

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 4x24 V DC/2 A PM HF
Product function	
<ul style="list-style-type: none"> <li>I&amp;M data</li> </ul>	Yes; I&M0 to I&M3
Engineering with	
<ul style="list-style-type: none"> <li>STEP 7 TIA Portal configurable/integrated as of version</li> </ul>	V12
<ul style="list-style-type: none"> <li>STEP 7 configurable/integrated as of version</li> </ul>	V5.5 SP3 / -
<ul style="list-style-type: none"> <li>PROFINET as of GSD version/GSD revision</li> </ul>	V2.31
Supply voltage	
Rated value (DC)	24 V
permissible range, lower limit (DC)	20.4 V
permissible range, upper limit (DC)	28.8 V
Reverse polarity protection	Yes
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
<b>Power</b>	
Power available from the backplane bus	70 mW
<b>Power loss</b>	
Power loss, typ.	4 W
<b>Address area</b>	
Address space per module	
• Inputs	5 byte
• Outputs	5 byte
<b>Digital outputs</b>	
Number of digital outputs	4
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	Typ. -2x 47 V
<b>Switching capacity of the outputs</b>	
• with resistive load, max.	2 A
• on lamp load, max.	10 W
<b>Load resistance range</b>	
• lower limit	12 Ω
• upper limit	2 000 Ω
<b>Output voltage</b>	
• for signal "1", min.	24 V; L+ (-0.5 V)
<b>Output current</b>	
• for signal "1" rated value	2 A
• for signal "0" residual current, max.	0.5 mA
<b>Switching frequency</b>	
• 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
<b>Total current of the outputs</b>	
• Current per channel, max.	2 A; Note derating data in the manual
• Current per module, max.	6 A; Note derating data in the manual
<b>Cable length</b>	
• shielded, max.	1 000 m
• unshielded, max.	500 m
<b>Interrupts/diagnostics/status information</b>	

Diagnostics function	Yes, "Alarms/diagnostic messages" section in the manual
Substitute values connectable	No
<b>Alarms</b>	
• Diagnostic alarm	Yes
<b>Diagnostics indication LED</b>	
• 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
<b>Potential separation</b>	
<b>Potential separation channels</b>	
• between the channels	No
• between the channels and backplane bus	Yes
• between the channels and the power supply of the electronics	No
<b>Permissible potential difference</b>	
between different circuits	75 V DC/60 V AC
<b>Isolation</b>	
Isolation tested with	707 V DC (type test)
<b>Ambient conditions</b>	
<b>Ambient temperature during operation</b>	
• horizontal installation, min.	0 °C
• horizontal installation, max.	60 °C
• vertical installation, min.	0 °C
• vertical installation, max.	50 °C
<b>Dimensions</b>	
Width	15 mm
Height	73 mm
Depth	58 mm
<b>Weights</b>	
Weight, approx.	57 g
<b>last modified:</b>	01/29/2018