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 / header	
Rated value (DC)	24 V
Power	
Power available 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
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
	No
Substitute values connectable	110
Substitute values connectable Alarms	140
Alarms	Yes
Alarms • Diagnostic alarm Diagnoses	
Alarms • Diagnostic alarm Diagnoses • Monitoring the supply voltage	Yes
Alarms • Diagnostic alarm Diagnoses	Yes Yes Yes
Alarms • Diagnostic alarm Diagnoses • Monitoring the supply voltage • Wire-break • Short-circuit	Yes Yes Yes Yes
Alarms • Diagnostic alarm Diagnoses • Monitoring the supply voltage • Wire-break • Short-circuit • Group error	Yes Yes Yes
Alarms • Diagnostic alarm Diagnoses • Monitoring the supply voltage • Wire-break • Short-circuit • Group error Diagnostics indication LED	Yes Yes Yes Yes Yes Yes
Alarms • Diagnostic alarm Diagnoses • Monitoring the supply voltage • Wire-break • Short-circuit • Group error Diagnostics indication LED • RUN LED	Yes Yes Yes Yes Yes Yes Yes
Alarms • Diagnostic alarm Diagnoses • Monitoring the supply voltage • Wire-break • Short-circuit • Group error Diagnostics indication LED • RUN LED • ERROR LED	Yes Yes Yes Yes Yes Yes Yes Yes; green LED Yes; red LED
Alarms • Diagnostic alarm Diagnoses • Monitoring the supply voltage • Wire-break • Short-circuit • Group error Diagnostics indication LED • RUN LED • ERROR LED • Monitoring of the supply voltage (PWR-LED)	Yes Yes Yes Yes Yes Yes Yes Yes Yes; green LED Yes; red LED Yes
Alarms • Diagnostic alarm Diagnoses • Monitoring the supply voltage • Wire-break • Short-circuit • Group error Diagnostics indication LED • RUN LED • ERROR LED • Monitoring of the supply voltage (PWR-LED) • Channel status display	Yes Yes Yes Yes Yes Yes Yes Yes Yes; green LED Yes; red LED Yes Yes; green LED
Alarms • Diagnostic alarm Diagnoses • Monitoring the supply voltage • Wire-break • Short-circuit • Group error Diagnostics indication LED • RUN LED • ERROR LED • Monitoring of the supply voltage (PWR-LED) • Channel status display • for channel diagnostics	Yes Yes Yes Yes Yes Yes Yes Yes Yes; green LED Yes; red LED Yes Yes; green LED Yes; red LED
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Alarms Diagnoses Monitoring the supply voltage Wire-break Short-circuit Group error Diagnostics indication LED RUN LED ERROR LED Monitoring of the supply voltage (PWR-LED) Channel status display for channel diagnostics for module diagnostics	Yes Yes Yes Yes Yes Yes Yes Yes Yes; green LED Yes; red LED Yes Yes; green LED Yes; red LED
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Diagnostic alarm Diagnoses Monitoring the supply voltage Wire-break Short-circuit Group error Diagnostics indication LED RUN LED ERROR LED Monitoring of the supply voltage (PWR-LED) Channel status display for channel diagnostics for module diagnostics for module diagnostics between the channels between the channels between the channels and backplane bus Isolation Isolation tested with Standards, approvals, certificates Suitable for safety functions Highest safety class achievable in safety mode Performance level according to ISO 13849-1	Yes Yes Yes Yes Yes Yes Yes Yes; green LED Yes; red LED Yes; green LED Yes; red LED No Yes 707 V DC (type test) PLe SiL 3
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SIL3 — 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	

3/12/2024

last modified: