## **SIEMENS**

## **Data sheet**

6ES7223-1PL32-0XB0



SIMATIC S7-1200, Digital I/O SM 1223, 16 DI/16 DO, 16 DI 24 V DC, Sink/Source, 16 DO, relay 2 A

Figure similar

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General information	
Product type designation	SM 1223, DI 16x24 V DC, DQ 16x 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.	180 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	
• present	Yes
Power loss	
Power loss, typ.	10 W
Digital inputs	
Number of digital inputs	16
• 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.	16
horizontal installation	
— up to 40 °C, max.	16
— up to 50 °C, max.	16
vertical installation	
— up to 40 °C, max.	16
Input voltage	
<ul> <li>Type of input voltage</li> </ul>	DC
<ul><li>Rated value (DC)</li></ul>	24 V
● for signal "0"	5 V DC at 1 mA
● for signal "1"	15 V DC 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
	4 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	groups of four
— parameterizable	Yes
— parameterizable  Cable length	165
shielded, max.	500 m
	300 m
unshielded, max.  Digital outputs	300 III
Digital outputs	40
Number of digital outputs	16
• in groups of	A
Short-circuit protection	No; to be provided externally
Switching capacity of the outputs	2.4
with resistive load, max.      an lower load, max.	2 A
on lamp load, max.  Output valtage	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
	5 V AC (0 250 V AC
Output current	2 A
for signal "1" rated value     for signal "1" permissible range, may	2 A
for signal "1" permissible range, max.  Output delay with resistive load	4 N
"0" to "1", max.	10 ms
• "1" to "0", max.	10 ms
Total current of the outputs (per group)	10 1115
horizontal installation	
	9 At Current per mana
— up to 50 °C, max.	8 A; Current per mass
Relay outputs	16
Number of relay outputs     Detect supply voltage of relay ceil L / /DC)	16 24 V
Rated supply voltage of relay coil L+ (DC)      Number of pageting evalue, may	
Number of operating cycles, max.  Suitabling capacity of contacts.	mechanically 10 million, at rated load voltage 100 000
Switching capacity of contacts	2 A
— with inductive load, max. — on lamp load, max.	
— with resistive load, max.	30 W with DC, 200 W with AC 2 A
— with resistive load, max.  Cable length	ZA
-	500 m
• shielded, max.	500 m 150 m
unshielded, max.  Interrupts/diagnostics/status information	150 111
Alarms	Vec
Diagnostic alarm  Diagnostics indication LED	Yes
Diagnostics indication LED	Voc
for status of the inputs     for status of the custouts	Yes
• for status of the outputs	Yes
Potential separation	
Potential separation digital inputs	2
between the channels, in groups of  Potential according digital outputs	2
Potential separation digital outputs	Deleve
between the channels	Relays
between the channels, in groups of	4 500 V AC for 4 minute
between the channels and backplane bus  Permissible potential differences.	1 500 V AC for 1 minute
Permissible potential difference	750VA0 for Aminute
between different circuits	750 V AC for 1 minute
Degree and class of protection	IDO
IP degree of protection	IP20
Standards, approvals, certificates	
CE mark	Yes
CSA approval	Yes
UL approval	Yes
cULus	Yes
FM approval	Yes
RCM (formerly C-TICK)	Yes

KC approval	Yes
Marine approval	Yes
Ecological footprint	
<ul> <li>environmental product declaration</li> </ul>	Yes
Global warming potential	
<ul><li>— global warming potential, (total) [CO2 eq]</li></ul>	123 kg
<ul> <li>— global warming potential, (during production) [CO2 eq]</li> </ul>	12.1 kg
<ul><li>— global warming potential, (during operation) [CO2 eq]</li></ul>	111 kg
<ul> <li>— global warming potential, (after end of life cycle)</li> <li>[CO2 eq]</li> </ul>	-0.434 kg
Ambient conditions	
Free fall	
Fall height, max.	0.3 m; five times, in product package
Ambient temperature during operation	
• min.	-20 °C
• max.	60 °C; Number of simultaneously activated outputs: 8 (no adjacent points) at 60 °C horizontal or 50 °C vertical, 16 at 55 °C horizontal or 45 °C vertical
<ul> <li>horizontal installation, min.</li> </ul>	-20 °C
<ul> <li>horizontal installation, max.</li> </ul>	60 °C
<ul> <li>vertical installation, min.</li> </ul>	-20 °C
<ul> <li>vertical installation, max.</li> </ul>	50 °C
permissible temperature change	5°C to 55°C, 3°C / minute
Ambient temperature during storage/transportation	
• min.	-40 °C
• max.	70 °C
Air pressure acc. to IEC 60068-2-13	
<ul> <li>Storage/transport, min.</li> </ul>	660 hPa
Storage/transport, max.	1 080 hPa
Relative humidity	
<ul> <li>Operation at 25 °C without condensation, max.</li> </ul>	95 %
connection method	
required front connector	Yes
Mechanics/material	
Enclosure material (front)	
<ul><li>Plastic</li></ul>	Yes
Dimensions	
Width	70 mm
Height	100 mm
Depth	75 mm
Weights	
Weight, approx.	350 g

last modified:

10/9/2024