

Siemens  
EcoTech



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



Figure similar

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 consumption 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	

• 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
<b>Input voltage</b>	
• Rated value (DC)	24 V
• for signal "0"	-30 to +5 V
• for signal "1"	+11 to +30V
<b>Input current</b>	
• for signal "1", typ.	2.5 mA
<b>Input delay (for rated value of input voltage)</b>	
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
<b>Cable length</b>	
• shielded, max.	1 000 m
• unshielded, max.	600 m
<b>Encoder</b>	
Connectable encoders	
• 2-wire sensor	Yes
— permissible quiescent current (2-wire sensor), max.	1.5 mA
<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>	
• Diagnostic alarm	Yes
• Hardware interrupt	Yes
<b>Diagnoses</b>	
• Monitoring the supply voltage	Yes
• Wire-break	Yes; to I < 350 µA
• Short-circuit	No
<b>Diagnostics indication LED</b>	
• 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
<b>Potential separation</b>	
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
<b>Isolation</b>	
Isolation tested with	707 V DC (type test)
<b>Standards, approvals, certificates</b>	
Suitable for safety functions	No

<b>Ecological footprint</b>	
• environmental product declaration	Yes
<b>Global warming potential</b>	
— global warming potential, (total) [CO2 eq]	18.9 kg
— global warming potential, (during production) [CO2 eq]	12.1 kg
— global warming potential, (during operation) [CO2 eq]	7.66 kg
— global warming potential, (after end of life cycle) [CO2 eq]	-1.02 kg

<b>product functions / security / header</b>	
signed firmware update	No
data integrity	No

<b>Ambient conditions</b>	
<b>Ambient temperature during operation</b>	
• horizontal installation, min.	-30 °C; From FS05
• horizontal installation, max.	60 °C
• vertical installation, min.	-30 °C; From FS05
• vertical installation, max.	40 °C

<b>Altitude during operation relating to sea level</b>	
• Installation altitude above sea level, max.	5 000 m; Restrictions for installation altitudes > 2 000 m, see manual

<b>Dimensions</b>	
Width	35 mm
Height	147 mm
Depth	129 mm

<b>Weights</b>	
Weight, approx.	260 g

<b>Classifications</b>			
		<b>Version</b>	<b>Classification</b>
	eClass	14	27-24-22-04
	eClass	12	27-24-22-04
	eClass	9.1	27-24-22-04
	eClass	9	27-24-22-04
	eClass	8	27-24-22-04
	eClass	7.1	27-24-22-04
	eClass	6	27-24-22-04
	ETIM	9	EC001419
	ETIM	8	EC001419
	ETIM	7	EC001419
	IDEA	4	3566
	UNSPSC	15	32-15-17-05

<b>Approvals / Certificates</b>	
<b>General Product Approval</b>	

[Manufacturer Declaration](#)



[KC](#)



<b>For use in hazardous locations</b>	
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[FM](#)



[FM](#)

[CCC-Ex](#)



<b>For use in hazardous locations</b>	<b>Marine / Shipping</b>
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[Type Examination Certificate](#)



[Miscellaneous](#)



### Marine / Shipping



[NK / Nippon Kaiji Kyokai](#)



[CCS \(China Classification Society\)](#)



### Environment



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10/9/2024