MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Reference package for procurement and maintenance review

SIEMENS

6ES7223-1BL30-0XB0

SM 1223 16-INPUT 16-OUTPUT DIGITAL I/O MODULE

Used with the applicable SIMATIC S7-1200 configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

Selected official manufacturer pages follow this cover.

Source: Siemens official documentation applicable to 6ES7223-1BL30-0XB0

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Product data sheet 6ES7223-1BL30-0XB0

SIMATIC S7-1200, DIGITAL I/O SM 1223, 16DI / 16DO, 16DI DC 24 V, SINK/SOURCE, 16DO, TRANSISTOR 0.5A

Supply voltages	
Rated value	
24 V DC	Yes
permissible range, lower limit (DC)	20.4 V
permissible range, upper limit (DC)	28.8 V
Power supply to the transmitters	
present	Yes
Current consumption	
from backplane bus 5 V DC, max.	185 mA
Digital inputs	
from load voltage L+ (without load), max.	4 mA ; per channel
Power losses	
Power loss, typ.	4.5 W
Connection method	
required front connector	Yes
Digital inputs	
Number of digital inputs	16
in groups of	2
Number of simultaneously controllable inputs	
all mounting positions	
Concurrently controllable inputs, up to 40 °C	16
horizontal installation	
up to 40 °C, max.	16
up to 50 °C, max.	16
vertical installation	
up to 40 °C, max.	16
Input characteristic curve acc. to IEC 1131, Type 1	Yes
Input voltage	

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Rated value, DC	24 V
for signal "0"	5 VDC at 1 mA
for signal "1"	15 VDC at 2.5 mA
Input current	
for signal "0", max. (permissible quiescent current)	1 mA
for signal "1", min.	2.5 mA
for signal "1", typ.	4 mA ; Typical
Input delay (for rated value of input voltage)	
for standard inputs	
parameterizable	Yes ; 0.2, 0.4, 0.8, 1.6, 3.2, 6.4, and 12.8 ms, selectable in groups of four
for interrupt inputs	
parameterizable	Yes
Cable length	
Cable length, shielded, max.	500 m
Cable length unshielded, max.	300 m
Digital outputs	
Number of digital outputs	16
in groups of	1
Short-circuit protection of the output	No ; to be provided externally
Limitation of inductive shutdown voltage to	L+ (-48 V)
Switching capacity of the outputs	
with resistive load, max.	0.5 A
on lamp load, max.	5 W
Output voltage	
Rated value (DC)	24 V
for signal "0" (DC), max.	0.1 V ; with 10k ohms Load
for signal "1", min.	20 VDC
Output current	
for signal "1" permissible range, max.	0.5 A
for signal "0" residual current, max.	10 µA
Output delay with resistive load	
0 to "1", max.	50 µs
1 to "0", max.	200 µs
Aggregate current of outputs (per group)	

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horizontal installation	
up to 50 °C, max.	8 A ; Current per mass
Cable length	
Cable length, shielded, max.	500 m
Cable length unshielded, max.	150 m
Relay outputs	
Switching capacity of contacts	
with inductive load, max.	0.5 A
on lamp load, max.	5 W
with resistive load, max.	0.5 A
Interrupts/diagnostics/status information	
Alarms	
Alarms	Yes
Diagnostic alarm	Yes
Diagnoses	
Diagnostic functions	Yes
Monitoring the supply voltage to the electronics	Yes
Diagnostics indication LED	
Status indicator digital output (green)	Yes
Status indicator digital input (green)	Yes
Galvanic isolation	
Galvanic isolation digital inputs	
between the channels, in groups of	2
Galvanic isolation digital outputs	
between the channels, in groups of	1
between the channels and the backplane bus	500 VAC
Degree of protection	
IP20	Yes
Standards, approvals, certificates	
CE mark	Yes
C-TICK	Yes
FM approval	Yes
Mechanics	
Plastic	Yes
Dimensions and weight	

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Dimensions	
Width	70 mm
Height	100 mm
Depth	75 mm
Weight	
Weight, approx.	310 g
Status	Jun 15, 2010

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