

SIMATIC S7, analog output SM 332, isolated, 4 AA; 0/4 to 20 mA, 20-pole, for signals from the hazardous area, diagnostics-capable, PTB tested



| Supply voltage                              |        |
|---|--------|
| Load voltage L+                             |        |
| • Rated value (DC)                          | 24 V   |
| • Reverse polarity protection               | Yes    |
| Input current                               |        |
| from load voltage L+ (without load), max.   | 200 mA |
| from backplane bus 5 V DC, max.             | 80 mA  |
| Power loss                                  |        |
| Power loss, typ.                            | 4 W    |
| Analog outputs                              |        |
| Number of analog outputs                    | 4      |
| Voltage output, short-circuit protection    | Yes    |
| Voltage output, short-circuit current, max. | 70 mA  |
| Current output, no-load voltage, max.       | 14 V   |
| Output ranges, current                      |        |
| • 0 to 20 mA                                | Yes    |
| • 4 mA to 20 mA                             | Yes    |
| Connection of actuators                     |        |

|   |  |
|---|--|
| • for current output two-wire connection                      | Yes  |
| <b>Load impedance (in rated range of output)</b>              |  |
| • with current outputs, max.                                  | 500 $\Omega$   |
| <b>Cable length</b>   |  |
| • shielded, max.  | 200 m  |
| <b>Analog value generation for the outputs</b>                |  |
| <b>Integration and conversion time/resolution per channel</b> |  |
| • Resolution with overrange (bit including sign), max.        | 15 bit   |
| • Basic conversion time (ms)                                  | 2.5 ms   |
| <b>Errors/accuracies</b>                                      |  |
| <b>Operational error limit in overall temperature range</b>   |  |
| • Current, relative to output range, (+/-)                    | 0.55 %   |
| <b>Basic error limit (operational limit at 25 °C)</b>         |  |
| • Current, relative to output range, (+/-)                    | 0.2 %  |
| <b>Interrupts/diagnostics/status information</b>              |  |
| <b>Diagnostics function</b>                                   | Yes  |
| <b>Diagnostic messages</b>                                    |  |
| • Diagnostic information readable                             | Yes  |
| • Overrange   | Yes  |
| • Wire-break in actuator cable                                | Yes  |
| <b>Diagnostics indication LED</b>                             |  |
| • Group error SF (red)  | Yes  |
| • Channel fault indicator F (red)                             | Yes  |
| <b>Ex(i) characteristics</b>                                  |  |
| <b>Module for Ex(i) protection</b>                            | Yes  |
| <b>Maximum values of output circuits (per channel)</b>        |  |
| • Co (permissible external capacity), max.                    | 850 nF   |
| • Io (short-circuit current), max.                            | 70 mA  |
| • Lo (permissible external inductivity), max.                 | 6.6 mH   |
| • Po (power of load), max.                                    | 440 mW   |
| • Uo (output no-load voltage), max.                           | 14 V   |
| <b>Potential separation</b>                                   |  |
| <b>Potential separation analog outputs</b>                    |  |
| • Potential separation analog outputs                         | Yes  |
| <b>Permissible potential difference</b>                       |  |
| between the outputs (UCM)                                     | 60 V DC/30 V AC when used in the hazardous area; 400 V DC/250 V AC when used in NON-hazardous area |
| Between the outputs and MANA (UCM)                            | 60 V DC/30 V AC when used in the hazardous area; 400 V DC/250 V AC when used in NON-hazardous area |

## Standards, approvals, certificates

### Use in hazardous areas

- |   |  |
|---|--|
| • Type of protection acc. to EN 50020 (CENELEC) | [EEx ib] IIC                             |
| • Type of protection acc. to FM                 | Class I, Division 2, Group A, B, C, D T4 |
| • Test number PTB                               | Ex-96.D.2026X                            |

## Ambient conditions

### Ambient temperature during operation

- |        |       |
|--------|-------|
| • max. | 60 °C |
|--------|-------|

## Connection method

|                          |        |
|--------------------------|--------|
| required front connector | 20-pin |
|--------------------------|--------|

## Weights

|                 |       |
|-----------------|-------|
| Weight, approx. | 280 g |
|-----------------|-------|

|                       |            |
|-----------------------|------------|
| <b>last modified:</b> | 06/19/2019 |
|-----------------------|------------|