

Data sheet

6ES7134-6GD01-0BA1



SIMATIC ET 200SP, ANALOG INPUT MODULE, AI 4xI 2-/4-WIRE STANDARD, PACKING UNIT: 1 PIECE, FITS TO BU-TYPE A0, A1, COLOR CODE CC03, MODULE DIAGNOSIS, 16BIT, +/-0,3%

General information	
Product type designation	AI 4xI 2-/4-wire ST
HW functional status	From FS02
Firmware version	
• FW update possible	Yes
usable BaseUnits	BU type A0, A1
Color code for module-specific color identification plate	CC03
Product function	
• I&M data	Yes; I&M0 to I&M3
• Isochronous mode	No
• Measuring range scalable	No
Engineering with	
• STEP 7 TIA Portal configurable/integrated from version	V14 / -
• STEP 7 configurable/integrated from version	V5.6 and higher
• PCS 7 configurable/integrated from version	V8.1 SP1
• PROFIBUS from GSD version/GSD revision	One GSD file each, Revision 3 and 5 and higher
• PROFINET from GSD version/GSD revision	GSDML V2.3
Operating mode	
• Oversampling	No
• MSI	No
CiR - Configuration in RUN	
Reparameterization possible in RUN	Yes
Calibration possible in RUN	No
Supply voltage	
Rated value (DC)	24 V
permissible range, lower limit (DC)	19.2 V
permissible range, upper limit (DC)	28.8 V
Reverse polarity protection	Yes
Input current	
Current consumption, max.	37 mA; without sensor supply
Encoder supply	
24 V encoder supply	
• 24 V	Yes
• Short-circuit protection	Yes
• Output current, max.	20 mA; max. 50 mA per channel for a duration < 10 s
Power loss	
Power loss, typ.	0.85 W; Without encoder supply voltage
Address area	
Address space per module	

• Address space per module, max.	8 byte; + 1 byte for QI information
Hardware configuration	
Automatic encoding	Yes
• Mechanical coding element	Yes
• Type of mechanical coding element	Type A
Selection of BaseUnit for connection variants	
• 2-wire connection	BU type A0, A1
• 4-wire connection	BU type A0, A1
Analog inputs	
Number of analog inputs	4; Differential inputs
permissible input current for current input (destruction limit), max.	50 mA
Cycle time (all channels), min.	Sum of the basic conversion times and additional processing times (depending on the parameterization of the active channels)
Input ranges (rated values), currents	
• 0 to 20 mA — Input resistance (0 to 20 mA)	Yes; 16 bit incl. sign 100 Ω; + approx. 0.7 V diode forward voltage in 2-wire operation
• -20 mA to +20 mA — Input resistance (-20 mA to +20 mA)	Yes 100 Ω
• 4 mA to 20 mA — Input resistance (4 mA to 20 mA)	Yes; 15 bit 100 Ω; + approx. 0.7 V diode forward voltage in 2-wire operation
Cable length	
• shielded, max.	1 000 m
Analog value generation for the inputs	
Measurement principle	integrating (Sigma-Delta)
Integration and conversion time/resolution per channel	
• Resolution with overrange (bit including sign), max.	16 bit
• Integration time, parameterizable	Yes
• Interference voltage suppression for interference frequency f_1 in Hz	16.6 / 50 / 60 Hz
• Conversion time (per channel)	180 / 60 / 50 ms
Smoothing of measured values	
• Number of smoothing levels	4; None; 4/8/16 times
• parameterizable	Yes
Encoder	
Connection of signal encoders	
• for voltage measurement	No
• for current measurement as 2-wire transducer — Burden of 2-wire transmitter, max.	Yes 650 Ω
• for current measurement as 4-wire transducer	Yes
Errors/accuracies	
Linearity error (relative to input range), (+/-)	0.01 %
Temperature error (relative to input range), (+/-)	0.005 %/K
Crosstalk between the inputs, min.	50 dB; Applies to up to ±5 V overvoltage in other channels
Repeat accuracy in steady state at 25 °C (relative to input range), (+/-)	0.05 %
Operational error limit in overall temperature range	
• Current, relative to input range, (+/-)	0.5 %
Basic error limit (operational limit at 25 °C)	
• Current, relative to input range, (+/-)	0.3 %
Interference voltage suppression for $f = n \times (f_1 \pm 1 \%)$, f_1 = interference frequency	
• Series mode interference (peak value of interference < rated value of input range), min.	70 dB
• Common mode voltage, max.	10 V
• Common mode interference, min.	90 dB
Interrupts/diagnostics/status information	
Diagnostics function	Yes
Alarms	
• Diagnostic alarm	Yes
• Limit value alarm	No

Diagnoses	
<ul style="list-style-type: none"> Monitoring the supply voltage Wire-break Short-circuit Group error Overflow/underflow 	<p>Yes</p> <p>Yes; at 4 to 20 mA</p> <p>Yes; 2-wire mode: Short-circuit of the encoder supply to ground or of an input to the encoder supply</p> <p>Yes</p> <p>Yes</p>
Diagnostics indication LED	
<ul style="list-style-type: none"> Monitoring of the supply voltage (PWR-LED) Channel status display for channel diagnostics for module diagnostics 	<p>Yes; green LED</p> <p>Yes; green LED</p> <p>No</p> <p>Yes; green/red LED</p>
Potential separation	
Potential separation channels	
<ul style="list-style-type: none"> between the channels between the channels and backplane bus between the channels and the power supply of the electronics 	<p>Yes; channel group-specific between 2-wire current input group and 4-wire voltage input group</p> <p>Yes</p> <p>Yes; only for 4-wire transducer</p>
Permissible potential difference	
between the inputs (UCM)	10 V DC
Isolation	
Isolation tested with	707 V DC (type test)
Standards, approvals, certificates	
Ecological footprint	
<ul style="list-style-type: none"> environmental product declaration 	Yes
Global warming potential	
— global warming potential, (total) [CO2 eq]	9.32 kg
— global warming potential, (during production) [CO2 eq]	4.97 kg
— global warming potential, (during operation) [CO2 eq]	4.79 kg
— global warming potential, (after end of life cycle) [CO2 eq]	-0.449 kg
Ambient conditions	
Ambient temperature during operation	
<ul style="list-style-type: none"> horizontal installation, min. horizontal installation, max. vertical installation, min. vertical installation, max. 	<p>-30 °C; < 0 °C as of FS02</p> <p>60 °C</p> <p>-30 °C; < 0 °C as of FS02</p> <p>50 °C</p>
Altitude during operation relating to sea level	
<ul style="list-style-type: none"> Installation altitude above sea level, max. 	5 000 m; Restrictions for installation altitudes > 2 000 m, see manual
Dimensions	
Width	15 mm
Height	73 mm
Depth	58 mm
Weights	
Weight, approx.	31 g

Classifications		
	Version	Classification
eClass	14	27-24-26-01
eClass	12	27-24-26-01
eClass	9.1	27-24-26-01
eClass	9	27-24-26-01
eClass	8	27-24-26-01
eClass	7.1	27-24-26-01
eClass	6	27-24-26-01
ETIM	10	EC001596

ETIM	9	EC001596
ETIM	8	EC001596
ETIM	7	EC001596
IDEA	4	3562
UNSPSC	15	32-15-17-05

Approvals / Certificates

General Product Approval



[Manufacturer Declaration](#)

[Miscellaneous](#)



[KC](#)

General Product Approval For use in hazardous locations

[Metrological Approval](#)



[FM](#)

[CCC-Ex](#)



For use in hazardous locations Maritime application



[Miscellaneous](#)

[Type Examination Certificate](#)



Maritime application



[NK / Nippon Kaiji Kyokai](#)



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



Environment



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