



spare part 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+	
• 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	
• 5 V	Yes; 5.2 V \pm 2 %
• Output current, max.	300 mA
24 V encoder supply	
• 24 V	Yes; 1L+ (-3 V)
• 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	
• for signal "0"	-28.8 ... +5V
• for signal "1"	+11 to +28.8V
Input current	
• 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	
• for signal "0", max.	3 V
• for signal "1", min.	2L+ (-1,5 V)
Output current	
• for signal "1" rated value	0.5 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.	0.6 A
Output delay with resistive load	
• "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	
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	
Potential separation digital outputs		
• between the channels and backplane bus	Yes; Optocoupler	
Potential separation counter		
• between the channels and backplane bus	Yes; Optocoupler	
Isolation		
Isolation tested with	500 V	
Connection method		
required front connector	1x 20-pin	
Dimensions		
Width	40 mm	
Height	125 mm	
Depth	120 mm	
Weights		
Weight, approx.	250 g	
Classifications		
	Version	Classification
eClass	14	27-24-22-05
eClass	12	27-24-22-05
eClass	9.1	27-24-22-05
eClass	9	27-24-22-05
eClass	8	27-24-22-05
eClass	7.1	27-24-22-05
eClass	6	27-24-22-05
ETIM	10	EC001422
ETIM	9	EC001422
ETIM	8	EC001422
ETIM	7	EC001422
IDEA	4	3567
UNSPSC	15	32-15-17-05
Approvals / Certificates		
General Product Approval		



[Miscellaneous](#)

[Manufacturer Declaration](#)



General Product Approval

EMV

For use in hazardous locations



[China RoHS](#)



For use in hazardous locations

Maritime application



[Miscellaneous](#)

[CCC-Ex](#)



Maritime application



[NK / Nippon Kaiji Kyokai](#)



[CCS \(China Classification Society\)](#)

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