## Data sheet



SIPLUS ET 200SP AQ 2xI STANDARD -40 ... +70 GRAD C with conformal coating BasedOn: 6ES7135-6GB00-0BA1 . ANALOG OUTPUT MODULE, AQ 2XI STANDARD, PACKING UNIT: 1 PIECE, FITS TO BU-TYPE A0, A1, COLOR CODE CC00, MODULE DIAGNOSIS, 16 BIT

| General information   |                   |  |
|---|-------------------|--|
| Product type designation                                    | AQ 2xl ST         |  |
| Firmware version  |                   |  |
| <ul> <li>FW update possible</li> </ul>                      | Yes               |  |
| usable BaseUnits  | BU type A0, A1    |  |
| Color code for module-specific color identification plate   | CC00              |  |
| Product function  |                   |  |
| • I&M data  | Yes; I&M0 to I&M3 |  |
| Output range scalable                                       | No                |  |
| Engineering with  |                   |  |
| <ul> <li>PROFIBUS as of GSD version/GSD revision</li> </ul> | GSD Revision 5    |  |
| <ul> <li>PROFINET as of GSD version/GSD revision</li> </ul> | GSDML V2.3        |  |
| Operating mode  |                   |  |
| Oversampling  | No                |  |
| • MSO   | No                |  |
| CiR – Configuration in RUN                                  |                   |  |
| Reparameterization possible in RUN                          | Yes               |  |

| 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.                                 | 110 mA                              |
| Power loss  |                                     |
| Power loss, typ.  | 1.5 W                               |
|   |                                     |
| Address area  |                                     |
| Address space per module                                  |                                     |
| <ul> <li>Address space per module, max.</li> </ul>        | 4 byte; + 1 byte for QI information |
| Analog outputs  |                                     |
| Number of analog outputs                                  | 2                                   |
| Cycle time (all channels), min.                           | 1 ms                                |
| Analog output with oversampling                           | No                                  |
| 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 current output two-wire connection                    | Yes                                 |
| Load impedance (in rated range of output)                 |                                     |
| with current outputs, max.                                | 500 Ω                               |
| • with current outputs, inductive load, max.              | 1 mH                                |
| Destruction limits against externally applied voltages an | d currents                          |
| Voltages at the outputs                                   | 30 V                                |
| Cable length  |                                     |
| • shielded, max.  | 1 000 m                             |
| Analog value generation for the outputs                   |                                     |
| Settling time   |                                     |
| • for resistive load                                      | 0.1 ms; Typical value               |
| • for inductive load                                      | 0.5 ms                              |
| Errors/accuracies   |                                     |
| Linearity error (relative to output range), (+/-)         | 0.06 %                              |
| Temperature error (relative to output range), (+/-)       | 0.01 %/K                            |
| Crosstalk between the outputs, min.                       | -50 dB                              |
| Repeat accuracy in steady state at 25 °C (relative to     | 0.05 %                              |
| output range), (+/-)                                      |                                     |
| Operational error limit in overall temperature range      |                                     |

| <ul><li>Current, relative to output range, (+/-)</li></ul>   | 1 %  |
|--|--|
| Basic error limit (operational limit at 25 °C)   | 1 70   |
| • Current, relative to output range, (+/-)   | 0.3 %  |
| - Current, relative to output range, (*/*)   |  |
| Isochronous mode   |  |
| Isochronous operation (application synchronized up   | No   |
| to terminal)   |  |
| Interrupts/diagnostics/status information  |  |
| Diagnostics function   | Yes  |
| Substitute values connectable  | Yes  |
| Alarms   |  |
| Diagnostic alarm   | Yes  |
| Diagnostic messages  |  |
| <ul> <li>Monitoring the supply voltage</li> </ul>  | Yes  |
| Wire-break   | Yes  |
| Group error  | Yes  |
| <ul><li>Overflow/underflow</li></ul>   | Yes  |
| Diagnostics indication LED   |  |
| <ul> <li>Monitoring of the supply voltage (PWR-LED)</li> </ul>   | 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   |
| <ul> <li>between the channels and backplane bus</li> </ul>   | Yes  |
|  |  |
| <ul> <li>between the channels and the power supply of</li> </ul>   | Yes  |
| <ul> <li>between the channels and the power supply of<br/>the electronics</li> </ul>   | Yes  |
| the electronics  | Yes  |
| the electronics  Ambient conditions  | Yes  |
| Ambient conditions  Ambient temperature during operation   |  |
| Ambient conditions  Ambient temperature during operation  • horizontal installation, min.  | -40 °C; = Tmin   |
| Ambient conditions  Ambient temperature during operation  • horizontal installation, min.  • horizontal installation, max.   |  |
| Ambient conditions  Ambient temperature during operation  • horizontal installation, min.  • horizontal installation, max.  Altitude during operation based on sea level   | -40 °C; = Tmin<br>70 °C; = Tmax  |
| Ambient conditions  Ambient temperature during operation  • horizontal installation, min.  • horizontal installation, max.   | -40 °C; = Tmin   |
| Ambient conditions  Ambient temperature during operation  • horizontal installation, min.  • horizontal installation, max.  Altitude during operation based on sea level  • Ambient air temperature-barometric pressure-   | -40 °C; = Tmin<br>70 °C; = Tmax<br>Tmin Tmax at 1080 hPa 795 hPa (-1000 m +2000 m) //  |
| Ambient conditions  Ambient temperature during operation  • horizontal installation, min.  • horizontal installation, max.  Altitude during operation based on sea level  • Ambient air temperature-barometric pressure-altitude   | -40 °C; = Tmin 70 °C; = Tmax  Tmin Tmax at 1080 hPa 795 hPa (-1000 m +2000 m) // Tmin (Tmax - 10K) at 795 hPa 658 hPa (+2000 m +3500   |
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| Ambient conditions  Ambient temperature during operation  • horizontal installation, min.  • horizontal installation, max.  Altitude during operation based on sea level  • Ambient air temperature-barometric pressure-altitude  Relative humidity  • With condensation, tested in accordance with                      | -40 °C; = Tmin 70 °C; = Tmax  Tmin Tmax at 1080 hPa 795 hPa (-1000 m +2000 m) // Tmin (Tmax - 10K) at 795 hPa 658 hPa (+2000 m +3500 m) // Tmin (Tmax - 20K) at 658 hPa 540 hPa (+3500 m +5000 m)  100 %; RH incl. condensation / frost (no commissioning in |
| Ambient conditions  Ambient temperature during operation  • horizontal installation, min.  • horizontal installation, max.  Altitude during operation based on sea level  • Ambient air temperature-barometric pressure-altitude  Relative humidity  • With condensation, tested in accordance with IEC 60068-2-38, max. | -40 °C; = Tmin 70 °C; = Tmax  Tmin Tmax at 1080 hPa 795 hPa (-1000 m +2000 m) // Tmin (Tmax - 10K) at 795 hPa 658 hPa (+2000 m +3500 m) // Tmin (Tmax - 20K) at 658 hPa 540 hPa (+3500 m +5000 m)  |
| Ambient conditions  Ambient temperature during operation  • horizontal installation, min.  • horizontal installation, max.  Altitude during operation based on sea level  • Ambient air temperature-barometric pressure-altitude  Relative humidity  • With condensation, tested in accordance with                      | -40 °C; = Tmin 70 °C; = Tmax  Tmin Tmax at 1080 hPa 795 hPa (-1000 m +2000 m) // Tmin (Tmax - 10K) at 795 hPa 658 hPa (+2000 m +3500 m) // Tmin (Tmax - 20K) at 658 hPa 540 hPa (+3500 m +5000 m)  100 %; RH incl. condensation / frost (no commissioning in |

— to biologically active substances according to EN 60721-3-3

Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna). The supplied connector covers must remain on the unused interfaces during operation in corrosive atmospheres!

— to chemically active substances according to EN 60721-3-3

Yes; Class 3C4 (RH < 75%) incl. salt spray according to EN 60068-2-52 (degree of severity 3). The supplied connector covers must remain on the unused interfaces during operation!

— to mechanically active substances according to EN 60721-3-3

Yes; Class 3S4 incl. sand, dust. The supplied connector covers must remain on the unused interfaces during operation!

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

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