## **SIEMENS**

## **Data sheet**

## 6ES7134-6HB00-0CA1



SIMATIC ET 200SP, Analog input module, Al 2x U/l 2-.4-wire High Feat., suitable for BU type A0, A1, Color code CC05, channel diagnostics, 16 bit, +/-0.1%

General information	
Product type designation	AI 2xU/I 2-/4-wire HF
HW functional status	From FS06
Firmware version	
<ul> <li>FW update possible</li> </ul>	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
<ul> <li>Isochronous mode</li> </ul>	Yes
Measuring range scalable	No
Engineering with	
<ul> <li>STEP 7 TIA Portal configurable/integrated from version</li> </ul>	V13
<ul> <li>STEP 7 configurable/integrated from version</li> </ul>	V5.5 / -
<ul> <li>PCS 7 configurable/integrated from version</li> </ul>	V8.1 SP1
<ul> <li>PROFIBUS from GSD version/GSD revision</li> </ul>	One GSD file each, Revision 3 and 5 and higher
PROFINET from GSD version/GSD revision	GSDML V2.3
Operating mode	
<ul> <li>Oversampling</li> </ul>	No
• MSI	Yes
CiR - Configuration in RUN	
Reparameterization possible in RUN	Yes
Calibration possible in RUN	Yes
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 (rated value)	39 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 (two-wire)
Additional 24 V encoder supply	
Short-circuit protection	Yes; channel by channel
<ul> <li>Output current, max.</li> </ul>	100 mA; max. 150 mA for a duration of < 10 s (four-wire)
Power loss	
Power loss, typ.	0.95 W; without sensor supply

Address area	
Address space per module	
Address space per module, max.	4 byte; + 4 byte for scaling of measured values, + 1 byte for QI information
Hardware configuration	1 byte, 1 byte for coaling of meadured values, 1 byte for at information
Automatic encoding	Yes
Mechanical coding element	Yes
Type of mechanical coding element	Type A
Selection of BaseUnit for connection variants	Type A
2-wire connection	DIL trino AO A4
	BU type A0, A1
4-wire connection	BU type A0, A1
Analog inputs	0.0%
Number of analog inputs	2; Differential inputs
For current measurement	2
For voltage measurement	2
permissible input voltage for voltage input (destruction limit), max.	30 V
permissible input current for current input (destruction limit), max.	50 mA
Analog input with oversampling	No
Standardization of measured values	Yes
Input ranges (rated values), voltages	
• 0 to +10 V	Yes; 15 bit
<ul><li>— Input resistance (0 to 10 V)</li></ul>	75 kΩ
• 1 V to 5 V	Yes; 15 bit
— Input resistance (1 V to 5 V)	75 kΩ
• -10 V to +10 V	Yes; 16 bit incl. sign
<ul><li>— Input resistance (-10 V to +10 V)</li></ul>	75 kΩ
• -5 V to +5 V	Yes; 16 bit incl. sign
— Input resistance (-5 V to +5 V)	75 kΩ
Input ranges (rated values), currents	
• 0 to 20 mA	Yes; 15 bit
— Input resistance (0 to 20 mA)	130 Ω
• -20 mA to +20 mA	Yes; 16 bit incl. sign
— Input resistance (-20 mA to +20 mA)	130 Ω
• 4 mA to 20 mA	Yes; 15 bit
— Input resistance (4 mA to 20 mA)	130 Ω
Cable length	130 12
• shielded, max.	1 000 m; 200 m for valtage magaurament
,	1 000 m; 200 m for voltage measurement
Analog value generation for the inputs	O' D II
Measurement principle	Sigma Delta
Integration and conversion time/resolution per channel	4017
Resolution with overrange (bit including sign), max.	16 bit
Integration time, parameterizable	Yes
<ul><li>Integration time (ms)</li></ul>	67.5 / 22.5 / 18.75 / 10 / 5 / 2.5 / 1.25 / 0.625 ms
Basic conversion time, including integration time (ms)	68.03 / 22.83 / 19.03 / 10.28 / 5.23 / 2.68 / 1.43 / 0.730 ms
<ul> <li>Interference voltage suppression for interference frequency f1 in Hz</li> </ul>	16.6 / 50 / 60 / 300 / 600 / 1 200 / 2 400 / 4 800
<ul> <li>Conversion time (per channel)</li> </ul>	68.2 / 23 / 19.2 / 10.45 / 5.40 / 2.85 / 1.6 / 0.9 ms
<ul> <li>Basic execution time of the module (all channels released)</li> </ul>	1 ms
Smoothing of measured values	
<ul> <li>Number of smoothing levels</li> </ul>	6; none; 2-/4-/8-/16-/32-fold
parameterizable	Yes
Encoder	
Connection of signal encoders	
for voltage measurement	Yes
for current measurement as 2-wire transducer	Yes
Burden of 2-wire transmitter, max.	650 Ω
for current measurement as 4-wire transducer	Yes
Errors/accuracies	
	0.01 %
Linearity error (relative to input range), (+/-)	
Temperature error (relative to input range), (+/-)	0.003 %/K

Crosstalk between the inputs, min.	-50 dB
Repeat accuracy in steady state at 25 °C (relative to input range), (+/-)	0.01 %
Operational error limit in overall temperature range	
<ul> <li>Voltage, relative to input range, (+/-)</li> </ul>	0.1 %
<ul> <li>Current, relative to input range, (+/-)</li> </ul>	0.1 %
Basic error limit (operational limit at 25 °C)	
<ul> <li>Voltage, relative to input range, (+/-)</li> </ul>	0.05 %; 0.1 % at SFU 4.8 kHz
<ul> <li>Current, relative to input range, (+/-)</li> </ul>	0.05 %; 0.1 % at SFU 4.8 kHz
Interference voltage suppression for f = n x (f1 +/- 1 %), f1 = interference	erference frequency
<ul> <li>Common mode voltage, max.</li> </ul>	35 V
<ul> <li>Common mode interference, min.</li> </ul>	90 dB
Isochronous mode	
Filtering and processing time (TCI), min.	800 μs
Bus cycle time (TDP), min.	1 ms
Jitter, max.	5 µs
Interrupts/diagnostics/status information	
Diagnostics function	Yes
Alarms	
Diagnostic alarm	Yes
Limit value alarm	Yes; two upper and two lower limit values in each case
Diagnoses	
Monitoring the supply voltage	Yes
Wire-break	Yes; Measuring range 4 to 20 mA only
Short-circuit	Yes; channel-by-channel, at 1 to 5 V or for short-circuit in encoder supply
Group error	Yes
Overflow/underflow	Yes
Diagnostics indication LED	
Monitoring of the supply voltage (PWR-LED)	Yes; green PWR LED
Channel status display	Yes; green LED
• for channel diagnostics	Yes; red LED
for module diagnostics	Yes; green/red DIAG LED
Potential separation	100, 9,000,000 2,000 2,000
Potential separation channels	
between the channels	Yes
between the channels and backplane bus	Yes
between the channels and the power supply of the	Yes
electronics	163
Isolation	
Isolation tested with	707 V DC (type test)
Ambient conditions	
Ambient temperature during operation	
horizontal installation, min.	-30 °C; < 0 °C as of FS06
<ul> <li>horizontal installation, max.</li> </ul>	60 °C
• vertical installation, min.	-30 °C; < 0 °C as of FS06
• vertical installation, max.	50 °C
Altitude during operation relating to sea level	
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.	32 g
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