



SIMATIC DP, POWER M. F-PM-E PPM PROFISAFE, FOR ET 200SP; 24V DC FAIL-SAFE SWITCHING OF DQ AND F-DQ UP TO PL D / SIL2 OR PL E / SIL3 2 FAIL-SAFE DIGITAL INPUTS 1 FAIL-SAFE DIGITAL OUTPUT PPM

Product type designation

General information

Product function	
• I&M data	Yes; I&M0 to I&M3
Engineering with	
• STEP 7 TIA Portal can be configured/integrated as of version	V12
• STEP 7 can be configured/integrated as of version	V5.5 SP3 / -
• PROFIBUS as of GSD version/GSD revision	V2.3
• PROFINET as of 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 voltage

• Type of input voltage	DC
-------------------------	----

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	
• up to 60 °C, max.	0.3 A
24 V encoder supply	
• 24 V	Yes; min. L+ (-1.5 V)
• short-circuit protection	Yes
• Output current, max.	600 mA
Power	
Power available from the backplane bus	70 mW
Power losses	
Power loss, typ.	5 W
Address area	
Address space per module	
• Input	7 byte
• Output	5 byte
Digital inputs	
Number of digital inputs	2
m/p-reading	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 +5V
• for signal "1"	+15 to +30V
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 counter/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
<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. 	8 A
<ul style="list-style-type: none"> • on lamp load, max. 	100 W
Load resistance range	
<ul style="list-style-type: none"> • lower limit 	3 Ω
<ul style="list-style-type: none"> • upper limit 	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 	8 A
<ul style="list-style-type: none"> • for signal "0" residual current, max. 	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. 	10 Hz; Symmetrical
<ul style="list-style-type: none"> • with inductive load, max. 	0.1 Hz; according to IEC 947-5-1, DC-13, symmetrical
<ul style="list-style-type: none"> • on lamp load, max. 	4 Hz; Symmetrical
Aggregate current of the outputs	
<ul style="list-style-type: none"> • Current per channel, max. 	8 A; Note derating data in the manual
<ul style="list-style-type: none"> • Current per module, max. 	8 A; Note derating data in the manual
Cable length	
<ul style="list-style-type: none"> • shielded, max. 	1 000 m
<ul style="list-style-type: none"> • Unshielded, max. 	500 m
Interrupts/diagnostics/status information	
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

- for channel diagnostics
- for module diagnostics

Yes; Red LED
Yes; green/red DIAG LED

Galvanic isolation

Electrical isolation channels

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

No
Yes
No

Permissible potential difference

between different circuits

60 V DC / 75 V AC

Isolation

Isolation checked with

707 V DC (type test)

Ambient conditions

Ambient temperature in operation

- horizontal installation, min.
- horizontal installation, max.
- vertical installation, min.
- vertical installation, max.

0 °C
60 °C
0 °C
50 °C

Dimensions

Width

20 mm

Height

72 mm

Depth

55 mm

Weights

Weight, approx.

70 g

last modified:

12.03.2015