## SIEMENS

## 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		
• I&M data	Yes; I&M0 to I&M3	
Engineering with		
STEP 7 TIA Portal configurable/integrated from version	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	
Outputs	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	

Decreases threshold two	2.9 A
Response threshold, typ.     Limitation of inductive shutdown voltage to	2.9 A Typ2x 47 V
Controlling a digital input	
	Yes; digital output, according to IEC 61131-2, type 2
Switching capacity of the outputs	0.4
with resistive load, max.	2 A
• on lamp load, max.	10 W
Load resistance range	40.0
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
Switching frequency	
• with resistive load, max.	30 Hz; Symmetrical
<ul> <li>with inductive load, max.</li> </ul>	0.1 Hz; according to IEC 60947-5-1, DC-13, symmetrical
• on lamp load, max.	10 Hz; Symmetrical
Total current of the outputs	
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	
• shielded, max.	1 000 m
• unshielded, max.	500 m
Interrupts/diagnostics/status information	
Diagnostics function	Yes
Substitute values connectable	No
Alarms	
Diagnostic alarm	Yes
Diagnostics indication LED	
RUN LED	Yes; green LED
• ERROR LED	Yes; red LED
<ul> <li>Monitoring of the supply voltage (PWR-LED)</li> </ul>	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
<ul> <li>between the channels and backplane bus</li> </ul>	Yes
<ul> <li>between the channels and the power supply of the</li> </ul>	No
• between the channels and the power supply of the electronics	
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
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	< 2.00E-04
SIL2 — Low demand mode: PFDavg in accordance with	< 2.00E-05
<ul> <li>SIL3</li> <li>High demand/continuous mode: PFH in accordance</li> </ul>	< 1.00E-08 1/h
<ul> <li>— High demand/continuous mode: PFH in accordance</li> <li>— High demand/continuous mode: PFH in accordance</li> </ul>	< 1.00E-09 1/h
Ambient conditions	
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° 0
<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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