SIEMENS

Data sheet



SIPLUS S7-1200 SM 1223 based on 6ES7223-1QH32-0XB0 with conformal coating, -40...+70 °C, start up -25 °C, SIMATIC S7-1200, digital inputs/ output SM 1223, 8 DI AC/8 DQ RLY, 8 DI 120/230 V AC, 8 DQ relay 2 A

Figure similar

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 / header		
supply voltage of the transmitters / header		
product function / supply voltage for transmitters	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 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		
 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		
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,	

for interrupt inputs — parameterizable Cable length • shieded, max. • unshielded, max. • unshielded, max. 9 pigital outputs Number of digital outputs • sin groups of 4 Short-circuit protection No; to be provided externally Switching capacity of the outputs • with resistive load, max. • on lamp load, max. Output voitage • Rated value (DC) • Rated value (DC) • S V DC to 30 V DC • Rated value (AC) • for signal "1" paremissible range, max. Output current • for signal "1" traited value • for "1", max. • "1" to "0", max. Relay outputs • Number of relay outputs • Number of operajing cycles, max. Number of operajing cycles, max. Switching capacity of too dan. — up to 50 "C, max. Relay outputs • Number of operajing cycles, max. Switching capacity of contacts — with inductive load, max. — on lamp load, max. — with resistive load. - with resistive load. - with inductive load, max. — with resistive load. - with inductive load, max. — with resistive load. - with inductive load, max. — with resistive load. - with inductive load, max. — on lamp load, max. - with inductive load, max. - with resistive load, max. - with inductive load, max. - with inductive load, max. - with inductive load, max. - with resistive load, max. - with inductive load, max. - on lamp load, max. - to since the channels - Soo m Diagnostics function Alarms - Ves Diagnostics function Potential separation Yes Potential separation digital inputs - between the channels, in groups of Potential separation digital outputs - between the channels, in groups of Potential separation digital outputs - between the channels		selectable in groups of four
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		163
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in groups of 4 No: to be provided externally		8
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on lamp load, max. Output voltage		2 A
Output voltage	·	30 W with DC, 200 W with AC
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for signal "1" permissible range, max. Output delay with resistive load	Output current	
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	between the channels, in groups of between the channels and hadrelene bus	2 4 500 V AC for 1 minute
between the channels and backplane bus 1 500 V AC for 1 minute		1 500 V AC for 1 minute
Permissible potential difference		
between different circuits 750 V AC for 1 minute		750 V AC for 1 minute
Degree and class of protection		
IP degree of protection IP20		IP20
Ambient conditions	Ambient conditions	
Ambient temperature during operation	Ambient temperature during operation	
• min40 °C; = Tmin (incl. condensation/frost); start-up @ -25 °C	• 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
Ambient temperature during storage/transportation	outpute 4, inpute 4 (to adjacent points) for nonzonial mounting position
• 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 1 080 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	V 01 000 11 6 11 1 1 1 1 1 1 1 1 1 1 1 1
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); * Yes: Class 3C4 incl. cand. dust. *
— to mechanically active substances according to EN 60721-3-3	Yes; Class 3S4 incl. sand, dust, *
Use on ships/at sea	Vest Class CD2 mold and firmulations (such that the control of the
— 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	V 01 07 1 " 1" 1" 1 1 1 1 1 1 1 1 1 1 1 1 1 1
— Against chemically active substances acc. to EN 60654-4	Yes; Class 3 (excluding trichlorethylene)
 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	
 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 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
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
last modified:	4/1/2022 C