

# 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

<b>Supply voltage</b>	
24 V DC	Yes
permissible range, lower limit (DC)	20.4 V
permissible range, upper limit (DC)	28.8 V
<b>Input current</b>	
from backplane bus 5 V DC, max.	180 mA
<b>Digital inputs</b>	
from load voltage L+ (without load), max.	4 mA/input 11 mA/relay
<b>Output voltage</b>	
<b>Power supply to the transmitters</b>	
present	Yes
<b>Power losses</b>	
Power loss, typ.	10 W
<b>Digital inputs</b>	
Number/binary inputs	16

In groups of	2
Input characteristic curve acc. to IEC 61131, Type 1	Yes
<b>Number of simultaneously controllable inputs</b>	
all mounting positions	
up to 40 °C, max.	16
horizontal installation	
up to 40 °C, max.	16
up to 50 °C, max.	16
vertical installation	
up to 40 °C, max.	16
<b>Input voltage</b>	
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
<b>Input current</b>	
for signal "0", max. (permissible quiescent current)	1 mA
for signal "1", min.	2.5 mA
for signal "1", typ.	4 mA ; Typical
<b>Input delay (for rated value of input voltage)</b>	
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
<b>Cable length</b>	
Cable length, shielded, max.	500 m
Cable length unshielded, max.	300 m
<b>Digital outputs</b>	
Number/binary outputs	16
In groups of	4
Functionality/short-circuit strength	No ; to be provided externally
<b>Switching capacity of the outputs</b>	
with resistive load, max.	2 A

on lamp load, max.	30 W DC ; 200 W AC
<b>Output voltage</b>	
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>Relay outputs</b>	
Number of relay outputs	16
Rated input voltage of relay coil L+ (DC)	24 V
Number of operating cycles, max.	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
Switching frequency/contacts/at ohmic load/maximum	2 A
<b>Cable length</b>	
Cable length, shielded, max.	500 m
Cable length unshielded, max.	150 m
<b>Interrupts/diagnostics/status information</b>	
<b>Alarms</b>	
Alarms	Yes
Diagnostic alarm	Yes
<b>Diagnostic messages</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
<b>Galvanic isolation</b>	
<b>Galvanic isolation digital inputs</b>	
between the channels, in groups of	2
<b>Galvanic isolation digital outputs</b>	
between the channels	Relay
between the channels, in groups of	4
between the channels and the backplane bus	1500 V AC for 1 minute
<b>Permissible potential difference</b>	
between different circuits	750 V AC for 1 minute
<b>Degree and class of protection</b>	
IP20	Yes
<b>Standards, approvals, certificates</b>	
CE mark	Yes
C-TICK	Yes
FM approval	Yes
<b>Climatic and mechanical conditions for storage and transport</b>	
<b>Climatic conditions for storage and transport</b>	
<b>Free fall</b>	
Drop height, max. (in packaging)	0.3 m ; five times, in dispatch package
<b>Temperature</b>	
Permissible temperature range	-40 °C to +70 °C
<b>Air pressure acc. to IEC 60068-2-13</b>	
Permissible air pressure	1080 to 660 hPa
<b>Mechanical and climatic conditions during operation</b>	
<b>Climatic conditions in operation</b>	
<b>Temperature</b>	
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
<b>Connection method</b>	
required front connector	Yes
<b>Mechanics/material</b>	

Type of housing (front)	
Plastic	Yes
<b>Dimensions</b>	
Width	70 mm
Height	100 mm
Depth	75 mm
<b>Weight</b>	
Weight, approx.	350 g
Status	Sep 24, 2012