SIEMENS

Data sheet

6AG1223-3BD30-5XB0



SIPLUS S7-1200 SB 1223 I/O based on 6ES7223-3BD30-0XB0 with conformal coating, -40...+60 °C, start up -25 °C, digital input/output 2 DI/2 DQ, 24 V DC 200 kHz

Figure similar

General information	
Product type designation	SB 1223, DI 2x24 V DC/DQ 2x24 V DC 200 kHz
Engineering with	
 STEP 7 TIA Portal configurable/integrated from version 	see entry ID: 109746275
Input current	
from backplane bus 5 V DC, typ.	50 mA
output voltage / header	
supply voltage of the transmitters / header	
 Supply current, max. 	4 mA; per channel
Power loss	
Power loss, typ.	1 W
Digital inputs	
Number of digital inputs	2
in groups of	1
Input characteristic curve in accordance with IEC 61131, type 1	Yes
Number of simultaneously controllable inputs	
all mounting positions	
— up to 40 °C, max.	2
Input voltage	
 Type of input voltage 	DC
 Rated value (DC) 	24 V
● for signal "0"	0 to 5 V
● for signal "1"	+15 to +30 V
Input current	
 for signal "0", max. (permissible quiescent current) 	2 mA
● for signal "1", min.	5.8 mA
● for signal "1", typ.	14 mA
Input delay (for rated value of input voltage)	
for standard inputs	
— parameterizable	Yes; 0.2 ms, 0.4 ms, 0.8 ms, 1.6 ms, 3.2 ms, 6.4 ms and 12.8 ms, selectable in groups of four
— at "0" to "1", max.	2.5 μs
for interrupt inputs	
— parameterizable	Yes
for technological functions	
— parameterizable	Yes
Cable length	
shielded, max.	50 m; Standard input: 500 m, high-speed counters: 50 m

Digital outputs	
Number of digital outputs	2
• in groups of	1
Short-circuit protection	No
Switching capacity of the outputs	
with resistive load, max.	0.1 A
Load resistance range	
• upper limit	10 Ω
Output voltage	
Rated value (DC)	24 V
• for signal "0", max.	0.1 V; with 10 kOhm load
• for signal "1", min.	20 V
Output current	
• for signal "1" permissible range, max.	0.1 A
 for signal "0" residual current, max. 	10 μΑ
Cable length	
• shielded, max.	500 m
• unshielded, max.	150 m
Interrupts/diagnostics/status information	
Alarms	Yes
Diagnostics function	Yes
Diagnostics indication LED	100
• for status of the inputs	Yes
• for status of the outputs	Yes
<u> </u>	100
Ambient conditions	
Ambient temperature during operation	40 °C - Train (incl. conders the first to the day
• min.	-40 °C; = Tmin (incl. condensation/frost); start-up @ -25 °C
• max.	60 °C; = Tmax
Ambient temperature during storage/transportation	40.00
• min.	-40 °C 70 °C
• max.	70 C
Altitude during operation relating to sea level	F 000 m
Installation altitude above sea level, max. Ambient oir temporature become trie pressure.	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	100 %; RH incl. condensation / frost (no commissioning in bedewed
60068-2-38, max.	state), horizontal installation
Resistance	
Coolants and lubricants	
Resistant to commercially available coolants	Yes; Incl. diesel and oil droplets in the air
and lubricants	
Use in stationary industrial systems	Voc. Class 3P3 mold, funguia and dry rot apares (with the avesation of
 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	Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52
EN 60721-3-3	(severity degree 3); *
 to mechanically active substances according to 	Yes; Class 3S4 incl. sand, dust, *
 to mechanically active substances according to EN 60721-3-3 	Yes; Class 3S4 incl. sand, dust, *
,	Yes; Class 3S4 incl. sand, dust, *
EN 60721-3-3 Use on ships/at sea — to biologically active substances according to	Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on
EN 60721-3-3 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
EN 60721-3-3 Use on ships/at sea — to biologically active substances according to EN 60721-3-6 — to chemically active substances according to	Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52
EN 60721-3-3 Use on ships/at sea — to biologically active substances according to EN 60721-3-6 — to chemically active substances according to EN 60721-3-6	Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *
EN 60721-3-3 Use on ships/at sea — to biologically active substances according to EN 60721-3-6 — to chemically active substances according to	Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52
EN 60721-3-3 Use on ships/at sea — to biologically active substances according to EN 60721-3-6 — to chemically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6	Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *
EN 60721-3-3 Use on ships/at sea — to biologically active substances according to EN 60721-3-6 — to chemically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 Usage in industrial process technology	Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); * Yes; Class 6S3 incl. sand, dust; *
EN 60721-3-3 Use on ships/at sea — to biologically active substances according to EN 60721-3-6 — to chemically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6	Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *
EN 60721-3-3 Use on ships/at sea — to biologically active substances according to EN 60721-3-6 — to chemically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 Usage in industrial process technology — Against chemically active substances acc. to	Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); * Yes; Class 6S3 incl. sand, dust; *
EN 60721-3-3 Use on ships/at sea — to biologically active substances according to EN 60721-3-6 — to chemically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 Usage in industrial process technology — Against chemically active substances acc. to EN 60654-4 — Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-	Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); * Yes; Class 6S3 incl. sand, dust; * Yes; Class 3 (excluding trichlorethylene) Yes; Level GX group A/B (excluding trichlorethylene; harmful gas concentrations up to the limits of EN 60721-3-3 class 3C4 permissible);
EN 60721-3-3 Use on ships/at sea — to biologically active substances according to EN 60721-3-6 — to chemically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 Usage in industrial process technology — Against chemically active substances acc. to EN 60654-4 — Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04	Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); * Yes; Class 6S3 incl. sand, dust; * Yes; Class 3 (excluding trichlorethylene) Yes; Level GX group A/B (excluding trichlorethylene; harmful gas
EN 60721-3-3 Use on ships/at sea — to biologically active substances according to EN 60721-3-6 — to chemically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 Usage in industrial process technology — Against chemically active substances acc. to EN 60654-4 — Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04 Remark	Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); * Yes; Class 6S3 incl. sand, dust; * Yes; Class 3 (excluding trichlorethylene) 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)
EN 60721-3-3 Use on ships/at sea — to biologically active substances according to EN 60721-3-6 — to chemically active substances according to EN 60721-3-6 — to mechanically active substances according to EN 60721-3-6 Usage in industrial process technology — Against chemically active substances acc. to EN 60654-4 — Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04	Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); * Yes; Class 6S3 incl. sand, dust; * Yes; Class 3 (excluding trichlorethylene) Yes; Level GX group A/B (excluding trichlorethylene; harmful gas concentrations up to the limits of EN 60721-3-3 class 3C4 permissible);

ANSI/ISA-71.04	
Conformal coating	
 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
Mechanics/material	
Enclosure material (front)	
 Plastic 	Yes
Dimensions	
Width	38 mm
Height	62 mm
Depth	21 mm
Weights	
Weight, approx.	40 g
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