

SIMATIC ET 200SP, Analog output module, AQ 2xU Standard, Pack quantity: 1 unit, suitable for BU type A0, A1, Color code CC00, Module diagnostics, 16 bit



General information	
Product type designation	AQ 2xU ST
HW functional status	From FS03
Firmware version	
<ul style="list-style-type: none"> FW update possible 	Yes
usable BaseUnits	BU type A0, A1
Color code for module-specific color identification plate	CC00
Product function	
<ul style="list-style-type: none"> I&M data 	Yes; I&M0 to I&M3
<ul style="list-style-type: none"> Isochronous mode 	No
<ul style="list-style-type: none"> Output range scalable 	No
Engineering with	
<ul style="list-style-type: none"> STEP 7 TIA Portal configurable/integrated from version 	V13 SP1 / -
<ul style="list-style-type: none"> STEP 7 configurable/integrated from version 	V5.5 SP3 / -
<ul style="list-style-type: none"> PROFIBUS from GSD version/GSD revision 	GSD Revision 5
<ul style="list-style-type: none"> PROFINET from GSD version/GSD revision 	GSDML V2.3
Operating mode	

- Oversampling No
- MSO No

CiR – Configuration in RUN

Reparameterization possible in RUN	Yes
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.	80 mA
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Power loss

Power loss, typ.	1 W
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Address area

Address space per module	
• Address space per module, max.	4 byte; + 1 byte for QI information

Hardware configuration

Automatic encoding	
• Mechanical coding element	Yes
• Type of mechanical coding element	Type A

Analog outputs

Number of analog outputs	2
Voltage output, short-circuit current, max.	45 mA
Cycle time (all channels), min.	1 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 |

Connection of actuators

- | | |
|---|-----|
| • for voltage output two-wire connection | Yes |
| • for voltage output four-wire connection | No |

Load impedance (in rated range of output)

- | | |
|---|--------------|
| • with voltage outputs, min. | 2 k Ω |
| • with voltage outputs, capacitive load, max. | 1 μ F |

Destruction limits against externally applied voltages and currents

- | | |
|---------------------------|------|
| • Voltages at the outputs | 30 V |
|---------------------------|------|

Cable length

- shielded, max.

200 m

Analog value generation for the outputs

Integration and conversion time/resolution per channel	
<ul style="list-style-type: none"> • Resolution with overrange (bit including sign), max. 	16 bit
Settling time	
<ul style="list-style-type: none"> • for resistive load 	0.1 ms
<ul style="list-style-type: none"> • for capacitive load 	1 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	
<ul style="list-style-type: none"> • Voltage, relative to output range, (+/-) 	0.5 %
<ul style="list-style-type: none"> • Current, relative to output range, (+/-) 	0.5 %
Basic error limit (operational limit at 25 °C)	
<ul style="list-style-type: none"> • Voltage, relative to output range, (+/-) 	0.3 %
<ul style="list-style-type: none"> • Current, relative to output range, (+/-) 	0.3 %

Interrupts/diagnostics/status information

Diagnostics function	Yes
Substitute values connectable	Yes
Alarms	
<ul style="list-style-type: none"> • Diagnostic alarm 	Yes
Diagnostic messages	
<ul style="list-style-type: none"> • Monitoring the supply voltage 	Yes
<ul style="list-style-type: none"> • Short-circuit 	Yes
<ul style="list-style-type: none"> • Group error 	Yes
<ul style="list-style-type: none"> • Overflow/underflow 	Yes
Diagnostics indication LED	
<ul style="list-style-type: none"> • Monitoring of the supply voltage (PWR-LED) 	Yes; green PWR LED
<ul style="list-style-type: none"> • Channel status display 	Yes; green LED
<ul style="list-style-type: none"> • for channel diagnostics 	No
<ul style="list-style-type: none"> • for module diagnostics 	Yes; green/red DIAG LED

Potential separation

Potential separation channels	
<ul style="list-style-type: none"> • between the channels 	No
<ul style="list-style-type: none"> • between the channels and backplane bus 	Yes
<ul style="list-style-type: none"> • between the channels and the power supply of the electronics 	Yes

Isolation

Isolation tested with	707 V DC (type test)
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Ambient conditions

Ambient temperature during operation

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|---------------------------------|--------|
| • horizontal installation, min. | -30 °C |
| • horizontal installation, max. | 60 °C |
| • vertical installation, min. | -30 °C |
| • vertical installation, max. | 50 °C |

Altitude during operation relating to sea level

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|---|--|
| • Installation altitude above sea level, max. | 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual |
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Dimensions

Width	15 mm
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Height	73 mm
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Depth	58 mm
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Weights

Weight, approx.	31 g
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last modified:	06/11/2020
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