



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	
<ul style="list-style-type: none"> supply current / from supply voltage for transmitter / maximum 	4 mA; per channel
Power loss	
Power loss, typ.	1 W
Digital inputs	
Number of digital inputs	2; Current-sinking
<ul style="list-style-type: none"> 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	
<ul style="list-style-type: none"> Type of input voltage Rated value (DC) for signal "0" for signal "1" 	DC 24 V 0 to 5 V +15 to +30 V
Input current	
<ul style="list-style-type: none"> for signal "0", max. (permissible quiescent current) for signal "1", typ. 	1 mA 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	
<ul style="list-style-type: none"> shielded, max. 	50 m

Digital outputs	
Number of digital outputs	2; MOSFET, solid-state (current-sinking/current-sourcing)
<ul style="list-style-type: none"> in groups of 	1
Short-circuit protection	No
Switching capacity of the outputs	
<ul style="list-style-type: none"> with resistive load, max. 	0.5 A
<ul style="list-style-type: none"> on lamp load, max. 	5 W
Load resistance range	
<ul style="list-style-type: none"> upper limit 	0.6 Ω
Output voltage	
<ul style="list-style-type: none"> Rated value (DC) 	24 V
<ul style="list-style-type: none"> for signal "0", max. 	0.1 V; with 10 kOhm load
<ul style="list-style-type: none"> for signal "1", min. 	20 V
Output current	
<ul style="list-style-type: none"> for signal "1" permissible range, max. 	0.5 A
<ul style="list-style-type: none"> for signal "0" residual current, max. 	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 	Yes
<ul style="list-style-type: none"> for status of the outputs 	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. 	-20 °C
<ul style="list-style-type: none"> max. 	60 °C
<ul style="list-style-type: none"> horizontal installation, min. 	-20 °C
<ul style="list-style-type: none"> horizontal installation, max. 	60 °C
<ul style="list-style-type: none"> vertical installation, min. 	-20 °C
<ul style="list-style-type: none"> vertical installation, max. 	50 °C
Ambient temperature during storage/transportation	
<ul style="list-style-type: none"> min. 	-40 °C
<ul style="list-style-type: none"> max. 	70 °C
Air pressure acc. to IEC 60068-2-13	
<ul style="list-style-type: none"> Storage/transport, min. 	660 hPa
<ul style="list-style-type: none"> Storage/transport, max. 	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:	4/1/2022 

