

SIMATIC S7-1500, Digital input module DI 16x 24...125V UC HF, 16 channels in groups of 1; Input delay 0.05..20 ms; Input type 3 (IEC 61131); diagnostics; Hardware interrupts



General information	
Product type designation	DI 16x24 ... 125 V UC HF
HW functional status	FS01
Firmware version	V1.0.0
<ul style="list-style-type: none"> <li>FW update possible</li> </ul>	Yes
Product function	
<ul style="list-style-type: none"> <li>I&amp;M data</li> </ul>	Yes; I&M0 to I&M3
Engineering with	
<ul style="list-style-type: none"> <li>STEP 7 TIA Portal configurable/integrated as of version</li> </ul>	V13 SP1 / -
<ul style="list-style-type: none"> <li>STEP 7 configurable/integrated as of version</li> </ul>	V5.5 SP3 / -
<ul style="list-style-type: none"> <li>PROFIBUS as of GSD version/GSD revision</li> </ul>	V1.0 / V5.1
<ul style="list-style-type: none"> <li>PROFINET as of GSD version/GSD revision</li> </ul>	V2.3 / -
Operating mode	
<ul style="list-style-type: none"> <li>DI</li> </ul>	Yes
<ul style="list-style-type: none"> <li>Counter</li> </ul>	No
<ul style="list-style-type: none"> <li>Oversampling</li> </ul>	No
<ul style="list-style-type: none"> <li>MSI</li> </ul>	Yes

Power	
Power available from the backplane bus	1.2 W
Power loss	
Power loss, typ.	2.2 W; At 24 V DC; 6.0 W at 125 V AC
Digital inputs	
Number of digital inputs	16
Digital inputs, parameterizable	Yes
Source/sink input	Yes
Input characteristic curve in accordance with IEC 61131, type 3	Yes; at 24 V DC
Input voltage	
<ul style="list-style-type: none"> <li>• Type of input voltage</li> <li>• Rated value (DC)</li> <li>• Rated value (AC)</li> <li>• for signal "0"</li> <li>• for signal "1"</li> </ul>	AC/DC 24 V; 48 V, 125 V 24 V; 48 V, 125 V (50 - 60 Hz) -5 ... +5 V +11 ... +146 V
Input current	
<ul style="list-style-type: none"> <li>• for signal "1", typ.</li> </ul>	3 mA; at 24 V DC
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 parameterizable with DC, 20 ms fixed with AC
— 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	No
Cable length	
<ul style="list-style-type: none"> <li>• shielded, max.</li> <li>• unshielded, max.</li> </ul>	1 000 m 600 m
Encoder	
Connectable encoders	
<ul style="list-style-type: none"> <li>• 2-wire sensor</li> <li>— permissible quiescent current (2-wire sensor), max.</li> </ul>	Yes 1.5 mA
Isochronous mode	
Isochronous operation (application synchronized up to terminal)	No

## Interrupts/diagnostics/status information

Diagnostics function Yes

### Alarms

- Diagnostic alarm Yes
- Hardware interrupt Yes

### Diagnostic messages

- Monitoring the supply voltage No
- Wire-break Yes;  $T_o I < 550 \mu A$
- Short-circuit No

### Diagnostics indication LED

- RUN LED Yes; Green LED
- ERROR LED Yes; Red LED
- Monitoring of the supply voltage (PWR-LED) No
- 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 1
- between the channels and backplane bus Yes

## Permissible potential difference

between different circuits 146 V DC/132 V AC

## Isolation

Isolation tested with 2 000 V DC

## 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:

08/13/2018