



SIMATIC DP, ELECTRONIC MODULE FOR ET 200S, 1 COUNT 5V/500KHZ FOR CONNECTING RS442 INCREMENTAL ENCODERS, OPERATION MODES: MEASURE, COUNT 30MM WIDE, SINGLE CHANNEL 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.	45 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 losses	
Power loss, typ.	2 W
Hardware configuration	
Module exchange	
• Hot swapping 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 μ s
Cable length	
• shielded, max.	50 m
Digital outputs	
Number of digital outputs	2
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.	10 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" rated value	2 A
• for signal "1" permissible range for 0 to 60 °C, min.	5 mA
• for signal "1" permissible range for 0 to 60 °C, max.	2.4 A
• for signal "0" residual current, max.	0.5 mA
Output delay with resistive load	
• "0" to "1", max.	100 μ s
Switching frequency	
• with resistive load, max.	100 Hz
• with inductive load, max.	2 Hz
• on lamp load, max.	10 Hz
Cable length	
• shielded, max.	1 000 m

- Unshielded, max. 600 m

Encoder

Number of connectable encoders, max. 1

Connectable encoders

- Incremental encoder (symmetrical) Yes

Encoder signals, incremental encoder (symmetrical)

- Trace mark signals A, notA, B, notB, A and B offset by 90°
- Zero mark signal N, notN
- Input signal 5 V difference signal (phys. RS 422)
- Input frequency, max. 650 kHz
- Cable length, shielded, max. 50 m; > 500 kHz: 30 m

Interrupts/diagnostics/status information

Diagnostic messages

- Diagnostic functions Yes

Diagnostics indication LED

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

Integrated Functions

Measuring functions

Measuring range

- Frequency measurement, min. 0.1 Hz
- Frequency measurement, max. 100 kHz
- Period measurement, min. 10 µs
- Period measurement, max. 120 s
- Velocity measurement, min. 1 1/min
- Velocity measurement, max. 25 000 1/min

Counter

Number of counter inputs 1; 32 Bit

Parameter

Remark 16 byte

Galvanic isolation

Galvanic isolation digital inputs

- Galvanic isolation digital inputs No; only opposite shielding

Galvanic isolation counter

- between the channels and the backplane bus Yes

- between the channels and the load voltage L+

No

Dimensions

Width	30 mm
Height	81 mm
Depth	52 mm

Weights

Weight, approx. 65 g

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