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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	

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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	
Integration and conversion time/resolution per channel	
● Resolution with overrange (bit including sign), max.	16 bit
Settling time	
● for resistive load	0.1 ms
● for capacitive load	1 ms
● for inductive load	0.5 ms
Errors/accuracies	
Linearity error (relative to output range), (+/-)	0.03 %
Temperature error (relative to output range), (+/-)	0.005 %/K
Crosstalk between the outputs, min.	-50 dB
Repeat accuracy in steady state at 25 °C (relative to output range), (+/-)	0.05 %
Operational error limit in overall temperature range	
● Voltage, relative to output range, (+/-)	0.5 %
● Current, relative to output range, (+/-)	0.5 %
Basic error limit (operational limit at 25 °C)	
● Voltage, relative to output range, (+/-)	0.3 %
● Current, relative to output range, (+/-)	0.3 %
Interrupts/diagnostics/status information	
Diagnostics function	Yes
Substitute values connectable	Yes
Alarms	
● Diagnostic alarm	Yes
Diagnoses	
● Monitoring the supply voltage	Yes
● Wire-break	Yes
● Short-circuit	Yes
● Group error	Yes
● Overflow/underflow	Yes; Module-wise
Diagnostics indication LED	
● Monitoring of the supply voltage (PWR-LED)	Yes; green PWR LED
● Channel status display	Yes; green LED
● for channel diagnostics	No
● for module diagnostics	Yes; green/red DIAG LED

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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

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