

SIMATIC S7-1500, DIGITAL INPUT MODULE DI 16xDC 24V HF, 16 CHANNELS IN GROUPS OF 16; INPUT DELAY 0.05 ... 20MS; INPUT TYPE 3 (IEC 61131); DIAGNOSIS, PROCESSALARMS



| General information | |
|---|-------------------|
| Product type designation | DI 16x24VDC HF |
| HW functional status | FS01 |
| Firmware version | V2.1.0 |
| <ul style="list-style-type: none"> FW update possible | Yes |
| 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"> Oversampling | No |
| <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. | 20 mA; with 24 V DC supply |
| Power | |
| Power available from the backplane bus | 1.1 W |
| Power loss | |
| Power loss, typ. | 2.6 W |
| Digital inputs | |
| Number of digital inputs | 16 |
| Digital inputs, parameterizable | Yes |
| Source/sink input | P-reading |
| Input characteristic curve in accordance with IEC 61131, type 3 | Yes |
| Digital input functions, parameterizable | |
| <ul style="list-style-type: none"> • Gate start/stop • Freely usable digital input • Counter <ul style="list-style-type: none"> — Number, max. — Counting frequency, max. — Counting width — Counting direction up/down | <ul style="list-style-type: none"> Yes Yes 2 1 kHz 32 bit Up |
| Input voltage | |
| <ul style="list-style-type: none"> • Type of input voltage • Rated value (DC) • for signal "0" • for signal "1" | <ul style="list-style-type: none"> DC 24 V -30 to +5V +11 to +30V |
| Input current | |
| <ul style="list-style-type: none"> • for signal "1", typ. | 2.5 mA |
| Input delay (for rated value of input voltage) | |
| for standard inputs | |
| <ul style="list-style-type: none"> — parameterizable — at "0" to "1", min. — at "0" to "1", max. — at "1" to "0", min. — at "1" to "0", max. | <ul style="list-style-type: none"> Yes; 0.05 / 0.1 / 0.4 / 1.6 / 3.2 / 12.8 / 20 ms 0.05 ms 20 ms 0.05 ms 20 ms |
| for interrupt inputs | |
| <ul style="list-style-type: none"> — 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 | |
| Diagnostics function | Yes |
| Alarms | |
| • Diagnostic alarm | Yes |
| • Hardware interrupt | Yes |
| Diagnostic messages | |
| • 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 |
| • 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 | No |
| • 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) |

Ambient conditions

Ambient temperature during operation

- horizontal installation, min. 0 °C
- horizontal installation, max. 60 °C
- vertical installation, min. 0 °C
- vertical installation, max. 40 °C

Decentralized operation

Prioritized startup Yes

Dimensions

Width 35 mm

Height 147 mm

Depth 129 mm

Weights

Weight, approx. 240 g

last modified: 08/12/2017