

SIMATIC DP, POWER M. F-PM-E PPM PROFIsafe, for ET 200SP;  
 24 V DC safe shutdown of DQ and F-DQ up to PL D/SIL2 or PL  
 E/SIL3 2 for safe dig. inputs 1 for safe dig. output PPM



General information	
Product type designation	F-PM-E 24 V DC/8 A PPM ST
usable BaseUnits	BU type C0
Color code for module-specific color identification plate	CC52
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
<b>Output voltage</b>	
Rated value (DC)	24 V
<b>Encoder supply</b>	
Number of outputs	2
Short-circuit protection	Yes; Electronic (response threshold 0.7 A to 2.1 A)
<b>Output current</b>	
<ul style="list-style-type: none"> <li>up to 60 °C, max.</li> </ul>	0.3 A
<b>24 V encoder supply</b>	
<ul style="list-style-type: none"> <li>24 V</li> <li>Short-circuit protection</li> <li>Output current, max.</li> </ul>	<ul style="list-style-type: none"> <li>Yes; min. L+ (-1.5 V)</li> <li>Yes</li> <li>600 mA; Total current of all encoders</li> </ul>
<b>Power</b>	
Power available from the backplane bus	70 mW
<b>Power loss</b>	
Power loss, typ.	5 W
<b>Address area</b>	
Address space per module	
<ul style="list-style-type: none"> <li>Inputs</li> <li>Outputs</li> </ul>	<ul style="list-style-type: none"> <li>7 byte</li> <li>5 byte</li> </ul>
<b>Hardware configuration</b>	
Automatic encoding	Yes
<ul style="list-style-type: none"> <li>Electronic coding element type F</li> </ul>	Yes
<b>Digital inputs</b>	
Number of digital inputs	2
Source/sink input	Yes; P-reading
Input characteristic curve in accordance with IEC 61131, type 1	Yes
<b>Input voltage</b>	
<ul style="list-style-type: none"> <li>Type of input voltage</li> <li>Rated value (DC)</li> <li>for signal "0"</li> <li>for signal "1"</li> </ul>	<ul style="list-style-type: none"> <li>DC</li> <li>24 V</li> <li>-30 to +5 V</li> <li>+15 to +30 V</li> </ul>
<b>Input current</b>	
<ul style="list-style-type: none"> <li>for signal "1", typ.</li> </ul>	3.7 mA
<b>Input delay (for rated value of input voltage)</b>	
for standard inputs	
<ul style="list-style-type: none"> <li>parameterizable</li> <li>at "0" to "1", min.</li> </ul>	<ul style="list-style-type: none"> <li>Yes</li> <li>0.4 ms</li> </ul>

— at "0" to "1", max.	20 ms
— at "1" to "0", min.	0.4 ms
— at "1" to "0", max.	20 ms
<b>for technological functions</b>	
— parameterizable	No
<b>Cable length</b>	
• shielded, max.	1 000 m
• unshielded, max.	500 m
<b>Digital outputs</b>	
Number of digital outputs	1
Short-circuit protection	Yes
• Response threshold, typ.	> 14.8 A
Open-circuit detection	Yes
• Response threshold, typ.	8 mA
Overload protection	Yes
• Response threshold, typ.	8.8 A
Limitation of inductive shutdown voltage to	Max. -1.5 V
<b>Switching capacity of the outputs</b>	
• with resistive load, max.	8 A
• on lamp load, max.	100 W
<b>Load resistance range</b>	
• lower limit	3 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	8 A
• for signal "0" residual current, max.	1.5 mA; PP-switching: max. 1.5 mA; PM-switching: max. 1 mA
<b>Switching frequency</b>	
• with resistive load, max.	10 Hz; Symmetrical
• with inductive load, max.	0.1 Hz; according to IEC 60947-5-1, DC-13, symmetrical
• on lamp load, max.	4 Hz; Symmetrical
<b>Total current of the outputs</b>	
• Current per channel, max.	8 A; note derating data in the manual
• Current per module, max.	8 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; 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
Highest safety class achievable in safety mode	
• Performance level according to ISO 13849-1	PLe
• SIL acc. to IEC 61508	SIL 3
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
Dimensions	
Width	20 mm
Height	73 mm
Depth	55 mm
Weights	
Weight, approx.	70 g
<b>last modified:</b>	05/09/2020