




SIMATIC S7-1200, Analog output, SB 1232, 1 AO, +/-10 V DC (12 bit resol.) or 0-20mA (11 bit resol.)

| General information  |   |
|--|---|
| Product type designation   | SB 1232, AQ 1x12 bit  |
| Input current  |   |
| from backplane bus 5 V DC, typ.  | 15 mA   |
| output voltage / header  |   |
| supply voltage of the transmitters / header  |   |
| <ul style="list-style-type: none"> <li>supply current / from supply voltage for transmitter / maximum</li> </ul> | 25 mA   |
| Power loss   |   |
| Power loss, typ.   | 1.5 W   |
| Analog inputs  |   |
| Number of analog inputs  | 0   |
| Analog outputs   |   |
| Number of analog outputs   | 1   |
| Cycle time (all channels) max.   | Voltage: 300 $\mu$ S (R), 750 $\mu$ S (1 uF) Current: 600 ms (1 mH); 2 ms (10 mH) |
| Output ranges, voltage   |   |
| <ul style="list-style-type: none"> <li>-10 V to +10 V</li> </ul>   | Yes   |
| Output ranges, current   |   |
| <ul style="list-style-type: none"> <li>0 to 20 mA</li> </ul>   | Yes   |
| Load impedance (in rated range of output)  |   |
| <ul style="list-style-type: none"> <li>with voltage outputs, min.</li> <li>with current outputs, max.</li> </ul> | 1 000 $\Omega$<br>600 $\Omega$  |
| Cable length   |   |
| <ul style="list-style-type: none"> <li>shielded, max.</li> </ul>   | 100 m; shielded, twisted pair   |
| Analog value generation for the outputs  |   |
| Conversion principle   | Differential  |
| Integration and conversion time/resolution per channel   |   |
| <ul style="list-style-type: none"> <li>Resolution with overrange (bit including sign), max.</li> </ul>           | 12 bit  |
| Errors/accuracies  |   |
| Temperature error (relative to output range), (+/-)  | 25 °C $\pm$ 0.5%, to 55 °C $\pm$ 1%   |
| Interrupts/diagnostics/status information  |   |
| Alarms   | Yes   |
| Diagnostics function   | Yes   |
| Diagnostics indication LED   |   |
| <ul style="list-style-type: none"> <li>for status of the outputs</li> </ul>                                      | Yes   |
| Standards, approvals, certificates   |   |
| CE mark  | Yes   |
| CSA approval   | Yes   |

|   |  |
|---|--|
| UL approval                                       | Yes  |
| cULus   | Yes  |
| FM approval                                       | Yes  |
| RCM (formerly C-TICK)                             | Yes  |
| KC approval                                       | Yes  |
| Marine approval                                   | Yes  |
| <b>Ambient conditions</b>                         |  |
| Free fall   |  |
| • Fall height, max.                               | 0.3 m; five times, in product package  |
| Ambient temperature during operation              |  |
| • min.  | -20 °C   |
| • max.  | 60 °C  |
| • horizontal installation, min.                   | -20 °C   |
| • horizontal installation, max.                   | 60 °C  |
| • vertical installation, min.                     | -20 °C   |
| • vertical installation, max.                     | 50 °C  |
| Ambient temperature during storage/transportation |  |
| • min.  | -40 °C   |
| • max.  | 70 °C  |
| Air pressure acc. to IEC 60068-2-13               |  |
| • Storage/transport, min.                         | 660 hPa  |
| • Storage/transport, max.                         | 1 080 hPa  |
| Relative humidity                                 |  |
| • Operation at 25 °C without condensation, max.   | 95 %   |
| Pollutant concentrations                          |  |
| • SO2 at RH < 60% without condensation            | SO2: < 0.5 ppm; H2S: < 0.1 ppm; RH < 60% condensation-free                                   |
| <b>Mechanics/material</b>                         |  |
| Enclosure material (front)                        |  |
| • Plastic   | Yes  |
| <b>Dimensions</b>                                 |  |
| Width   | 38 mm  |
| Height  | 62 mm  |
| Depth   | 21 mm  |
| <b>Weights</b>                                    |  |
| Weight, approx.                                   | 40 g   |
| <b>last modified:</b>                             | 4/1/2022  |