6ES7223-1BH32-0XB0

Data sheet



SIMATIC S7-1200, Digital I/O SM 1223, 8 DI/8 DO, 8 DI 24 V DC, Sink/Source, 8 DO, transistor 0.5 A

General information	
Product type designation	SM 1223, DI 8x24 V DC, DQ 8x24 V DC
Supply voltage	
Rated value (DC)	24 V
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 loss	
Power loss, typ.	2.5 W
Digital inputs	
Number of digital inputs	8
• in groups of	2
Input characteristic curve in accordance with IEC 61131, type 1	Yes
Number of simultaneously controllable inputs	
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	4 0
• for signal "0", max. (permissible quiescent current)	1 mA
• for signal "1", min.	2.5 mA
● for signal "1", typ.	4 mA

Post sandard inputs	ed value of input voltage)	
selectable in groups of four for interrupt inputs	puts	
— parameterizable Yes		
Sale length		
• shielded, max. 500 m 300 m	terizable Yes	
• unshielded, max. 300 m		
Number of digital outputs 8	ix. 500 m	
Number of digital outputs	max. 300 m	
• in groups of		
Short-circuit protection No; to be provided externally	outputs 8	
Limitation of inductive shutdown voltage to Switching capacity of the outputs • with resistive load, max. • on lamp load, max. • on lamp load, max. Output voltage • Rated value (DC) • for signal "0", max. • for signal "1", min. Output current • for signal "1" reade value • for signal "1" reade value • for signal "1" reade value • for signal "1" residual current, max. • for signal "0" residual current, max. 10 µA Output delay with resistive load • "0" to "1", max. • for or signal "0" residual current, max. 10 µA Output delay with resistive load • "0" to "1", max. • 10 "0", max. • 200 µs Total current of the outputs (per group) horizontal installation — up to 50 "C, max. 4 A; Current per mass Cable length • shielded, max. • 150 m nterrupts/diagnostics/status information Alarms • Diagnostics alarm Potential separation digital inputs • for status of the outputs • between the channels, in groups of • between	1	
Switching capacity of the outputs	ction No; to b	e provided externally
• 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 - • for signal "1" repressible 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 Total current of the outputs (per group) broizontal installation — up to 50 "C, max. 4 A; Current per mass Cable length 500 m • shielded, max. 500 m • unshielded, max. 500 m • long stics lature information Yes Alarms • Diagnostic status information Alarms • Diagnostic sindication LED • for status of the outputs Yes * or status of the outputs Yes * or status of the outputs Yes • between the channels, in groups of	tive shutdown voltage to L+ (-48	V)
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	d, max. 5 W	
• for signal "0", max. • for signal "1", min. 20 V DC Output current • for signal "1" rated value • for signal "0" residual current, max. • for signal "0" residual current, max. • 10 µA Output delay with resistive load • "0" to "1", max. • "1" to "0", max. • 200 µs Total current of the outputs (per group) horizontal installation — up to 50 "C, max. 4 A; Current per mass Cable length • shielded, max. • so 0 m • shielded, max. • unshielded, max. • 150 m Interrupts/diagnostics/status information Alarms • Diagnostic alarm Potential separation digital inputs • for status of the inputs • for status of the outputs • between the channels, in groups of • between the channels and backplane bus • Diagnostics of protection IP degree of protection Per degree of		
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FM approval Yes RCM (formerly C-TICK) Yes KC approval Yes		
RCM (formerly C-TICK) KC approval Yes Yes		
KC approval Yes		
Marine approval		
Ambient conditions	Yes	

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	
permissible temperature change	5°C to 55°C, 3°C / minute	
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		
$ullet$ Operation at 25 $^{\circ}{\rm C}$ without condensation, max.	95 %	
Connection method		
required front connector	Yes	
Mechanics/material		
Enclosure material (front)		
Plastic	Yes	
Dimensions		
Width	45 mm	
Height	100 mm	
Depth	75 mm	
Weights		
Weight, approx.	210 g	
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