

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	
Power supply to the transmitters	
• 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

<b>Number of simultaneously controllable inputs</b>	
all mounting positions	
— up to 40 °C, max.	2
<b>Input voltage</b>	
• Type of input voltage	DC
• Rated value (DC)	24 V
• for signal "0"	0 to 5 V
• for signal "1"	+15 to +30V
<b>Input current</b>	
• for signal "0", max. (permissible quiescent current)	1 mA
• for signal "1", typ.	0.5 A
<b>Input delay (for rated value of input voltage)</b>	
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
<b>Cable length</b>	
• shielded, max.	500 m
• unshielded, max.	300 m
<b>Digital outputs</b>	
Number of digital outputs	2; MOSFET, solid-state (current-sinking/current-sourcing)
• in groups of	1
Short-circuit protection	No
<b>Switching capacity of the outputs</b>	
• with resistive load, max.	0.5 A
• on lamp load, max.	5 W
<b>Load resistance range</b>	
• upper limit	0.6 Ω
<b>Output voltage</b>	
• Rated value (DC)	24 V
• for signal "0", max.	0.1 V; with 10 kOhm load
• for signal "1", min.	20 V
<b>Output current</b>	
• for signal "1" permissible range, max.	0.5 A
• for signal "0" residual current, max.	10 µA
<b>Cable length</b>	

- shielded, max. 500 m
- unshielded, max. 150 m

### Interrupts/diagnostics/status information

Alarms	Yes
Diagnostics function	Yes
Diagnostics indication LED	
• for status of the inputs	Yes
• 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	
• Fall height, max.	0.3 m; five times, in product package

#### Ambient temperature during operation

- min. -20 °C
- max. 60 °C
- horizontal installation, min. -20 °C
- horizontal installation, max. 60 °C
- vertical installation, min. -20 °C
- vertical installation, max. 50 °C

#### Ambient temperature during storage/transportation

- min. -40 °C
- max. 70 °C

#### Air pressure acc. to IEC 60068-2-13

- Storage/transport, min. 660 hPa
- Storage/transport, max. 1 080 hPa

#### Relative humidity

- Operation at 25 °C without condensation, max. 95 %

### Mechanics/material

Enclosure material (front)	
• Plastic	Yes

### Dimensions

Width	38 mm
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Height	62 mm
Depth	21 mm
<b>Weights</b>	
Weight, approx.	40 g
<b>last modified:</b>	08/27/2019