

SIMATIC DP, Power Module PM-E F PROFIsafe, f. ET200S; 24 V DC suitable for ungrounded setup relay for switching the voltage buses P1 and P2 up to Category 3 (EN 954-1)/ SIL2 (IEC61508)/PLD (ISO13849), 2 fail-safe dig. outputs up to Category 4 (EN 954-1)/ SIL3 (IEC61508)/PLE (ISO13849), can also be used in PROFINET configuration with IM 151-3 HF



Supply voltage	
Load voltage L+	
• Rated value (DC)	24 V
• Reverse polarity protection	No
Input current	
From load voltage L+ (no load), typ.	100 mA
from backplane bus 24 V DC, max.	28 mA
Power loss	
Power loss, typ.	4 W
Address area	
Address space per module	
• Inputs	5 byte
• Outputs	5 byte
Digital outputs	
Number of digital outputs	2
Short-circuit protection	Yes; Electronic

<ul style="list-style-type: none"> • Response threshold, typ. 	Response threshold (short-circuit): 5 to 12 A; response threshold (external short-circuit to ground): 5 to 12 A; response threshold (external short-circuit to P potential): 25 to 45 A
Limitation of inductive shutdown voltage to	L+ (-2x 47 V)
Controlling a digital input	No
Switching capacity of the outputs	
<ul style="list-style-type: none"> • on lamp load, max. 	10 W
Load resistance range	
<ul style="list-style-type: none"> • lower limit 	12 Ω
<ul style="list-style-type: none"> • upper limit 	1 kΩ
Output voltage	
<ul style="list-style-type: none"> • for signal "1", min. 	L+ (-2,0 V), current sourcing switch: L+ (-1,5 V), voltage drop on current sinking switch: max. 0.5 V
Output current	
<ul style="list-style-type: none"> • for signal "1" rated value 	2 A
<ul style="list-style-type: none"> • for signal "1" permissible range for 0 to 60 °C, min. 	20 mA
<ul style="list-style-type: none"> • for signal "1" permissible range for 0 to 60 °C, max. 	2.4 A
<ul style="list-style-type: none"> • for signal "0" residual current, max. 	0.5 mA
Parallel switching of two outputs	
<ul style="list-style-type: none"> • for uprating 	No
<ul style="list-style-type: none"> • for redundant control of a load 	No
Switching frequency	
<ul style="list-style-type: none"> • with resistive load, max. 	30 Hz
<ul style="list-style-type: none"> • with inductive load, max. 	0.1 Hz
<ul style="list-style-type: none"> • on lamp load, max. 	10 Hz
Total current of the outputs (per group)	
horizontal installation	
— up to 40 °C, max.	10 A
— up to 55 °C, max.	7 A
— up to 60 °C, max.	6 A
vertical installation	
— up to 40 °C, max.	6 A
Relay outputs	
Switching capacity of contacts	
— with resistive load, up to 50 °C, max.	10 A
Cable length	
<ul style="list-style-type: none"> • shielded, max. 	200 m
<ul style="list-style-type: none"> • unshielded, max. 	200 m
Interrupts/diagnostics/status information	
Diagnostics function	Yes

Diagnostic messages

- | | |
|-----------------------------------|-----|
| • Diagnostic information readable | Yes |
| • Wire-break | Yes |
| • Short-circuit | Yes |
| • missing load voltage | Yes |

Diagnostics indication LED

- | | |
|---|-----|
| • Rated load voltage PWR (green) | Yes |
| • Group error SF (red) | Yes |
| • Status indicator digital output (green) | Yes |

Potential separation

Potential separation digital outputs

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| • between the channels | No |
| • between the channels and backplane bus | Yes |
| • Between the channels and load voltage L+ | No |

Isolation

Isolation tested with	500 V DC
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Standards, approvals, certificates

Highest safety class achievable in safety mode

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|--|-------------|
| • acc. to EN 954 | 4 |
| • Performance level according to ISO 13849-1 | e |
| • SIL acc. to IEC 61508 | Up to SIL 3 |

Dimensions

Width	30 mm
Height	81 mm
Depth	52 mm

Weights

Weight, approx.	88 g
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last modified:	08/16/2019
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