

SIPLUS S7-300 FM350-2 8 channels for medial exposure with conformal coating based on 6ES7350-2AH01-0AE0 . Counter module FM 350-2, 8 channels, 20 kHz, 24 V encoder for counting, frequency measurement, speed measurement, period duration measurement, dosing incl. configuration package and Electronic documentation on CD-ROM

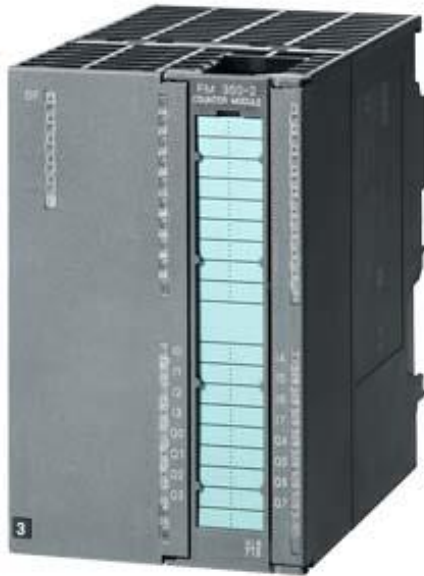


Figure similar

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 µs
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

Diagnostics function	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 µs
• Counting frequency, max.	20 kHz; Incremental encoder: 10 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

Standards, approvals, certificates

CE mark	Yes
UL approval	Yes; File E239877
RCM (formerly C-TICK)	Yes

KC approval	Yes
EAC (formerly Gost-R)	Yes
Ambient conditions	
Ambient temperature during operation	
• min.	0 °C; = Tmin
• max.	60 °C; = Tmax
Altitude during operation relating to sea level	
• Installation altitude above sea level, max.	5 000 m
• Ambient air temperature-barometric pressure-altitude	Tmin ... Tmax at 1 140 hPa ... 795 hPa (-1 000 m ... +2 000 m) // Tmin ... (Tmax - 10 K) at 795 hPa ... 658 hPa (+2 000 m ... +3 500 m) // Tmin ... (Tmax -20 K) at 658 hPa ... 540 hPa (+3 500 m ... +5 000 m)
Relative humidity	
• With condensation, tested in accordance with IEC 60068-2-38, max.	100 %; RH incl. condensation/frost (no commissioning under condensation conditions)
Resistance	
Use in stationary industrial systems	
— to biologically active substances according to EN 60721-3-3	Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request
— to chemically active substances according to EN 60721-3-3	Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *
— to mechanically active substances according to EN 60721-3-3	Yes; Class 3S4 incl. sand, dust, *
Use on ships/at sea	
— to biologically active substances according to EN 60721-3-6	Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request
— to chemically active substances according to EN 60721-3-6	Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *
— to mechanically active substances according to EN 60721-3-6	Yes; Class 6S3 incl. sand, dust; *
Usage in industrial process technology	
— Against chemically active substances acc. to EN 60654-4	Yes; Class 3 (excluding trichlorethylene)
— Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04	Yes; Level GX group A/B (excluding trichlorethylene; harmful gas concentrations up to the limits of EN 60721-3-3 class 3C4 permissible); level LC3 (salt spray) and level LB3 (oil)
Remark	
— Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04	* The supplied plug covers must remain in place over the unused interfaces during operation!
Connection method	
required front connector	1x 40-pin
Dimensions	

Width	80 mm
Height	125 mm
Depth	120 mm

Weights

Weight, approx.	460 g
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