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## Data sheet 6ES7526-2BF00-0AB0



SIMATIC S7-1500, F digital output module, F-DQ 8x 24 V DC 2A PPM PROFIsafe; 35 mm width; up to PL E (ISO 13849-1)/ SIL3 (IEC 61508)

| | |
|---|---|
| **General information** | |
| Product type designation | F-DQ 8x24VDC/2A PPM |
| Firmware version | |
| ● FW update possible | Yes |
| Product function | |
| ● I&M data | Yes; I&M0 to I&M3 |
| Engineering with | |
| ● STEP 7 TIA Portal configurable/integrated from version | V13 SP1 with HSP 0086 |
| Operating mode | |
| ● DQ | Yes |
| ● 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 |
| power supply according to NEC Class 2 required | No |
| **Input current** | |
| Current consumption (rated value) | 110 mA; without load |
| Current consumption, max. | 130 mA; without load |
| **Output voltage** | |
| Rated value (DC) | 24 V |
| **Power** | |
| Power consumption from the backplane bus | 0.8 W |
| **Power loss** | |
| Power loss, typ. | 11 W |
| **Address area** | |
| Address space per module | |
| ● Inputs | 6 byte; S7-300/400F CPU, 5 byte |
| ● Outputs | 6 byte; S7-300/400F CPU, 5 byte |
| **Hardware configuration** | |
| Automatic encoding | Yes |
| ● Electronic coding element type F | Yes |
| **Digital outputs** | |
| Number of digital outputs | 8 |
| Current-sinking | Yes |
| Current-sourcing | Yes |
| Short-circuit protection | Yes |
| Open-circuit detection | Yes |


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| | |
|---|---|
| ● Response threshold, typ. | 8 mA |
| Overload protection | Yes |
| ● Response threshold, typ. | 2.9 A |
| Limitation of inductive shutdown voltage to | PM-switching: -24 V + (-47 V), PP-switching: -24 V |
| Controlling a digital input | Yes; digital output, according to IEC 61131-2, type 2 |
| 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 | 2 000 Ω |
| Output voltage | |
| ● for signal "1", min. | 24 V; L+ (-0.5 V) |
| Output current | |
| ● for signal "1" rated value | 2 A |
| ● for signal "0" residual current, max. | 0.5 mA; Current-sourcing, or current sourcing and sinking switches individually, current sinking: max. 1 mA |
| Switching frequency | |
| ● with resistive load, max. | 30 Hz |
| ● with inductive load, max. | 0.1 Hz |
| ● on lamp load, max. | 10 Hz |
| Total current of the outputs | |
| ● Current per channel, max. | 2 A |
| Total current of the outputs (per module) | |
| horizontal installation | |
| — up to 40 °C, max. | 16 A |
| — up to 60 °C, max. | 8 A |
| vertical installation | |
| — up to 40 °C, max. | 8 A |
| Cable length | |
| ● shielded, max. | 1 000 m |
| ● unshielded, max. | 500 m |
| **Interrupts/diagnostics/status information** | |
| Diagnostics function | Yes |
| Substitute values connectable | No |
| Alarms | |
| ● Diagnostic alarm | Yes |
| Diagnoses | |
| ● Monitoring the supply voltage | Yes |
| ● Wire break | Yes |
| ● Short-circuit | Yes |
| ● Group error | Yes |
| Diagnostics indication LED | |
| ● RUN LED | Yes; green LED |
| ● ERROR LED | Yes; red LED |
| ● Monitoring of the supply voltage (PWR-LED) | Yes |
| ● 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 and backplane bus | Yes |
| **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 |


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| | |
|---|---|
| ● 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. | 40 °C |
| **Dimensions** | |
| Width | 35 mm |
| Height | 147 mm |
| Depth | 129 mm |
| **Weights** | |
| Weight, approx. | 300 g |

**Classifications**

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

**General Product Approval**

China RoHS

**EMV**

RCM

**For use in hazardous locations**

UL

FM

CCC-Ex

IECEx

**For use in hazardous locations**

ATEX

Type Examination Certificate

Miscellaneous

CCC-Ex

**Functional Saftey**

Type Examination Certificate

TUEV


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| Maritime application | | | | | |
|---|---|---|---|---|---|
|  ABS |  |  DNV |  LRS | NK / Nippon Kaiji Kyokai |  RINA |

| Maritime application | | Industrial Communication |
|---|---|---|
| CCS (China Classification Society) | KR (Korean Register of Shipping) | PROFIsafe |

**last modified:** 10/23/2025


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