SIEMENS

Product data sheet 6ES7223-1BH30-0XB0



SIMATIC S7-1200, DIGITAL I/O SM 1223,
8DI / 8DO, 8DI DC 24 V, SINK/SOURCE,
8DO, TRANSISTOR 0.5A

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Supply voltage	
24 V DC	Yes
permissible range, lower limit (DC)	20.4 V
permissible range, upper limit (DC)	28.8 V
Input current	
from backplane bus 5 V DC, max.	145 mA
Digital inputs	
from load voltage L+ (without load), max.	4 mA ; per channel
Output voltage	
Power supply to the transmitters	
present	Yes
Power losses	
Power loss, typ.	2.5 W
Digital inputs	
Number/binary inputs	8
In groups of	2
Input characteristic curve acc. to IEC 61131, Type 1	Yes
Number of simultaneously controllable inputs	

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all mounting positions	
up to 40 °C, max.	8
horizontal installation	
up to 40 °C, max.	8
up to 50 °C, max.	8
vertical installation	
up to 40 °C, max.	8
Input voltage	
Type of input voltage	DC
Rated value, DC	24 V
for signal "0"	5 V DC at 1 mA
for signal "1"	15 V DC 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/binary outputs	8
In groups of	1
Functionality/short-circuit strength	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", max.	0.1 V ; with 10 kOhm load
for signal "1", min.	20 V DC
Output current	

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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)	
horizontal installation	
up to 50 °C, max.	4 A ; Current per mass
Relay outputs	
Switching capacity of contacts	
with inductive load, max.	0.5 A
on lamp load, max.	5 W
Switching frequency/contacts/at ohmic load/maximum	0.5 A
Cable length	
Cable length, shielded, max.	500 m
Cable length unshielded, max.	150 m
Interrupts/diagnostics/status information	
Alarms	
Alarms	Yes
Diagnostic alarm	Yes
Diagnostic messages	
Diagnostic functions	Yes
Diagnostics indication LED	
for status of the inputs	Yes
For status of the outputs	Yes
for maintenance	Yes
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 V AC
Degree and class of protection	
IP20	Yes
Standards, approvals, certificates	
CE mark	Yes

subject to modifications
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C-TICK	Yes
FM approval	Yes
Climatic and mechanical conditions for storage and transport	
Climatic conditions for storage and transport	
Free fall	
Drop height, max. (in packaging)	0.3 m ; five times, in dispatch package
Temperature	
Permissible temperature range	-40 °C to +70 °C
Air pressure acc. to IEC 60068-2-13	
Permissible air pressure	1080 to 660 hPa
Mechanical and climatic conditions during operation	
Climatic conditions in operation	
Temperature	
Permissible temperature range	0 °C to 55 °C horizontal installation 0 °C to 45 °C vertical installation
Permissible temperature change	5°C to 55°C, 3°C / minute
Connection method	
required front connector	Yes
Mechanics/material	
Type of housing (front)	
Plastic	Yes
Dimensions	
Width	45 mm
Height	100 mm
Depth	75 mm
Weight	
Weight, approx.	210 g
Status	Feb 21, 2013

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