



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"> I&M data 	Yes; I&M0 to I&M3
Engineering with	
<ul style="list-style-type: none"> STEP 7 TIA Portal configurable/integrated from version 	V12
<ul style="list-style-type: none"> STEP 7 configurable/integrated from version 	V5.5 SP3 / -
<ul style="list-style-type: none"> PROFINET from GSD version/GSD revision 	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
Encoder supply	
Number of outputs	2
Short-circuit protection	Yes; Electronic (response threshold 0.7 A to 2.1 A)
Output current	
<ul style="list-style-type: none"> up to 60 °C, max. 	0.3 A
24 V encoder supply	
<ul style="list-style-type: none"> 24 V 	Yes; min. L+ (-1.5 V)
<ul style="list-style-type: none"> Short-circuit protection 	Yes
<ul style="list-style-type: none"> Output current, max. 	600 mA; Total current of all encoders
Power	
Power available from the backplane bus	70 mW
Power loss	
Power loss, typ.	5 W
Address area	
Address space per module	
<ul style="list-style-type: none"> Inputs 	7 byte

• Outputs	5 byte
Hardware configuration	
Automatic encoding	Yes
• Electronic coding element type F	Yes
Digital inputs	
Number of digital inputs	2
Source/sink input	Yes; P-reading
Input characteristic curve in accordance with IEC 61131, type 1	Yes
Input voltage	
• Type of input voltage	DC
• Rated value (DC)	24 V
• for signal "0"	-30 to +5 V
• for signal "1"	+15 to +30 V
Input current	
• for signal "1", typ.	3.7 mA
Input delay (for rated value of input voltage)	
for standard inputs	
— parameterizable	Yes
— at "0" to "1", min.	0.4 ms
— at "0" to "1", max.	20 ms
— at "1" to "0", min.	0.4 ms
— at "1" to "0", max.	20 ms
for technological functions	
— parameterizable	No
Cable length	
• shielded, max.	1 000 m
• unshielded, max.	500 m
Digital outputs	
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
Switching capacity of the outputs	
• with resistive load, max.	8 A
• on lamp load, max.	100 W
Load resistance range	
• lower limit	3 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	8 A
• for signal "0" residual current, max.	1.5 mA; PP-switching: max. 1.5 mA; PM-switching: max. 1 mA
Switching frequency	
• 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
Total current of the outputs	
• Current per channel, max.	8 A; note derating data in the manual
• Current per module, max.	8 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; See Chapter "Alarms/diagnostic messages" in the manual
Substitute values connectable	No
Alarms	
<ul style="list-style-type: none"> • Diagnostic alarm 	Yes
<ul style="list-style-type: none"> • Hardware interrupt 	No
Diagnostics indication LED	
<ul style="list-style-type: none"> • RUN LED 	Yes; green LED
<ul style="list-style-type: none"> • ERROR LED 	Yes; red LED
<ul style="list-style-type: none"> • Monitoring of the supply voltage (PWR-LED) 	Yes; green PWR LED
<ul style="list-style-type: none"> • Channel status display 	Yes; green LED
<ul style="list-style-type: none"> • for channel diagnostics 	Yes; red LED
<ul style="list-style-type: none"> • for module diagnostics 	Yes; green/red DIAG LED
Potential separation	
Potential separation channels	
<ul style="list-style-type: none"> • between the channels 	No
<ul style="list-style-type: none"> • between the channels and backplane bus 	Yes
<ul style="list-style-type: none"> • 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	
<ul style="list-style-type: none"> • Performance level according to ISO 13849-1 	PLe
<ul style="list-style-type: none"> • SIL acc. to IEC 61508 	SIL 3
Ambient conditions	
Ambient temperature during operation	
<ul style="list-style-type: none"> • horizontal installation, min. 	0 °C
<ul style="list-style-type: none"> • horizontal installation, max. 	60 °C
<ul style="list-style-type: none"> • vertical installation, min. 	0 °C
<ul style="list-style-type: none"> • vertical installation, max. 	50 °C
Dimensions	
Width	20 mm
Height	73 mm
Depth	55 mm
Weights	
Weight, approx.	70 g

last modified: 1/16/2021 