



Figure similar

SIPLUS S7-1200 SB 1221 4DI based on 6ES7221-3BD30-0XB0 with conformal coating, -40...+60 °C, start up -25 °C, digital inputs 4 DI 24 V DC 200 kHz

General information	
Product type designation	SB 1221, DI 4x24 V DC 200 kHz
based on	6ES7221-3BD30-0XB0
Engineering with	
<ul style="list-style-type: none"> STEP 7 TIA Portal configurable/integrated from version 	see entry ID: 109746275
Input current	
from backplane bus 5 V DC, typ.	40 mA
Power loss	
Power loss, typ.	1 W
Digital inputs	
Number of digital inputs	4; Current-sourcing
<ul style="list-style-type: none"> in groups of 	4
Input voltage	
<ul style="list-style-type: none"> Rated value (DC) 	24 V
<ul style="list-style-type: none"> for signal "0" 	(L+ minus 5.0 V DC) ... L+ (1.4 ... 0 mA)
<ul style="list-style-type: none"> for signal "1" 	0 V ... (L+ minus 10 V DC (10 ... 2.9 mA))
Input current	
<ul style="list-style-type: none"> for signal "0", max. (permissible quiescent current) 	1.4 mA
<ul style="list-style-type: none"> for signal "1", min. 	2.9 mA
<ul style="list-style-type: none"> for signal "1", typ. 	7 mA
Input delay (for rated value of input voltage)	
for standard inputs	
— parameterizable	Yes; 0.1 / 0.2 / 0.4 / 0.8 / 1.6 / 3.2 / 6.4 / 10.0 / 12.8 / 20.0 μs; 0.05 / 0.1 / 0.2 / 0.4 / 0.8 / 1.6 / 3.2 / 6.4 / 10.0 / 12.8 / 20.0 ms
for interrupt inputs	
— parameterizable	Yes
for technological functions	
— parameterizable	Yes
Cable length	
<ul style="list-style-type: none"> shielded, max. 	50 m; shielded, twisted pair
Interrupts/diagnostics/status information	
Diagnostics indication LED	
<ul style="list-style-type: none"> for status of the inputs 	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. 	-40 °C; = Tmin (incl. condensation/frost); start-up @ -25 °C

• 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 (no commissioning in bedewed state), horizontal installation	
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		
• Coatings for printed circuit board assemblies acc. to EN 61086	Yes; Class 2 for high reliability	
• Protection against fouling acc. to EN 60664-3	Yes; Type 1 protection	
• Military testing according to MIL-I-46058C, Amendment 7	Yes; Discoloration of coating possible during service life	
• Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A	Yes; Conformal coating, Class A	
Mechanics/material		
Enclosure material (front)		
• Plastic	Yes	
Dimensions		
Width	38 mm	
Height	62 mm	
Depth	21 mm	
Weights		
Weight, approx.	35 g	
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



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