



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 / header	
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 consumption 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
<ul style="list-style-type: none"> Outputs 	5 byte
Hardware configuration	
Automatic encoding	Yes
<ul style="list-style-type: none"> 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	
<ul style="list-style-type: none"> Type of input voltage Rated value (DC) for signal "0" for signal "1" 	DC 24 V -30 to +5 V +15 to +30 V
Input current	
<ul style="list-style-type: none"> for signal "1", typ. 	3.7 mA
Input delay (for rated value of input voltage)	
for standard inputs	
<ul style="list-style-type: none"> parameterizable at "0" to "1", min. at "0" to "1", max. at "1" to "0", min. at "1" to "0", max. 	Yes 0.4 ms 20 ms 0.4 ms 20 ms
for technological functions	
<ul style="list-style-type: none"> parameterizable 	No
Cable length	
<ul style="list-style-type: none"> shielded, max. unshielded, max. 	1 000 m 500 m
Digital outputs	
Number of digital outputs	1
Short-circuit protection	Yes
<ul style="list-style-type: none"> Response threshold, typ. 	> 14.8 A
Open-circuit detection	Yes
<ul style="list-style-type: none"> Response threshold, typ. 	8 mA
Overload protection	Yes
<ul style="list-style-type: none"> Response threshold, typ. 	8.8 A
Limitation of inductive shutdown voltage to	Max. -1.5 V
Switching capacity of the outputs	
<ul style="list-style-type: none"> with resistive load, max. on lamp load, max. 	8 A 100 W
Load resistance range	
<ul style="list-style-type: none"> lower limit upper limit 	3 Ω 2 000 Ω
Output voltage	
<ul style="list-style-type: none"> for signal "1", min. 	24 V; L+ (-0.5 V)
Output current	
<ul style="list-style-type: none"> for signal "1" rated value for signal "0" residual current, max. 	8 A 1.5 mA; PP-switching: max. 1.5 mA; PM-switching: max. 1 mA
Switching frequency	
<ul style="list-style-type: none"> with resistive load, max. with inductive load, max. on lamp load, max. 	10 Hz; Symmetrical 0.1 Hz; according to IEC 60947-5-1, DC-13, symmetrical 4 Hz; Symmetrical
Total current of the outputs	
<ul style="list-style-type: none"> Current per channel, max. Current per module, max. 	8 A; note derating data in the manual 8 A; note derating data in the manual
Cable length	
<ul style="list-style-type: none"> shielded, max. unshielded, max. 	1 000 m 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 Hardware interrupt 	Yes No
Diagnostics indication LED	

- RUN LED
- ERROR LED
- Monitoring of the supply voltage (PWR-LED)
- Channel status display
- for channel diagnostics
- for module diagnostics

Yes; green LED
 Yes; red LED
 Yes; green PWR LED
 Yes; green LED
 Yes; red LED
 Yes; green/red DIAG LED

Potential separation

Potential separation channels

- between the channels
- between the channels and backplane bus
- between the channels and the power supply of the electronics

No
 Yes
 No

Isolation

Isolation tested with 707 V DC (type test)

Standards, approvals, certificates

Suitable for safety functions Yes

Ecological footprint

- environmental product declaration Yes

Global warming potential

- global warming potential, (total) [CO2 eq] 88.3 kg
- global warming potential, (during production) [CO2 eq] 13.1 kg
- global warming potential, (during operation) [CO2 eq] 76.6 kg
- global warming potential, (after end of life cycle) [CO2 eq] -1.37 kg

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

Altitude during operation relating to sea level

- Installation altitude above sea level, max. 4 000 m; restrictions for installation altitudes > 2 000 m, see ET 200SP System Manual

Dimensions

Width 20 mm
 Height 73 mm
 Depth 58 mm

Weights

Weight, approx. 70 g

Classifications

	Version	Classification
eClass	14	27-24-26-11
eClass	12	27-24-26-11
eClass	9.1	27-24-26-11
eClass	9	27-24-26-11
eClass	8	27-24-26-11
eClass	7.1	27-24-26-11
eClass	6	27-24-26-11
ETIM	9	EC002583
ETIM	8	EC002583
ETIM	7	EC002583
IDEA	4	3575
UNSPSC	15	32-15-17-06

Approvals / Certificates

General Product Approval

[Miscellaneous](#)



[Manufacturer Declaration](#)



For use in hazardous locations



[EM](#)

[CCC-Ex](#)



[Miscellaneous](#)

Functional Safety

Maritime application



[Type Examination Certificate](#)



Maritime application

Industrial Communication

[NK / Nippon Kaiji Kyokai](#)



[CCS \(China Classification Society\)](#)



[PROFIsafe](#)

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