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Data sheet 6ES7136-6DC00-0CA0



SIMATIC DP, electronic module ET 200SP, F-DQ 8x24VDC/0.5A PP HF, 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-coded label	CC02
Product function	
● I&M data	Yes; I&M0 to I&M3
Engineering with	
● STEP 7 TIA Portal configurable/integrated from version	V14 SP1 with HSP 202
● STEP 7 configurable/integrated from version	V5.5 SP4 HF5
● PROFINET from GSD version/GSD revision	V2.31
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)	75 mA; without load
Current consumption, max.	21 mA; From the backplane bus
Output voltage	
Rated value (DC)	24 V
Power	
Power consumption 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	Yes
● Electronic coding element type F	Yes
Digital outputs	
Type of digital output	Transistor
Number of digital outputs	8
Digital outputs, parameterizable	Yes
Short-circuit protection	Yes

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● 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; digital output, according to IEC 61131-2, type 0.5
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; See Chapter "Alarms/diagnostic messages" in the manual
Substitute values connectable	No
Alarms	
● Diagnostic alarm	Yes
● Hardware interrupt	No
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
Ecological footprint	
● environmental product declaration	Yes
Global warming potential	

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— global warming potential, (total) [CO2 eq]	88.3 kg
— global warming potential, (during production) [CO2 eq]	13.1 kg
— global warming potential, (during operation) [CO2 eq]	76.6 kg
— global warming potential, (after end of life cycle) [CO2 eq]	-1.37 kg
Highest safety class achievable in safety mode	
● Performance level according to ISO 13849-1	PLe
● Category according to ISO 13849-1	Cat. 4
● 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
Altitude during operation relating to sea level	
● Installation altitude above sea level, max.	4 000 m; restrictions for installation altitudes > 2 000 m, see ET 200SP System Manual
Dimensions	
Width	15 mm
Height	73 mm
Depth	58 mm
Weights	
Weight, approx.	48 g

Classifications

	Version	Classification
eClass	16	27-24-26-04
eClass	14	27-24-26-04
eClass	12	27-24-26-04
eClass	9.1	27-24-26-04
eClass	9	27-24-26-04
eClass	8	27-24-26-04
eClass	7.1	27-24-26-04
eClass	6	27-24-26-04
ETIM	10	EC001599
ETIM	9	EC001599
ETIM	8	EC001599
ETIM	7	EC001599
IDEA	4	3566
UNSPSC	15	32-15-17-05

Approvals / Certificates

General Product Approval

Miscellaneous

Manufacturer Declaration

General Product Approval	For use in hazardous locations

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

Functional Saftey	Maritime application				
					NK / Nippon Kaiji Kyokai

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

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