

SIPLUS ET200S EM 2AI STANDARD U -25 ... +60 DEGREES C  
BASED ON 6ES7132-4ED00-0AB0



Figure similar

| Supply voltage                                                        |                                                                      |
|-----------------------------------------------------------------------|----------------------------------------------------------------------|
| Load voltage L+                                                       |                                                                      |
| • Rated value (DC)                                                    | 24 V; From power module                                              |
| • Reverse polarity protection                                         | Yes                                                                  |
| Input current                                                         |                                                                      |
| from load voltage L+ (without load), max.                             | 30 mA                                                                |
| from backplane bus 3.3 V DC, max.                                     | 10 mA                                                                |
| Power loss                                                            |                                                                      |
| Power loss, typ.                                                      | 0.6 W                                                                |
| Address area                                                          |                                                                      |
| Address space per module                                              |                                                                      |
| • Address space per module, max.                                      | 4 byte                                                               |
| Analog inputs                                                         |                                                                      |
| Number of analog inputs                                               | 2                                                                    |
| permissible input voltage for voltage input (destruction limit), max. | 35 V; 35 V continuous; 75 V for max. 1 ms (mark to space ratio 1:20) |

|                                                                                                                                 |                                                                            |
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| Cycle time (all channels) max.                                                                                                  | Number of active channels per module x basic conversion time               |
| <b>Input ranges</b>                                                                                                             |                                                                            |
| • Voltage                                                                                                                       | Yes                                                                        |
| • Current                                                                                                                       | No                                                                         |
| • Thermocouple                                                                                                                  | No                                                                         |
| • Resistance thermometer                                                                                                        | No                                                                         |
| • Resistance                                                                                                                    | No                                                                         |
| <b>Input ranges (rated values), voltages</b>                                                                                    |                                                                            |
| • 1 V to 5 V                                                                                                                    | Yes                                                                        |
| • -10 V to +10 V                                                                                                                | Yes                                                                        |
| • -5 V to +5 V                                                                                                                  | Yes                                                                        |
| <b>Cable length</b>                                                                                                             |                                                                            |
| • shielded, max.                                                                                                                | 200 m                                                                      |
| <b>Analog value generation for the inputs</b>                                                                                   |                                                                            |
| Measurement principle                                                                                                           | integrating                                                                |
| <b>Integration and conversion time/resolution per channel</b>                                                                   |                                                                            |
| • Resolution with overrange (bit including sign), max.                                                                          | 14 bit; +/-10 V: 13 bits + sign, +/-5 V: 13 bits + sign; 1 to 5 V: 13 bits |
| • Integration time (ms)                                                                                                         | 16,7 / 20 ms                                                               |
| • Interference voltage suppression for interference frequency f1 in Hz                                                          | 50 / 60 Hz                                                                 |
| • Conversion time (per channel)                                                                                                 | 65 ms; 55 / 65 ms                                                          |
| <b>Smoothing of measured values</b>                                                                                             |                                                                            |
| • parameterizable                                                                                                               | Yes; In four stages by means of digital filtering                          |
| • Step: None                                                                                                                    | Yes; 1 x cycle time                                                        |
| • Step: low                                                                                                                     | Yes; 4 x cycle time                                                        |
| • Step: Medium                                                                                                                  | Yes; 32 x cycle time                                                       |
| • Step: High                                                                                                                    | Yes; 64 x cycle time                                                       |
| <b>Errors/accuracies</b>                                                                                                        |                                                                            |
| Linearity error (relative to input range), (+/-)                                                                                | 0.01 %                                                                     |
| Temperature error (relative to input range), (+/-)                                                                              | 0.01 %/K                                                                   |
| Crosstalk between the inputs, min.                                                                                              | -50 dB                                                                     |
| Repeat accuracy in steady state at 25 °C (relative to input range), (+/-)                                                       | 0.05 %                                                                     |
| <b>Operational error limit in overall temperature range</b>                                                                     |                                                                            |
| • Voltage, relative to input range, (+/-)                                                                                       | 0.6 %                                                                      |
| <b>Basic error limit (operational limit at 25 °C)</b>                                                                           |                                                                            |
| • Voltage, relative to input range, (+/-)                                                                                       | 0.4 %                                                                      |
| <b>Interference voltage suppression for <math>f = n \times (f_1 \pm 1 \%)</math>, <math>f_1</math> = interference frequency</b> |                                                                            |
| • Series mode interference (peak value of interference < rated value of input range), min.                                      | 70 dB                                                                      |

|                                                                                                                              |                                                                                                                                                                                                         |
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| <ul style="list-style-type: none"> <li>Common mode interference (USS &lt; 2.5 V) , min.</li> </ul>                           | 90 dB                                                                                                                                                                                                   |
| <b>Isochronous mode</b>                                                                                                      |                                                                                                                                                                                                         |
| Isochronous operation (application synchronized up to terminal)                                                              | No                                                                                                                                                                                                      |
| <b>Interrupts/diagnostics/status information</b>                                                                             |                                                                                                                                                                                                         |
| <b>Diagnostic messages</b>                                                                                                   |                                                                                                                                                                                                         |
| <ul style="list-style-type: none"> <li>Wire-break</li> </ul>                                                                 | Yes; Measuring range 1 to 5 V only                                                                                                                                                                      |
| <ul style="list-style-type: none"> <li>Group error</li> </ul>                                                                | Yes                                                                                                                                                                                                     |
| <ul style="list-style-type: none"> <li>Overflow/underflow</li> </ul>                                                         | Yes                                                                                                                                                                                                     |
| <b>Diagnostics indication LED</b>                                                                                            |                                                                                                                                                                                                         |
| <ul style="list-style-type: none"> <li>Group error SF (red)</li> </ul>                                                       | Yes                                                                                                                                                                                                     |
| <b>Parameter</b>                                                                                                             |                                                                                                                                                                                                         |
| Remark                                                                                                                       | 4 byte                                                                                                                                                                                                  |
| Diagnostics wire break                                                                                                       | Disable / enable (only in measuring range 1 to 5 V)                                                                                                                                                     |
| Measurement type/range                                                                                                       | deactivated / +/-5 V / 1 to 5 V / +/-10 V                                                                                                                                                               |
| Group diagnostics                                                                                                            | Disable / enable                                                                                                                                                                                        |
| Overflow/underflow                                                                                                           | Disable / enable                                                                                                                                                                                        |
| <b>Potential separation</b>                                                                                                  |                                                                                                                                                                                                         |
| <b>Potential separation analog inputs</b>                                                                                    |                                                                                                                                                                                                         |
| <ul style="list-style-type: none"> <li>between the channels</li> </ul>                                                       | No                                                                                                                                                                                                      |
| <ul style="list-style-type: none"> <li>between the channels and backplane bus</li> </ul>                                     | Yes                                                                                                                                                                                                     |
| <ul style="list-style-type: none"> <li>Between the channels and load voltage L+</li> </ul>                                   | Yes                                                                                                                                                                                                     |
| <b>Permissible potential difference</b>                                                                                      |                                                                                                                                                                                                         |
| Between the inputs and MANA (UCM)                                                                                            | 2 V AC PP                                                                                                                                                                                               |
| between MANA and M internally (UIISO)                                                                                        | 75 V DC/60 V AC                                                                                                                                                                                         |
| <b>Isolation</b>                                                                                                             |                                                                                                                                                                                                         |
| Isolation tested with                                                                                                        | 500 V DC                                                                                                                                                                                                |
| <b>Standards, approvals, certificates</b>                                                                                    |                                                                                                                                                                                                         |
| CE mark                                                                                                                      | Yes                                                                                                                                                                                                     |
| <b>Ambient conditions</b>                                                                                                    |                                                                                                                                                                                                         |
| <b>Ambient temperature during operation</b>                                                                                  |                                                                                                                                                                                                         |
| <ul style="list-style-type: none"> <li>min.</li> </ul>                                                                       | -25 °C; = Tmin                                                                                                                                                                                          |
| <ul style="list-style-type: none"> <li>max.</li> </ul>                                                                       | 70 °C; = Tmax                                                                                                                                                                                           |
| <b>Extended ambient conditions</b>                                                                                           |                                                                                                                                                                                                         |
| <ul style="list-style-type: none"> <li>relative to ambient temperature-atmospheric pressure-installation altitude</li> </ul> | 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) |
| <b>Relative humidity</b>                                                                                                     |                                                                                                                                                                                                         |

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| — With condensation, tested in accordance with IEC 60068-2-38, max.     | 100 %; incl. condensation / frost permitted (no commissioning under condensation conditions)                                                                                                |
| <b>Resistance</b>                                                       |                                                                                                                                                                                             |
| — against biologically active substances / conformity with 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! |
| — against chemically active substances / conformity with EN 60721-3-3   | Yes; Class 3C4 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!                     |
| — against mechanically active substances / conformity with EN 60721-3-3 | Yes; Class 3S4 incl. sand, dust. The supplied connector covers must remain on the unused interfaces during operation!                                                                       |
| <b>Dimensions</b>                                                       |                                                                                                                                                                                             |
| Width                                                                   | 15 mm                                                                                                                                                                                       |
| Height                                                                  | 81 mm                                                                                                                                                                                       |
| Depth                                                                   | 52 mm                                                                                                                                                                                       |
| <b>Weights</b>                                                          |                                                                                                                                                                                             |
| Weight, approx.                                                         | 40 g                                                                                                                                                                                        |
| <b>last modified:</b>                                                   | 22.06.2016                                                                                                                                                                                  |