SIEMENS

## Data sheet 6ES7522-1BF00-0AB0



Figure similar

SIMATIC S7-1500, digital output module DQ 8x24 V DC/2A HF; 8 channels in groups of 8; 8 A per group; diagnostics; substitute value: 2 channels can be used for pulse width modulation(PWM) . the module supports the safety-oriented shutdown of load groups up to SIL2 according to EN IEC 62061:2021 and Category 3 / PL d according to EN ISO 13849-1:2015. front connector (screw terminals or push-in) to be ordered separately

| | |
|---|---|
| **General information** | |
| Product type designation | DQ 8x24VDC/2A HF |
| HW functional status | From FS03 |
| Firmware version | V2.2.0 |
| ● FW update possible | Yes |
| Product function | |
| ● I&M data | Yes; I&M0 to I&M3 |
| ● Isochronous mode | No |
| ● Prioritized startup | Yes |
| Engineering with | |
| ● STEP 7 TIA Portal configurable/integrated from version | V13 SP1 / - |
| ● STEP 7 configurable/integrated from version | V5.5 SP3 / - |
| ● PROFIBUS from GSD version/GSD revision | V1.0 / V5.1 |
| ● PROFINET from GSD version/GSD revision | V2.3 / - |
| Operating mode | |
| ● DQ | Yes |
| ● DQ with energy-saving function | Yes; with an application |
| ● PWM | Yes |
| ● Cam control (switching at comparison values) | No |
| ● Oversampling | No |
| ● MSO | Yes |
| ● Integrated operating cycle counter | Yes |
| **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; through internal protection with 10 A per group |
| **Input current** | |
| Current consumption, max. | 40 mA; 20 mA per group, no output is activated. |
| **Output voltage** | |
| Rated value (DC) | 24 V |
| **Power** | |
| Power consumption from the backplane bus | 0.9 W |
| **Power loss** | |
| Power loss, typ. | 5.6 W; 6.8 W for PWM operation |


Subject to change without notice
© Copyright Siemes

| | |
|---|---|
| **Digital outputs** | |
| Type of digital output | Transistor |
| Number of digital outputs | 8 |
| Current-sourcing | Yes |
| Digital outputs, parameterizable | Yes |
| output type acc. to IEC 61131, type 2 | Yes |
| Short-circuit protection | Yes |
| ● Response threshold, typ. | 3 A |
| Limitation of inductive shutdown voltage to | -17 V |
| Controlling a digital input | Yes |
| Digital output functions, parameterizable | |
| ● Freely usable digital output | Yes |
| ● PWM output | Yes; FS02 and FW V2.1.0 or higher |
| — Number, max. | 2 |
| — Cycle duration, parameterizable | Yes; 2 ... 100 ms continuous |
| — ON period, min. | 0 % |
| — ON period, max. | 100 % |
| — Resolution of the duty cycle | 0.1 % |
| — Minimum pulse duration | 300 µs |
| Switching capacity of the outputs | |
| ● with resistive load, max. | 2 A |
| ● 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. | 2.4 A; note derating specification for PWM operation |
| ● for signal "0" residual current, max. | 0.5 mA |
| Output delay with resistive load | |
| ● "0" to "1", typ. | 80 µs |
| ● "0" to "1", max. | 100 µs |
| ● "1" to "0", typ. | 300 µs |
| ● "1" to "0", max. | 500 µs |
| Parallel switching of two outputs | |
| ● for logic links | Yes |
| ● for uprating | No |
| ● for redundant control of a load | Yes |
| Switching frequency | |
| ● with resistive load, max. | 100 Hz; With PWM operation: 500 Hz |
| ● with inductive load, max. | 0.5 Hz; According to IEC 60947-5-1, DC-13; max. 500 Hz with PWM operation only with external circuit; see additional description in the manual |
| ● on lamp load, max. | 10 Hz |
| Total current of the outputs | |
| ● Current per channel, max. | 2 A; see additional description in the manual |
| ● Current per group, max. | 8 A; see additional description in the manual |
| ● Current per module, max. | 16 A; see additional description in the manual |
| Cable length | |
| ● shielded, max. | 1 000 m |
| ● unshielded, max. | 600 m |
| **Interrupts/diagnostics/status information** | |
| Diagnostics function | Yes |
| Substitute values connectable | Yes |
| Alarms | |
| ● Diagnostic alarm | Yes |
| ● Maintenance interrupt | Yes; maintenance alarm for switching cycle counter |
| Diagnoses | |


© Copyright Siemes

| | |
|---|---|
| ● Monitoring the supply voltage | Yes |
| ● Wire break | No |
| ● Short-circuit | Yes |
| ● Group error | Yes |
| Diagnostics indication LED | |
| ● RUN LED | Yes; green LED |
| ● ERROR LED | Yes; red LED |
| ● MAINT LED | Yes; Yellow LED |
| ● Monitoring of the supply voltage (PWR-LED) | Yes; green LED |
| ● Channel status display | Yes; green LED |
| ● for channel diagnostics | Yes; red LED |
| ● for module diagnostics | Yes; red LED |
| **Potential separation** | |
| Potential separation channels | |
| ● between the channels | No |
| ● between the channels, in groups of | 4 |
| ● between the channels and backplane bus | Yes |
| **Isolation** | |
| Isolation tested with | 707 V DC (type test) |
| **Standards, approvals, certificates** | |
| Siemens Eco Profile (SEP) | Siemens EcoTech |
| Suitable for safety functions | No |
| Suitable for safety-related tripping of standard modules | Yes; From FS03 |
| Ecological footprint | |
| ● environmental product declaration | Yes |
| Global warming potential | |
| — global warming potential, (total) [CO2 eq] | 43.8 kg |
| — global warming potential, (during production) [CO2 eq] | 9.5 kg |
| — global warming potential, (during operation) [CO2 eq] | 34.5 kg |
| — global warming potential, (after end of life cycle) [CO2 eq] | -0.231 kg |
| 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 |
| ● remark on safety-oriented shutdown | https://www.siemes.plc.com/?s=6ES7522-1BF00-0AB0 |
| **Security** | |
| signed firmware update | No |
| data integrity | No |
| **Ambient conditions** | |
| Ambient temperature during operation | |
| ● horizontal installation, min. | -30 °C; From FS06 |
| ● horizontal installation, max. | 60 °C |
| ● vertical installation, min. | -30 °C; From FS06 |
| ● vertical installation, max. | 40 °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 | 35 mm |
| Height | 147 mm |
| Depth | 129 mm |
| **Weights** | |
| Weight, approx. | 240 g |

**Classifications**

| | Version | Classification |
|---|---|---|
| eClass | 16 | 27-24-22-04 |
| eClass | 14 | 27-24-22-04 |


© Copyright Siemes

| | | |
|---|---|---|
| eClass | 12 | 27-24-22-04 |
| eClass | 9.1 | 27-24-22-04 |
| eClass | 9 | 27-24-22-04 |
| eClass | 8 | 27-24-22-04 |
| eClass | 7.1 | 27-24-22-04 |
| eClass | 6 | 27-24-22-04 |
| ETIM | 10 | EC001419 |
| ETIM | 9 | EC001419 |
| ETIM | 8 | EC001419 |
| ETIM | 7 | EC001419 |
| IDEA | 4 | 3566 |
| UNSPSC | 15 | 32-15-17-05 |

## Approvals / Certificates

### General Product Approval

Miscellaneous | Manufacturer Declaration

### General Product Approval

China RoHS | Manufacturer Declaration

### For use in hazardous locations

FM

### For use in hazardous locations

FM | CCC-Ex | Type Examination Certificate

### For use in hazardous locations

Miscellaneous | CCC-Ex

### Maritime application

### Maritime application

NK / Nippon Kaiji Kyokai | CCS (China Classification Society) | KR (Korean Register of Shipping)

### Environment

### Environment

**last modified:** 5/7/2026


© Copyright Siemes