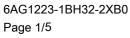
SIEMENS

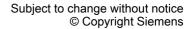
Data sheet

6AG1223-1BH32-2XB0

SIPLUS S7-1200 SM 1223 8DI/8DQ -25...+70°C with conformal coating based on 6ES7223-1BH32-0XB0 . Digital input/output SM 1223, 8 DI/8 DO, 8 DI 24 V DC, Sink/Source, 8 DO, transistor 0.5 A

General information	
Product type designation	SM 1223, DI 8x24 V DC, DQ 8x24 V DC
Supply voltage	
Rated value (DC)	24 V
permissible range, lower limit (DC)	20.4 V
permissible range, upper limit (DC)	28.8 V
Input current	
from backplane bus 5 V DC, max.	145 mA
Digital inputs	
• from load voltage L+ (without load), max.	4 mA; per channel
Output voltage	
Power supply to the transmitters	
• present	Yes
Power loss	
Power loss, typ.	2.5 W
Digital inputs	
Number of digital inputs	8
• in groups of	2
Input characteristic curve in accordance with IEC	Yes
61131, type 1	
Number of simultaneously controllable inputs	
all mounting positions	
— up to 40 °C, max.	8
horizontal installation	
— up to 40 °C, max.	8
— up to 50 °C, max.	8
vertical installation	
— up to 40 °C, max.	8
Input voltage	
Type of input voltage	DC
• Rated value (DC)	24 V
• for signal "0"	5 V DC at 1 mA
• for signal "1"	15 V DC at 2.5 mA





Input current	
• for signal "0", max. (permissible quiescent	1 mA
current)	
● for signal "1", min.	2.5 mA
● for signal "1", typ.	4 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
for interrupt inputs	
— parameterizable	Yes
Cable length	
• shielded, max.	500 m
• unshielded, max.	300 m
Digital outputs Number of digital outputs	8
• in groups of	1
Short-circuit protection	No; to be provided externally
Limitation of inductive shutdown voltage to	L+ (-48 V)
Switching capacity of the outputs	2. (10 1)
with resistive load, max.	0.5 A
• on lamp load, max.	5 W
Output voltage	
Rated value (DC)	24 V
• for signal "0", max.	0.1 V; with 10 kOhm load
• for signal "1", min.	20 V DC
Output current	20 V BG
	0.5 A
• for signal "1" rated value	0.5 A
• for signal "1" permissible range, max.	
• for signal "0" residual current, max.	10 μΑ
Output delay with resistive load	F0.110
• "0" to "1", max.	50 μs
• "1" to "0", max.	200 μs
Total current of the outputs (per group)	
horizontal installation	44.0
— up to 50 °C, max.	4 A; Current per mass
Cable length	500
• shielded, max.	500 m
• unshielded, max.	150 m
Interrupts/diagnostics/status information	
Alarms	Yes
Diagnostics function	Yes



A1	
Alarms	V
Diagnostic alarm	Yes
Diagnoses	V
Monitoring the supply voltage	Yes
Diagnostics indication LED	V
for status of the inputs	Yes
 for status of the outputs 	Yes
• for maintenance	Yes
Potential separation	
Potential separation digital inputs	
 between the channels, in groups of 	2
Potential separation digital outputs	
 between the channels, in groups of 	1
 between the channels and backplane bus 	500 V AC
Degree and class of protection	
IP degree of protection	IP20
Ambient conditions	
Free fall	
● Fall height, max.	0.3 m; five times, in product package
Ambient temperature during operation	
• min.	-40 °C; = Tmin (incl. condensation/frost); start-up @ -25 °C
• max.	70 °C; = Tmax; Tmax > +60 °C number of simultaneously
	activated outputs 4, inputs 4 (no adjacent points) for horizontal
	mounting position
At cold restart, min.	-25 °C
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- 	Tmin Tmax at 1 140 hPa 795 hPa (-1 000 m +2 000 m) //
altitude	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	100 %; RH incl. condensation/frost (no commissioning under
IEC 60068-2-38, max.	condensation conditions)
Resistance	
Coolants and lubricants	
 Resistant to commercially available coolants and lubricants 	Yes
Use in stationary industrial systems	



Yes; Class 3B2 mold, fungus and dry rot spores (with the - to biologically active substances according exception of fauna); Class 3B3 on request to EN 60721-3-3 Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-- to chemically active substances according 52 (severity degree 3); * to EN 60721-3-3 Yes; Class 3S4 incl. sand, dust, * - to mechanically active substances according to EN 60721-3-3 Use on ships/at sea Yes; Class 6B2 mold and fungal spores (excluding fauna); Class - to biologically active substances according 6B3 on request to EN 60721-3-6 - to chemically active substances according Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (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 Yes; Level GX group A/B (excluding trichlorethylene; harmful gas - Environmental conditions for process, measuring and control systems acc. to concentrations up to the limits of EN 60721-3-3 class 3C4 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 Conformal coating Yes; Class 2 for high reliability • Coatings for printed circuit board assemblies acc. to EN 61086 Yes; Type 1 protection • Protection against fouling acc. to EN 60664-3 Yes; Discoloration of coating possible during service life Military testing according to MIL-I-46058C, Amendment 7 • Qualification and Performance of Electrical Yes; Conformal coating, Class A Insulating Compound for Printed Board Assemblies according to IPC-CC-830A Connection method required front connector Yes Mechanics/material Enclosure material (front) Yes Plastic Dimensions Width 45 mm Height 100 mm Depth 75 mm Weights Weight, approx. 210 g



last modified: 10/13/2020

