

SIMATIC ET 200SP, ANALOG OUTPUT MODULE, AQ 4xU/I STANDARD, FITS TO BU-TYPE A0, A1, COLOR CODE CC00, MODULE DIAGNOSIS, 16BIT, +/-0,3%



| General information | |
|---|-----------------------------|
| Product type designation | ET 200SP, AQ 4xU/I Standard |
| Firmware version | V1.1 |
| 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"> Output range scalable | No |
| Engineering with | |
| <ul style="list-style-type: none"> STEP 7 TIA Portal configurable/integrated as of version | V11 SP2 / V13 |
| <ul style="list-style-type: none"> STEP 7 configurable/integrated as of version | V5.5 SP3 / - |
| <ul style="list-style-type: none"> PCS 7 configurable/integrated as of version | V8.1 SP1 |
| <ul style="list-style-type: none"> PROFIBUS as of GSD version/GSD revision | GSD Revision 5 |
| <ul style="list-style-type: none"> PROFINET as of GSD version/GSD revision | GSDML V2.3 |
| Operating mode | |
| <ul style="list-style-type: none"> Oversampling | No |
| <ul style="list-style-type: none"> 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. | 150 mA |
|---------------------------|--------|

Power loss

| | |
|------------------|-------|
| Power loss, typ. | 1.5 W |
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Address area

| | |
|----------------------------------|-------------------------------------|
| Address space per module | |
| • Address space per module, max. | 8 byte; + 1 byte for QI information |

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 k Ω |
| • with voltage outputs, capacitive load, max. | 1 μ F |
| • 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 % |
| Isochronous mode | |
| Isochronous operation (application synchronized up to terminal) | No |
| Interrupts/diagnostics/status information | |
| Diagnostics function | Yes |
| Substitute values connectable | Yes |
| Alarms | |
| • Diagnostic alarm | Yes |
| Diagnostic messages | |
| • Monitoring the supply voltage | Yes |
| • Wire-break | 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

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

Dimensions

| | |
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| Width | 15 mm |
| Height | 73 mm |
| Depth | 58 mm |

Weights

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|-----------------|------|
| Weight, approx. | 31 g |
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| last modified: | 12/22/2016 |
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