

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 |
| Firmware version | V1.0 |
| <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"> Output range scalable | No |
| Engineering with | |
| <ul style="list-style-type: none"> STEP 7 TIA Portal configurable/integrated as of version | V13 SP1 / - |
| <ul style="list-style-type: none"> STEP 7 configurable/integrated as of version | V5.5 SP3 / - |
| <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. | 80 mA |
|---------------------------|-------|

Power loss

| | |
|------------------|-----|
| Power loss, typ. | 1 W |
|------------------|-----|

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 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

| | |
|--|--------|
| • 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 % |
| 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
- 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

- | | |
|---------------------------------|-------|
| • 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

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|-----------------|------|
| Weight, approx. | 31 g |
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| last modified: | 05/30/2019 |
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