SIEMENS

Data sheet 6AG1332-5HB01-2AB0



Figure similar

spare part SIPLUS S7-300 SM 332 2 AO 20-pole based on 6ES7332-5HB01-0AB0 with conformal coating, -25…+70 °C, analog output isolated, 2 AO, U/I; resolution 11/12 bits 20-pole, removing/inserting with active backplane bus possible

General information	
based on	6ES7332-5HB01-0AB0
Product function	
● Isochronous mode	No
Supply voltage	
Load voltage L+	
● Rated value (DC)	24 V; A power supply according to EN 50155 shall be used for railway applications
● Reverse polarity protection	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	
● 0 to 10 V	Yes
● 1 V to 5 V	Yes
● -10 V to +10 V	Yes
Output ranges, current	
● 0 to 20 mA	Yes
● -20 mA to +20 mA	Yes
● 4 mA to 20 mA	Yes
Connection of actuators	
● for voltage output two-wire connection	Yes
● for voltage output four-wire connection	Yes
● for current output two-wire connection	Yes
Load impedance (in rated range of output)	
● with voltage outputs, min.	1 kΩ
● with voltage outputs, capacitive load, max.	1 µF
● with current outputs, max.	500 Ω
● with current outputs, inductive load, max.	10 mH
Cable length	
● shielded, max.	200 m

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Analog value generation for the outputs	
Integration and conversion time/resolution per channel	
● Resolution with overrange (bit including sign), max.	12 bit; ±10 V, ±20 mA, 4 mA to 20 mA, 1 V to 5 V: 11 bit + sign; 0 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	
● Voltage, relative to output range, (+/-)	0.5 %; ±0.6 % @ < 0 °C or > 60 °C
● Current, relative to output range, (+/-)	0.6 %; ±0.7 % @ < 0 °C or > 60 °C
Basic error limit (operational limit at 25 °C)	
● Voltage, relative to output range, (+/-)	0.4 %
● Current, relative to output range, (+/-)	0.5 %
Interrupts/diagnostics/status information	
Diagnostics function	Yes; Parameterizable
Substitute values connectable	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 the electronics	Yes
Isolation	
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	
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
● 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)
Relative humidity	
● With condensation, tested in accordance with IEC 60068-2-38, max.	100 %; RH incl. condensation/frost (no commissioning under condensation conditions)
Resistance	

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Use in stationary industrial systems	
— 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, *
Use on land craft, rail vehicles and special-purpose vehicles	
— to biologically active substances according to EN 60721-3-5	Yes; Class 5B2 mold, fungus and dry rot spores (with the exception of fauna); Class 5B3 on request
— to chemically active substances according to EN 60721-3-5	Yes; Class 5C3 (RH < 75 %) incl. salt spray acc. to EN 50155 (ST2); *
— to mechanically active substances according to EN 60721-3-5	Yes; Class 5S3 incl. sand, dust; *
Use on ships/at sea	
— 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; *
Usage in industrial process technology	
— 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)
Remark	
— 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!

Connection method

required front connector	20-pin

Dimensions

Width	40 mm
Height	125 mm
Depth	120 mm

Weights

Weight, approx.	220 g

Classifications

	Version	Classification
eClass	16	27-24-22-01
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

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EG-Konf.	Manufacturer Declaration	Declaration of Conformity	UKCA	China RoHS	UL

General Product Approval	EMV	For use in hazardous locations			
EAC	KC	RCM	IECEx	ATEX	CCC-Ex

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