SIEMENS

Data sheet

6ES7135-6HD00-0BA1



SIMATIC ET 200SP, Analog output module, AQ 4XU/I Standard, suitable for BU type A0, A1, Color code CC00, Module diagnostics, 16 bit, +/-0.3%

General information	
Product type designation	AQ 4xU/I ST
HW functional status	from FS21
Firmware version	
 FW update possible 	Yes
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 	No
Output range scalable	No
Engineering with	
 STEP 7 TIA Portal configurable/integrated from version 	V11 SP2 / V13
 STEP 7 configurable/integrated from version 	V5.5 SP3 / -
 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
• MSO	No
CiR - Configuration in RUN	
Reparameterization possible in RUN	No
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.	150 mA
Power loss	
Power loss, typ.	1.5 W
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
Analog outputs	

Number of analog outputs	4
Voltage output, short-circuit current, max.	45 mA
Cycle time (all channels), min.	5 ms
Analog output with oversampling	No
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
 for current output two-wire connection 	Yes
Load impedance (in rated range of output)	
with voltage outputs, min.	2 kΩ
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	- 500 m, 200 m to to large output
Integration and conversion time/resolution per channel	
Resolution with overrange (bit including sign), max.	16 bit
Settling time	TO DIL
	0.1 ms
 for resistive load 	U. I ITIS
- for connective land	4 mag
• for capacitive load	1 ms
for inductive load	1 ms 0.5 ms
for inductive load Errors/accuracies	0.5 ms
for inductive load Errors/accuracies Linearity error (relative to output range), (+/-)	0.5 ms 0.03 %
for inductive load Errors/accuracies Linearity error (relative to output range), (+/-) Temperature error (relative to output range), (+/-)	0.5 ms 0.03 % 0.005 %/K
• for inductive load Errors/accuracies Linearity error (relative to output range), (+/-) Temperature error (relative to output range), (+/-) Crosstalk between the outputs, min.	0.5 ms 0.03 %
● for inductive load Errors/accuracies Linearity error (relative to output range), (+/-) Temperature error (relative to output range), (+/-) Crosstalk between the outputs, min. Repeat accuracy in steady state at 25 °C (relative to output	0.5 ms 0.03 % 0.005 %/K
● for inductive load Errors/accuracies Linearity error (relative to output range), (+/-) Temperature error (relative to output range), (+/-) Crosstalk between the outputs, min. Repeat accuracy in steady state at 25 °C (relative to output range), (+/-)	0.5 ms 0.03 % 0.005 %/K -50 dB
● for inductive load Errors/accuracies Linearity error (relative to output range), (+/-) Temperature error (relative to output range), (+/-) Crosstalk between the outputs, min. Repeat accuracy in steady state at 25 °C (relative to output range), (+/-) Operational error limit in overall temperature range	0.5 ms 0.03 % 0.005 %/K -50 dB 0.05 %
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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 tested with	707 V DC (type test)	
Ambient conditions		
Ambient temperature during operation		
 horizontal installation, min. 	-30 °C; < 0 °C as of FS07	
 horizontal installation, max. 	60 °C; Observe derating	
 vertical installation, min. 	-30 °C; < 0 °C as of FS07	
vertical installation, max.	50 °C; Observe derating	
Altitude during operation relating to sea level		
• Installation altitude above sea level, max.	5 000 m; restrictions for installation altitudes > 2 000 m, see ET 200SP system manual	
Dimensions		
Width	15 mm	
Height	73 mm	
Depth	58 mm	
Weights		
Weight, approx.	31 g	

last modified:

5/22/2024