



SIMATIC ET 200SP, Digital output module, DQ 8x 24V DC/0.5A Basic, Source output (PNP,P-switching) Packing unit: 1 piece, 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 identification plate | 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 / header                                   |  |
| 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             |  |

|   |  |
|---|--|
| <ul style="list-style-type: none"> <li>• 1-wire connection</li> <li>• 2-wire connection</li> <li>• 3-wire connection</li> <li>• 4-wire connection</li> </ul>  | BU type A0<br>BU type A0<br>BU type A0 with AUX terminals or potential distributor module<br>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-sourcing  | Yes  |
| Digital outputs, parameterizable  | Yes  |
| Short-circuit protection  | Yes; per channel, electronic   |
| <ul style="list-style-type: none"> <li>• Response threshold, typ.</li> </ul>  | 1 A  |
| Limitation of inductive shutdown voltage to   | Typ. L+ (-50 V)  |
| Controlling a digital input   | Yes  |
| <b>Switching capacity of the outputs</b>  |  |
| <ul style="list-style-type: none"> <li>• with resistive load, max.</li> <li>• on lamp load, max.</li> </ul>   | 0.5 A<br>5 W   |
| <b>Load resistance range</b>  |  |
| <ul style="list-style-type: none"> <li>• lower limit</li> <li>• upper limit</li> </ul>  | 48 Ω<br>100 kΩ   |
| <b>Output current</b>   |  |
| <ul style="list-style-type: none"> <li>• for signal "1" rated value</li> <li>• for signal "1" permissible range, max.</li> <li>• for signal "0" residual current, max.</li> </ul>                     | 0.5 A<br>0.5 A<br>10 μA  |
| <b>Output delay with resistive load</b>   |  |
| <ul style="list-style-type: none"> <li>• "0" to "1", max.</li> <li>• "1" to "0", max.</li> </ul>  | 100 μs; at rated load<br>150 μs; at rated load   |
| <b>Parallel switching of two outputs</b>  |  |
| <ul style="list-style-type: none"> <li>• for uprating</li> <li>• for redundant control of a load</li> </ul>   | No<br>Yes  |
| <b>Switching frequency</b>  |  |
| <ul style="list-style-type: none"> <li>• with resistive load, max.</li> <li>• with inductive load, max.</li> <li>• on lamp load, max.</li> </ul>  | 100 Hz<br>2 Hz<br>10 Hz  |
| <b>Total current of the outputs</b>   |  |
| <ul style="list-style-type: none"> <li>• Current per channel, max.</li> <li>• Current per module, max.</li> </ul>   | 0.5 A<br>4 A   |
| <b>Total current of the outputs (per module)</b>  |  |
| horizontal installation   |  |
| — up to 60 °C, max.   | 4 A  |
| vertical installation   |  |
| — up to 50 °C, max.   | 4 A  |
| <b>Cable length</b>   |  |
| <ul style="list-style-type: none"> <li>• shielded, max.</li> <li>• unshielded, max.</li> </ul>  | 1 000 m<br>600 m   |
| <b>Interrupts/diagnostics/status information</b>  |  |
| Diagnostics function  | Yes  |
| Substitute values connectable   | Yes  |
| <b>Alarms</b>   |  |
| <ul style="list-style-type: none"> <li>• Diagnostic alarm</li> </ul>  | Yes  |
| <b>Diagnoses</b>  |  |
| <ul style="list-style-type: none"> <li>• Monitoring the supply voltage</li> <li>• Wire-break</li> <li>• Short-circuit</li> <li>• Group error</li> </ul>   | Yes<br>No<br>No<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>   |  |

| Potential separation channels                                  |  |
|--|--|
| • between the channels   | No   |
| • between the channels and backplane bus                       | Yes  |
| • between the channels and the power supply of the electronics | 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  |
| Highest safety class achievable in safety mode                 |  |
| • Performance level according to ISO 13849-1                   | PL d   |
| • SIL acc. to IEC 61508  | SIL 2  |
| Ambient conditions   |  |
| Ambient temperature during operation                           |  |
| • 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  |
| Altitude during operation relating to sea level                |  |
| • Installation altitude above sea level, max.                  | 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   |

**last modified:**

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