



SIMATIC ET 200SP, Digital output module, DQ 8x 24V DC/0.5A Basic, Source output (PNP,P-switching) Packing unit: 10 pieces, fits to BU-type A0, Colour Code CC02, substitute value output, module diagnostics for: supply voltage

| General information                                      |                                                |
|----------------------------------------------------------|------------------------------------------------|
| Product type designation                                 | DQ 8x24VDC/0.5A BA                             |
| HW functional status                                     | From FS02                                      |
| Firmware version                                         | V0.0                                           |
| • FW update possible                                     | No                                             |
| usable BaseUnits                                         | BU type A0                                     |
| Color code for module-specific color-coded label         | CC02                                           |
| Product function                                         |                                                |
| • I&M data                                               | Yes; I&M0 to I&M3                              |
| • Isochronous mode                                       | No                                             |
| Engineering with                                         |                                                |
| • STEP 7 TIA Portal configurable/integrated from version | V14                                            |
| • 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.                                | 45 mA; without load                            |
| Output voltage                                           |                                                |
| Rated value (DC)                                         | 24 V                                           |
| Power loss                                               |                                                |
| Power loss, typ.                                         | 1 W                                            |
| Address area                                             |                                                |
| Address space per module                                 |                                                |
| • Address space per module, max.                         | 1 byte                                         |
| Hardware configuration                                   |                                                |

|                                                  |                                                               |
|--------------------------------------------------|---------------------------------------------------------------|
| Automatic encoding                               | Yes                                                           |
| • Mechanical coding element                      | Yes                                                           |
| • Type of mechanical coding element              | Type A                                                        |
| Selection of BaseUnit for connection variants    |                                                               |
| • 1-wire connection                              | BU type A0                                                    |
| • 2-wire connection                              | BU type A0                                                    |
| • 3-wire connection                              | BU type A0 with AUX terminals or potential distributor module |
| • 4-wire connection                              | BU type A0 + Potential distributor module                     |
| <b>Digital outputs</b>                           |                                                               |
| Type of digital output                           | Source output (PNP, current-sourcing)                         |
| Number of digital outputs                        | 8                                                             |
| Current-sinking                                  | No                                                            |
| Current-sourcing                                 | Yes                                                           |
| Digital outputs, parameterizable                 | Yes                                                           |
| Short-circuit protection                         | Yes; per channel, electronic                                  |
| • Response threshold, typ.                       | 1 A                                                           |
| Limitation of inductive shutdown voltage to      | Typ. L+ (-50 V)                                               |
| Controlling a digital input                      | Yes                                                           |
| Switching capacity of the outputs                |                                                               |
| • with resistive load, max.                      | 0.5 A                                                         |
| • on lamp load, max.                             | 5 W                                                           |
| Load resistance range                            |                                                               |
| • lower limit                                    | 48 Ω                                                          |
| • upper limit                                    | 100 kΩ                                                        |
| Output current                                   |                                                               |
| • for signal "1" rated value                     | 0.5 A                                                         |
| • for signal "1" permissible range, max.         | 0.5 A                                                         |
| • for signal "0" residual current, max.          | 10 μA                                                         |
| Output delay with resistive load                 |                                                               |
| • "0" to "1", max.                               | 100 μs; at rated load                                         |
| • "1" to "0", max.                               | 150 μs; at rated load                                         |
| Parallel switching of two outputs                |                                                               |
| • for uprating                                   | No                                                            |
| • for redundant control of a load                | Yes                                                           |
| Switching frequency                              |                                                               |
| • with resistive load, max.                      | 100 Hz                                                        |
| • with inductive load, max.                      | 2 Hz                                                          |
| • on lamp load, max.                             | 10 Hz                                                         |
| Total current of the outputs                     |                                                               |
| • Current per channel, max.                      | 0.5 A                                                         |
| • Current per module, max.                       | 4 A                                                           |
| Total current of the outputs (per module)        |                                                               |
| horizontal installation                          |                                                               |
| — up to 60 °C, max.                              | 4 A                                                           |
| vertical installation                            |                                                               |
| — up to 50 °C, max.                              | 4 A                                                           |
| Cable length                                     |                                                               |
| • shielded, max.                                 | 1 000 m                                                       |
| • unshielded, max.                               | 600 m                                                         |
| <b>Interrupts/diagnostics/status information</b> |                                                               |
| Diagnostics function                             | Yes                                                           |
| Substitute values connectable                    | Yes                                                           |
| Alarms                                           |                                                               |
| • Diagnostic alarm                               | Yes                                                           |
| Diagnoses                                        |                                                               |
| • Monitoring the supply voltage                  | Yes                                                           |
| • Wire-break                                     | No                                                            |
| • Short-circuit                                  | No                                                            |
| • Group error                                    | Yes                                                           |

|                                                                                                                |                                                                        |         |                |
|----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|---------|----------------|
| Diagnostics indication LED                                                                                     |                                                                        |         |                |
| <ul style="list-style-type: none"><li>Monitoring of the supply voltage (PWR-LED)</li></ul>                     | Yes; green PWR LED                                                     |         |                |
| <ul style="list-style-type: none"><li>Channel status display</li></ul>                                         | Yes; green LED                                                         |         |                |
| <ul style="list-style-type: none"><li>for channel diagnostics</li></ul>                                        | 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>                                           | No                                                                     |         |                |
| <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>   | No                                                                     |         |                |
| Isolation                                                                                                      |                                                                        |         |                |
| Isolation tested with                                                                                          | 707 V DC (type test)                                                   |         |                |
| Standards, approvals, certificates                                                                             |                                                                        |         |                |
| Suitable for safety functions                                                                                  | No                                                                     |         |                |
| Suitable for safety-related tripping of standard modules                                                       | Yes; see FAQ Entry ID: 39198632                                        |         |                |
| 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>                   | 20.4 kg                                                                |         |                |
| <ul style="list-style-type: none"><li>— global warming potential, (during production) [CO2 eq]</li></ul>       | 3.16 kg                                                                |         |                |
| <ul style="list-style-type: none"><li>— global warming potential, (during operation) [CO2 eq]</li></ul>        | 17.5 kg                                                                |         |                |
| <ul style="list-style-type: none"><li>— global warming potential, (after end of life cycle) [CO2 eq]</li></ul> | -0.221 kg                                                              |         |                |
| Highest safety class achievable in safety mode                                                                 |                                                                        |         |                |
| <ul style="list-style-type: none"><li>Performance level according to ISO 13849-1</li></ul>                     | PL d                                                                   |         |                |
| <ul style="list-style-type: none"><li>SIL acc. to IEC 61508</li></ul>                                          | SIL 2                                                                  |         |                |
| Ambient conditions                                                                                             |                                                                        |         |                |
| Ambient temperature during operation                                                                           |                                                                        |         |                |
| <ul style="list-style-type: none"><li>horizontal installation, min.</li></ul>                                  | -30 °C; < 0 °C as of FS02                                              |         |                |
| <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; < 0 °C as of FS02                                              |         |                |
| <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>                    | 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual |         |                |
| Dimensions                                                                                                     |                                                                        |         |                |
| Width                                                                                                          | 15 mm                                                                  |         |                |
| Height                                                                                                         | 73 mm                                                                  |         |                |
| Depth                                                                                                          | 58 mm                                                                  |         |                |
| Weights                                                                                                        |                                                                        |         |                |
| Weight, approx.                                                                                                | 30 g                                                                   |         |                |
| Classifications                                                                                                |                                                                        |         |                |
|                                                                                                                |                                                                        | Version | Classification |
|                                                                                                                | 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](#)

[China RoHS](#)

[Manufacturer Declaration](#)



Maritime application

Environment



Siemens  
EcoTech



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