



6ES7223-1PH30-0XB0 S7-1200 DIGITAL I/O, 8DI/8DO

Technical / CAx data

☒ Technical Data ☐ CAx data

SIMATIC S7-1200, DIGITAL I/O SM 1223, 8DI / 8DO, 8DI DC 24 V, SINK/SOURCE, 8DO, RELAY 2A
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.	145 mA
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Power losses

Power loss, typ.	5.5 W
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Connection method

required front connector	Yes
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Digital inputs

Number of digital inputs	8
in groups of	2

Number of simultaneously controllable inputs
all mounting positions

Concurrently controllable inputs, up to 40 °C	8
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horizontal installation

up to 40 °C, max.	8
up to 50 °C, max.	8

vertical installation

up to 40 °C, max.	8
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Input characteristic curve acc. to IEC 1131, Type 1	Yes
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Input voltage

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
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for interrupt inputs

parameterizable	Yes
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Cable length	
Cable length, shielded, max.	500 m
Cable length unshielded, max.	300 m
Digital outputs	
Number of digital outputs	8
in groups of	2
Short-circuit protection of the output	No; to be provided externally
Switching capacity of the outputs	
with resistive load, max.	2 A
on lamp load, max.	30 W DC; 200 W AC
Output voltage	
Rated value (AC)	5 to 250 VAC
Rated value (DC)	5 to 30 VDC
Output current	
for signal "1" permissible range, max.	2 A
Output delay with resistive load	
0 to "1", max.	10 ms
1 to "0", max.	10 ms
Aggregate current of outputs (per group)	
horizontal installation	
up to 50 °C, max.	10 A; Current per mass
Cable length	
Cable length, shielded, max.	500 m
Cable length unshielded, max.	150 m
Relay outputs	
Number of relay outputs	8
Rated input voltage of relay L+ (DC)	24 V
Number of operating cycles	mechanically 10 million, at rated load voltage 100,000
Switching capacity of contacts	
with inductive load, max.	2 A
on lamp load, max.	30 W DC; 200 W AC
with resistive load, max.	2 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	Relays
between the channels, in groups of	2
between the channels and the backplane bus	1500 VAC for 1 minute (

Permissible potential difference between different circuits	750 VAC for 1 minute
Degree of protection IP20	Yes
Standards, approvals, certificates	
CE mark	Yes
C-TICK	Yes
FM approval	Yes
Mechanics	
Plastic	Yes
Dimensions and weight	
Dimensions	
Width	45 mm
Height	100 mm
Depth	75 mm
Weight	
Weight, approx.	230 g
Status	Jun 15, 2010