SIEMENS

## Data sheet 6ES7321-7RD00-0AB0

Figure similar

SIMATIC S7, digital input SM 321, isolated, 4 DI; 24 V DC, NAMUR/DIN 19234, for signals from the hazardous area, diagnostics-capable, PTB tested

| | |
|---|---|
| **Supply voltage** | |
| Load voltage L+ | |
| ● Rated value (DC) | 24 V |
| ● Reverse polarity protection | Yes |
| **Input current** | |
| from load voltage L+ (without load), max. | 50 mA |
| from backplane bus 5 V DC, max. | 80 mA |
| **Encoder supply** | |
| Type of output voltage | via the inputs |
| **Power loss** | |
| Power loss, typ. | 1.1 W |
| **Digital inputs** | |
| Number of digital inputs | 4 |
| Number of NAMUR inputs | 4 |
| Input voltage | |
| ● Type of input voltage | DC |
| ● Rated value (DC) | 8.2 V; from internal power circuit supply |
| Input current | |
| ● on wire-break, max. | 0.1 mA |
| ● on short-circuit, max. | 8.5 mA |
| Input delay (for rated value of input voltage) | |
| ● Input frequency (with a time delay of 0.1 ms), max. | 2 kHz |
| for NAMUR inputs | |
| — parameterizable | Yes; 0.1 / 0.5 / 3 / 15 / 20 ms (plus 0.25 ms preparation time) |
| Cable length | |
| ● unshielded, max. | 200 m |
| **Encoder** | |
| Connectable encoders | |
| ● NAMUR encoder | Yes; Two-wire connection |
| **Interrupts/diagnostics/status information** | |
| Diagnostics function | Yes |
| Diagnoses | |
| ● Diagnostic information readable | Yes |
| Diagnostics indication LED | |
| ● Group error SF (red) | Yes |
| ● Status indicator digital input (green) | Yes |

| | |
|---|---|
| ● Channel fault indicator F (red) | Yes |
| **Ex(i) characteristics** | |
| Module for Ex(i) protection | Yes |
| maximum values for connecting terminals for gas group IIC | |
| ● Uo (no-load voltage), max. | 10 V |
| ● Io (short-circuit current), max. | 14.1 mA |
| ● Po (power output), max. | 33.7 mW |
| ● Co (permissible external capacity), max. | 3 µF |
| ● Lo (permissible external inductivity), max. | 100 mH |
| **Potential separation** | |
| Potential separation digital inputs | |
| ● between the channels | Yes; 60 V DC/30 V AC when used in the hazardous area; 400 V DC/250 V AC when used in NON-hazardous area |
| ● between the channels, in groups of | 1 |
| ● between the channels and backplane bus | Yes; 60 V DC/30 V AC when used in the hazardous area; 400 V DC/250 V AC when used in NON-hazardous area |
| ● Between the channels and load voltage L+ | Yes; 60 V DC/30 V AC when used in the hazardous area; 400 V DC/250 V AC when used in NON-hazardous area |
| **Standards, approvals, certificates** | |
| Use in hazardous areas | |
| ● ATEX marking | ATEX II 3 G (2) GD Ex nA [ib Gb] [ib IIIC Db] IIC T4 Gc |
| ● FM marking | Class II, Division 2, Group A, B, C, D T4 |
| ● Test number PTB | Ex-96.D.2094X |
| **Ambient conditions** | |
| Ambient temperature during operation | |
| ● max. | 60 °C |
| **Connection method** | |
| required front connector | 20-pin |
| **Dimensions** | |
| Width | 40 mm |
| Height | 125 mm |
| Depth | 120 mm |
| **Weights** | |
| Weight, approx. | 230 g |

**last modified:** 5/31/2021