

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>	
Diagnostic functions	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>	
Module for Ex(i) protection	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
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## Weights

Weight, approx.	280 g
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**last modified:** 08/22/2018 