

SIMATIC S7-300, COUNTER MODULE FM 350-2, 8 CHANNELS, 20 KHZ, 24V ENCODER FOR COUNTING, MEASURING FREQUENCIES, SPEED MEASUREMENT, PERIOD DURATION MEASUREMENT AND PROPORTIONING INCL. CONFIG. PACKAGE AND ELECTRONIC DOCU ON CD

Supply voltage

Auxiliary voltage 1L+, load voltage 2L+

- | | |
|---------------------------------------|--------|
| • Rated value (DC) | 24 V |
| • permissible range, lower limit (DC) | 20.4 V |
| • permissible range, upper limit (DC) | 28.8 V |

Input current

- | | |
|---|--------|
| from load voltage L+ (without load), max. | 150 mA |
| from backplane bus 5 V DC, max. | 100 mA |

Encoder supply

- | | |
|--------------------------|---------------------------------------|
| Type of output voltage | NAMUR-encoder supply: 8.2 V \pm 2 % |
| Short-circuit protection | Yes |

Output current

- | | |
|---------------|--------|
| • Rated value | 200 mA |
|---------------|--------|

Power loss

- | | |
|------------------|------|
| Power loss, typ. | 10 W |
|------------------|------|

Digital inputs

- | | |
|--------------------------|----------------------------------|
| Number of digital inputs | 8 |
| Number of NAMUR inputs | 8 |
| Functions | 1 each for gate start/ gate stop |

Input voltage

- | | |
|------------------|--------------|
| • for signal "0" | -3 to +5V |
| • for signal "1" | 11 to 30.2 V |

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. | 50 μ s |

Cable length

- | | |
|------------------|-------|
| • shielded, max. | 100 m |
|------------------|-------|

Digital outputs	
Number of digital outputs	8
Short-circuit protection	Yes
Limitation of inductive shutdown voltage to	L+ (-40 V)
Output voltage	
• for signal "1", min.	L+ (-0.8 V)
Output current	
• for signal "1" rated value	0.5 A
• for signal "0" residual current, max.	0.5 mA
Output delay with resistive load	
• "0" to "1", max.	300 µs
Switching frequency	
• with resistive load, max.	500 Hz
• with inductive load, max.	0.5 Hz
Total current of the outputs (per group)	
horizontal installation	
— up to 40 °C, max.	4 A
— up to 60 °C, max.	2 A
all other mounting positions	
— up to 40 °C, max.	2 A
Cable length	
• shielded, max.	600 m
• unshielded, max.	100 m
Encoder	
Connectable encoders	
• Incremental encoder (asymmetrical)	Yes
• 24 V initiator	Yes
• 24 V directional element	Yes
• NAMUR encoder	Yes
• 2-wire sensor	Yes
NAMUR encoder	
• Input signal	to DIN 19 234
• Input current for signal "0", max.	1.2 mA
• Input current for signal "1", min.	2.1 mA
• Input delay, max.	50 µs
• Input frequency, max.	20 kHz
• Cable length, shielded, max.	100 m
Interrupts/diagnostics/status information	
Diagnostic functions	Yes; Diagnostic information readable
Alarms	
• Diagnostic alarm	Yes; Parameterizable

• Hardware interrupt	Yes; Parameterizable
Diagnostics indication LED	
• Group error SF (red)	Yes

Counter

Counter input 24 V	
• Number	8; 32 bit or ± 31 bit
• Input voltage for signal "0"	-3 to +5V
• Input voltage for signal "1"	11 to 30.2 V
• Input current for signal "0", max. (permissible quiescent current)	2 mA
• Input current for signal "1", typ.	9 mA
• Input delay, max.	50 μ s
• Counting frequency, max.	20 kHz; 24 V incremental encoder: 10 kHz; 24-V direction encoder: 20 kHz; 24-V initiator: 20 kHz; NAMUR encoder: 20 kHz
• Cable length, max.	100 m

Potential separation

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

Connection method

required front connector	1x 40-pin
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Dimensions

Width	80 mm
Height	125 mm
Depth	120 mm

Weights

Weight, approx.	460 g
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last modified: 03/16/2018