



SIPLUS S7-300 FM350-1 based on 6ES7350-1AH03-0AE0 with conformal coating, -25...+60 °C, counter module 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-ROM

General information

based on

[6ES7350-1AH03-0AE0](#)

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 μ s
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
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.	-25 °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	Yes; Class 3 (excluding trichlorethylene)

60654-4
— 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 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	9	EC001422
ETIM	8	EC001422
ETIM	7	EC001422
IDEA	4	3567
UNSPSC	15	32-15-17-05

Approvals / Certificates

General Product Approval

EMV

[Miscellaneous](#)



[Manufacturer Declaration](#)



[KC](#)

EMV

For use in hazardous locations



[CCC-Ex](#)

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