



SIMATIC ET 200AL, DQ 8x 24 V DC/2 A, 8x M12, Degree of protection IP67

| General information | |
|--|---|
| Product type designation | DQ 8x24VDC/2A |
| HW functional status | FS03 |
| Firmware version | V1.0.x |
| Product function | |
| • I&M data | Yes; I&M0 to I&M3 |
| Engineering with | |
| • STEP 7 TIA Portal configurable/integrated from version | STEP 7 V13 SP1 or higher |
| • STEP 7 configurable/integrated from version | V5.5 SP4 Hotfix 7 or higher |
| • PROFIBUS from GSD version/GSD revision | GSD as of Revision 5 |
| • PROFINET from GSD version/GSD revision | GSDML V2.3.1 |
| Supply voltage | |
| power supply according to NEC Class 2 required | No |
| Load voltage 1L+ | |
| • Rated value (DC) | 24 V |
| • permissible range, lower limit (DC) | 20.4 V |
| • permissible range, upper limit (DC) | 28.8 V |
| • Reverse polarity protection | Yes; against destruction; load increasing |
| Load voltage 2L+ | |
| • Rated value (DC) | 24 V |
| • permissible range, lower limit (DC) | 20.4 V |
| • permissible range, upper limit (DC) | 28.8 V |
| • Reverse polarity protection | Yes; against destruction; load increasing |
| Input current | |
| Current consumption (rated value) | 40 mA; without load |
| from load voltage 1L+ (unswitched voltage) | 4 A; Maximum value |
| from load voltage 2L+, max. | 4 A; Maximum value |
| Power loss | |
| Power loss, typ. | 4 W |
| Digital outputs | |
| Number of digital outputs | 8 |
| • in groups of | 4; 2 load groups for 4 outputs each |
| Short-circuit protection | Yes; per channel, electronic |
| • Response threshold, typ. | 2.8 A |
| Limitation of inductive shutdown voltage to | 2L+ (-47 V) |
| Switching capacity of the outputs | |
| • on lamp load, max. | 10 W |
| Load resistance range | |
| • lower limit | 12 Ω |
| • upper limit | 4 kΩ |

| | |
|--|---|
| Output voltage | |
| • for signal "1", min. | L+ (-0.8 V) |
| Output current | |
| • for signal "1" rated value | 2 A |
| • for signal "1" permissible range, max. | 2 A; with inductive load to IEC 60947-5-1, DC-13 / AC-15 |
| • for signal "0" residual current, max. | 0.5 mA |
| Switching frequency | |
| • with resistive load, max. | 100 Hz |
| • with inductive load, max. | 0.1 Hz; 0.25 Hz at 25 °C |
| • on lamp load, max. | 1 Hz |
| Total current of the outputs | |
| • Current per group, max. | 4 A; For inductive load max. 2 channels per group |
| Cable length | |
| • unshielded, max. | 30 m |
| Interrupts/diagnostics/status information | |
| Substitute values connectable | Yes; channel by channel, parameterizable |
| Alarms | |
| • Diagnostic alarm | Yes; Parameterizable |
| Diagnoses | |
| • Short-circuit | Yes; Outputs to ground; module by module |
| Diagnostics indication LED | |
| • Channel status display | Yes; green LED |
| • for module diagnostics | Yes; green/red LED |
| • For load voltage monitoring | Yes; green LED |
| Potential separation | |
| between the load voltages | Yes |
| Potential separation channels | |
| • between the channels, in groups of | 4 |
| • between the channels and backplane bus | Yes |
| • between the channels and the power supply of the electronics | No; 4 channels are non-isolated and 4 channels are isolated from supply voltage 1L+ |
| Isolation | |
| Isolation tested with | 707 V DC (type test) |
| Degree and class of protection | |
| IP degree of protection | IP65/67 |
| Standards, approvals, certificates | |
| Suitable for safety-related tripping of standard modules | Yes; From FS01 |
| Highest safety class achievable for safety-related tripping of standard modules | |
| • Performance level according to ISO 13849-1 | PL d |
| • Category according to ISO 13849-1 | Cat. 3 |
| • SIL acc. to IEC 62061 | SIL 2 |
| Ambient conditions | |
| Ambient temperature during operation | |
| • min. | -30 °C |
| • max. | 55 °C |
| connection method | |
| Design of electrical connection for the inputs and outputs | M12, 5-pole |
| Design of electrical connection for supply voltage | M8, 4-pole |
| ET-Connection | |
| • ET-Connection | M8, 4-pin, shielded |
| Dimensions | |
| Width | 45 mm |
| Height | 159 mm |
| Depth | 40 mm |
| Weights | |
| Weight, approx. | 192 g |

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