

DS1-X for ET 200S Standard DOL starter expandable Setting range 4.5...6.3 A AC-3, 2.2 kW / 400 V Electromechanical starter for brake control module

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| product brand name | SIMATIC |
| product designation | Motor starters |
| design of the product | direct starter |
| product type designation | ET 200S |
| General technical data | |
| product function on-site operation | Yes |
| power loss [W] for rated value of the current | |
| • at AC in hot operating state | 10 W |
| • at AC in hot operating state per pole | 3.33 W |
| • without load current share typical | 4.12 W |
| insulation voltage rated value | 500 V |
| degree of pollution | 3 at 400 V, 2 at 500 V according to IEC60664 (IEC61131) |
| surge voltage resistance rated value | 6 kV |
| maximum permissible voltage for protective separation between main and auxiliary circuit | 400 V |
| shock resistance | 5 g / 11 ms |
| vibration resistance | 2 g |
| operating frequency maximum | 750 1/h |
| mechanical service life (operating cycles) of the main contacts typical | 100 000 |
| type of coordination | 1 |
| reference code according to IEC 81346-2 | Q |
| Substance Prohibitance (day/month/year) | 10/26/2016 |
| SVHC substance name | Lead CAS-No. 7439-92-1 Lead monoxide (lead oxide) CAS-No. 1317-36-8 2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one CAS-No. 71868-10-5 Melamine CAS-No. 108-78-1 |
| Net Weight | 945 g |
| product function | |
| • direct start | Yes |
| • reverse starting | No |
| product component motor brake output | Yes |
| product feature | |
| • brake control with 230 V AC | No |
| • brake control with 24 V DC | No |
| • brake control with 180 V DC | No |
| • brake control with 500 V DC | No |
| product extension braking module for brake control | Yes |
| product function short circuit protection | Yes |
| design of short-circuit protection | circuit-breakers |
| maximum short-circuit current breaking capacity (Icu) | |
| • at 400 V rated value | 50 kA |
| Electromagnetic compatibility | |
| EMC emitted interference according to IEC 60947-1 | CISPR11, ambience A (industrial sector) |
| EMC immunity according to IEC 60947-1 | corresponds to degree of severity 3, ambience A (industrial sector) |
| conducted interference | |
| • due to burst according to IEC 61000-4-4 | 2 kV on voltage supply, inputs and outputs |
| • due to conductor-earth surge according to IEC 61000-4-5 | 2 kV (U > 24 V DC) |
| • due to conductor-conductor surge according to IEC 61000-4-5 | 1 kV (U > 24 V DC) |

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| field-based interference according to IEC 61000-4-3 | 80 MHz ... 1 GHz 10 V/m, 1.4 GHz ... 2 Hz 3 V/m, 2 GHz ... 2.7 GHz 1 V/m |
| Safety related data | |
| proportion of dangerous failures | |
| • with low demand rate according to SN 31920 | 50 % |
| • with high demand rate according to SN 31920 | 75 % |
| B10 value with high demand rate according to SN 31920 | 1 000 000 |
| failure rate [FIT] with low demand rate according to SN 31920 | 100 FIT |
| IEC 61508 | |
| T1 value for proof test interval or service life according to IEC 61508 | 20 a |
| Electrical Safety | |
| protection class IP on the front according to IEC 60529 | IP20 |
| touch protection on the front according to IEC 60529 | finger-safe |
| Main circuit | |
| number of poles for main current circuit | 3 |
| design of the switching contact | electromechanical |
| adjustable current response value current of the current-dependent overload release | 4.5 ... 6.3 A |
| type of the motor protection | bimetal |
| operating voltage rated value | 200 ... 400 V |
| operating frequency 1 rated value | 50 Hz |
| operating frequency 2 rated value | 60 Hz |
| relative positive tolerance of the operating frequency | 10 % |
| relative negative tolerance of the operating frequency | 10 % |
| operating range relative to the operating voltage at AC at 50 Hz | 200 ... 440 V |
| operational current | |
| • at AC-3 at 400 V rated value | 6.3 A |
| operating power at AC-3 at 400 V rated value | 2.2 kW |
| operating power for 3-phase motors at 400 V at 50 Hz | 2.2 kW |
| Inputs/ Outputs | |
| product function | |
| • digital inputs parameterizable | No |
| • digital outputs parameterizable | No |
| number of digital inputs | 0 |
| number of sockets | |
| • for digital output signals | 0 |
| • for digital input signals | 0 |
| Supply voltage | |
| type of voltage of the supply voltage | DC |
| supply voltage 1 at DC | 24 V |
| supply voltage 1 at DC rated value | |
| • minimum permissible | 20.4 V |
| • maximum permissible | 28.8 V |
| Control circuit/ Control | |
| type of voltage of the control supply voltage | DC |
| control supply voltage at DC rated value | 20.4 ... 28.8 V |
| control supply voltage 1 at DC rated value | 20.4 ... 28.8 V |
| control supply voltage 1 at DC | 24 V |
| power loss [W] in auxiliary and control circuit | |
| • in switching state OFF | |
| — with bypass circuit | 0.3744 W |
| — without bypass circuit | 0.374 W |
| • in switching state ON | |
| — with bypass circuit | 4.1184 W |
| — without bypass circuit | 4.118 W |
| Installation/ mounting/ dimensions | |
| mounting position | vertical, horizontal |
| fastening method | pluggable on terminal module |

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|---------------|--------|
| height | 265 mm |
| width | 45 mm |
| depth | 120 mm |

Ambient conditions

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|---|----------------|
| installation altitude at height above sea level maximum | 2 000 m |
| ambient temperature | |
| • during operation | 0 ... 60 °C |
| • during storage | -40 ... +70 °C |
| • during transport | -40 ... +70 °C |
| relative humidity during operation | 5 ... 95 % |

Communication/ Protocol

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|--|-------------------|
| protocol is supported | |
| • PROFIBUS DP protocol | Yes |
| • PROFINET protocol | Yes |
| design of the interface PROFINET protocol | Yes |
| product function bus communication | Yes |
| protocol is supported AS-Interface protocol | No |
| product function | |
| • supports PROFenergy measured values | No |
| • supports PROFenergy shutdown | No |
| address space memory of address range | |
| • of the inputs | 1 byte |
| • of the outputs | 1 byte |
| type of electrical connection | |
| • of the communication interface | via backplane bus |
| • for communication transmission | via backplane bus |

Connections/ Terminals

| | |
|--|----------------------|
| type of electrical connection for main current circuit | screw-type terminals |
| type of electrical connection | |
| • 1 for digital input signals | using control module |
| • 2 for digital input signals | using control module |
| type of electrical connection | |
| • at the manufacturer-specific device interface | plug |
| • for main energy infeed | screw-type terminals |
| • for load-side outgoing feeder | Screw-type terminals |
| • for main energy transmission | via energy bus |
| • for supply voltage line-side | via backplane bus |
| • for supply voltage transmission | via backplane bus |

UL/CSA ratings

| | |
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| operating voltage at AC at 60 Hz according to CSA and UL rated value | 600 V |
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Approvals Certificates

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



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|---------------------------------------|--------------------------|--------------|------------------------|--------------------|
| For use in hazardous locations | Test Certificates | other | Dangerous goods | Environment |
|---------------------------------------|--------------------------|--------------|------------------------|--------------------|



[Type Test Certificates/Test Report](#)

[Confirmation](#)



[Transport Information](#)

[Environmental Confirmations](#)

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=3RK1301-1GB00-0AA2>

Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RK1301-1GB00-0AA2>

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

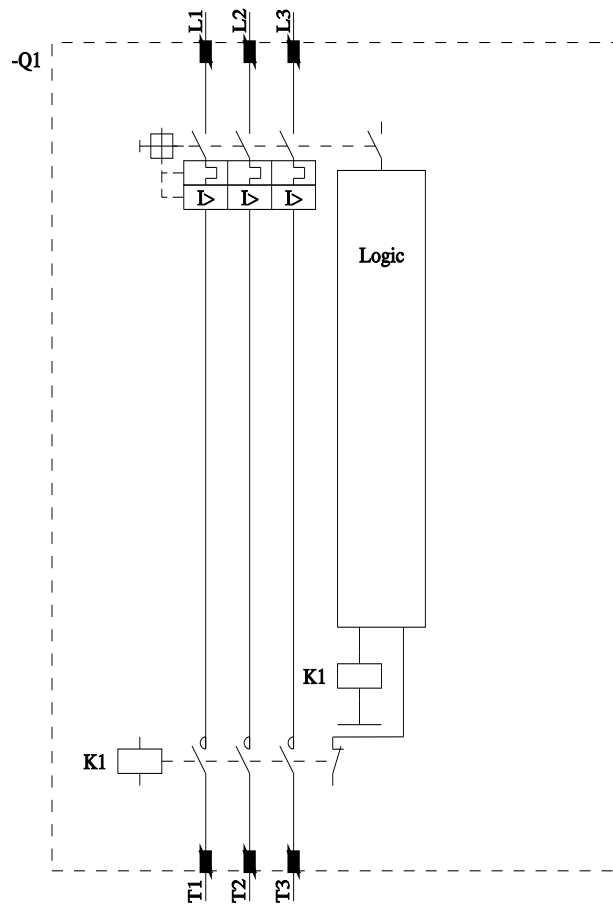
<https://support.industry.siemens.com/cs/ww/en/ps/3RK1301-1GB00-0AA2>

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

https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RK1301-1GB00-0AA2&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=)



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