



SIMATIC ET 200AL, DIQ 4+DQ 4x 24 V DC/0.5 A, 8XM8, Degree of protection IP67

| General information | |
|---|--|
| Product type designation | DIQ 4+DQ 4x24VDC/0.5A |
| HW functional status | E01 |
| Firmware version | V1.0.x |
| Product function | |
| <ul style="list-style-type: none"> I&M data | Yes; I&M0 to I&M3 |
| Engineering with | |
| <ul style="list-style-type: none"> STEP 7 TIA Portal configurable/integrated from version STEP 7 configurable/integrated from version PROFIBUS from GSD version/GSD revision PROFINET from GSD version/GSD revision | STEP 7 V13 SP1 or higher From V5.5 SP4 Hotfix 3 GSD as of Revision 5 GSDML V2.3.1 |
| Supply voltage | |
| Load voltage 1L+ | |
| <ul style="list-style-type: none"> Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) Reverse polarity protection | 24 V 20.4 V 28.8 V Yes; Against destruction; encoder power supply outputs applied with reversed polarity, loads pick up |
| Load voltage 2L+ | |
| <ul style="list-style-type: none"> Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) Reverse polarity protection | 24 V 20.4 V 28.8 V 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 |
| Encoder supply | |
| Number of outputs | 4 |
| 24 V encoder supply | |
| <ul style="list-style-type: none"> Short-circuit protection Output current, max. | Yes; per module, electronic 0.7 A; Total current of all encoders |
| Power loss | |
| Power loss, typ. | 2.5 W |
| Digital inputs | |
| Number of digital inputs | 4; Parameterizable as DIQ |
| Input characteristic curve in accordance with IEC 61131, type 3 | Yes |
| Number of simultaneously controllable inputs | |
| all mounting positions | |

| | |
|--|--|
| — up to 55 °C, max. | 4 |
| Input voltage | |
| <ul style="list-style-type: none"> Rated value (DC) for signal "0" for signal "1" | 24 V -3 to +5V +11 to +30V |
| Input current | |
| <ul style="list-style-type: none"> for signal "1", typ. | 3.2 mA |
| Input delay (for rated value of input voltage) | |
| for standard inputs | |
| — at "0" to "1", min. | 1.2 ms |
| — at "0" to "1", max. | 4.8 ms |
| — at "1" to "0", min. | 1.2 ms |
| — at "1" to "0", max. | 4.8 ms |
| Cable length | |
| <ul style="list-style-type: none"> unshielded, max. | 30 m |
| Digital outputs | |
| Number of digital outputs | 8; 4 DQ fixed, 4 DIQ parameterizable |
| <ul style="list-style-type: none"> in groups of | 4; 2 load groups for 4 outputs each |
| Short-circuit protection | Yes; per channel, electronic |
| <ul style="list-style-type: none"> Response threshold, typ. | 0.7 A |
| Limitation of inductive shutdown voltage to | 2L+ (-47 V) |
| Switching capacity of the outputs | |
| <ul style="list-style-type: none"> on lamp load, max. | 5 W |
| Load resistance range | |
| <ul style="list-style-type: none"> lower limit upper limit | 48 Ω 4 kΩ |
| Output voltage | |
| <ul style="list-style-type: none"> for signal "1", min. | L+ (-0.8 V) |
| Output current | |
| <ul style="list-style-type: none"> for signal "1" rated value for signal "0" residual current, max. | 0.5 A 0.5 mA |
| Switching frequency | |
| <ul style="list-style-type: none"> with resistive load, max. with inductive load, max. on lamp load, max. | 100 Hz 0.5 Hz 1 Hz |
| Total current of the outputs | |
| <ul style="list-style-type: none"> Current per group, max. | 2 A |
| Cable length | |
| <ul style="list-style-type: none"> unshielded, max. | 30 m |
| Encoder | |
| Connectable encoders | |
| <ul style="list-style-type: none"> 2-wire sensor — permissible quiescent current (2-wire sensor), max. | Yes 1.5 mA |
| Interrupts/diagnostics/status information | |
| Substitute values connectable | Yes; channel by channel, parameterizable |
| Alarms | |
| <ul style="list-style-type: none"> Diagnostic alarm | Yes; Parameterizable |
| Diagnoses | |
| <ul style="list-style-type: none"> Short-circuit | Yes; Outputs to M; encoder supply to M; module by module |
| Diagnostics indication LED | |
| <ul style="list-style-type: none"> Channel status display for module diagnostics For load voltage monitoring | Yes; green LED Yes; green/red LED Yes; green LED |
| Potential separation | |
| between the load voltages | Yes |
| Potential separation channels | |
| <ul style="list-style-type: none"> between the channels, in groups of between the channels and backplane bus between the channels and the power supply of the electronics | 4; DIQ channels are isolated from DQ channels Yes No; DIQ channels are non-isolated and DQ 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 | |
| <ul style="list-style-type: none"> • Performance level according to ISO 13849-1 | PL d |
| <ul style="list-style-type: none"> • Category according to ISO 13849-1 | Cat. 3 |
| <ul style="list-style-type: none"> • SIL acc. to IEC 62061 | SIL 2 |
| Ambient conditions | |
| Ambient temperature during operation | |
| <ul style="list-style-type: none"> • min. | -30 °C |
| <ul style="list-style-type: none"> • max. | 55 °C |
| connection method / header | |
| Design of electrical connection for the inputs and outputs | M8, 3-pole |
| Design of electrical connection for supply voltage | M8, 4-pole |
| ET-Connection | |
| <ul style="list-style-type: none"> • ET-Connection | M8, 4-pin, shielded |
| Dimensions | |
| Width | 30 mm |
| Height | 159 mm |
| Depth | 40 mm |
| Weights | |
| Weight, approx. | 145 g |
| last modified: | 3/7/2022  |