## **SIEMENS**

## **Data sheet**

## 6ES7223-1QH32-0XB0

SIMATIC S7-1200, Digital I/O SM 1223, 8 DI AC/8 DO RLY, 8 DI 120/230 V AC, 8 DO relay 2 A

General information	DO Telay 2 A
	SM 1223 DL 8v120/230 V AC DO 8v relay
Product type designation	SM 1223, DI 8x120/230 V AC, DQ 8x relay
Supply voltage	24.1/
Rated value (DC)	24 V 20.4 V
permissible range, lower limit (DC)	
permissible range, upper limit (DC)	28.8 V
Input current	400 A
from backplane bus 5 V DC, max.	120 mA
output voltage / header	
supply voltage of the transmitters / header	
• 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 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>	AC
<ul><li>Rated value (AC)</li></ul>	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	
<ul><li>for signal "0", max. (permissible quiescent current)</li></ul>	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	
<ul><li>shielded, max.</li></ul>	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	
<ul><li>with resistive load, max.</li></ul>	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)  Rated value (AC)	5 V AC to 250 V AC
Output current	3 V AC to 250 V AC
• for signal "1" rated value	2 A
•	2 A
• for signal "1" permissible range, max.	ZA
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	
— 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	
Diagnostic alarm	Yes
Diagnostics indication LED	
<ul> <li>for status of the inputs</li> </ul>	Yes
<ul> <li>for status of the outputs</li> </ul>	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
<ul> <li>between the channels and backplane bus</li> </ul>	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
Standards, approvals, certificates	20
CE mark	Yes
CSA approval	Yes
	Yes
UL approval	Yes
cULus EM approval	
FM approval	Yes
RCM (formerly C-TICK)	Yes
KC approval	Yes
Marine approval	Yes
Ecological footprint	V
environmental product declaration	Yes
Global warming potential	400.1
— global warming potential, (total) [CO2 eq]	123 kg
— global warming potential, (during production) [CO2 eq]	12.1 kg
— global warming potential, (during operation) [CO2 eq]	111 kg
— global warming potential, (after end of life cycle) [CO2 eq]	-0.434 kg
Ambient conditions	
Free fall	
<ul> <li>Fall height, max.</li> </ul>	0.3 m; five times, in product package

-20 °C
60 °C; Number of simultaneously activated outputs: 4 (no adjacent points) at 60 °C horizontal or 50 °C vertical, 8 at 55 °C horizontal or 45 °C vertical
-20 °C
60 °C
-20 °C
50 °C
5°C to 55°C, 3°C / minute
-40 °C
70 °C
660 hPa
1 080 hPa
95 %
Yes
Yes
45 mm
100 mm
75 mm
230 g

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