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**Product data sheet**
**6ES7221-1BH30-0XB0**


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

**Digital inputs**

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

**Power losses**

Power loss, typ. 2.5 W

**Connection method**

required front connector Yes

**Digital inputs**

Number of digital inputs 16

in groups of 4

**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 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 |
| 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                            | 0                                                                             |
| 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 input (green)               | Yes                                                                           |
| Galvanic isolation                                   |                                                                               |
| Galvanic isolation digital inputs                    |                                                                               |
| between the channels, in groups of                   | 4                                                                             |
| 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. | 210 g |
|-----------------|-------|

|        |              |
|--------|--------------|
| Status | Jun 15, 2010 |
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