

SIMATIC ET 200SP, ANALOG OUTPUT MODULE, AQ 2xU  
 STANDARD, PACKING UNIT: 1 PIECE, FITS TO BU-TYPE A0, A1,  
 COLOR CODE CC00, MODULE DIAGNOSIS, 16 BIT



General information	
Product type designation	ET 200SP, AQ 2xU Standard
Firmware version	V1.0
<ul style="list-style-type: none"> <li>FW update possible</li> </ul>	Yes
usable BaseUnits	BU type A0, A1
Color code for module-specific color identification plate	CC00
Product function	
<ul style="list-style-type: none"> <li>I&amp;M data</li> </ul>	Yes; I&M0 to I&M3
<ul style="list-style-type: none"> <li>Output range scalable</li> </ul>	No
Engineering with	
<ul style="list-style-type: none"> <li>STEP 7 TIA Portal configurable/integrated as of version</li> </ul>	V13 SP1 / -
<ul style="list-style-type: none"> <li>STEP 7 configurable/integrated as of version</li> </ul>	V5.5 SP3 / -
<ul style="list-style-type: none"> <li>PROFIBUS as of GSD version/GSD revision</li> </ul>	GSD Revision 5
<ul style="list-style-type: none"> <li>PROFINET as of GSD version/GSD revision</li> </ul>	GSDML V2.3
Operating mode	
<ul style="list-style-type: none"> <li>Oversampling</li> </ul>	No
<ul style="list-style-type: none"> <li>MSO</li> </ul>	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

## 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 $\Omega$ |
| • with voltage outputs, capacitive load, max. | 1 $\mu$ 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

- |  |        |
|--|--------|
| • Resolution with overrange (bit including sign), max. | 16 bit |
|--|--------|

### Settling time

- for resistive load 0.1 ms
- 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 %
<b>Operational error limit in overall temperature range</b>	
• Voltage, relative to output range, (+/-)	0.5 %
• Current, relative to output range, (+/-)	0.5 %
<b>Basic error limit (operational limit at 25 °C)</b>	
• Voltage, relative to output range, (+/-)	0.3 %
• Current, relative to output range, (+/-)	0.3 %

### Isochronous mode

Isochronous operation (application synchronized up to terminal)	No
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### Interrupts/diagnostics/status information

Diagnostics function	Yes
Substitute values connectable	Yes

#### Alarms

- Diagnostic alarm Yes

#### Diagnostic messages

- Monitoring the supply voltage Yes
- Short-circuit Yes
- 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 No
- 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 tested with	707 V DC (type test)
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## Ambient conditions

### Ambient temperature during operation

- |                                 |       |
|---------------------------------|-------|
| • horizontal installation, min. | 0 °C  |
| • horizontal installation, max. | 60 °C |
| • vertical installation, min.   | 0 °C  |
| • vertical installation, max.   | 50 °C |

## Dimensions

Width	15 mm
Height	73 mm
Depth	58 mm

## Weights

Weight, approx.	31 g
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<b>last modified:</b>	08/29/2017
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