

SIMATIC DP, Electronics module for ET 200S, 1 count 24 V/100 kHz
 15 mm installation width, operating modes: Count, Measure, (cycle
 duration measurement, high-resolution) with clock synchronization



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"> • for signal "1" permissible range for 0 to 60 °C, max. 	500 mA; 1 000 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	
<ul style="list-style-type: none"> • Incremental encoder (asymmetrical) 	Yes
<ul style="list-style-type: none"> • 24 V initiator 	Yes
<ul style="list-style-type: none"> • 2-wire sensor 	Yes
Interrupts/diagnostics/status information	
Diagnostics function	Yes
Diagnostics indication LED	
<ul style="list-style-type: none"> • Group error SF (red) 	Yes
<ul style="list-style-type: none"> • Status indicator digital input (green) 	Yes
<ul style="list-style-type: none"> • Status indicator digital output (green) 	Yes
<ul style="list-style-type: none"> • Status indicator backward counting (green) 	Yes
<ul style="list-style-type: none"> • 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 µs
— 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 µs; Filter off: 2.5 µs (200 kHz), filter on: 25 µs (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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