



Figure similar

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
<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
<ul style="list-style-type: none"> <li>Isochronous mode</li> </ul>	Yes
<ul style="list-style-type: none"> <li>Prioritized startup</li> </ul>	Yes
Engineering with	
<ul style="list-style-type: none"> <li>STEP 7 TIA Portal configurable/integrated from version</li> </ul>	V13 SP1 / -
<ul style="list-style-type: none"> <li>STEP 7 configurable/integrated from version</li> </ul>	V5.5 SP3 / -
<ul style="list-style-type: none"> <li>PROFIBUS from GSD version/GSD revision</li> </ul>	V1.0 / V5.1
<ul style="list-style-type: none"> <li>PROFINET from 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>	Yes
<ul style="list-style-type: none"> <li>Oversampling</li> </ul>	No
<ul style="list-style-type: none"> <li>MSI</li> </ul>	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
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"> <li>Gate start/stop</li> </ul>	Yes
<ul style="list-style-type: none"> <li>Freely usable digital input</li> </ul>	Yes

<ul style="list-style-type: none"> <li>• Counter <ul style="list-style-type: none"> <li>— Number, max.</li> <li>— Counting frequency, max.</li> <li>— Counting width</li> <li>— Counting direction up/down</li> </ul> </li> </ul>	<p>2 6 kHz; FS04 and FW V2.2.1 or higher 32 bit Up</p>
<b>Input voltage</b>	
<ul style="list-style-type: none"> <li>• Rated value (DC)</li> <li>• for signal "0"</li> <li>• for signal "1"</li> </ul>	<p>24 V -30 to +5 V +11 to +30V</p>
<b>Input current</b>	
<ul style="list-style-type: none"> <li>• for signal "1", typ.</li> </ul>	2.5 mA
<b>Input delay (for rated value of input voltage)</b>	
for standard inputs	
<ul style="list-style-type: none"> <li>— parameterizable</li> <li>— at "0" to "1", min.</li> <li>— at "0" to "1", max.</li> <li>— at "1" to "0", min.</li> <li>— at "1" to "0", max.</li> </ul>	<p>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</p>
for interrupt inputs	
<ul style="list-style-type: none"> <li>— parameterizable</li> </ul>	Yes
for technological functions	
<ul style="list-style-type: none"> <li>— parameterizable</li> </ul>	Yes
<b>Cable length</b>	
<ul style="list-style-type: none"> <li>• shielded, max.</li> <li>• unshielded, max.</li> </ul>	<p>1 000 m 600 m</p>
<b>Encoder</b>	
Connectable encoders	
<ul style="list-style-type: none"> <li>• 2-wire sensor <ul style="list-style-type: none"> <li>— permissible quiescent current (2-wire sensor), max.</li> </ul> </li> </ul>	<p>Yes 1.5 mA</p>
<b>Isochronous mode</b>	
Filtering and processing time (TCI), min.	80 µs; At 50 µs filter time
Bus cycle time (TDP), min.	250 µs
<b>Interrupts/diagnostics/status information</b>	
Diagnostics function	Yes
<b>Alarms</b>	
<ul style="list-style-type: none"> <li>• Diagnostic alarm</li> <li>• Hardware interrupt</li> </ul>	<p>Yes Yes</p>
<b>Diagnoses</b>	
<ul style="list-style-type: none"> <li>• Monitoring the supply voltage</li> <li>• Wire-break</li> <li>• Short-circuit</li> </ul>	<p>Yes Yes; to I &lt; 350 µA No</p>
<b>Diagnostics indication LED</b>	
<ul style="list-style-type: none"> <li>• RUN LED</li> <li>• ERROR LED</li> <li>• Monitoring of the supply voltage (PWR-LED)</li> <li>• Channel status display</li> <li>• for channel diagnostics</li> <li>• for module diagnostics</li> </ul>	<p>Yes; green LED Yes; red LED Yes; green LED Yes; green LED Yes; red LED Yes; red LED</p>
<b>Potential separation</b>	
Potential separation channels	
<ul style="list-style-type: none"> <li>• between the channels</li> <li>• between the channels, in groups of</li> <li>• between the channels and backplane bus</li> <li>• between the channels and the power supply of the electronics</li> </ul>	<p>Yes 16 Yes No</p>
<b>Isolation</b>	
Isolation tested with	707 V DC (type test)
<b>Standards, approvals, certificates</b>	
Suitable for safety functions	No
<b>Ambient conditions</b>	
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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**last modified:** 7/30/2021 