# SIEMENS

Data sheet                                                                        6ES7136-6DC00-0CA0

SIMATIC DP, Electronics module ET 200SP, F-DQ 8XDC 24V0.5A
PP, 15 mm width, up to PL E (ISO 13849) up to SIL 3 (IEC 61508)



| General information | |
|---|---|
| Product type designation | F-DQ 8x24 V DC/0.5 A PP HF |
| Firmware version | |
| • FW update possible | Yes |
| 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 |
| **Engineering with** | |
| • STEP 7 TIA Portal configurable/integrated as of version | V14 SP1 with HSP 202 |
| • STEP 7 configurable/integrated as of version | V5.5 SP4 HF5 |

| Supply voltage | |
|---|---|
| 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 |

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| Input current | |
|---|---|
| Current consumption (rated value) | 75 mA; without load |
| Current consumption, max. | 21 mA; From the backplane bus |

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

| Power | |
|---|---|
| Power available from the backplane bus | 70 mW |

| Power loss | |
|---|---|
| Power loss, typ. | 3 W |

| Address area | |
|---|---|
| **Address space per module** | |
| • Inputs | 6 byte; 5 bytes non-RIOforFA; 6 bytes RIOforFA |
| • Outputs | 6 byte; 5 bytes non-RIOforFA; 6 bytes RIOforFA |

| Hardware configuration | |
|---|---|
| Automatic encoding | |
| • Electronic coding element type F | Yes |

| Digital outputs | |
|---|---|
| Number of digital outputs | 8 |
| Digital outputs, parameterizable | Yes |
| Short-circuit protection | Yes |
| • Response threshold, typ. | Min. 0.7 A |
| Open-circuit detection | No |
| Limitation of inductive shutdown voltage to | Typ. -39 V |
| Controlling a digital input | Yes |
| **Switching capacity of the outputs** | |
| • with resistive load, max. | 0.5 A |
| • on lamp load, max. | 2 W |
| **Load resistance range** | |
| • lower limit | 48 Ω |
| • upper limit | 12 000 Ω |
| **Output voltage** | |
| • for signal "1", min. | 24 V; L+ (-0.5 V) |
| **Output current** | |
| • for signal "1" rated value | 0.5 A |
| • for signal "0" residual current, max. | 0.5 mA |
| **Switching frequency** | |
| • with resistive load, max. | 30 Hz; Symmetrical |
| • with inductive load, max. | 0.1 Hz; according to IEC 60947-5-1, DC-13, symmetrical |
| • with capacitive load, max. | 2 Hz; Symmetrical |
| • on lamp load, max. | 10 Hz; Symmetrical |

| Total current of the outputs | |
|---|---|
| • Current per channel, max. | 0.5 A; Note derating data in the manual |
| • Current per module, max. | 3 A; Note derating data in the manual |
| Total current of the outputs (per module) | |
| horizontal installation | |
| — up to 40 °C, max. | 3 A |
| — up to 50 °C, max. | 2.5 A |
| — up to 60 °C, max. | 2 A |
| vertical installation | |
| — up to 50 °C, max. | 2 A |
| Cable length | |
| • shielded, max. | 100 m |
| • unshielded, max. | 100 m |

## Interrupts/diagnostics/status information

| | |
|---|---|
| Diagnostics function | Yes, "Alarms/diagnostic messages" section in the manual |
| Substitute values connectable | No |
| Alarms | |
| • Diagnostic alarm | Yes |
| Diagnostics indication LED | |
| • RUN LED | Yes; Green LED |
| • ERROR LED | Yes; Red LED |
| • Monitoring of the supply voltage (PWR-LED) | Yes; Green PWR LED |
| • Channel status display | Yes; Green LED |
| • for channel diagnostics | Yes; Red LED |
| • for module diagnostics | Yes; green/red DIAG LED |

## Potential separation

| | |
|---|---|
| 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 | Yes |
| Highest safety class achievable in safety mode | |
| • Performance level according to ISO 13849-1 | PLe |
| • SIL acc. to IEC 61508 | SIL 3 |
| Probability of failure (for service life of 20 years and repair time of 100 hours) | |
| — Low demand mode: PFDavg in accordance with SIL3 | < 6.00E-05 |

| | |
|---|---|
| — High demand/continuous mode: PFH in accordance with SIL3 | < 2.00E-09 1/h |

## Ambient conditions

### Ambient temperature during operation

| | |
|---|---|
| • horizontal installation, min. | 0 °C |
| • horizontal installation, max. | 60 °C |
| • vertical installation, min. | 0 °C |
| • vertical installation, max. | 50 °C |

## Dimensions

| | |
|---|---|
| Width | 15 mm |
| Height | 73 mm |
| Depth | 58 mm |

## Weights

| | |
|---|---|
| Weight, approx. | 48 g |
| **last modified:** | 07/14/2019 |