

Siemens  
EcoTech



SIMATIC ET 200SP, Digital output module, DQ 8x 24V DC/0.5A Standard, Source output (PNP,P-switching) Packing unit: 1 piece, fits to BU-type A0, Colour Code CC02, substitute value output, module diagnostics for: short-circuit to L+ and ground, wire break, supply voltage

| General information                                      |                                                        |
|----------------------------------------------------------|--------------------------------------------------------|
| Product type designation                                 | DQ 8x24VDC/0.5A ST                                     |
| HW functional status                                     | from FS21                                              |
| 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 | STEP 7 TIA V14 with HSP0222 / integrated as of TIA V15 |
| • STEP 7 configurable/integrated from version            | V5.5 SP3 with HSP0230 V7.0 / integrated as of V5.6 SP1 |
| • PCS 7 configurable/integrated from version             | V8.1 SP1                                               |
| • 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.                                | 20 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; + 1 byte for QI information                    |

| 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                                                                                |
| Digital outputs                               |                                                                                                                          |
| Type of digital output                        | Source output (PNP, current-sourcing)                                                                                    |
| Number of digital outputs                     | 8                                                                                                                        |
| Current-sinking                               | No                                                                                                                       |
| Current-sourcing                              | Yes                                                                                                                      |
| Digital outputs, parameterizable              | Yes                                                                                                                      |
| output type acc. to IEC 61131, type 0.5       | Yes                                                                                                                      |
| Short-circuit protection                      | Yes; Electronic                                                                                                          |
| • Response threshold, typ.                    | 1 A; 0.7 to 1.3 A                                                                                                        |
| Open-circuit detection                        | Yes                                                                                                                      |
| 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                                                                                                                    |
| • with inductive load, max.                   | 0.5 A                                                                                                                    |
| • on lamp load, max.                          | 5 W                                                                                                                      |
| Load resistance range                         |                                                                                                                          |
| • lower limit                                 | 48 Ω                                                                                                                     |
| • upper limit                                 | 12 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.       | 0.1 mA                                                                                                                   |
| Output delay with resistive load              |                                                                                                                          |
| • "0" to "1", max.                            | 50 μs; at rated load                                                                                                     |
| • "1" to "0", max.                            | 100 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.                   | 0.1 Hz; higher frequencies are possible, see Equipment Manual "Maximum permitted switching frequency of inductive loads" |
| • 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                                                                                                                    |
| Interrupts/diagnostics/status information     |                                                                                                                          |
| Diagnostics function                          | Yes                                                                                                                      |
| Substitute values connectable                 | Yes                                                                                                                      |
| Alarms                                        |                                                                                                                          |
| • Diagnostic alarm                            | Yes                                                                                                                      |

|                                                                |                                                                        |
|----------------------------------------------------------------|------------------------------------------------------------------------|
| <b>Diagnoses</b>                                               |                                                                        |
| • Monitoring the supply voltage                                | Yes                                                                    |
| • Wire break                                                   | Yes; module-wise                                                       |
| • Short-circuit to ground                                      | Yes; module-wise                                                       |
| • Short-circuit to L+                                          | Yes; module-wise                                                       |
| • Group error                                                  | Yes                                                                    |
| <b>Diagnostics indication LED</b>                              |                                                                        |
| • Monitoring of the supply voltage (PWR-LED)                   | Yes; green PWR LED                                                     |
| • Channel status display                                       | Yes; green PWR LED                                                     |
| • for channel diagnostics                                      | No                                                                     |
| • for module diagnostics                                       | Yes; green PWR LED                                                     |
| <b>Potential separation</b>                                    |                                                                        |
| <b>Potential separation channels</b>                           |                                                                        |
| • between the channels                                         | No                                                                     |
| • between the channels and backplane bus                       | Yes                                                                    |
| • Between the channels and load voltage L+                     | No                                                                     |
| <b>Isolation</b>                                               |                                                                        |
| Isolation tested with                                          | 707 V DC (type test)                                                   |
| <b>Standards, approvals, certificates</b>                      |                                                                        |
| Suitable for safety functions                                  | No                                                                     |
| Suitable for safety-related tripping of standard modules       | No                                                                     |
| <b>Ecological footprint</b>                                    |                                                                        |
| • environmental product declaration                            | Yes                                                                    |
| <b>Global warming potential</b>                                |                                                                        |
| — global warming potential, (total) [CO2 eq]                   | 20.4 kg                                                                |
| — global warming potential, (during production) [CO2 eq]       | 3.16 kg                                                                |
| — global warming potential, (during operation) [CO2 eq]        | 17.5 kg                                                                |
| — global warming potential, (after end of life cycle) [CO2 eq] | -0.221 kg                                                              |
| <b>Ambient conditions</b>                                      |                                                                        |
| <b>Ambient temperature during operation</b>                    |                                                                        |
| • horizontal installation, min.                                | -30 °C; < 0 °C as of FS02                                              |
| • horizontal installation, max.                                | 60 °C                                                                  |
| • vertical installation, min.                                  | -30 °C; < 0 °C as of FS02                                              |
| • vertical installation, max.                                  | 50 °C                                                                  |
| <b>Altitude during operation relating to sea level</b>         |                                                                        |
| • Installation altitude above sea level, max.                  | 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual |
| <b>Absolute humidity</b>                                       |                                                                        |
| • dew point, min.                                              | -60 °C; suitable for dry room applications                             |
| <b>Dimensions</b>                                              |                                                                        |
| Width                                                          | 15 mm                                                                  |
| Height                                                         | 73 mm                                                                  |
| Depth                                                          | 58 mm                                                                  |
| <b>Weights</b>                                                 |                                                                        |
| Weight, approx.                                                | 30 g                                                                   |
| <b>Classifications</b>                                         |                                                                        |

|        | 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        |
| UNSPSC | 15 | 32-15-17-05 |

### Approvals / Certificates

#### General Product Approval



[Miscellaneous](#)



[Manufacturer Declaration](#)



#### General Product Approval



[China RoHS](#)



#### EMV

#### For use in hazardous locations



[CCC-Ex](#)

[FM](#)



#### For use in hazardous locations

#### Maritime application

[Miscellaneous](#)

[Type Examination Certificate](#)

[CCC-Ex](#)



#### Maritime application



[NK / Nippon Kaiji Kyokai](#)



[CCS \(China Classification Society\)](#)

[KR \(Korean Register of Shipping\)](#)

#### Environment



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