

SIMATIC ET 200SP, digital output module, DQ 16x 24VDC/0.5A
Basic, Pack quantity: 1 unit, suitable for BU type A0, Color code
CC00, Module diagnostics



| General information | |
|---|--|
| Product type designation | DQ 16x 24 V DC/0.5 A BA, PU 1 |
| HW functional status | From FS03 |
| Firmware version | V0.0 |
| <ul style="list-style-type: none"> FW update possible | No |
| usable BaseUnits | BU type A0 |
| Color code for module-specific color identification plate | CC00 |
| 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 as of version | V14 |
| <ul style="list-style-type: none"> STEP 7 configurable/integrated as of version | STEP 7 V5.5 or higher |
| <ul style="list-style-type: none"> PROFIBUS as of GSD version/GSD revision | One GSD file each, Revision 3 and 5 and higher |
| <ul style="list-style-type: none"> PROFINET as of GSD version/GSD revision | GSDML V2.3 |
| Operating mode | |
| <ul style="list-style-type: none"> DQ | Yes |
| <ul style="list-style-type: none"> 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. | 55 mA; without load |
|---------------------------|---------------------|

Output voltage

| | |
|------------------|------|
| Rated value (DC) | 24 V |
|------------------|------|

Power loss

| | |
|------------------|-----|
| Power loss, typ. | 1 W |
|------------------|-----|

Address area

| | |
|--------------------------|--------|
| Address space per module | |
| • Outputs | 2 byte |

Hardware configuration

| | |
|-----------------------------|-----|
| Automatic encoding | Yes |
| • Mechanical coding element | Yes |

Selection of BaseUnit for connection variants

- | | |
|---------------------|---|
| • 1-wire connection | BU type A0 |
| • 2-wire connection | BU type A0 + Potential isolation module |
| • 3-wire connection | BU type A0 + Potential isolation module |
| • 4-wire connection | BU type A0 + Potential isolation module |

Digital outputs

| | |
|---|---------------------------------------|
| Type of digital output | Source output (PNP, current-sourcing) |
| Number of digital outputs | 16 |
| Current-sinking | No |
| Current-sourcing | Yes |
| Digital outputs, parameterizable | Yes |
| Short-circuit protection | Yes |
| • Response threshold, typ. | 1.4 A; 0.7 to 1.9 A |
| Open-circuit detection | No |
| Limitation of inductive shutdown voltage to | Typ. L+ (-53 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 | 100 kΩ |
| Output current | |
| • for signal "1" rated value | 0.5 A |
| • for signal "0" residual current, max. | 30 μA |
| Output delay with resistive load | |
| • "0" to "1", typ. | 80 μs; at rated load |
| • "0" to "1", max. | 150 μs; at rated load |
| • "1" to "0", typ. | 100 μs; at rated load |
| • "1" to "0", max. | 200 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. | 8 A |
| Total current of the outputs (per module) | |
| horizontal installation | |
| — up to 60 °C, max. | 8 A |
| vertical installation | |
| — up to 50 °C, max. | 8 A |
| Cable length | |
| • shielded, max. | 1 000 m |
| • unshielded, max. | 600 m |
| Isochronous mode | |
| Isochronous operation (application synchronized up to terminal) | No |
| Interrupts/diagnostics/status information | |
| Diagnostics function | Yes |
| Substitute values connectable | Yes |
| Alarms | |
| • Diagnostic alarm | Yes |
| Diagnostic messages | |
| • Monitoring the supply voltage | Yes |
| • Wire-break | No |
| • Short-circuit | No |
| • Group error | Yes |

| Diagnostics indication LED | |
|--|-------------------------|
| • Monitoring of the supply voltage (PWR-LED) | Yes; Green PWR LED |
| • Channel status display | Yes; Green LED |
| • for channel diagnostics | No |
| • for module diagnostics | Yes; green/red DIAG LED |

| Potential separation | |
|--|-----|
| Potential separation channels | |
| • between the channels | No |
| • between the channels and backplane bus | Yes |

| 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 | No |

| Ambient conditions | |
|--------------------------------------|--------|
| Ambient temperature during operation | |
| • horizontal installation, min. | -30 °C |
| • horizontal installation, max. | 60 °C |
| • vertical installation, min. | -30 °C |
| • 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: | 01/22/2020 |