

SIPLUS S7-1200 SM 1232 -40...+70 °C with conformal coating based on 6ES7232-4HD32-0XB0 . S7-1200, Analog output, SM 1232, 4 AO, +/-10 V, 14-bit resolution: or 0-20 mA, 13-bit resolution:



General information	
Product type designation	SM 1232, AQ 4x14 bit
Supply voltage	
Rated value (DC)	Yes
• 24 V DC	
Input current	
Current consumption, typ.	45 mA
from backplane bus 5 V DC, typ.	80 mA
Power loss	
Power loss, typ.	1.5 W
Analog outputs	
Number of analog outputs	4; Current or voltage
Output ranges, voltage	
• -10 V to +10 V	Yes
Output ranges, current	
• 0 to 20 mA	Yes
Load impedance (in rated range of output)	

- with voltage outputs, min. 1 000 Ω
- with current outputs, max. 600 Ω

### Analog value generation for the outputs

#### Integration and conversion time/resolution per channel

- Resolution (incl. overrange) Voltage: 14 bits; Current : 13 bits

### Errors/accuracies

Temperature error (relative to output range), (+/-) 25 °C ±0.3%, to 55 °C ±0.6% total measurement range

#### Basic error limit (operational limit at 25 °C)

- Voltage, relative to output range, (+/-) 0.3 %
- Current, relative to output range, (+/-) 0.3 %

#### Interference voltage suppression for $f = n \times (f_1 \pm 1 \%)$ , $f_1$ = interference frequency

- Common mode voltage, max. 12 V

### Interrupts/diagnostics/status information

Alarms Yes

Diagnostic functions Yes

#### Alarms

- Diagnostic alarm Yes

#### Diagnostic messages

- Monitoring the supply voltage Yes
- Wire-break Yes
- Short-circuit Yes

#### Diagnostics indication LED

- for status of the outputs Yes
- for maintenance Yes

### Degree and class of protection

#### Degree of protection acc. to EN 60529

- IP20 Yes

### Standards, approvals, certificates

CE mark Yes

### Ambient conditions

#### Free fall

- Fall height, max. 0.3 m; five times, in product package

#### Ambient temperature during operation

- min. -40 °C; = Tmin; Startup @ -25 °C
- max. 70 °C; = Tmax

#### Ambient temperature during storage/transportation

- min. -40 °C
- max. 70 °C

#### Air pressure acc. to IEC 60068-2-13

- Operation, min. 795 hPa

• Operation, max.	1 080 hPa
• Storage/transport, min.	660 hPa
• Storage/transport, max.	1 080 hPa
<b>Altitude during operation relating to sea level</b>	
• Installation altitude above sea level, max.	5 000 m
• Ambient air temperature-barometric pressure-altitude	Tmin ... Tmax at 1 140 hPa ... 795 hPa (-1 000 m ... +2 000 m) // Tmin ... (Tmax - 10 K) at 795 hPa ... 658 hPa (+2 000 m ... +3 500 m) // Tmin ... (Tmax -20 K) at 658 hPa ... 540 hPa (+3 500 m ... +5 000 m)
<b>Relative humidity</b>	
• Operation at 25 °C without condensation, max.	95 %
• With condensation, tested in accordance with IEC 60068-2-38, max.	100 %; RH incl. condensation/frost (no commissioning under condensation conditions)
<b>Resistance</b>	
<b>Coolants and lubricants</b>	
— Resistant to commercially available coolants and lubricants	Yes
<b>Use in stationary industrial systems</b>	
— to biologically active substances according to EN 60721-3-3	Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request
— to chemically active substances according to EN 60721-3-3	Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *
— to mechanically active substances according to EN 60721-3-3	Yes; Class 3S4 incl. sand, dust, *
<b>Use on ships/at sea</b>	
— to biologically active substances according to EN 60721-3-6	Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request
— to chemically active substances according to EN 60721-3-6	Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *
— to mechanically active substances according to EN 60721-3-6	Yes; Class 6S3 incl. sand, dust; *
<b>from supply voltage 1L+</b>	
— Note regarding classification of environmental conditions acc. to EN 60721	* The supplied plug covers must remain in place over the unused interfaces during operation!
<b>Pollutant concentrations</b>	
• SO2 at RH < 60% without condensation	SO2: < 0.5 ppm; H2S: < 0.1 ppm; RH < 60% condensation-free
<b>Connection method</b>	
required front connector	Yes
<b>Mechanics/material</b>	
<b>Enclosure material (front)</b>	
• Plastic	Yes
<b>Dimensions</b>	
Width	45 mm

Height	100 mm
Depth	75 mm
<b>Weights</b>	
Weight, approx.	180 g
<b>last modified:</b>	05/18/2018