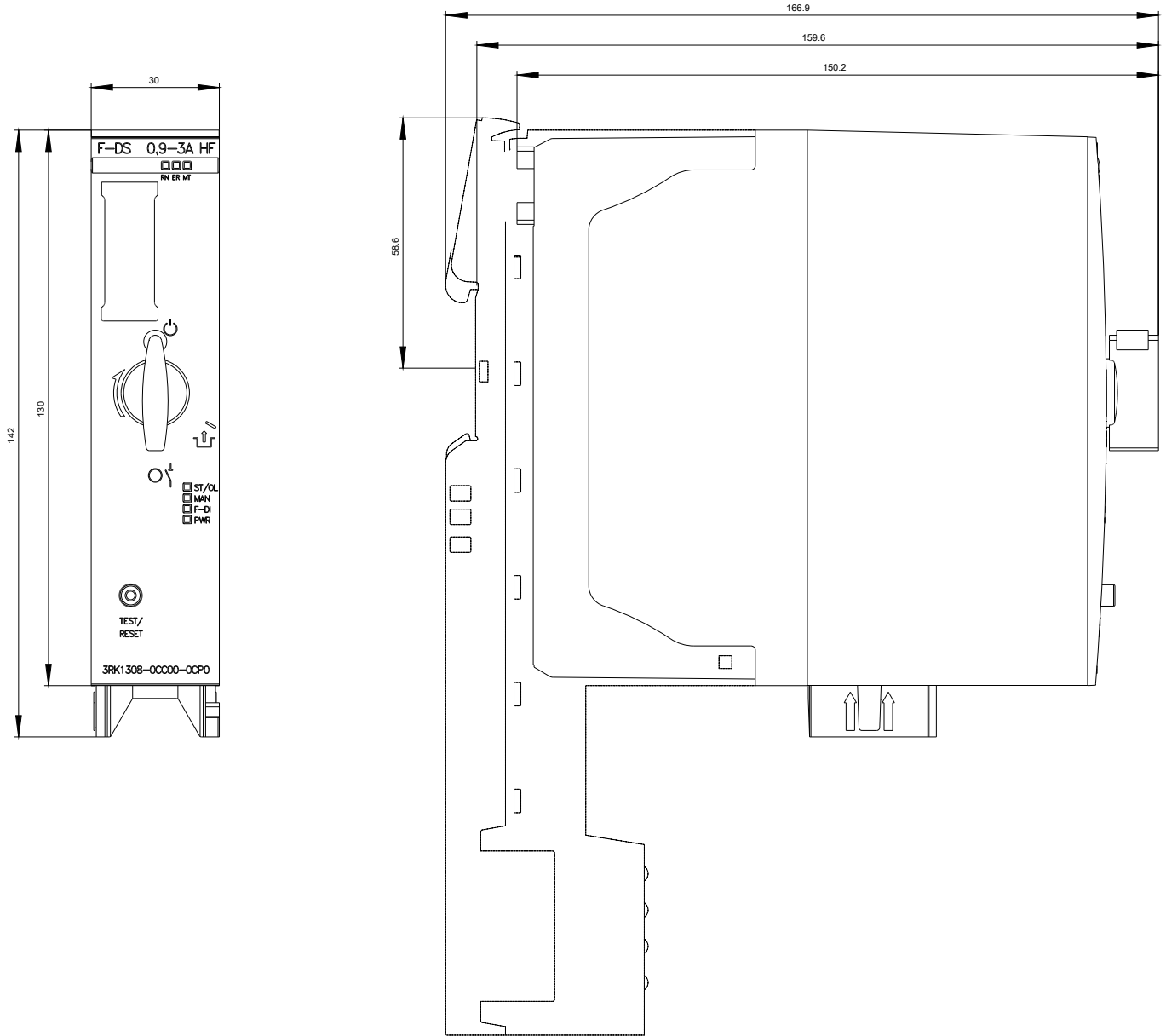
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RK1308-0CC00-0CP0>

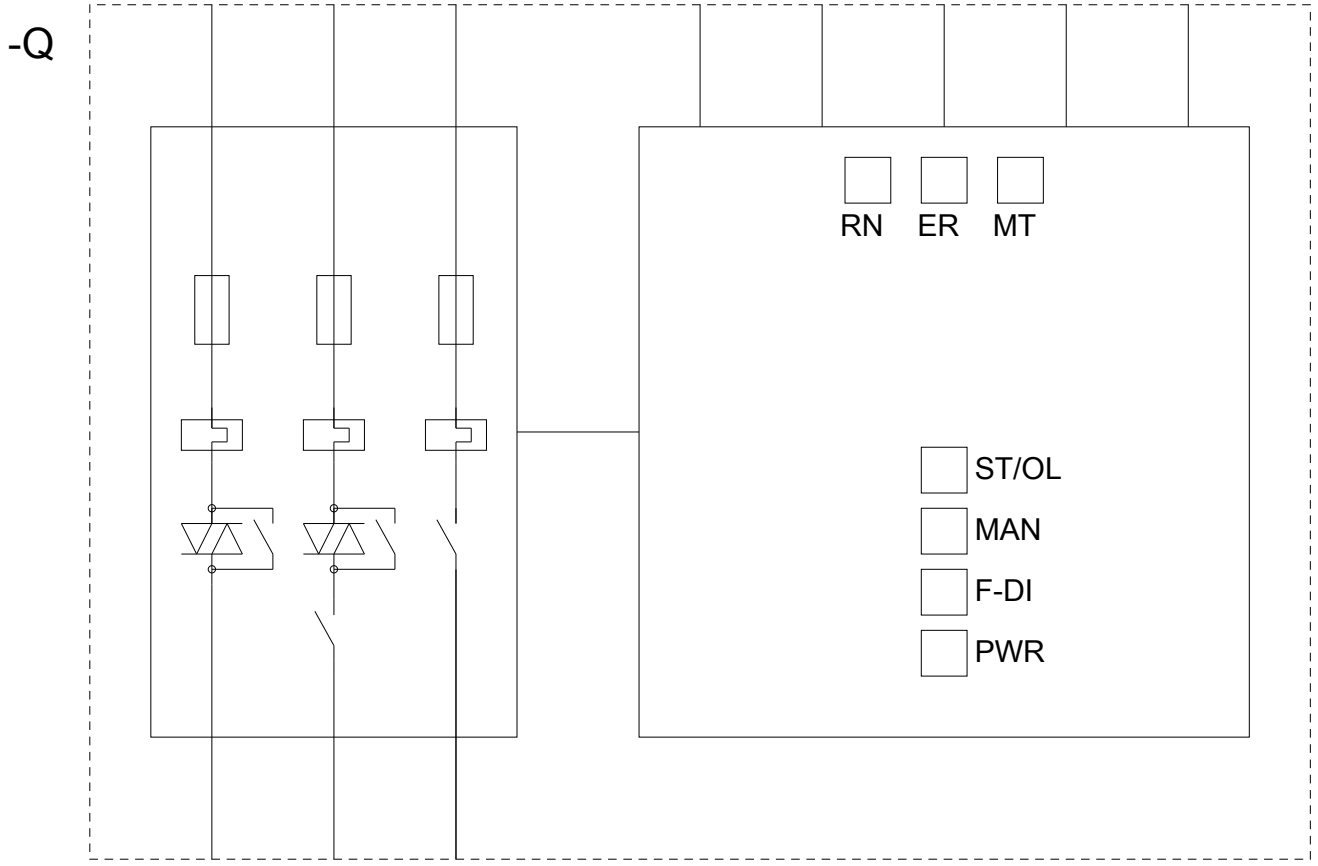
**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**

<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)





last modified:

03/10/2020