



SIMATIC S7-1500, DIGITAL INPUT MODULE DI16 X DC24V, 16 CHANNELS IN GROUPS OF 16; INPUT DELAY 0.05 ... 20MS; INPUT TYPE 3 (IEC 61131); DIAGNOSIS, PROCESSALARMS

General information

Hardware product version

E01

Firmware version

V2.0.0

Product function

- I&M data

Yes; I&M0 to I&M3

Engineering with

- STEP 7 TIA Portal can be configured/integrated as of version
- STEP 7 can be configured/integrated as of version
- PROFIBUS as of GSD version/GSD revision
- PROFINET as of GSD version/GSD revision

V12 / V12

V5.5 SP3 / -

V1.0 / V5.1

V2.3 / -

Operating mode

- 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 losses	
Power loss, typ.	2.6 W
Digital inputs	
Number of digital inputs	16
m/p-reading	p-reading
Input characteristic curve in accordance with IEC 61131, type 3	Yes
Input voltage	
• Type of input voltage	DC
• Rated value, DC	24 V
• for signal "0"	-30 to +5 V
• for signal "1"	+11 to +30 V
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
Cable length	
• Cable length, shielded, max.	1 000 m
• Cable length 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
Galvanic isolation	
Electrical isolation channels	
• between the channels	No
• between the channels, in groups of	16
• between the channels and the backplane bus	Yes
• between the channels and the supply voltage of the electronics	No
Permissible potential difference	
between different circuits	75 V DC/60 V AC (base isolation)
Isolation	
Isolation checked with	707 V DC (type test)
Decentralized operation	
Prioritized startup	Yes
Dimensions	

Width	35 mm
Height	147 mm
Depth	129 mm
Weights	
Weight, approx.	240 g
last modified:	30.09.2014