

# SIEMENS

## Product data sheet

**6ES7221-1BH30-0XB0**


SIMATIC S7-1200, DIGITAL INPUT SM 1221,  
16 DI, 24VDC, SINK/SOURCE INPUT

<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.	130 mA
<b>Digital inputs</b>	
from load voltage L+ (without load), max.	4 mA ; per channel
<b>Output voltage</b>	
<b>Power supply to the transmitters</b>	
present	Yes
<b>Power losses</b>	
Power loss, typ.	2.5 W
<b>Digital inputs</b>	
Number/binary inputs	16

In groups of	4
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	0
<b>Interrupts/diagnostics/status information</b>	
<b>Alarms</b>	
Alarms	Yes
Diagnostic alarm	Yes

Diagnostic messages	
Diagnostic functions	Yes
Diagnostics indication LED	
for status of the inputs	Yes
for maintenance	Yes
Status indicator digital input (green)	Yes
Galvanic isolation	
Galvanic isolation digital inputs	
between the channels, in groups of	4
Degree and class of protection	
IP20	Yes
Standards, approvals, certificates	
CE mark	Yes
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	Mar 27, 2012