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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		EMV	For use in hazardous locations
China RoHS	Manufacturer Declaration		

For use in hazardous locations

FM	CCC-Ex	Type Examination Certificate	Miscellaneous

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For use in hazardous locations	Functional Saftey			Maritime application
CCC-Ex	Type Examination Certificate	TUEV	TUEV	

Maritime application			
		NK / Nippon Kaiji Kyokai	CCS (China Classification Society)

Maritime application	Industrial Communication
KR (Korean Register of Shipping)	PROFIsafe

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