

Siemens 6ES7521-1BL00-0AB0 Manual

Brand	Siemens
Product Series	Siemens
Product Type	designation DI 32x24VDC HF

Description

6ES7521-1BL00-0AB0

SIMATIC S7-1500, digital input module DI 32x24 V DC HF, 32 channels in groups of 16; of which 2 inputs as counters can be used; input delay 0.05..20 ms input type 3 (IEC 61131); diagnostics; hardware interrupts: front connector (screw terminals or push-in) to be ordered separately

General information

Product type designation DI 32x24VDC HF

HW functional status from FS04

Firmware version V2.2.1

- FW update possible Yes

Product function

- I&M data Yes; I&M0 to I&M3
- Isochronous mode Yes
- Prioritized startup Yes

Engineering with

- STEP 7 TIA Portal configurable/integrated from version V13 SP1 / -
- STEP 7 configurable/integrated from version V5.5 SP3 / -
- PROFIBUS from GSD version/GSD revision V1.0 / V5.1
- PROFINET from GSD version/GSD revision V2.3 / -

Operating mode

- DI Yes
- Counter Yes
- Oversampling No
- MSI Yes

Supply voltage

Rated value (DC) 24 V

permissible range, lower limit (DC) 19.2 V

permissible range, upper limit (DC) 28.8 V

Reverse polarity protection Yes

Input current

Current consumption, max. 40 mA; 20 mA per group with 24 V DC supply

Power

Power available from the backplane bus 1.1 W

Power loss

Power loss, typ. 4.2 W

Digital inputs

Number of digital inputs 32

Digital inputs, parameterizable Yes

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Source/sink input P-reading

Input characteristic curve in accordance with IEC 61131, type 3 Yes

Digital input functions, parameterizable

- Gate start/stop Yes
- Freely usable digital input Yes
- Counter

— Number, max. 2

— Counting frequency, max. 6 kHz; FS04 and FW V2.2.1 or higher

— Counting width 32 bit

— Counting direction up/down Up

Input voltage

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

Input current

- for signal "1", typ. 2.5 mA

Input delay (for rated value of input voltage)

for standard inputs

— parameterizable Yes; 0.05 / 0.1 / 0.4 / 1.6 / 3.2 / 12.8 / 20 ms

— at "0" to "1", min. 0.05 ms

— at "0" to "1", max. 20 ms

— at "1" to "0", min. 0.05 ms

— at "1" to "0", max. 20 ms

for interrupt inputs

— parameterizable Yes

for technological functions

— parameterizable Yes

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. 1.5 mA

Isochronous mode

Filtering and processing time (TCI), min. 80 µs; At 50 µs filter time

Bus cycle time (TDP), min. 250 µs

Interrupts/diagnostics/status information

Diagnostics function Yes

Alarms

- Diagnostic alarm Yes
- Hardware interrupt Yes

Diagnoses

- Monitoring the supply voltage Yes
- Wire-break Yes; to I < 350 µA
- Short-circuit No

Diagnostics indication LED

- RUN LED Yes; green LED
- ERROR LED Yes; red LED
- Monitoring of the supply voltage (PWR-LED) Yes; green LED

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- Channel status display Yes; green LED
- for channel diagnostics Yes; red LED
- for module diagnostics Yes; red LED

Potential separation

Potential separation channels

- between the channels Yes
- between the channels, in groups of 16
- between the channels and backplane bus Yes
- between the channels and the power supply of the electronics

No

Isolation

Isolation tested with 707 V DC (type test)

Standards, approvals, certificates

Suitable for safety functions No

Ambient conditions

Ambient temperature during operation

- horizontal installation, min. -30 °C; From FS05

- horizontal installation, max. 60 °C
- vertical installation, min. -30 °C; From FS05
- vertical installation, max. 40 °C

Altitude during operation relating to sea level

- Installation altitude above sea level, max. 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual

Dimensions

Width 35 mm

Height 147 mm

Depth 129 mm

Weights

Weight, approx. 260 g

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