

SIPLUS ET 200M SM 336 F 6AI 15 bit -25...+60 °C (70°C with forced convection) with conformal coating based on 6ES7336-4GE00-0AB0 . fail-safe analog inputs for SIMATIC Safety, with HART support, up to Category 4 (EN 954-1) /SIL3 (IEC 61508)/ PLE (ISO 13849), 1x 20-pole



Figure similar

Supply voltage	
Rated value (DC)	24 V; ±5 %
Reverse polarity protection	Yes
Input current	
From power supply L+, typ.	150 mA
from backplane bus 5 V DC, max.	90 mA
Power loss	
Power loss, typ.	4.5 W
Analog inputs	
Number of analog inputs	6
permissible input current for current input (destruction limit), max.	40 mA
Input ranges	
• Voltage	No
• Current	Yes
Input ranges (rated values), currents	

<ul style="list-style-type: none"> • 0 to 20 mA 	Yes
<ul style="list-style-type: none"> • Input resistance (0 to 20 mA) 	150 Ω; typ. 150 ohms max. 175 ohms
<ul style="list-style-type: none"> • 4 mA to 20 mA 	Yes
<ul style="list-style-type: none"> • Input resistance (4 mA to 20 mA) 	150 Ω; typ. 150 ohms max. 175 ohms
Cable length	
<ul style="list-style-type: none"> • shielded, max. 	1 000 m
Analog value generation for the inputs	
Integration and conversion time/resolution per channel	
<ul style="list-style-type: none"> • Integration time (ms) 	20 ms @ 50 Hz, 16.7 ms @ 60 Hz
<ul style="list-style-type: none"> • Interference voltage suppression for interference frequency f1 in Hz 	f=n x (f1 ±0.5 %)
Encoder	
Connection of signal encoders	
<ul style="list-style-type: none"> • for current measurement as 2-wire transducer 	Yes
<ul style="list-style-type: none"> • for current measurement as 4-wire transducer 	Yes
Errors/accuracies	
Operational error limit in overall temperature range	
<ul style="list-style-type: none"> • Current, relative to input range, (+/-) 	0.3 %; 60 μA
Basic error limit (operational limit at 25 °C)	
<ul style="list-style-type: none"> • Current, relative to input range, (+/-) 	0.1 %; 20 μA
Interrupts/diagnostics/status information	
<ul style="list-style-type: none"> • Diagnostics function 	Yes
Alarms	
<ul style="list-style-type: none"> • Diagnostic alarm 	Yes
Diagnostic messages	
<ul style="list-style-type: none"> • Diagnostic information readable 	Yes
Diagnostics indication LED	
<ul style="list-style-type: none"> • Fail-safe operation 	Yes
<ul style="list-style-type: none"> • Group error SF (red) 	Yes
<ul style="list-style-type: none"> • Encoder supply Vs (green) 	No
Potential separation	
Potential separation analog inputs	
<ul style="list-style-type: none"> • between the channels 	Yes
<ul style="list-style-type: none"> • between the channels and backplane bus 	Yes
<ul style="list-style-type: none"> • between the channels and the power supply of the electronics 	Yes
Isolation	
<ul style="list-style-type: none"> • Isolation tested with 	370V for 1 min
Standards, approvals, certificates	
<ul style="list-style-type: none"> • CE mark 	Yes

Highest safety class achievable in safety mode	
<ul style="list-style-type: none"> • acc. to EN 954 • SIL acc. to IEC 61508 	<p>4</p> <p>SIL 3</p>
Ambient conditions	
Ambient temperature during operation	
<ul style="list-style-type: none"> • min. • max. 	<p>-25 °C; = Tmin; Startup @ -25 °C</p> <p>60 °C; = T max; *+70 °C when forced convection at a minimum air speed of 0.3 m/s through the modules is ensured. If in the course of maintenance or automatic diagnosis it is determined that the admissible specified parameters have been exceeded, the modules should be subjected to a proof test (function check) by the manufacturer.</p>
<ul style="list-style-type: none"> • At cold restart, min. 	-25 °C
Ambient temperature during storage/transportation	
<ul style="list-style-type: none"> • min. • max. 	<p>-40 °C</p> <p>70 °C</p>
Altitude during operation relating to sea level	
<ul style="list-style-type: none"> • Installation altitude above sea level, max. • Ambient air temperature-barometric pressure-altitude 	<p>2 000 m</p> <p>Tmin ... Tmax at 1 140 hPa ... 795 hPa (-1 000 m ... +2 000 m)</p>
Relative humidity	
<ul style="list-style-type: none"> • 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	
<ul style="list-style-type: none"> — to biologically active substances according to EN 60721-3-3 — to chemically active substances according to EN 60721-3-3 — to mechanically active substances according to EN 60721-3-3 	<p>Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request</p> <p>Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *</p> <p>Yes; Class 3S4 incl. sand, dust, *</p>
Use on ships/at sea	
<ul style="list-style-type: none"> — to biologically active substances according to EN 60721-3-6 — to chemically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 	<p>Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request</p> <p>Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *</p> <p>Yes; Class 6S3 incl. sand, dust; *</p>
Remark	
<ul style="list-style-type: none"> — Note regarding classification of environmental conditions acc. to EN 60721 	* The supplied plug covers must remain in place over the unused interfaces during operation!
Conformal coating	
<ul style="list-style-type: none"> • Coatings for printed circuit board assemblies acc. to EN 61086 	Yes; Class 2 for high availability

- Military testing according to MIL-I-46058C, Amendment 7
- Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A

Yes; Discoloration of coating possible during service life

Yes; Conformal coating, Class A

Connection method

required front connector 20-pin

Dimensions

Width 40 mm

Height 125 mm

Depth 120 mm

Weights

Weight, approx. 350 g

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