

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



Figure similar

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

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	
• for signal "0", max. (permissible quiescent current)	2 mA
• 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	
• 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
• 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	
• on lamp load, max.	5 W
Output voltage	
• Rated value (DC)	24 V
• for signal "0", max.	3 V
• for signal "1", min.	L+ (-1 V)
Output current	
• for signal "1" permissible range for 0 to 40 °C, min.	5 mA
• for signal "1" permissible range for 0 to 40 °C, max.	2 000 mA
• for signal "1" permissible range for 0 to 60 °C, min.	5 mA

<ul style="list-style-type: none"> <li>• for signal "1" permissible range for 0 to 60 °C, max.</li> </ul>	500 mA; 1000 mA at 50 °C
<ul style="list-style-type: none"> <li>• for signal "0" residual current, max.</li> </ul>	0.5 mA
<b>Output delay with resistive load</b>	
<ul style="list-style-type: none"> <li>• "0" to "1", max.</li> </ul>	100 µs
<b>Switching frequency</b>	
<ul style="list-style-type: none"> <li>• with resistive load, max.</li> </ul>	100 Hz
<ul style="list-style-type: none"> <li>• with inductive load, max.</li> </ul>	2 Hz
<ul style="list-style-type: none"> <li>• on lamp load, max.</li> </ul>	10 Hz
<b>Cable length</b>	
<ul style="list-style-type: none"> <li>• shielded, max.</li> </ul>	1 000 m
<ul style="list-style-type: none"> <li>• unshielded, max.</li> </ul>	600 m
<b>Encoder</b>	
Number of connectable encoders, max.	1
<b>Connectable encoders</b>	
<ul style="list-style-type: none"> <li>• Incremental encoder (asymmetrical)</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• 24 V initiator</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• 2-wire sensor</li> </ul>	Yes
<b>Interrupts/diagnostics/status information</b>	
Diagnostic functions	Yes
<b>Diagnostics indication LED</b>	
<ul style="list-style-type: none"> <li>• Group error SF (red)</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• Status indicator digital input (green)</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• Status indicator digital output (green)</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• Status indicator backward counting (green)</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• Status indicator forward counting (green)</li> </ul>	Yes
<b>Integrated Functions</b>	
<b>Measuring functions</b>	
<b>Measuring range</b>	
— Frequency measurement, min.	0.1 Hz
— Frequency measurement, max.	100 kHz
— Cycle duration measurement, min.	10 µs
— Cycle duration measurement, max.	120 s
— Speed measurement, min.	1 1/min
— Speed measurement, max.	25 000 1/min
<b>Counter</b>	
Number of counter inputs	1; 32 bit
Minimum pulse width	2.5 µs; Filter off: 2.5 µs (200 kHz), filter on: 25 µs (20 kHz)
<b>Parameter</b>	
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

**last modified:** 03/09/2017