



Failsafe reversing starter High Feature; Electronic switching; Electronic overload protection up to 4 kW / 400 V; Adjustment range 2.8 .. 9 A; PROFIenergy; Option: 3DI/LC module

|                                                                                                |                                                                                                                                                                                     |
|------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| product brand name                                                                             | SIMATIC                                                                                                                                                                             |
| product category                                                                               | Motor starter                                                                                                                                                                       |
| product designation                                                                            | Reversing starter                                                                                                                                                                   |
| product type designation                                                                       | ET 200SP                                                                                                                                                                            |
| General technical data                                                                         |                                                                                                                                                                                     |
| equipment version according to IEC 60947-4-2                                                   | 3                                                                                                                                                                                   |
| product function                                                                               | Fail-safe reversing 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>        | 1.7 W                                                                                                                                                                               |
| insulation voltage rated value                                                                 | 500 V                                                                                                                                                                               |
| degree of pollution                                                                            | 2                                                                                                                                                                                   |
| overvoltage category                                                                           | III                                                                                                                                                                                 |
| surge voltage resistance rated value                                                           | 6 kV                                                                                                                                                                                |
| maximum permissible voltage for protective separation                                          |                                                                                                                                                                                     |
| <ul style="list-style-type: none"> <li>between main and auxiliary circuit</li> </ul>           | 500 V                                                                                                                                                                               |
| consumed current maximum                                                                       | 180 mA                                                                                                                                                                              |
| shock resistance                                                                               | 6g / 11 ms                                                                                                                                                                          |
| vibration resistance                                                                           | 15 mm to 6 Hz; 2g to 500 Hz                                                                                                                                                         |
| operating frequency maximum                                                                    | 1 1/s                                                                                                                                                                               |
| mechanical service life (operating cycles) of the main contacts typical                        | 30 000 000                                                                                                                                                                          |
| type of coordination                                                                           | 1                                                                                                                                                                                   |
| utilization category                                                                           |                                                                                                                                                                                     |
| <ul style="list-style-type: none"> <li>according to IEC 60947-4-2</li> </ul>                   | AC-53a: 9 A: (8-0,7: 70-32)                                                                                                                                                         |
| reference code according to IEC 81346-2                                                        | Q                                                                                                                                                                                   |
| Substance Prohibitance (Date)                                                                  | 04/15/2016                                                                                                                                                                          |
| SVHC substance name                                                                            | Lead - 7439-92-1<br>Lead monoxide (lead oxide) - 1317-36-8<br>2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol - 79-94-7<br>6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol - 119-47-1 |
| Net Weight                                                                                     | 0.453 kg                                                                                                                                                                            |
| product function                                                                               |                                                                                                                                                                                     |
| <ul style="list-style-type: none"> <li>direct start</li> </ul>                                 | Yes                                                                                                                                                                                 |
| <ul style="list-style-type: none"> <li>reverse starting</li> </ul>                             | Yes                                                                                                                                                                                 |
| product component motor brake output                                                           | No                                                                                                                                                                                  |
| product function short circuit protection                                                      | 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 according 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>                                           |                                        |
| EMC emitted interference according to IEC 60947-1                              | class A                                |
| EMC immunity according to IEC 60947-1                                          | Class A                                |
| <b>conducted interference</b>                                                  |                                        |
| • due to burst according to IEC 61000-4-4                                      | 3 kV                                   |
| • due to conductor-earth surge according to IEC 61000-4-5                      | 4 kV                                   |
| • due to conductor-conductor surge according to IEC 61000-4-5                  | 2 kV                                   |
| • due to high-frequency radiation according to IEC 61000-4-6                   | Class A                                |
| <b>field-based interference according to IEC 61000-4-3</b>                     | 20 V/m                                 |
| <b>electrostatic discharge according to IEC 61000-4-2</b>                      | 8 kV air discharge                     |
| <b>conducted HF interference emissions according to CISPR11</b>                | Class A for industrial environment     |
| <b>field-bound HF interference emission according to CISPR11</b>               | Class A for industrial environment     |
| <b>Safety related data</b>                                                     |                                        |
| product function suitable for safety function                                  | Yes                                    |
| <b>suitability for use</b>                                                     |                                        |
| • safety-related switching on                                                  | No                                     |
| • safety-related switching OFF                                                 | Yes                                    |
| <b>safe state</b>                                                              | Load circuit open                      |
| <b>test wear-related service life necessary</b>                                | Yes                                    |
| <b>function test interval maximum</b>                                          | 0.083 a                                |
| <b>diagnostics test interval by internal test function maximum</b>             | 600 s                                  |
| <b>stop category according to IEC 60204-1</b>                                  | 0                                      |
| proportion of dangerous failures with high demand rate according to SN 31920   | 50 %                                   |
| <b>B10 value with high demand rate according to SN 31920</b>                   | 1 000 000                              |
| <b>IEC 62061</b>                                                               |                                        |
| <b>Safety Integrity Level (SIL) according to IEC 62061</b>                     | SIL 3                                  |
| <b>ISO 13849</b>                                                               |                                        |
| <b>performance level (PL) according to ISO 13849-1</b>                         | PL e                                   |
| <b>category according to ISO 13849-1</b>                                       | 4                                      |
| <b>device type according to ISO 13849-1</b>                                    | 1                                      |
| <b>overdimensioning according to ISO 13849-2 necessary</b>                     | No                                     |
| <b>IEC 61508</b>                                                               |                                        |
| Safety Integrity Level (SIL) according to IEC 61508                            | SIL 3                                  |
| <b>safety device type according to IEC 61508-2</b>                             | Type B                                 |
| <b>PFH according to IEC 61508 relating to SIL</b>                              | 1E-8 1/h; for switching frequency 30/h |
| PFDavg with low demand rate according to IEC 61508                             | 9E-7; for switching frequency 30/h     |
| <b>Safe failure fraction (SFF)</b>                                             | 99.5 %                                 |
| hardware fault tolerance according to IEC 61508                                | 1                                      |
| <b>T1 value</b>                                                                |                                        |
| • of service life according to IEC 61508                                       | 20 a                                   |
| <b>Electrical Safety</b>                                                       |                                        |
| <b>touch protection against electrical shock</b>                               | finger-safe                            |
| <b>protection class IP on the front according to IEC 60529</b>                 | IP20                                   |
| <b>touch protection on the front according to IEC 60529</b>                    | finger-safe                            |
| <b>ATEX</b>                                                                    |                                        |
| <b>Safety Integrity Level (SIL) according to IEC 61508 relating to ATEX</b>    | SIL 1                                  |

|                                                                                                                                                                  |                                                  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|
| hardware fault tolerance according to IEC 61508 relating to ATEX                                                                                                 | 1                                                |
| <b>Main circuit</b>                                                                                                                                              |                                                  |
| number of poles for main current circuit                                                                                                                         | 3                                                |
| design of the switching contact                                                                                                                                  | Hybrid                                           |
| adjustable current response value current of the current-dependent overload release                                                                              | 2.8 ... 9 A                                      |
| minimum load [%]                                                                                                                                                 | 50 %; from smallest adjustable rated current     |
| type of the motor protection                                                                                                                                     | solid-state                                      |
| operating voltage rated value                                                                                                                                    | 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 %                                              |
| operational current at AC at 400 V rated value                                                                                                                   | 9 A                                              |
| ampacity when starting maximum                                                                                                                                   | 90 A                                             |
| operating power for 3-phase motors at 400 V at 50 Hz                                                                                                             | 1.5 ... 4 kW                                     |
| <b>Inputs/ Outputs</b>                                                                                                                                           |                                                  |
| number of digital inputs                                                                                                                                         | 5                                                |
| <ul style="list-style-type: none"> <li>note</li> <li>safety-related</li> </ul>                                                                                   | 4 via 3DI/LC module<br>1                         |
| type of input characteristic                                                                                                                                     | Type 1 in accordance with EN 61131-2             |
| input voltage at digital input at DC rated value                                                                                                                 | 24 V                                             |
| input current at digital input for signal <1> typical                                                                                                            | 0 A                                              |
| address space memory of address range                                                                                                                            |                                                  |
| <ul style="list-style-type: none"> <li>of the inputs</li> <li>of the outputs</li> </ul>                                                                          | 4 byte<br>2 byte                                 |
| <b>Supply voltage</b>                                                                                                                                            |                                                  |
| type of voltage of the supply voltage                                                                                                                            | DC                                               |
| supply voltage 1 at DC rated value                                                                                                                               |                                                  |
| <ul style="list-style-type: none"> <li>minimum permissible</li> <li>maximum permissible</li> </ul>                                                               | 20.4 V<br>28.8 V                                 |
| supply voltage at DC rated value                                                                                                                                 | 24 V                                             |
| consumed current for rated value of supply voltage                                                                                                               |                                                  |
| <ul style="list-style-type: none"> <li>in standby mode of operation</li> <li>during operation</li> <li>at switching on of motor</li> </ul>                       | 95 mA<br>90 mA<br>180 mA                         |
| power loss [W] for rated value of supply voltage                                                                                                                 |                                                  |
| <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>                  | 2.2 W<br>4.32 W                                  |
| inrush current peak at 24 V                                                                                                                                      | 25 A; Observe the manual for group configuration |
| duration of inrush current peak at 24 V                                                                                                                          | 0.14 ms                                          |
| <b>Response times</b>                                                                                                                                            |                                                  |
| 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<br>120 ms                                  |
| <b>Power Electronics</b>                                                                                                                                         |                                                  |
| operational current                                                                                                                                              |                                                  |
| <ul style="list-style-type: none"> <li>at 40 °C rated value</li> <li>at 50 °C rated value</li> <li>at 55 °C rated value</li> <li>at 60 °C rated value</li> </ul> | 9 A<br>9 A<br>9 A<br>7 A                         |
| <b>Installation/ mounting/ dimensions</b>                                                                                                                        |                                                  |
| mounting position                                                                                                                                                | Vertical, horizontal (observe derating)          |
| fastening method                                                                                                                                                 | pluggable in BaseUnit                            |

|                                             |        |
|---------------------------------------------|--------|
| <b>height</b>                               | 142 mm |
| <b>width</b>                                | 30 mm  |
| <b>depth</b>                                | 150 mm |
| required spacing with side-by-side mounting |        |
| • upwards                                   | 50 mm  |
| • downwards                                 | 50 mm  |

#### Ambient conditions

|                                                                |                                                                                                          |
|----------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| installation altitude at height above sea level maximum        | 4 000 m                                                                                                  |
| <b>ambient temperature</b>                                     |                                                                                                          |
| • during operation                                             | -25 ... +60 °C; For derating see manual                                                                  |
| • during storage                                               | -40 ... +70 °C                                                                                           |
| • during transport                                             | -40 ... +70 °C                                                                                           |
| environmental category during operation according 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 %                                                                                              |
| air pressure according to SN 31205                             | 900 ... 1 060 hPa                                                                                        |

#### Communication/ Protocol

|                                                              |                           |
|--------------------------------------------------------------|---------------------------|
| <b>protocol is supported</b>                                 |                           |
| • PROFIBUS DP protocol                                       | Yes                       |
| • PROFINET protocol                                          | Yes                       |
| <b>product function bus communication</b>                    | Yes                       |
| protocol is supported AS-Interface protocol                  | No                        |
| <b>product function</b>                                      |                           |
| • supports PROFenergy measured values                        | Yes                       |
| • supports PROFenergy shutdown                               | Yes                       |
| type of electrical connection of the communication interface | Plug contact to Base Unit |

#### Connections/ Terminals

|                                                 |                              |
|-------------------------------------------------|------------------------------|
| <b>type of electrical connection</b>            |                              |
| • 1 for digital input signals                   | Pluggable module - accessory |
| • 2 for digital input signals                   | Plug contact to Base Unit    |
| <b>type of electrical connection</b>            |                              |
| • for main energy infeed                        | Plug contact to Base Unit    |
| • for load-side outgoing feeder                 | Plug contact to Base Unit    |
| • for supply voltage line-side                  | Plug contact to Base Unit    |
| <b>wire length for motor unshielded maximum</b> | 200 m                        |

#### UL/CSA ratings

|                                                                           |         |
|---------------------------------------------------------------------------|---------|
| full-load current (FLA) for 3-phase AC motor at 480 V rated value         | 9 A     |
| current with locked rotor (LRA) for 3-phase AC motor at 480 V rated value | 72 A    |
| <b>yielded mechanical performance [hp]</b>                                |         |
| • for single-phase AC motor                                               |         |
| — at 110/120 V rated value                                                | 0.33 hp |
| — at 230 V rated value                                                    | 1 hp    |
| • for 3-phase AC motor                                                    |         |
| — at 200/208 V rated value                                                | 2 hp    |
| — at 220/230 V rated value                                                | 2 hp    |
| — at 460/480 V rated value                                                | 5 hp    |
| operating voltage at AC at 60 Hz according to CSA and UL rated value      | 480 V   |

#### Approvals Certificates

|                          |     |
|--------------------------|-----|
| General Product Approval | EMV |
|--------------------------|-----|



|     |                                |                   |                   |                      |
|-----|--------------------------------|-------------------|-------------------|----------------------|
| EMV | For use in hazardous locations | Functional Safety | Test Certificates | Maritime application |
|-----|--------------------------------|-------------------|-------------------|----------------------|

[KC](#)



[Type Examination Certificate](#)

[Type Test Certificates/Test Report](#)



Maritime application

other

Dangerous goods

Environment



[Confirmation](#)

[Transport Information](#)

[Environmental Confirmations](#)

Industrial Communication



Further information

Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

Information for data generation and storage

<https://support.industry.siemens.com/cs/ww/en/view/109995012>

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

<https://www.siemens.com/ic10>

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RK1308-0DD00-0CP0>

Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RK1308-0DD00-0CP0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RK1308-0DD00-0CP0>

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

[https://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RK1308-0DD00-0CP0&lang=en](https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RK1308-0DD00-0CP0&lang=en)

Characteristic curves

[https://curves.simaris.siemens.com/curves/<mmp\\_prod\\_noCOMP="HAUPT"></mmp\\_prod\\_no>](https://curves.simaris.siemens.com/curves/<mmp_prod_noCOMP="HAUPT"></mmp_prod_no>)



