

SIMATIC S7-1200, Digital I/O SB 1223, 2 DI/2 DO, 2 DI 24 V DC/2 DO 24 V DC

General information	
Product type designation	SB 1223, DI 2x24 V DC/DQ 2x24 V DC
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, typ.	50 mA
output voltage / header	
supply voltage of the transmitters / header	
• Supply current, max.	4 mA; per channel
Power loss	
Power loss, typ.	1 W
Digital inputs	
Number of digital inputs	2; Current-sinking
• in groups of	1
Input characteristic curve in accordance with IEC 61131, type 1	Yes
Number of simultaneously controllable inputs	
all mounting positions	
— up to 40 °C, max.	2
Input voltage	
• Type of input voltage	DC
• Rated value (DC)	24 V
• for signal "0"	0 to 5 V
• for signal "1"	+15 to +30 V
Input current	
• for signal "0", max. (permissible quiescent current)	1 mA
• for signal "1", typ.	7 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
— at "0" to "1", max.	2 µs
— at "1" to "0", max.	10 µs
for interrupt inputs	
— parameterizable	Yes
for technological functions	
— parameterizable	Yes
Cable length	
• shielded, max.	50 m
Digital outputs	
Number of digital outputs	2; MOSFET, solid-state (current-sinking/current-sourcing)
• in groups of	1
Short-circuit protection	No
Switching capacity of the outputs	
• with resistive load, max.	0.5 A
• on lamp load, max.	5 W
Load resistance range	
• upper limit	0.6 Ω
Output voltage	
• Rated value (DC)	24 V
• for signal "0", max.	0.1 V; with 10 kOhm load
• for signal "1", min.	20 V

Output current	
<ul style="list-style-type: none"> for signal "1" permissible range, max. for signal "0" residual current, max. 	0.5 A 10 µA
Cable length	
<ul style="list-style-type: none"> shielded, max. 	50 m
Interrupts/diagnostics/status information	
Alarms	Yes
Diagnostics function	Yes
Diagnostics indication LED	
<ul style="list-style-type: none"> for status of the inputs for status of the outputs 	Yes Yes
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
Ambient conditions	
Free fall	
<ul style="list-style-type: none"> Fall height, max. 	0.3 m; five times, in product package
Ambient temperature during operation	
<ul style="list-style-type: none"> min. max. horizontal installation, min. horizontal installation, max. vertical installation, min. vertical installation, max. 	-20 °C 60 °C -20 °C 60 °C -20 °C 50 °C
Ambient temperature during storage/transportation	
<ul style="list-style-type: none"> min. max. 	-40 °C 70 °C
Air pressure acc. to IEC 60068-2-13	
<ul style="list-style-type: none"> Storage/transport, min. Storage/transport, max. 	660 hPa 1 080 hPa
Relative humidity	
<ul style="list-style-type: none"> Operation at 25 °C without condensation, max. 	95 %
Mechanics/material	
Enclosure material (front)	
<ul style="list-style-type: none"> Plastic 	Yes
Dimensions	
Width	38 mm
Height	62 mm
Depth	21 mm
Weights	
Weight, approx.	40 g

last modified:

8/16/2023 