## Data sheet

SIPLUS S7-300 SM 332-20-pole -25...+70 °C With conformal coating based on 6ES7332-5HB01-0AB0 . Analog output Isolated, "2 AQ, U/I; Resolution 11/12 bit 20-pole, removing/inserting with active backplane bus possible

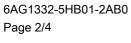


Figure similar

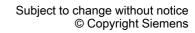
Supply voltage	
Load voltage L+	
Rated value (DC)	24 V; A power supply according to EN 50155 shall be used for railway applications
<ul> <li>Reverse polarity protection</li> </ul>	Yes
Input current	
from load voltage L+ (without load), max.	135 mA
from backplane bus 5 V DC, max.	60 mA
Power loss	
Power loss, typ.	3 W
Analog outputs	
Number of analog outputs	2
Voltage output, short-circuit protection	Yes
Voltage output, short-circuit current, max.	25 mA
Current output, no-load voltage, max.	18 V
Output ranges, voltage	

**PNAP** 

• 0 to 10 V	Yes
	Yes
• 1 V to 5 V	
• -10 V to +10 V	Yes
Output ranges, current	Yes
• 0 to 20 mA	
• -20 mA to +20 mA	Yes
• 4 mA to 20 mA	Yes
Load impedance (in rated range of output)	
<ul><li>with voltage outputs, min.</li></ul>	1 kΩ
<ul> <li>with voltage outputs, capacitive load, max.</li> </ul>	1 μF
<ul><li>with current outputs, max.</li></ul>	500 Ω
<ul><li>with current outputs, inductive load, max.</li></ul>	10 mH
Cable length	
• shielded, max.	200 m
Analog value generation for the outputs	
Integration and conversion time/resolution per channel	
<ul> <li>Resolution with overrange (bit including sign),</li> </ul>	12 bit; ±10 V, ±20 mA, 4 mA to 20 mA, 1 V to 5 V: 11 bit + sign; 0
max.	V to 10 V, 0 mA to 20 mA: 12 bit
Conversion time (per channel)	0.8 ms
Settling time	
• for resistive load	0.2 ms
• for capacitive load	3.3 ms
• for inductive load	0.5 ms; 0.5 ms (1 mH); 3.3 ms (10 mH)
Errors/accuracies	
Operational error limit in overall temperature range	
<ul><li>Voltage, relative to output range, (+/-)</li></ul>	0.5 %; ±0.6 % @ < 0 °C or > 60 °C
<ul><li>Current, relative to output range, (+/-)</li></ul>	0.6 %; ±0.7 % @ < 0 °C or > 60 °C
Basic error limit (operational limit at 25 °C)	
<ul> <li>Voltage, relative to output range, (+/-)</li> </ul>	0.4 %
<ul> <li>Current, relative to output range, (+/-)</li> </ul>	0.5 %
Interrupts/diagnostics/status information	
Diagnostics function	Yes; Parameterizable
Alarms	
Diagnostic alarm	Yes; Parameterizable
Diagnoses	
Diagnostic information readable	Yes
Diagnostics indication LED	
• Group error SF (red)	Yes
Potential separation	



Potential separation analog outputs



• between the channels	No
• between the channels and backplane bus	Yes
Between the channels and load voltage L+	Yes
• between the channels and the power supply of	Yes
the electronics	

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Isolation tested with	500 V DC
Standards, approvals, certificates	
CE mark	Yes
UL approval	Yes; File E239877
RCM (formerly C-TICK)	Yes
KC approval	Yes
EAC (formerly Gost-R)	Yes
Railway application	
● EN 50155	Yes; Sections 4, 5 and 12; no further agreements apply; T1, Category 1, Class A/B, EN 50155:2007 (see SIOS entry 109755985)
Ambient conditions	

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Ambient conditions	
Ambient temperature during operation	
• min.	-25 °C; = Tmin
● max.	70 °C; = Tmax; for use on railway vehicles according to EN50155, the rated temperature range -25 +55 °C (T1) or 60 °C @ UL/ULhaz/ATEX/FM use applies
Ambient temperature during storage/transportation	
• min.	-40 °C
• max.	70 °C
Altitude during operation relating to sea level	
• Installation altitude above sea level, max.	5 000 m
<ul> <li>Ambient air temperature-barometric pressure- altitude</li> </ul>	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)
Relative humidity	
<ul> <li>With condensation, tested in accordance with IEC 60068-2-38, max.</li> </ul>	100 %; RH incl. condensation/frost (no commissioning under condensation conditions)
Resistance	
Use in stationary industrial systems	
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- to biologically active substances according to EN 60721-3-3
- to chemically active substances according to EN 60721-3-3
- to mechanically 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

Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3);  $^{\star}$ 

Yes; Class 3S4 incl. sand, dust, \*



## Use on land craft, rail vehicles and special-purpose vehicles Yes; Class 5B2 mold, fungus and dry rot spores (with the - to biologically active substances according exception of fauna); Class 5B3 on request to EN 60721-3-5 Yes; Class 5C3 (RH < 75 %) incl. salt spray acc. to EN 50155 - to chemically active substances according (ST2); \* to EN 60721-3-5 Yes; Class 5S3 incl. sand, dust; \* — to mechanically active substances according to EN 60721-3-5 Use on ships/at sea - to biologically active substances according Yes; Class 6B2 mold and fungal spores (excluding fauna); Class to EN 60721-3-6 6B3 on request Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-— to chemically active substances according 52 (severity degree 3); \* to EN 60721-3-6 Yes; Class 6S3 incl. sand, dust; \* — to mechanically active substances according to EN 60721-3-6 Usage in industrial process technology Yes; Class 3 (excluding trichlorethylene) - Against chemically active substances acc. to EN 60654-4 - Environmental conditions for process, Yes; Level GX group A/B (excluding trichlorethylene; harmful gas concentrations up to the limits of EN 60721-3-3 class 3C4 measuring and control systems acc. to permissible); level LC3 (salt spray) and level LB3 (oil) ANSI/ISA-71.04 Remark \* The supplied plug covers must remain in place over the unused - Note regarding classification of interfaces during operation! environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04 Connection method required front connector 20-pin

Dimensions		
Width	40 mm	
Height	125 mm	
Depth	120 mm	
Weights		
Weight, approx.	220 g	

last modified: 10/13/2020

