

SIMATIC S7-300, Counter module FM 350-1 for S7-300, Counter functions up to 500 kHz 1 channel for connection of 5 V and 24 V incremental encoders Isochronous mode; Measuring range types incl. configuration package on CD



Supply voltage

Auxiliary voltage 1L+, load voltage 2L+

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|---------------------------------------|------------------------|
| • Rated value (DC) | 24 V |
| • permissible range, lower limit (DC) | 20.4 V; Dynamic 18.5 V |
| • permissible range, upper limit (DC) | 28.8 V; dynamic 30.2 V |

Input current

from load voltage 1L+ (without load), max.	40 mA
from backplane bus 5 V DC, max.	160 mA

Encoder supply

5 V encoder supply

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|------------------------|----------------------|
| • 5 V | Yes; 5.2 V \pm 2 % |
| • Output current, max. | 300 mA |

24 V encoder supply

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|------------------------|-----------------|
| • 24 V | Yes; 1L+ (-3 V) |
| • Output current, max. | 400 mA |

Power loss

Power loss, typ.	4.5 W
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Digital inputs	
Number of digital inputs	3
Functions	1 for gate start, 1 for gate stop, 1 for setting the counter
Input voltage	
<ul style="list-style-type: none"> for signal "0" for signal "1" 	-28.8 ... +5V +11 to +28.8V
Input current	
<ul style="list-style-type: none"> for signal "1", typ. 	9 mA
Digital outputs	
Number of digital outputs	2
Short-circuit protection	Yes; Clocked electronically
Limitation of inductive shutdown voltage to	2L+ (-39 V)
Output voltage	
<ul style="list-style-type: none"> for signal "0", max. for signal "1", min. 	3 V 2L+ (-1,5 V)
Output current	
<ul style="list-style-type: none"> for signal "1" rated value for signal "1" permissible range for 0 to 60 °C, min. for signal "1" permissible range for 0 to 60 °C, max. 	0.5 A 5 mA 0.6 A
Output delay with resistive load	
<ul style="list-style-type: none"> "0" to "1", max. 	300 µs
Encoder	
Connectable encoders	
<ul style="list-style-type: none"> Incremental encoder (symmetrical) Incremental encoder (asymmetrical) 24 V initiator 24 V directional element 	Yes; With 2 pulse trains offset by 90° Yes Yes Yes; 1 pulse train, 1 direction level
Counter	
Number of counter inputs	1; 32 bit or ±31 bit
Counter input 5 V	
<ul style="list-style-type: none"> Type Terminating resistor Differential input voltage Counting frequency, max. 	RS 422 220 Ω 1,3 V 500 kHz
Counter input 24 V	
<ul style="list-style-type: none"> Input voltage for signal "0" Input voltage for signal "1" Input current for signal "1", typ. Counting frequency, max. 	-28.8 ... +5V +11 to +28.8V 9 mA 200 kHz

• Minimum pulse width	2.5 μ s
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Potential separation

Potential separation digital inputs

• between the channels and backplane bus	Yes; Optocoupler
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Potential separation digital outputs

• between the channels and backplane bus	Yes; Optocoupler
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Potential separation counter

• between the channels and backplane bus	Yes; Optocoupler
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Isolation

Isolation tested with	500 V
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Connection method

required front connector	1x 20-pin
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Dimensions

Width	40 mm
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Height	125 mm
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Depth	120 mm
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Weights

Weight, approx.	250 g
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last modified:	08/19/2020
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