

SIMATIC S7-300, COUNTER MODULE FM 350-1 FOR S7-300, COUNTER FUNCTIONS UP TO 500 KHZ 1 CHANNEL FOR CONNECTION OF 5V AND 24V INCREMENTAL ENCODERS ISOCHRON MODE, MEASUREMENT MODE INCL. CONFIG. PACKAGE ON CD



Supply voltage	
Auxiliary voltage 1L+, load voltage 2L+	
• Rated value (DC)	24 V
Permissible range (ripple included)	
— dynamic, lower limit (DC)	18.5 V
— dynamic, upper limit (DC)	30.2 V
— static, lower limit (DC)	20.4 V
— static, upper limit (DC)	28.8 V
non-periodic skip	
— Duration	500 ms
— Recovery time	50 s
— Value	35 V
Input current	
from load voltage 1L+ (without load), max.	40 mA
from backplane bus 5 V DC, max.	160 mA
5 V encoder supply	
• 5 V	Yes; 5.2 V +/-2%
• 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 µs
Encoder	
Connectable encoders	
<ul style="list-style-type: none"> • Incremental encoder (symmetrical) 	Yes; With 2 pulse trains offset by 90°
<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"> • 24 V directional element 	Yes; 1 pulse train, 1 direction level
Counter	
Number of counter inputs	1
Counting range, description	32 bit or +/-31 bit
Minimum pulse width, adjustable	Yes; 2.5 or 25 µs
Counter input 5 V	
<ul style="list-style-type: none"> • Type 	RS 422
<ul style="list-style-type: none"> • 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 μ s

Potential separation

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

Permissible potential difference

between different circuits	75V DC/60V AC
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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: 24.07.2015