



SIMATIC ET 200BL, analog output module, AQ 4xI, module diagnostics, 16 bit, packing unit: 1 unit, color code CC00

General information	
Product type designation	AQ 4xI
HW functional status	from FS01
Firmware version	V1.0.0
• FW update possible	Yes
Color code for module-specific color-coded label	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	STEP 7 V18 or higher; MicroWin V3.0 or higher; Configuration in ES via GSDML;
• PROFINET from GSD version/GSD revision	GSDML V2.45
Operating mode	
• Oversampling	No
Supply voltage	
Rated value (DC)	24 V
permissible range, lower limit (DC)	20.4 V
permissible range, upper limit (DC)	28.8 V
Reverse polarity protection	Yes
external protection for power supply lines	Yes; 24 V DC/10 A miniature circuit breaker with type B or C tripping characteristic
Input current	
Current consumption (rated value)	55 mA
Current consumption, max.	170 mA; 4 channels activated with -20 mA per channel at 20.4 V
Current carrying capacity	
For P1 and P2 bus, max.	10 A
Power loss	
Power loss, typ.	1.2 W; rated voltage, 50 % load, 50 % active channels
Address area	
Address space per module	
• Address space per module, max.	8 byte
Hardware configuration	
Automatic encoding	No
• Mechanical coding element	No
Formation of potential groups	
• support of potential groups	Yes
Analog outputs	

Number of analog outputs	4
Cycle time (all channels), min.	1 ms
Analog output with oversampling	No
<b>Output ranges, current</b>	
• 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
<b>Connection of actuators</b>	
• for voltage output two-wire connection	No
• for voltage output four-wire connection	No
• for current output two-wire connection	Yes
<b>Load impedance (in rated range of output)</b>	
• with current outputs, max.	500 Ω
• with current outputs, inductive load, max.	1 mH
<b>Cable length</b>	
• shielded, max.	1 000 m
<b>Analog value generation for the outputs</b>	
<b>Integration and conversion time/resolution per channel</b>	
• Resolution with overrange (bit including sign), max.	16 bit
<b>Settling time</b>	
• for resistive load	0.1 ms
• for inductive load	0.5 ms
<b>Errors/accuracies</b>	
Linearity error (relative to output range), (+/-)	0.15 %
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 %
<b>Operational error limit in overall temperature range</b>	
• Current, relative to output range, (+/-)	0.5 %
<b>Basic error limit (operational limit at 25 °C)</b>	
• Current, relative to output range, (+/-)	0.3 %
<b>Interrupts/diagnostics/status information</b>	
Diagnostics function	Yes
Substitute values connectable	Yes
<b>Alarms</b>	
• Diagnostic alarm	Yes
<b>Diagnoses</b>	
• Monitoring the supply voltage	Yes
• Wire-break	Yes; Module-wise
• Short-circuit	No
• Group error	No
• Overflow/underflow	Yes; Module-wise
<b>Diagnostics indication LED</b>	
• 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
<b>Potential separation</b>	
between backplane bus and supply voltage	Yes
<b>Potential separation analog outputs</b>	
• between the channels	No
• between the channels and backplane bus	Yes
• between the channels and the power supply of the electronics	No
<b>Isolation</b>	
Isolation tested with	500 V AC/707 V DC, type test
<b>Standards, approvals, certificates</b>	
Ecological footprint	

• environmental product declaration	Yes
<b>Global warming potential</b>	
— global warming potential, (total) [CO2 eq]	28.8 kg
— global warming potential, (during production) [CO2 eq]	4.52 kg
— global warming potential, (during operation) [CO2 eq]	24.6 kg
— global warming potential, (after end of life cycle) [CO2 eq]	-0.373 kg
<b>Use in hazardous areas</b>	
• EAC Ex	No
<b>Ambient conditions</b>	
<b>Ambient temperature during operation</b>	
• horizontal installation, min.	-30 °C
• horizontal installation, max.	60 °C
• vertical installation, min.	-30 °C
• vertical installation, max.	50 °C
<b>Altitude during operation relating to sea level</b>	
• Installation altitude above sea level, max.	5 000 m; restrictions for installation altitudes > 2 000 m, see ET 200BL system manual
<b>Connection method</b>	
<b>Terminals</b>	
• Conductor cross-section, min.	0.14 mm <sup>2</sup> ; follow detailed information in System manual of ET 200BL
• Conductor cross-section, max.	2.5 mm <sup>2</sup> ; follow detailed information in System manual of ET 200BL
• Number of process terminals to I/O module	16
• Number of terminals with connection to P1 and P2 bus	2
<b>Dimensions</b>	
Width	15 mm
Height	117 mm
Depth	74 mm
<b>Weights</b>	
Weight, approx.	81 g

<b>Classifications</b>			
		<b>Version</b>	<b>Classification</b>
	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

<b>Approvals / Certificates</b>	
<b>General Product Approval</b>	<b>EMV</b>



<b>Functional Safety</b>	<b>Test Certificates</b>	<b>other</b>
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[Miscellaneous](#)

[Type Examination Certificate](#)

[Type Examination Certificate](#)

[Type Test Certificates/Test Report](#)

[Confirmation](#)



## Environment

[Environmental Confirmations](#)

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