## **SIEMENS**

## **Data sheet**

6AG1223-1PH32-4XB0



SIPLUS S7-1200 SM 1223 8DI/8DQ RLY based on 6ES7223-1PH32-0XB0 with conformal coating, -20...+60 °C, digital input/output 8 DI/8 DQ, 8 DI 24 V DC, sink/source, 8 DQ, relay 2 A

Figure similar

General information	
Product type designation	SM 1223, DI 8x24 V DC, DQ 8x relay
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	
<ul> <li>from load voltage L+ (without load), max.</li> </ul>	4 mA/input 11 mA/relay
output voltage / header	
supply voltage of the transmitters / header	
<ul> <li>product function / supply voltage for transmitters</li> </ul>	Yes
Power loss	
Power loss, typ.	5.5 W
Digital inputs	
Number of digital inputs	8
• in groups of	2
Input characteristic curve in accordance with IEC 61131, type 1	Yes
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	
<ul> <li>Type of input voltage</li> </ul>	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 current)	1 mA
• for signal "1", min.	2.5 mA
• for signal "1", typ.	4 mA
Input delay (for rated value of input voltage)	

for standard incuts	
for standard inputs	Voc. 0.2 mg 0.4 mg 0.9 mg 4.6 mg 0.0 mg 0.4 mg mg 4.0 0 mg
— 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	100
• shielded, max.	500 m
• unshielded, max.	300 m
Digital outputs	300 III
	8
Number of digital outputs  ■ in groups of	2
Short-circuit protection	No; to be provided externally
Switching capacity of the outputs  • with resistive load, max.	2 A
• on lamp load, max.	30 W with DC, 200 W with AC
Output voltage	30 W WILLI DC, 200 W WILLI AC
- · · · - ·	5 V DC to 30 V DC
Rated value (DC)     Peted value (AC)	5 V AC to 250 V AC
Rated value (AC)  Output current	3 V AC (U 200 V AC
Output current	2 ^
• for signal "1" rated value	2 A 2 A
for signal "1" permissible range, max.  Output delay with registive lead.	2 N
Output delay with resistive load	40
• "0" to "1", max.	10 ms
• "1" to "0", max.	10 ms
Total current of the outputs (per group)	
horizontal installation	40.4.0
— up to 50 °C, max.	10 A; Current per mass
Relay outputs	
Number of relay outputs	8
Rated supply voltage of relay coil L+ (DC)	24 V
Number of operating cycles, max.	mechanically 10 million, at rated load voltage 100 000
Switching capacity of contacts	
— with inductive load, max.	2 A
— on lamp load, max.	30 W with DC, 200 W with AC
— with resistive load, max.	2 A
Cable length	
• shielded, max.	500 m
• unshielded, max.	150 m
Interrupts/diagnostics/status information	
Alarms	Yes
Diagnostics function	Yes
Alarms	
Diagnostic alarm	Yes
Diagnoses	
Monitoring the supply voltage	Yes
Diagnostics indication LED	
<ul> <li>for status of the inputs</li> </ul>	Yes
<ul> <li>for status of the outputs</li> </ul>	Yes
for maintenance	Yes
Potential separation	
Potential separation digital inputs	
<ul> <li>between the channels, in groups of</li> </ul>	2
Potential separation digital outputs	
<ul> <li>between the channels</li> </ul>	Relays
<ul> <li>between the channels, in groups of</li> </ul>	2
between the channels and backplane bus	1 500 V AC for 1 minute
Permissible potential difference	
between different circuits	750 V AC for 1 minute
Degree and class of protection	
	IP20
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.	-20 °C; = Tmin (incl. condensation/frost); start-up @ 0 °C
• max.	60 °C; = Tmax
At cold restart, min.	0 °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.	2 000 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); above 2 000 m max. 132 V AC
Relative humidity	
With condensation, tested in accordance with IEC 60068-2-38, max.	100 %; RH incl. condensation/frost (no commissioning under condensation conditions)
Resistance	
Coolants and lubricants	Von
Resistant to commercially available coolants and lubricants	Yes
Use in stationary industrial systems	Voc. Class 2D2 mold functionand draws are approximately the according of
to biologically active substances according to EN 60721-3-3  to chamically active substances according to	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 ships/at sea	Variable of CDO marks and formal angular and formal angular formal control of the CDO and
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 (BH < 75 %) incl. celt spray age to EN 60068 3 53
<ul> <li>to chemically active substances according to EN 60721-3-6</li> <li>to mechanically active substances according to</li> </ul>	Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); * Yes; Class 6S3 incl. sand, dust; *
EN 60721-3-6	res, Class 053 IIIdi. Saliu, dust,
Usage in industrial process technology  — Against chemically active substances acc. to	Yes; Class 3 (excluding trichlorethylene)
EN 60654-4  — 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	
<ul> <li>Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04</li> </ul>	* The supplied plug covers must remain in place over the unused interfaces during operation!
Conformal coating	
<ul> <li>Coatings for printed circuit board assemblies acc. to EN 61086</li> </ul>	Yes; Class 2 for high reliability
<ul> <li>Protection against fouling acc. to EN 60664-3</li> </ul>	Yes; Type 1 protection
<ul> <li>Military testing according to MIL-I-46058C, Amendment 7</li> </ul>	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
connection method / header	
required front connector	Yes
Mechanics/material	
Enclosure material (front)	
Plastic	Yes
Dimensions	
Width	45 mm
Height	100 mm

Depth	75 mm
Weights	
Weight, approx.	230 g
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