



SIPLUS S7-1200 SB 1223 2DI/2DQ based on 6ES7223-0BD30-0XB0 with conformal coating, -20...+60 °C, start up 0 °C, digital input/output 2 DI 24 V DC/2 DQ 24 V DC

General information	
Product type designation	SB 1223, DI 2x24 V DC/DQ 2x24 V DC
based on	6ES7223-0BD30-0XB0
Engineering with	
<ul style="list-style-type: none"> STEP 7 TIA Portal configurable/integrated from version 	see entry ID: 109746275
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	
<ul style="list-style-type: none"> Supply current, max. 	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"> Rated value (DC) for signal "0" for signal "1" 	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	
• 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	
• for signal "1" rated value	0.5 A
• for signal "1" permissible range, max.	0.5 A
• for signal "0" residual current, max.	10 μA
Cable length	
• shielded, max.	50 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
Ambient conditions	
Free fall	
• Fall height, max.	0.3 m; five times, in product package
Ambient temperature during operation	
• min.	-20 °C; = Tmin (incl. condensation/frost)
• max.	60 °C; = Tmax
Ambient temperature during storage/transportation	
• min.	-40 °C
• max.	70 °C
Altitude during operation relating to sea level	
• Installation altitude above sea level, max.	5 000 m
• Ambient air temperature-barometric pressure-altitude	Tmin ... Tmax at 1 140 hPa ... 795 hPa (-1 000 m ... +2 000 m) // Tmin ... (Tmax - 10 K) at 795 hPa ... 658 hPa (+2 000 m ... +3 500 m) // Tmin ... (Tmax -20 K) at 658 hPa ... 540 hPa (+3 500 m ... +5 000 m)
Relative humidity	
• With condensation, tested in accordance with IEC 60068-2-38, max.	100 %; RH incl. condensation/frost permitted (no commissioning in bedewed state)
Resistance	
Coolants and lubricants	
— Resistant to commercially available coolants and lubricants	Yes; Incl. diesel and oil droplets in the air
Use in stationary industrial systems	
— to biologically active substances according to EN 60721-3-3	Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request
— to chemically active substances according to EN 60721-3-3	Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *
— to mechanically active substances according to EN 60721-3-3	Yes; Class 3S4 incl. sand, dust, *
Use on ships/at sea	
— to biologically active substances according to EN 60721-3-6	Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request
— to chemically active substances according to EN 60721-3-6	Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *
— to mechanically active substances according to EN 60721-3-6	Yes; Class 6S3 incl. sand, dust; *

Usage in industrial process technology	
— Against chemically active substances acc. to EN 60654-4	Yes; Class 3 (excluding trichlorethylene)
— Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04	Yes; Level GX group A/B (excluding trichlorethylene; harmful gas concentrations up to the limits of EN 60721-3-3 class 3C4 permissible); level LC3 (salt spray) and level LB3 (oil)

Remark	
— Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04	* The supplied plug covers must remain in place over the unused interfaces during operation!

Conformal coating	
<ul style="list-style-type: none"> • Coatings for printed circuit board assemblies acc. to EN 61086 • Protection against fouling acc. to EN 60664-3 • Military testing according to MIL-I-46058C, Amendment 7 • Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A 	<p>Yes; Class 2 for high reliability</p> <p>Yes; Type 1 protection</p> <p>Yes; Discoloration of coating possible during service life</p> <p>Yes; Conformal coating, Class A</p>

Mechanics/material

Enclosure material (front)	
• Plastic	Yes

Dimensions

Width	38 mm
Height	62 mm
Depth	21 mm

Weights

Weight, approx.	40 g
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Classifications

	Version	Classification
eClass	14	27-24-22-04
eClass	12	27-24-22-04
eClass	9.1	27-24-22-04
eClass	9	27-24-22-04
eClass	8	27-24-22-04
eClass	7.1	27-24-22-04
eClass	6	27-24-22-04
ETIM	10	EC001419
ETIM	9	EC001419
ETIM	8	EC001419
ETIM	7	EC001419
IDEA	4	3566
UNSPSC	15	32-15-17-05

Approvals / Certificates

General Product Approval



[Manufacturer Declaration](#)



[China RoHS](#)



General Product Approval **EMV** **For use in hazardous locations**

[China RoHS](#)



For use in hazardous locations **Maritime application**



IECEX



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