



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+	
<ul style="list-style-type: none"> Rated value (DC) 	24 V
<ul style="list-style-type: none"> permissible range, lower limit (DC) 	20.4 V; Dynamic 18.5 V
<ul style="list-style-type: none"> 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	
<ul style="list-style-type: none"> 5 V 	Yes; 5.2 V \pm 2 %
<ul style="list-style-type: none"> Output current, max. 	300 mA
24 V encoder supply	
<ul style="list-style-type: none"> 24 V 	Yes; 1L+ (-3 V)
<ul style="list-style-type: none"> Output current, max. 	400 mA
Power loss	
Power loss, typ.	4.5 W
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" 	-28.8 ... +5V
<ul style="list-style-type: none"> for signal "1" 	+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. 	3 V
<ul style="list-style-type: none"> for signal "1", min. 	2L+ (-1,5 V)
Output current	
<ul style="list-style-type: none"> for signal "1" rated value 	0.5 A
<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. 	0.6 A
Output delay with resistive load	
<ul style="list-style-type: none"> "0" to "1", max. 	300 μ s
Encoder	
Connectable encoders	

• Incremental encoder (symmetrical)	Yes; With 2 pulse trains offset by 90°
• Incremental encoder (asymmetrical)	Yes
• 24 V initiator	Yes
• 24 V directional element	Yes; 1 pulse train, 1 direction level

Counter

Number of counter inputs	1; 32 bit or ±31 bit
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Counter input 5 V

• Type	RS 422
• Terminating resistor	220 Ω
• Differential input voltage	1,3 V
• Counting frequency, max.	500 kHz

Counter input 24 V

• Input voltage for signal "0"	-28.8 ... +5V
• Input voltage for signal "1"	+11 to +28.8V
• Input current for signal "1", typ.	9 mA
• Counting frequency, max.	200 kHz
• Minimum pulse width	2.5 μs

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
Height	125 mm
Depth	120 mm

Weights

Weight, approx.	250 g
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last modified: 1/16/2021 