

SIMATIC S7-1500, DIGITAL INPUT MODULE DI32 X DC24V, 32 CHANNELS IN GROUPS OF 16; INPUT DELAY 0.05... 20MS; INPUT TYPE 3 (IEC 61131); DIAGNOSIS, PROCESSALARMS



Figure similar

| General information | |
|---|-------------------|
| Product type designation | DI 32x24 V DC HF |
| HW functional status | FS01 |
| Firmware version | V2.1.0 |
| Product function | |
| <ul style="list-style-type: none"> I&M data | Yes; I&M0 to I&M3 |
| Engineering with | |
| <ul style="list-style-type: none"> STEP 7 TIA Portal configurable/integrated as of version | V13 SP1 / - |
| <ul style="list-style-type: none"> STEP 7 configurable/integrated as of version | V5.5 SP3 / - |
| <ul style="list-style-type: none"> PROFIBUS as of GSD version/GSD revision | V1.0 / V5.1 |
| <ul style="list-style-type: none"> PROFINET as of GSD version/GSD revision | V2.3 / - |
| Operating mode | |
| <ul style="list-style-type: none"> DI | Yes |
| <ul style="list-style-type: none"> Counter | Yes |
| <ul style="list-style-type: none"> MSI | Yes |
| Supply voltage | |
| 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

| | |
|---------------------------|--|
| 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 |
| m/p-reading | 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. | 1 kHz |
| — Counting width | 32 bit |
| — Counting direction up/down | Up |

Input voltage

| | |
|-------------------------|-------------|
| • Type of input voltage | DC |
| • Rated value (DC) | 24 V |
| • for signal "0" | -30 to +5V |
| • 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 counter/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 | |
| Isochronous operation (application synchronized up to terminal) | Yes |
| Filtering and processing time (TCI), min. | 80 µs; At 50 µs filter time |
| Bus cycle time (TDP), min. | 250 µs |
| Interrupts/diagnostics/status information | |
| Alarms | |
| • Diagnostic alarm | Yes |
| • Hardware interrupt | Yes |
| Diagnostic messages | |
| • Diagnostics | Yes |
| • Monitoring the supply voltage | Yes |
| • Wire-break | Yes; to I < 350 µA |
| • Short-circuit | No |
| • Fuse blown | No |
| Diagnostics indication LED | |
| • RUN LED | Yes; Green LED |
| • ERROR LED | Yes; Red LED |
| • Monitoring of the supply voltage (PWR-LED) | Yes; Green LED |
| • 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 |
| Permissible potential difference | |
| between different circuits | 75 V DC/60 V AC (base isolation) |
| Isolation | |

| | |
|--------------------------------|----------------------|
| Isolation tested with | 707 V DC (type test) |
| Decentralized operation | |
| Prioritized startup | Yes |
| Dimensions | |
| Width | 35 mm |
| Height | 147 mm |
| Depth | 129 mm |
| Weights | |
| Weight, approx. | 260 g |
| last modified: | 03.12.2015 |