SIEMENS

## Data sheet 6ES7321-7BH01-0AB0



Figure similar

***spare part*** SIMATIC S7-300, digital input SM 321, isolated, 16 DI; 24 V DC, 1x 20-pole, hardware interrupt, diagnostics, suitable for isochronous mode

| | |
|---|---|
| **General information** | |
| Product function | |
| ● Isochronous mode | Yes |
| **Supply voltage** | |
| Load voltage L+ | |
| ● Rated value (DC) | 24 V |
| ● permissible range, lower limit (DC) | 20.4 V |
| ● permissible range, upper limit (DC) | 28.8 V |
| ● Reverse polarity protection | Yes |
| **Input current** | |
| from load voltage L+ (without load), max. | 90 mA |
| from backplane bus 5 V DC, max. | 130 mA |
| **Encoder supply** | |
| Number of outputs | 2 |
| Type of output voltage | L+ (-2.5 V) |
| Short-circuit protection | Yes; Electronic |
| additional (redundant) feed | Yes |
| Output current | |
| ● Rated value | 120 mA |
| ● permissible range, lower limit | 0 mA |
| ● permissible range, upper limit | 150 mA |
| **Power loss** | |
| Power loss, typ. | 4 W |
| **Digital inputs** | |
| Number of digital inputs | 16 |
| Input characteristic curve in accordance with IEC 61131, type 2 | Yes |
| Number of simultaneously controllable inputs | |
| horizontal installation | |
| — up to 40 °C, max. | 16 |
| — up to 60 °C, max. | 16 |
| vertical installation | |
| — up to 40 °C, max. | 16 |
| Input voltage | |
| ● Type of input voltage | DC |
| ● Rated value (DC) | 24 V |
| ● for signal "0" | -30 to +5 V |
| ● for signal "1" | 13 to 30V |
| Input current | |


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| | |
|---|---|
| ● for signal "1", typ. | 7 mA |
| Input delay (for rated value of input voltage) | |
| for standard inputs | |
| — parameterizable | Yes; 0.1 / 0.5 / 3 / 15 / 20 ms |
| Encoder connection | |
| ● Fixed current limitation for wire-break monitoring, min. | 10 kΩ |
| ● Fixed current limitation for wire-break monitoring, max. | 18 kΩ |
| Cable length | |
| ● shielded, max. | 1 000 m |
| ● unshielded, max. | 600 m |
| **Encoder** | |
| Connectable encoders | |
| ● 2-wire sensor | Yes |
| — permissible quiescent current (2-wire sensor), max. | 2 mA |
| **Interrupts/diagnostics/status information** | |
| Alarms | Yes |
| Diagnostics function | Yes; Parameterizable |
| Alarms | |
| ● Diagnostic alarm | Yes; Parameterizable |
| ● Hardware interrupt | Yes; Parameterizable |
| Diagnoses | |
| ● Diagnostic information readable | Yes |
| ● Wire break | Yes; to I< 1 mA |
| Diagnostics indication LED | |
| ● Group error SF (red) | Yes |
| ● Status indicator digital input (green) | Yes |
| ● Encoder supply Vs (green) | Yes |
| **Potential separation** | |
| Potential separation digital inputs | |
| ● between the channels | No |
| ● between the channels, in groups of | 16 |
| ● between the channels and backplane bus | Yes; Optocoupler |
| **Isolation** | |
| Isolation tested with | 500 V DC |
| **Connection method** | |
| required front connector | 20-pin |
| **Dimensions** | |
| Width | 40 mm |
| Height | 125 mm |
| Depth | 120 mm |
| **Weights** | |
| Weight, approx. | 200 g |
| **Classifications** | |

| | Version | Classification |
|---|---|---|
| eClass | 16 | 27-24-22-04 |
| eClass | 14 | 27-24-22-04 |
| eClass | 12 | 27-24-22-04 |
| eClass | 9.1 | 27-24-22-04 |
| eClass | 9 | 27-24-22-04 |
| eClass | 8 | 27-24-22-04 |
| eClass | 7.1 | 27-24-22-04 |
| eClass | 6 | 27-24-22-04 |
| ETIM | 10 | EC001419 |
| ETIM | 9 | EC001419 |
| ETIM | 8 | EC001419 |
| ETIM | 7 | EC001419 |


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| | | | |
|---|---|---|---|
| IDEA | 4 | 3566 |
| UNSPSC | 15 | 32-15-17-05 |

## Approvals / Certificates

### General Product Approval

Manufacturer Declaration

Miscellaneous

### General Product Approval

China RoHS

Manufacturer Declaration

### EMV

### For use in hazardous locations

### For use in hazardous locations

FM

Miscellaneous

CCC-Ex

### Maritime application

NK / Nippon Kaiji Kyokai

### Maritime application

CCS (China Classification Society)

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