SIEMENS

Data sheet

6AG1222-1BH32-2XB0

SIPLUS S7-1200 SM 1222 16DQ based on 6ES7222-1BH32-0XB0 with conformal coating, -40...+70 °C, start up -25 °C, digital output 16 DQ, 24 V DC, transistor 0.5 A



General information		
Product type designation	SM 1222, DQ 16x24 V DC/0.5 A	
Supply voltage		
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.	140 mA	
Power loss		
Power loss, typ.	2.5 W	
Digital outputs		
Number of digital outputs	16	
• in groups of	1	
Short-circuit protection	No; to be provided externally	
Limitation of inductive shutdown voltage to	typ. (L+) -48 V	
Switching capacity of the outputs		
 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		
for signal "1" rated value	0.5 A	
• for signal "0" residual current, max.	10 μΑ	
Output delay with resistive load		
• "0" to "1", max.	50 μs	
• "1" to "0", max.	200 μs	
Total current of the outputs (per group)		
horizontal installation		
— up to 50 °C, max.	8 A; Current per mass	
Relay outputs		
Switching capacity of contacts		
— with inductive load, max.	0.5 A	
— on lamp load, max.	5 W	
— with resistive load, max.	0.5 A	
Cable length		
shielded, max.	500 m	
• unshielded, max.	150 m	
Interrupts/diagnostics/status information		

Diagnostics function	Yes
Alarms	
Diagnostic alarm	Yes
Diagnoses	
Monitoring the supply voltage	Yes
Diagnostics indication LED	
• for status of the outputs	Yes
for maintenance	Yes
Potential separation	
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 8 (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- 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	
Coolants and lubricants	
Resistant to commercially available coolants and lubricants	Yes; Incl. diesel and oil droplets in the air
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 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	Yes; Class 3 (excluding trichlorethylene)
EN 60654-4 — Environmental conditions for process,	Yes; Level GX group A/B (excluding trichlorethylene; harmful gas
measuring and control systems acc. to ANSI/ISA- 71.04	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!
Conformal coating	
Coatings for printed circuit board assemblies acc. to	Yes; Class 2 for high reliability

• Protection against fouling acc. to EN 60664-3

Military testing according to MIL-I-46058C, Amendment 7

• Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A Yes; Type 1 protection

Yes; Discoloration of coating possible during service life

Yes; Conformal coating, Class A

according to IPC-CC-830A	
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.	220 g

12/18/2020 🖸

last modified:

6AG12221BH322XB0

Page 3/3

7/9/2022