

Siemens 6ES7421-7BH01-0AB0 Manual

Brand	Siemens
Product Series	Siemens
Product Type	of output voltage L+ (-2.5 V)

Description

6ES7421-7BH01-0AB0

SIMATIC S7-400, digital input SM 421, isolated 16 DI; 24 V DC with 0.05 ms input delay alarm, diagnostics

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 supply voltage L+, max. 120 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; possible

Output current

- Rated value 120 mA
- permissible range, lower limit 0 mA
- permissible range, upper limit 150 mA

Power loss

Power loss, typ. 5 W

Digital inputs

Number of digital inputs 16

Input characteristic according to IEC 61131 Type 2

Number of simultaneously controllable inputs

- Number of simultaneously controllable inputs 16

Input voltage

- Type of input voltage DC
- Rated value (DC) 24 V
- for signal "0" -30 V DC to +5 V DC
- for signal "1" 11 V DC to 30 V DC

Input current

- for signal "0", min. 6 mA; < 6 mA
- for signal "1", typ. 6 mA; 6 to 8 mA

Input delay (for rated value of input voltage)

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for standard inputs

— parameterizable Yes

— at "0" to "1", min. 3 μ s; 0.05 / 0.1 / 0.5 / 3 ms

Encoder connection

- Fixed current limitation for wire-break monitoring, min. 10 k Ω
- Fixed current limitation for wire-break monitoring, max. 18 k Ω

Cable length

- shielded, max. 1 000 m; 1 000 m: 3 ms, 70 m: 0.5 ms, 30 m: 0.1 ms, 30 m: 0.05 ms
- unshielded, max. 600 m; 600 m: 3 ms; 50 m: 0.5 ms; 20 m: 0.1 ms; 20 m: 0.05 ms

Encoder

Connectable encoders

- 2-wire sensor Yes
- permissible quiescent current (2-wire sensor), max. 3 mA

Interrupts/diagnostics/status information

Diagnostics function Yes; Parameterizable

Alarms

- Diagnostic alarm Yes; Parameterizable
- Hardware interrupt Yes; Parameterizable

Diagnoses

- Diagnostic information readable Yes
- Monitoring the supply voltage Yes
- Wire-break Yes; $I < 1$ mA

Diagnostics indication LED

- Rated load voltage PWR (green) Yes; Per group
- internal fault INTF (red) Yes
- external fault EXTF (red) Yes
- Status indicator digital input (green) Yes
- Channel fault indicator F (red) No

Potential separation

Potential separation digital inputs

- between the channels Yes
- between the channels, in groups of 8
- between the channels and backplane bus Yes

Isolation

Isolation tested with 500 V DC

Dimensions

Width 25 mm

Height 290 mm

Depth 210 mm

Weights

Weight, approx. 600 g

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