



SIPLUS S7-1200 SB 1232 1AQ based on 6ES7232-4HA30-0XB0 with conformal coating, -40...+60 °C, start up -25 °C, analog output 1 AQ, +/-10 V DC (12 bit resolution) or 0-20 mA (11 bit resolution)

General information	
Product type designation	SB 1232, AQ 1x12 bit
based on	<a href="#">6ES7232-4HA30-0XB0</a>
Input current	
from backplane bus 5 V DC, typ.	15 mA
Output voltage	
Power supply to the transmitters	
• Supply current, max.	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 µS (R), 750 µS (1 uF) Current: 600 ms (1 mH); 2 ms (10 mH)
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
Cable length	
• shielded, max.	100 m; shielded, twisted pair
Analog value generation for the outputs	
Conversion principle	Differential
Integration and conversion time/resolution per channel	
• Resolution with overrange (bit including sign), max.	12 bit
Errors/accuracies	
Temperature error (relative to output range), (+/-)	25 °C ±0.5 %, up to 55 °C ±1.8 %
Interrupts/diagnostics/status information	
Alarms	Yes
Diagnostics function	Yes
Diagnostics indication LED	
• for status of the outputs	Yes
Ambient conditions	
Free fall	
• Fall height, max.	0.3 m; five times, in product package

<b>Ambient temperature during operation</b>			
• min.	-40 °C; = Tmin (incl. condensation/frost); start-up @ -25 °C		
• max.	60 °C; = Tmax		
<b>Ambient temperature during storage/transportation</b>			
• min.	-40 °C		
• max.	70 °C		
<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>			
• 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; Incl. diesel and oil droplets in the air		
<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>Usage in industrial process technology</b>			
— Against chemically active substances acc. to EN 60654-4	Yes; Class 3 (excluding trichlorethylene)		
— Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04	Yes; Level GX group A/B (excluding trichlorethylene; harmful gas concentrations up to the limits of EN 60721-3-3 class 3C4 permissible); level LC3 (salt spray) and level LB3 (oil)		
<b>Remark</b>			
— Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04	* The supplied plug covers must remain in place over the unused interfaces during operation!		
<b>Conformal coating</b>			
• Coatings for printed circuit board assemblies acc. to EN 61086	Yes; Class 2 for high reliability		
• Protection against fouling acc. to EN 60664-3	Yes; Type 1 protection		
• Military testing according to MIL-I-46058C, Amendment 7	Yes; Discoloration of coating possible during service life		
• Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A	Yes; Conformal coating, Class A		
<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>Classifications</b>			
		<b>Version</b>	<b>Classification</b>
	eClass	14	27-24-22-01
	eClass	12	27-24-22-01

eClass	9.1	27-24-22-01
eClass	9	27-24-22-01
eClass	8	27-24-22-01
eClass	7.1	27-24-22-01
eClass	6	27-24-22-01
ETIM	10	EC001420
ETIM	9	EC001420
ETIM	8	EC001420
ETIM	7	EC001420
IDEA	4	3562
UNSPSC	15	32-15-17-05

Approvals / Certificates

General Product Approval



[Manufacturer Declaration](#)



[China RoHS](#)



[Metrological Approval](#)

General Product Approval

EMV



[China RoHS](#)



For use in hazardous locations

Maritime application



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