

SIMATIC DP, ELECTRONIC MODULE F. ET 200S, 1 COUNT
24V/100KHZ 15 MM WIDE, OPERATION MODES: COUNT,
MEASURE, (PERIOD DURATION MEASUREMENT HIGH
RESOLUTION) WITH CLOCK CYCLIC SYNCHRON.APP

Supply voltage

Load voltage L+	
• 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

from load voltage L+ (without load), max.	42 mA
from backplane bus 3.3 V DC, max.	10 mA

Encoder supply

24 V encoder supply	
• 24 V	Yes; L+ (-0.8 V)
• Short-circuit protection	Yes
• Output current, max.	500 mA

Power loss

Power loss, typ.	1 W
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Hardware configuration

Module exchange	
• Module exchange during operation of the IM-DP	Yes
• Module exchange under process voltage	Yes

Digital inputs

Number of digital inputs	1
Functions	Gate control, synchronization, latch function
Input characteristic curve in accordance with IEC 61131, type 2	Yes
Input voltage	
• Rated value (DC)	24 V
• for signal "0"	-30 to +5V
• for signal "1"	+11 to +30V
Input current	

<ul style="list-style-type: none"> • for signal "0", max. (permissible quiescent current) 	2 mA
<ul style="list-style-type: none"> • for signal "1", typ. 	9 mA
Input delay (for rated value of input voltage)	
for standard inputs	
— at "0" to "1", max.	2.5 µs; Filter off: 2.5 µs (200 kHz), filter on: 25 µs (20 kHz)
Cable length	
<ul style="list-style-type: none"> • shielded, max. 	100 m; Filter 20 kHz: 100 m, filter 200 kHz: 50 m
Digital outputs	
Number of digital outputs	1
Short-circuit protection	Yes
<ul style="list-style-type: none"> • Response threshold, typ. 	2.6 A to 4 A
Limitation of inductive shutdown voltage to	L+ (-50 to -60 V)
Controlling a digital input	Yes
Switching capacity of the outputs	
<ul style="list-style-type: none"> • on lamp load, max. 	5 W
Output voltage	
<ul style="list-style-type: none"> • Rated value (DC) 	24 V
<ul style="list-style-type: none"> • for signal "0", max. 	3 V
<ul style="list-style-type: none"> • for signal "1", min. 	L+ (-1 V)
Output current	
<ul style="list-style-type: none"> • for signal "1" permissible range for 0 to 40 °C, min. 	5 mA
<ul style="list-style-type: none"> • for signal "1" permissible range for 0 to 40 °C, max. 	2 000 mA
<ul style="list-style-type: none"> • for signal "1" permissible range for 0 to 60 °C, min. 	5 mA
<ul style="list-style-type: none"> • for signal "1" permissible range for 0 to 60 °C, max. 	500 mA; 1000 mA at 50 °C
<ul style="list-style-type: none"> • for signal "0" residual current, max. 	0.5 mA
Output delay with resistive load	
<ul style="list-style-type: none"> • "0" to "1", max. 	100 µs
Switching frequency	
<ul style="list-style-type: none"> • with resistive load, max. 	100 Hz
<ul style="list-style-type: none"> • with inductive load, max. 	2 Hz
<ul style="list-style-type: none"> • on lamp load, max. 	10 Hz
Cable length	
<ul style="list-style-type: none"> • shielded, max. 	1 000 m
<ul style="list-style-type: none"> • unshielded, max. 	600 m
Encoder	
Number of connectable encoders, max.	1
Connectable encoders	

- Incremental encoder (asymmetrical) Yes
- 24 V initiator Yes
- 2-wire sensor Yes

Interrupts/diagnostics/status information

Diagnostic functions Yes

Diagnostics indication LED

- Group error SF (red) Yes
- Status indicator digital input (green) Yes
- Status indicator digital output (green) Yes
- Status indicator backward counting (green) Yes
- Status indicator forward counting (green) Yes

Integrated Functions

Measuring functions

Measuring range

- Frequency measurement, min. 0.1 Hz
- Frequency measurement, max. 100 kHz
- Cycle duration measurement, min. 10 μ s
- Cycle duration measurement, max. 120 s
- Speed measurement, min. 1 1/min
- Speed measurement, max. 25 000 1/min

Counter

Number of counter inputs 1; 32 bit

Minimum pulse width 2.5 μ s; Filter off: 2.5 μ s (200 kHz), filter on: 25 μ s (20 kHz)

Parameter

Remark 16 byte

Potential separation

Potential separation digital inputs

- Potential separation digital inputs No; only opposite shielding

Potential separation counter

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

Dimensions

Width 15 mm

Height 81 mm

Depth 52 mm

Weights

Weight, approx. 40 g

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