SIEMENS

Data sheet

6ES7135-6HB00-0DA1

SIMATIC ET 200SP, Analog output module, AQ 2x U/I High Speed, suitable for BU type A0, A1, Color code CC00, channel diagnostics, 16 bit, +/-0.2%



General information	
Product type designation	AQ 2xU/I HS
HW functional status	From FS06
usable BaseUnits	BU type A0, A1
Color code for module-specific color identification plate	CC00
Product function	
● I&M data	Yes; I&M0 to I&M3
 Isochronous mode 	Yes
Engineering with	
 STEP 7 TIA Portal configurable/integrated from version 	V13 SP1
 STEP 7 configurable/integrated from version 	V5.5 SP3 / -
 PROFIBUS from GSD version/GSD revision 	GSD Revision 5
 PROFINET from GSD version/GSD revision 	GSDML V2.3
Operating mode	
Oversampling	Yes; 2 channels per module
• MSO	No

CiR – Configuration in RUN	
Reparameterization possible in RUN	Yes
Calibration possible in RUN	No
Supply voltage	24 V
Rated value (DC)	
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)	45 mA; without load
Power loss	
Power loss, typ.	0.9 W
Address area	
Address space per module	4 byte; + 1 byte for QI information (32 bytes in the oversampling
 Address space per module, max. 	operating mode)
Hardware configuration	
Automatic encoding	
 Mechanical coding element 	Yes
 Type of mechanical coding element 	Туре А
Analog outputs	
Number of analog outputs	2
Voltage output, short-circuit protection	Yes
Voltage output, short-circuit current, max.	45 mA
Cycle time (all channels), min.	125 µs
Analog output with oversampling	Yes
 Values per cycle, max. 	16
Resolution, min.	45 μs; (2 channels), 35 μs (1 channel)
Output ranges, voltage	
• 0 to 10 V	Yes; 15 bit
• 1 V to 5 V	Yes; 13 bit
• -5 V to +5 V	Yes; 15 bit incl. sign
• -10 V to +10 V	Yes; 16 bit incl. sign
Output ranges, current	
• 0 to 20 mA	Yes; 15 bit
• -20 mA to +20 mA	Yes; 16 bit incl. sign
• 4 mA to 20 mA	Yes; 14 bit
Connection of actuators	
 for voltage output two-wire connection 	Yes
 for voltage output four-wire connection 	Yes

Load impedance (in rated range of output) with voltage outputs, nin, with voltage outputs, capacitive load, max. 1 μF with current outputs, max. 500 Ω with current outputs, inductive load, max. 1 mH Destruction limits against externally applied voltages and currents voltages at the outputs 30 V Cable length shielded, max. 1 000 m; 200 m for voltage output Analog value generation for the outputs Integration and conversion time/resolution per channel Resolution with overrange (bit including sign), max. 16 bit for reasitive load 0.05 ms for capacitive load 0.05 ms for capacitive load 0.05 ms Output tripple (relative to output range, bandwidth 0 to 0 003 %/K Crosstalk between the output range, handwidth 0 to 0 03 % Temperature error (relative to output range), (+/-) 0.03 % Crosstalk between the output range, (+/-) 0.03 % Current, relative to output range, (+/-) 0.03 % Current, relative to output range, (+/-) 0.2 % Output range), (+/-) 0.2 % Current, relative to output range, (+/-) 0.2 % Current, relative to output range, (+/-)<!--</th--><th> for current output two-wire connection </th><th>Yes</th>	 for current output two-wire connection 	Yes
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Bus cycle time (TDP), min. 125 μs Interrupts/diagnostics/status information Interrupts/diagnostics/status information Diagnostics function Yes Substitute values connectable Yes Alarms Yes • Diagnostic alarm Yes		
Interrupts/diagnostics/status information Diagnostics function Yes Substitute values connectable Yes Alarms Yes		
Diagnostics function Yes Substitute values connectable Yes Alarms Yes • Diagnostic alarm Yes	Bus cycle time (TDP), min.	125 µs
Substitute values connectable Yes Alarms Yes • Diagnostic alarm Yes	Interrupts/diagnostics/status information	
Alarms • Diagnostic alarm Yes	Diagnostics function	Yes
Diagnostic alarm Yes	Substitute values connectable	Yes
	Alarms	
Diagnostic messages	Diagnostic alarm	Yes
	Diagnostic messages	

 Monitoring the supply voltage 	Yes
Wire-break	Yes; channel-by-channel, only for output type "current"
Short-circuit	Yes; channel-by-channel, only for output type "voltage"
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	
Potential separation channels	
 between the channels 	No
 between the channels and backplane bus 	Yes
 between the channels and the power supply of the electronics 	Yes
Isolation	
Isolation Isolation tested with	707 V DC (type test)
	707 V DC (type test)
Isolation tested with	707 V DC (type test)
Isolation tested with Ambient conditions	707 V DC (type test) -30 °C; < 0 °C as of FS06
Isolation tested with Ambient conditions Ambient temperature during operation	
Isolation tested with Ambient conditions Ambient temperature during operation • horizontal installation, min.	-30 °C; < 0 °C as of FS06
Isolation tested with Ambient conditions Ambient temperature during operation horizontal installation, min. horizontal installation, max.	-30 °C; < 0 °C as of FS06 60 °C
Isolation tested with Ambient conditions Ambient temperature during operation	-30 °C; < 0 °C as of FS06 60 °C -30 °C; < 0 °C as of FS06
Isolation tested with Ambient conditions Ambient temperature during operation horizontal installation, min. horizontal installation, max. vertical installation, min. vertical installation, max.	-30 °C; < 0 °C as of FS06 60 °C -30 °C; < 0 °C as of FS06
Isolation tested with Ambient conditions Ambient temperature during operation • horizontal installation, min. • horizontal installation, max. • vertical installation, min. • vertical installation, max. Altitude during operation relating to sea level	-30 °C; < 0 °C as of FS06 60 °C -30 °C; < 0 °C as of FS06 50 °C 5 000 m; Restrictions for installation altitudes > 2 000 m, see
Isolation tested with Ambient conditions Ambient temperature during operation	-30 °C; < 0 °C as of FS06 60 °C -30 °C; < 0 °C as of FS06 50 °C 5 000 m; Restrictions for installation altitudes > 2 000 m, see
Isolation tested with Ambient conditions Ambient temperature during operation horizontal installation, min. horizontal installation, max. vertical installation, max. Altitude during operation relating to sea level Installation altitude above sea level, max. Dimensions Width Height	-30 °C; < 0 °C as of FS06 60 °C -30 °C; < 0 °C as of FS06 50 °C 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual 15 mm 73 mm
Isolation tested with Ambient conditions Ambient temperature during operation horizontal installation, min. horizontal installation, max. vertical installation, min. vertical installation, max. Altitude during operation relating to sea level Installation altitude above sea level, max. Dimensions Width 	-30 °C; < 0 °C as of FS06 60 °C -30 °C; < 0 °C as of FS06 50 °C 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual 15 mm
Isolation tested with Ambient conditions Ambient temperature during operation horizontal installation, min. horizontal installation, max. vertical installation, max. Altitude during operation relating to sea level Installation altitude above sea level, max. Dimensions Width Height	-30 °C; < 0 °C as of FS06 60 °C -30 °C; < 0 °C as of FS06 50 °C 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual 15 mm 73 mm
Isolation tested with Ambient conditions Ambient temperature during operation horizontal installation, min. horizontal installation, max. vertical installation, min. vertical installation, max. Altitude during operation relating to sea level Installation altitude above sea level, max. Dimensions Width Height Depth	-30 °C; < 0 °C as of FS06 60 °C -30 °C; < 0 °C as of FS06 50 °C 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual 15 mm 73 mm