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SIMATIC ET 200SP, relay module normally open, RQ NO-MA4x120VDC...230VAC/5A ST, with manual operation, packing unit VPE 1, suitable for BU type B0 or B1, Module diagnostics

| General information                                      |                                                |
|----------------------------------------------------------|------------------------------------------------|
| Product type designation                                 | RQ 4x120 V DC ... 230 V AC/5 A NO MA ST        |
| HW functional status                                     | From FS03                                      |
| Firmware version                                         |                                                |
| • FW update possible                                     | Yes                                            |
| usable BaseUnits                                         | BU type B0, B1                                 |
| Color code for module-specific color-coded label         | CC40                                           |
| Product function                                         |                                                |
| • I&M data                                               | Yes; I&M0 to I&M3                              |
| • Isochronous mode                                       | No                                             |
| Engineering with                                         |                                                |
| • STEP 7 TIA Portal configurable/integrated from version | V13 SP1                                        |
| • STEP 7 configurable/integrated from version            | V5.5 SP3 / -                                   |
| • PROFIBUS from GSD version/GSD revision                 | One GSD file each, Revision 3 and 5 and higher |
| • PROFINET from GSD version/GSD revision                 | GSDML V2.3                                     |
| Operating mode                                           |                                                |
| • DQ                                                     | Yes                                            |
| • DQ with energy-saving function                         | No                                             |
| • PWM                                                    | No                                             |
| • Oversampling                                           | No                                             |
| • MSO                                                    | No                                             |
| Supply voltage                                           |                                                |
| Rated value (DC)                                         | 24 V                                           |
| permissible range, lower limit (DC)                      | 19.2 V                                         |
| permissible range, upper limit (DC)                      | 28.8 V                                         |
| Reverse polarity protection                              | Yes                                            |
| Input current                                            |                                                |
| Current consumption, max.                                | 100 mA; without load                           |
| Power loss                                               |                                                |
| Power loss, typ.                                         | 1.5 W                                          |
| Address area                                             |                                                |
| Address space per module                                 |                                                |
| • Inputs                                                 | 1 byte; + 1 byte for QI information            |
| • Outputs                                                | 1 byte                                         |
| Hardware configuration                                   |                                                |
| Automatic encoding                                       | Yes                                            |

|                                                                    |                                                                                               |
|--------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| • Mechanical coding element                                        | Yes                                                                                           |
| • Type of mechanical coding element                                | type C                                                                                        |
| <b>Selection of BaseUnit for connection variants</b>               |                                                                                               |
| • 2-wire connection                                                | BU type B1                                                                                    |
| • 3-wire connection                                                | BU type B0                                                                                    |
| <b>Digital outputs</b>                                             |                                                                                               |
| Type of digital output                                             | Relays                                                                                        |
| Number of digital outputs                                          | 4                                                                                             |
| Current-sinking                                                    | Yes                                                                                           |
| Current-sourcing                                                   | Yes                                                                                           |
| Digital outputs, parameterizable                                   | Yes                                                                                           |
| Short-circuit protection                                           | No                                                                                            |
| <b>Switching frequency</b>                                         |                                                                                               |
| • with resistive load, max.                                        | 2 Hz                                                                                          |
| • with inductive load (acc. to IEC 60947-5-1, DC13), max.          | 0.5 Hz; provide one freewheeling diode for switching frequencies higher than 0.1 Hz           |
| • with inductive load (acc. to IEC 60947-5-1, AC15), max.          | 0.5 Hz                                                                                        |
| • on lamp load, max.                                               | 2 Hz                                                                                          |
| <b>Total current of the outputs</b>                                |                                                                                               |
| • Current per channel, max.                                        | 5 A                                                                                           |
| • Current per module, max.                                         | 20 A                                                                                          |
| <b>Total current of the outputs (per module)</b>                   |                                                                                               |
| <b>horizontal installation</b>                                     |                                                                                               |
| — up to 50 °C, max.                                                | 20 A                                                                                          |
| — up to 60 °C, max.                                                | 16 A                                                                                          |
| <b>vertical installation</b>                                       |                                                                                               |
| — up to 40 °C, max.                                                | 20 A                                                                                          |
| — up to 50 °C, max.                                                | 16 A                                                                                          |
| <b>Relay outputs</b>                                               |                                                                                               |
| • Number of relay outputs                                          | 4                                                                                             |
| • Rated supply voltage of relay coil L+ (DC)                       | 24 V                                                                                          |
| • Current consumption of relays (coil current of all relays), max. | 40 mA                                                                                         |
| • external protection for relay outputs                            | Yes, with miniature fuse max. 6 A tripping current and quick-response tripping characteristic |
| • Number of operating cycles, max.                                 | 7 000 000; see additional description in the manual                                           |
| <b>Switching capacity of contacts</b>                              |                                                                                               |
| — with inductive load, max.                                        | 2 A; see additional description in the manual                                                 |
| — with resistive load, max.                                        | 5 A; see additional description in the manual                                                 |
| — Thermal continuous current, max.                                 | 5 A                                                                                           |
| — Switching current, min.                                          | 100 mA; 5 V DC                                                                                |
| — Rated switching voltage (DC)                                     | 24 V DC to 120 V DC                                                                           |
| — Rated switching voltage (AC)                                     | 24V AC to 230V AC                                                                             |
| <b>Cable length</b>                                                |                                                                                               |
| • shielded, max.                                                   | 1 000 m                                                                                       |
| • unshielded, max.                                                 | 200 m                                                                                         |
| <b>Interrupts/diagnostics/status information</b>                   |                                                                                               |
| Diagnostics function                                               | Yes                                                                                           |
| Substitute values connectable                                      | Yes                                                                                           |
| <b>Alarms</b>                                                      |                                                                                               |
| • Diagnostic alarm                                                 | Yes                                                                                           |
| <b>Diagnoses</b>                                                   |                                                                                               |
| • Monitoring the supply voltage                                    | Yes                                                                                           |
| • Wire break                                                       | No                                                                                            |
| • Short-circuit                                                    | No                                                                                            |
| • Group error                                                      | Yes                                                                                           |
| <b>Diagnostics indication LED</b>                                  |                                                                                               |
| • Monitoring of the supply voltage (PWR-LED)                       | Yes; green PWR LED                                                                            |
| • Channel status display                                           | Yes; green LED                                                                                |
| • for channel diagnostics                                          | No                                                                                            |

|                                                                                                                |                                                                  |         |                |
|----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|---------|----------------|
| <ul style="list-style-type: none"><li>• for module diagnostics</li></ul>                                       | Yes; green/red DIAG LED                                          |         |                |
| Potential separation                                                                                           |                                                                  |         |                |
| Potential separation channels                                                                                  |                                                                  |         |                |
| <ul style="list-style-type: none"><li>• between the channels</li></ul>                                         | Yes                                                              |         |                |
| <ul style="list-style-type: none"><li>• between the channels and backplane bus</li></ul>                       | Yes                                                              |         |                |
| <ul style="list-style-type: none"><li>• between the channels and the power supply of the electronics</li></ul> | Yes                                                              |         |                |
| Permissible potential difference                                                                               |                                                                  |         |                |
| between channels and backplane bus/supply voltage                                                              | 240 V AC                                                         |         |                |
| Isolation                                                                                                      |                                                                  |         |                |
| Isolation tested with                                                                                          | 2 500 V DC (type test)                                           |         |                |
| tested with                                                                                                    |                                                                  |         |                |
| <ul style="list-style-type: none"><li>• between channels and backplane bus/supply voltage</li></ul>            | 2 500 V DC                                                       |         |                |
| <ul style="list-style-type: none"><li>• between backplane bus and supply voltage</li></ul>                     | 707 V DC (type test)                                             |         |                |
| Standards, approvals, certificates                                                                             |                                                                  |         |                |
| Suitable for safety functions                                                                                  | No                                                               |         |                |
| Ecological footprint                                                                                           |                                                                  |         |                |
| <ul style="list-style-type: none"><li>• environmental product declaration</li></ul>                            | Yes                                                              |         |                |
| Global warming potential                                                                                       |                                                                  |         |                |
| <ul style="list-style-type: none"><li>— global warming potential, (total) [CO2 eq]</li></ul>                   | 25.5 kg                                                          |         |                |
| <ul style="list-style-type: none"><li>— global warming potential, (during production) [CO2 eq]</li></ul>       | 3.54 kg                                                          |         |                |
| <ul style="list-style-type: none"><li>— global warming potential, (during operation) [CO2 eq]</li></ul>        | 22.1 kg                                                          |         |                |
| <ul style="list-style-type: none"><li>— global warming potential, (after end of life cycle) [CO2 eq]</li></ul> | -0.137 kg                                                        |         |                |
| Ambient conditions                                                                                             |                                                                  |         |                |
| Ambient temperature during operation                                                                           |                                                                  |         |                |
| <ul style="list-style-type: none"><li>• horizontal installation, min.</li></ul>                                | -30 °C                                                           |         |                |
| <ul style="list-style-type: none"><li>• horizontal installation, max.</li></ul>                                | 60 °C                                                            |         |                |
| <ul style="list-style-type: none"><li>• vertical installation, min.</li></ul>                                  | -30 °C                                                           |         |                |
| <ul style="list-style-type: none"><li>• vertical installation, max.</li></ul>                                  | 50 °C                                                            |         |                |
| Altitude during operation relating to sea level                                                                |                                                                  |         |                |
| <ul style="list-style-type: none"><li>• Installation altitude above sea level, max.</li></ul>                  | 2 000 m; On request: Installation altitudes greater than 2 000 m |         |                |
| Absolute humidity                                                                                              |                                                                  |         |                |
| <ul style="list-style-type: none"><li>• dew point, min.</li></ul>                                              | -60 °C; suitable for dry room applications                       |         |                |
| Dimensions                                                                                                     |                                                                  |         |                |
| Width                                                                                                          | 20 mm                                                            |         |                |
| Height                                                                                                         | 73 mm                                                            |         |                |
| Depth                                                                                                          | 58 mm                                                            |         |                |
| Weights                                                                                                        |                                                                  |         |                |
| Weight, approx.                                                                                                | 45 g                                                             |         |                |
| Classifications                                                                                                |                                                                  |         |                |
|                                                                                                                |                                                                  | Version | Classification |
|                                                                                                                | eClass                                                           | 16      | 27-24-26-04    |
|                                                                                                                | eClass                                                           | 14      | 27-24-26-04    |
|                                                                                                                | eClass                                                           | 12      | 27-24-26-04    |
|                                                                                                                | eClass                                                           | 9.1     | 27-24-26-04    |
|                                                                                                                | eClass                                                           | 9       | 27-24-26-04    |
|                                                                                                                | eClass                                                           | 8       | 27-24-26-04    |
|                                                                                                                | eClass                                                           | 7.1     | 27-24-26-04    |
|                                                                                                                | eClass                                                           | 6       | 27-24-26-04    |
|                                                                                                                | ETIM                                                             | 10      | EC001599       |
|                                                                                                                | ETIM                                                             | 9       | EC001599       |
|                                                                                                                | ETIM                                                             | 8       | EC001599       |
|                                                                                                                | ETIM                                                             | 7       | EC001599       |
|                                                                                                                | IDEA                                                             | 4       | 3566           |

## Approvals / Certificates

## General Product Approval


[Miscellaneous](#)
[Manufacturer Declaration](#)


## General Product Approval

## For use in hazardous locations


[China RoHS](#)


## For use in hazardous locations

## Maritime application

[EM](#)

[NK / Nippon Kaiji Kyokai](#)

## Maritime application

## Environment


[CCS \(China Classification Society\)](#)
[KR \(Korean Register of Shipping\)](#)


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last modified:

2/1/2026