

# SIEMENS

## Product data sheet

**6ES7223-1PL30-0XB0**


SIMATIC S7-1200, DIGITAL I/O SM 1223,  
16DI / 16DO, 16DI DC 24 V, SINK/SOURCE,  
16DO, RELAY 2A

Supply voltage	
Power supply / Input / Input voltage	
24 V DC	Yes
permissible range, lower limit (DC)	20.4 V
permissible range, upper limit (DC)	28.8 V
Power supply / Input / Input current	
from backplane bus 5 V DC, max.	180 mA
Power supply / Output / Output voltage	
Power supply to the transmitters	
present	Yes
Power losses	
Power loss, typ.	10 W
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	
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 of digital outputs	16
in groups of	4
Short-circuit protection	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 V AC
Rated value (DC)	5 to 30 V AC
<b>Output current</b>	
for signal "1" permissible range, max.	2 A
<b>Output delay with resistive load</b>	
0 to "1", max.	10 ms
1 to "0", max.	10 ms
<b>Aggregate current of outputs (per group)</b>	
horizontal installation	
up to 50 °C, max.	8 A ; Current per mass
<b>Cable length</b>	
Cable length, shielded, max.	500 m
Cable length unshielded, max.	150 m
<b>Relay outputs</b>	
Number of relay outputs	16
Rated input voltage of relay L+ (DC)	24 V
Number of operating cycles	mechanically 10 million, at rated load voltage 100,000
<b>Switching capacity of contacts</b>	
with inductive load, max.	2 A
on lamp load, max.	30 W DC ; 200 W AC
with resistive load, max.	2 A
<b>Interrupts/diagnostics/status information</b>	
<b>Alarms</b>	
Alarms	Yes
Diagnostic alarm	Yes
<b>Diagnoses</b>	
Diagnostic functions	Yes
<b>Diagnostics indication LED</b>	
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	Relays
between the channels, in groups of	4
between the channels and the backplane bus	1500 V AC for 1 minute
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
Relative humidity	
Permissible range (without condensation) at 25 °C	95%
Mechanical and climatic conditions during operation	
Climatic conditions in operation	
Temperature	
permissible temperature change	5°C to 55°C, 3°C / minute
UMW / Degree of protection and class of protection	
IP20	Yes
Standards, approvals, certificates	
CE mark	Yes
C-TICK	Yes
FM approval	Yes
Connection method	
required front connector	Yes
Mechanics/material	
Plastic	Yes
Dimensions and weight	
Dimensions	

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Width	70 mm
Height	100 mm
Depth	75 mm
<b>Weight</b>	
Weight, approx.	350 g
Status	May 9, 2011