



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
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Engineering with

STEP 7 TIA Portal configurable/integrated as of version	V12 / V12
STEP 7 configurable/integrated as of version	V5.5 SP3 / -
PROFIBUS as of GSD version/GSD revision	V1.0 / V5.1
PROFINET as of GSD version/GSD revision	V2.3 / -

Operating mode

MSI	Yes
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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
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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
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
Input current	
for signal "1", typ.	2.5 mA
Input delay (for rated value of input voltage)	
for standard inputs	
parameterizable	Yes
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.	1000 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 mode (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 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	
Galvanic 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 tested 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
Status	Aug 21, 2014