## **Data sheet**

## 6ES7136-6DB00-0CA0



SIMATIC DP, Electronics module for ET 200SP, F-DQ 4X24 V DC/2A, 15 mm width, up to PL E (ISO 13849) up to SIL 3 (IEC 61508)

General information	
Product type designation	F-DQ 4x24VDC/2A PM HF
usable BaseUnits	BU type A0
Product function	
	Yes; I&M0 to I&M3
Engineering with	
<ul> <li>STEP 7 TIA Portal configurable/integrated from version</li> </ul>	V12
<ul> <li>STEP 7 configurable/integrated from version</li> </ul>	V5.5 SP3 / -
<ul> <li>PROFINET from GSD version/GSD revision</li> </ul>	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 / header	
Rated value (DC)	24 V
Power	
Power available from the backplane bus	70 mW
Power loss	
Power loss, typ.	4 W
Address area	
Address space per module	
• Inputs	5 byte
<ul><li>Outputs</li></ul>	5 byte
Hardware configuration	
Automatic encoding	Yes
Electronic coding element type F	Yes
Digital outputs	
Type of digital output	Transistor
Number of digital outputs	4
Digital outputs, parameterizable	Yes
Short-circuit protection	Yes
Response threshold, typ.	> 3.3 A
Open-circuit detection	Yes
Response threshold, typ.	8 mA
Overload protection	Yes

Response threshold, typ.	2.9 A
Limitation of inductive shutdown voltage to	Typ2x 47 V
Controlling a digital input	Yes; digital output, according to IEC 61131-2, type 2
Switching capacity of the outputs	3 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
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	2 000 12
• for signal "1", min.	24 V; L+ (-0.5 V)
Output current	211,2 (001)
for signal "1" rated value	2 A
• for signal "0" residual current, max.	0.5 mA
Switching frequency	3.5
with resistive load, max.	30 Hz; Symmetrical
with inductive load, max.	0.1 Hz; according to IEC 60947-5-1, DC-13, symmetrical
• on lamp load, max.	10 Hz; Symmetrical
Total current of the outputs	, 2)
Current per channel, max.	2 A; note derating data in the manual
Current per module, max.	6 A; note derating data in the manual
Cable length	ory note defaulty data in the manual
shielded, max.	1 000 m
unshielded, max.  unshielded, max.	500 m
Interrupts/diagnostics/status information	300 111
Diagnostics function	Yes
Substitute values connectable	No
Alarms	NO
	Yes
Diagnostics Indication LED	res
Diagnostics indication LED	Voc. groon LED
• RUN LED	Yes; green LED
ERROR LED      Manitaring of the cumply valtage (PW/P 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
<ul> <li>between the channels and the power supply of the electronics</li> </ul>	No
Isolation	
Isolation tested with	707 V DC (type test)
Standards, approvals, certificates	
Suitable for safety functions	Yes
Highest safety class achievable in safety mode	160
Performance level according to ISO 13849-1	PLe
SIL acc. to IEC 61508	SIL 3
Probability of failure (for service life of 20 years and repair time	
Low demand mode: PFDavg in accordance with SIL2	< 2.00E-04
Low demand mode: PFDavg in accordance with SIL3	< 2.00E-05
High demand/continuous mode: PFH in accordance with SIL2	< 1.00E-08 1/h
High demand/continuous mode: PFH in accordance with SIL3	< 1.00E-09 1/h
Ambient conditions	
Ambient temperature during operation	
<ul> <li>horizontal installation, min.</li> </ul>	0 °C
<ul> <li>horizontal installation, max.</li> </ul>	60 °C

<ul> <li>vertical installation, min.</li> </ul>	O°C
<ul> <li>vertical installation, max.</li> </ul>	50 °C
Altitude during operation relating to sea level	
<ul> <li>Installation altitude above sea level, max.</li> </ul>	4 000 m; Restrictions for installation altitudes > 2 000 m, see manual
Dimensions	
Width	15 mm
Height	73 mm
Depth	58 mm
Weights	
Weight, approx.	57 g

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