




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 FS02                                      |
| Firmware version   | V0.0   |
| <ul style="list-style-type: none"> <li>FW update possible</li> </ul>                                     | No   |
| usable BaseUnits   | BU type A0                                     |
| Color code for module-specific color identification plate  | CC02   |
| Product function   |  |
| <ul style="list-style-type: none"> <li>I&amp;M data</li> </ul>   | Yes; I&M0 to I&M3                              |
| <ul style="list-style-type: none"> <li>Isochronous mode</li> </ul>                                       | No   |
| Engineering with   |  |
| <ul style="list-style-type: none"> <li>STEP 7 TIA Portal configurable/integrated from version</li> </ul> | V14  |
| <ul style="list-style-type: none"> <li>STEP 7 configurable/integrated from version</li> </ul>            | V5.5 SP3 or higher                             |
| <ul style="list-style-type: none"> <li>PCS 7 configurable/integrated from version</li> </ul>             | V8.1 SP1                                       |
| <ul style="list-style-type: none"> <li>PROFIBUS from GSD version/GSD revision</li> </ul>                 | One GSD file each, Revision 3 and 5 and higher |
| <ul style="list-style-type: none"> <li>PROFINET from GSD version/GSD revision</li> </ul>                 | GSDML V2.3                                     |
| Operating mode   |  |
| <ul style="list-style-type: none"> <li>DQ</li> </ul>   | Yes  |
| <ul style="list-style-type: none"> <li>DQ with energy-saving function</li> </ul>                         | No   |
| <ul style="list-style-type: none"> <li>PWM</li> </ul>  | No   |
| <ul style="list-style-type: none"> <li>Oversampling</li> </ul>   | No   |
| <ul style="list-style-type: none"> <li>MSO</li> </ul>  | 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.  | 35 mA; without load                            |
| Output voltage   |  |
| Rated value (DC)   | 24 V   |
| Power loss   |  |
| Power loss, typ.   | 1 W  |
| Address area   |  |
| Address space per module   |  |
| <ul style="list-style-type: none"> <li>Address space per module, max.</li> </ul>                         | 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-sourcing                              | Yes   |
| Digital outputs, parameterizable              | Yes   |
| Short-circuit protection                      | Yes   |
| • 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                                 | 12 kΩ   |
| Output voltage                                |   |
| • for signal "1", min.                        | L+ (-0.8 V)   |
| 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.                   | 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   |
| Interrupts/diagnostics/status information     |   |
| Diagnostics function                          | Yes   |
| Substitute values connectable                 | Yes   |
| Alarms  |   |
| • Diagnostic alarm                            | Yes   |
| Diagnoses                                     |   |
| • Monitoring the supply voltage               | Yes   |

|  |   |
|--|---|
| <ul style="list-style-type: none"> <li>• Wire-break</li> <li>• Short-circuit to M</li> <li>• Short-circuit to L+</li> <li>• Group error</li> </ul>   | Yes; Module-wise<br>Yes<br>Yes<br>Yes   |
| <b>Diagnostics indication LED</b>  |   |
| <ul style="list-style-type: none"> <li>• Monitoring of the supply voltage (PWR-LED)</li> <li>• Channel status display</li> <li>• for channel diagnostics</li> <li>• for module diagnostics</li> </ul>    | Yes; green PWR LED<br>Yes; green LED<br>No<br>Yes; green/red DIAG LED                         |
| <b>Potential separation</b>  |   |
| <b>Potential separation channels</b>   |   |
| <ul style="list-style-type: none"> <li>• between the channels</li> <li>• between the channels and backplane bus</li> <li>• between the channels and the power supply of the electronics</li> </ul>       | No<br>Yes<br>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   | Yes; From FS01  |
| <b>Highest safety class achievable in safety mode</b>  |   |
| <ul style="list-style-type: none"> <li>• Performance level according to ISO 13849-1</li> <li>• SIL acc. to IEC 61508</li> </ul>  | PL d<br>SIL 2   |
| <b>Ambient conditions</b>  |   |
| <b>Ambient temperature during operation</b>  |   |
| <ul style="list-style-type: none"> <li>• horizontal installation, min.</li> <li>• horizontal installation, max.</li> <li>• vertical installation, min.</li> <li>• vertical installation, max.</li> </ul> | -30 °C; < 0 °C as of FS02<br>60 °C<br>-30 °C; < 0 °C as of FS02<br>50 °C                      |
| <b>Altitude during operation relating to sea level</b>   |   |
| <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                        |
| <b>Dimensions</b>  |   |
| Width  | 15 mm   |
| Height   | 73 mm   |
| Depth  | 58 mm   |
| <b>Weights</b>   |   |
| Weight, approx.  | 30 g  |
| <b>last modified:</b>  | 1/16/2021  |