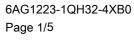
SIEMENS

Data sheet

6AG1223-1QH32-4XB0

SIPLUS S7-1200 SM 1223 8DI/DQ with conformal coating based on 6ES7223-1QH32-0XB0 . SIMATIC S7-1200, Digital inputs/ output SM 1223, 8 DI AC/8 DO RLY, 8 DI 120/230 V AC, 8 DO relay 2 A

General information		
Product type designation	SM 1223, DI 8x120/230 V AC, 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.	120 mA	
Output voltage		
Power supply to the transmitters		
• present	Yes	
Power loss		
Power loss, typ.	7.5 W	
Digital inputs		
Number of digital inputs	8	
• in groups of	4	
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	AC	
Rated value (AC)	120/230 V AC	
• for signal "0"	20 V AC at 1 mA	
• for signal "1"	79 V AC at 2.5 mA	
Input current		



PNAP

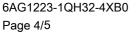
- (: 1101	1
 for signal "0", max. (permissible quiescent current) 	1 mA
● for signal "1", min.	2.5 mA
● for signal "1", typ.	9 mA
Input delay (for rated value of input voltage)	
for standard inputs	
— parameterizable	Yes; 0.2 ms, 0.4 ms, 0.8 ms, 1.6 ms, 3.2 ms, 6.4 ms and 12.8 ms, selectable in groups 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	4
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	
Rated value (DC)	5 V DC to 30 V DC
Rated value (AC)	5 V AC to 250 V AC
Output current	
● for signal "1" rated value	2 A
for signal "1" permissible range, max.	2 A
Output delay with resistive load	
• "0" to "1", max.	10 ms
• "1" to "0", max.	10 ms
Total current of the outputs (per group)	
horizontal installation	
— up to 50 °C, max.	8 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
•	



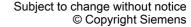
• unshielded, max.	150 m		
Interrupts/diagnostics/status information			
Alarms	Yes		
Diagnostics function	Yes		
Alarms			
Diagnostic alarm	Yes		
Diagnostics indication LED			
• for status of the inputs	Yes		
 for status of the outputs 	Yes		
• for maintenance	Yes		
Potential separation			
Potential separation digital inputs			
• between the channels, in groups of	2		
Potential separation digital outputs			
• between the channels	Relays		
• between the channels, in groups of	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			
IP degree of protection	IP20		
Ambient conditions			
Ambient temperature during operation			
• min.	-20 °C; = Tmin (incl. condensation/frost); start-up @ 0 °C		
• max.	60 °C; = Tmax		
Ambient temperature during storage/transportation			
• min.	-40 °C		
• max.	70 °C		
Altitude during operation relating to sea level			
Ambient air temperature-barometric pressure- altitude	Tmin Tmax at 1 080 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			
Operation at 25 °C without condensation, max.	95 %		
 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			
 Resistant to commercially available coolants and lubricants 	Yes; Incl. diesel and oil droplets in the air		



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 - to biologically active substances according Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request to EN 60721-3-6 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 Yes; Level GX group A/B (excluding trichlorethylene; harmful gas - Environmental conditions for process, 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, FN 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 Yes; Conformal coating, Class A Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A Connection method 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	

last modified: 10/13/2020

