

Siemens 6ES7221-1BH32-0XB0 Manual

Brand	Siemens
Product Series	Siemens
Product Type	designation SM 1221, DI 16x24 V DC

Description

6ES7221-1BH32-0XB0

SIMATIC S7-1200, Digital input SM 1221, 16 DI, 24 V DC, Sink/Source

General information

Product type designation SM 1221, DI 16x24 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. 130 mA

Digital inputs

- from load voltage L+ (without load), max. 4 mA; per channel

output voltage / header

supply voltage of the transmitters / header

- present Yes

Power loss

Power loss, typ. 2.5 W

Digital inputs

Number of digital inputs 16

- in groups of 4

Input characteristic curve in accordance with IEC 61131, type 1 Yes

Number of simultaneously controllable inputs

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

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

Input delay (for rated value of input voltage)

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for standard inputs

— parameterizable Yes; 0.2 ms, 0.4 ms, 0.8 ms, 1.6 ms, 3.2 ms, 6.4 ms and 12.8 ms, selectable in groups of four

for interrupt inputs

— parameterizable Yes

Cable length

- shielded, max. 500 m
- unshielded, max. 300 m

Interrupts/diagnostics/status information

Alarms

- Diagnostic alarm Yes

Diagnostics indication LED

- for status of the inputs Yes

Potential separation

Potential separation digital inputs

- between the channels, in groups of 4

Degree and class of protection

IP degree of protection IP20

Standards, approvals, certificates

CE mark Yes

CSA approval Yes

UL approval Yes

cULus Yes

FM approval Yes

RCM (formerly C-TICK) Yes

KC approval Yes

Marine approval Yes

Ambient conditions

Free fall

- Fall height, max. 0.3 m; five times, in product package

Ambient temperature during operation

- min. -20 °C
- max. 60 °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

- Operation at 25 °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

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Depth 75 mm

Weights

Weight, approx. 210 g

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