



SIMATIC DP,
IM151-8 PN/DP CPU FOR ET200S,
192 KB WORKING MEMORY,
INT. PROFINET INTERFACE (WITH THREE RJ45 PORTS)
AS IO-CONTROLLER,
W/O BATTERY MMC REQUIRED

Supply voltage

Tensão de alimentação / a CD / Valor de cálculo / [nicht versorgt - 120 V] Si

Tensão de alimentação / a CD / Valor de cálculo / mínimo 20,4 V

Tensão de alimentação / a CD / Valor de cálculo / máximo 28,8 V

Função do produto / protecção contra inversão da polaridade Si

Alimentação de corrente / [nicht versorgt - Netz- und Spannungsausfallüberbrückung]

Alimentação de corrente / [nicht versorgt - Netz- /Spannungsausfallüberbrückung] 5 ms

Alimentação de corrente / [nicht versorgt - Eingang] / [nicht versorgt - Eingangsstrom]

Inrush current, max. 1,8 A

Tensões e correntes / I²t 0,13 A²·s

from supply voltage 1L+, max. 352 mA

Alimentação de corrente / [nicht versorgt - Ausgangsstrom]

Entrada de corrente / [nicht versorgt - Stromabgabe an Rückwandbus (DC 5 V), max.] 700 mA

Power loss

Potência activa dissipada / típico 5,5 W

Memory

Work memory

Capacidade de memória / [nicht versorgt - erweiterbar] / [nicht versorgt - integriert]	192 kbyte
Ampliação do produto / [nicht versorgt - Arbeitsspeicher]	No
Size of retentive memory for retentive data blocks	64 kbyte
Load memory	
Plug-in (MMC)	Si
Plug-in (MMC), max.	8 Mbyte
Data management on MMC (after last programming), min.	10 a
Backup	
present	Si
CPU processing times	
for bit operations, typ.	0,06 µs
for word operations, typ.	0,12 µs
for fixed point arithmetic, typ.	0,16 µs
for floating point arithmetic, typ.	0,59 µs
CPU-blocks	
Number of blocks (total)	1024
DB	
Number, max.	1024
Size, max.	64 kbyte
FB	
Number, max.	1024
Size, max.	64 kbyte
FC	
Number, max.	1024
Size, max.	64 kbyte
OB	
Size, max.	64 kbyte
Number of free cycle OBs	1
Number of time alarm OBs	1
Number of delay alarm OBs	2
Number of time interrupt OBs	4
Number of process alarm OBs	1
Number of DPV1 alarm OBs	3
Number of isochronous mode OBs	1
Number of startup OBs	1
Number of asynchronous error OBs	6
Number of synchronous error OBs	2
Nesting depth	

per priority class	16
additional within an error OB	4
Counters, timers and their retentivity	
S7 counter	
Number	256
Retentivity	
adjustable	Si
lower limit	0
upper limit	255
Counting range	
adjustable	Si
lower limit	0
upper limit	999
IEC counter	
present	Si
S7 times	
Number	256
Retentivity	
adjustable	Si
lower limit	0
upper limit	255
Time range	
lower limit	10 ms
upper limit	9990 s
IEC timer	
present	Si
Data areas and their retentivity	
Flag	
Number, max.	256 byte
Retentivity available	Si
Number of clock memories	8
Data blocks	
Number, max.	1024
Size, max.	64 kbyte
Retentivity adjustable	Si
Local data	
per priority class, max.	32768 byte
Address area	

I/O address area	
Quantidade de dados/ da área de endereço das entradas / total	2048 byte
Quantidade de dados/ da área de endereço das saídas / total	2048 byte
of which distributed	
Inputs	2048 byte
Outputs	2048 byte
Process image	
Inputs, adjustable	2048 byte
Outputs, adjustable	2048 byte
Inputs, default	128 byte
Outputs, default	128 byte
Subprocess images	
Number of subprocess images, max.	1
Digital channels	
Quantidade de entradas digitais / endereçável	16336
Quantidade de saídas digitais / [nicht versorgt - adressierbar]	16336
Inputs, of which central	496
Outputs, of which central	496
Analog channels	
Quantidade de entradas analógicas / [nicht versorgt - adressierbar]	1021
Quantidade de saídas analógicas / [nicht versorgt - adressierbar]	1021
Inputs, of which central	124
Outputs, of which central	124
Hardware configuration	
Number of modules per system, max.	63
Mounting rail	
Number of mounting rails that can be used	1
Time of day	
Clock	
Componente do produto / relógio em tempo real do hardware	Si
battery-backed and synchronizable	Si
Deviation per day, max.	10 s
Backup time	6 wk
Operating hours counter	

Number	1
retentive	Si
Clock synchronization	
supported	Si
to MPI, master	No
to MPI, slave	No
to DP, master	Si
to DP, slave	Si
in AS, master	No
in AS, slave	No
on Ethernet via NTP	Si
Interfaces	
Quantidade de interfaces / de acordo com USB	0
Quantidade de interfaces / paralelo	0
Quantidade de interfaces / outras	1
PROFINET IO	
Quantidade de interfaces / de acordo com PROFINET	3
WLAN	
Número de interfaces / de acordo com Wireless	0
1. Interface	
isolated	Si
integrated switch	Si
Number of ports	3
automatic detection of transmission rate	Si
Função do produto / [nicht versorgt - an der Schnittstelle 1] / [nicht versorgt - Autonegotiation]	Si
Função do produto / [nicht versorgt - an der Schnittstelle 1] / [nicht versorgt - Autocrossover]	Si
Change of IP address at runtime, supported	Si
Media redundancy	
supported	Si
Switchover time on line break, typ.	200 ms
Number of stations in the ring, max.	50
Functionality	
Função do produto / [nicht versorgt - Auswurfvorrichtung] / [nicht versorgt - MPI]	No
Função do produto / [nicht versorgt - an der 1. Schnittstelle als DP-Master] / [nicht versorgt - PROFIBUS DP]	No

Função do produto / [nicht versorgt - an der 1. Schnittstelle als DP-Slave] / [nicht versorgt - PROFIBUS DP]	No
PROFINET IO Device	Si
PROFINET IO Controller	Si
PROFINET CBA	Si
Open IE communication	Si
Função de comunicação/servidor Web	Si
Função do produto / [nicht versorgt - Auswurfvorrichtung] / [nicht versorgt - PtP]	No
PROFINET IO Controller	
Transmission rate, max.	100 Mbit/s
Number of connectable IO Devices, max.	128
Number of connectable IO Devices for RT, max.	128
of which in line, max.	128
Number of IO Devices with IRT and the option "high flexibility"	128
of which in line, max.	61
Number of IO Devices with IRT and the option "high performance", max.	64
of which in line, max.	64
IRT, supported	Si
Shared device, supported	Si
Prioritized startup supported	Si
Number of IO Devices, max.	32
Activation/deactivation of IO Devices	Si
Number of IO Devices that can be simultaneously activated/deactivated, max.	8
IO Devices changing during operation (partner ports), supported	Si
Number of IO Devices per tool, max.	8
Device replacement without swap medium	Si
Services	
PG/OP communication	Si
Routing	Si
S7 communication	Si
Isochronous mode	Si
Open IE communication	Si
Address area	
Inputs, max.	2 kbyte
Outputs, max.	2 kbyte

User data consistency, max.	1024 byte
PROFINET IO Device	
Services	
PG/OP communication	Si
Routing	Si
S7 communication	Si
Isochronous mode	No
Open IE communication	Si
IRT	Si
PROFenergy, supported	Si
Shared device	Si
Number of IO Controllers with shared device, max.	2
Transfer memory	
Inputs, max.	1440 byte
Outputs, max.	1440 byte
Submodules	
Number, max.	64
User data per submodule, max.	1024 byte
PROFINET CBA	
acyclic transmission	Si
cyclic transmission	Si
Open IE communication	
Open IE communication, supported	Si
Number of connections, max.	8
2. Interface	
isolated	Si
Functionality	
Função do produto / [nicht versorgt - an der 2. Schnittstelle] / [nicht versorgt - MPI]	No
Função do produto / [nicht versorgt - an der 2. Schnittstelle als PROFIBUS DP] / [nicht versorgt - DP-Master]	Si
Função do produto / [nicht versorgt - an der 2. Schnittstelle als PROFIBUS DP] / [nicht versorgt - DP-Slave]	No
Função do produto / [nicht versorgt - an der 2. Schnittstelle] / [nicht versorgt - PROFINET IO-Controller]	No
PROFINET IO Device	No
Função do produto / [nicht versorgt - an der 2. Schnittstelle] / [nicht versorgt - PROFINET CBA]	No
Open IE communication	No

Web server	No
DP master	
Débito binário / [nicht versorgt - an der 1. Schnittstelle als DP-Master] / [nicht versorgt - maximal]	12 Mbit/s
Number of DP slaves, max.	32
Services	
PG/OP communication	Si
Routing	Si
Global data communication	No
S7 basic communication	Si
S7 communication	Si
S7 communication, as client	No
S7 communication, as server	Si
Equidistance mode support	Si
Isochronous mode	No
SYNC/FREEZE	Si
Activation/deactivation of DP slaves	Si
Direct data exchange (slave-to-slave communication)	Si
DPV1	Si
Address area	
Inputs, max.	2048 byte
Outputs, max.	2048 byte
User data per DP slave	
Inputs, max.	244 byte
Outputs, max.	244 byte
Isochronous mode	
Isochronous mode (application synchronized up to terminal)	No
Communication functions	
PG/OP communication	Si
Data record routing	Si
Global data communication	
supported	No
S7 basic communication	
supported	Si
User data per job, max.	76 byte
User data per job (of which consistent), max.	76 byte
S7 communication	
supported	Si
as server	Si

as client	Si
Open IE communication	
TCP/IP	Si
Number of connections, max.	8
Data length for connection type 01H, max.	1460 byte
Data length for connection type 11H, max.	32768 byte
Several passive connections per port, supported	Si
ISO-on-TCP (RFC1006)	Si
Number of connections, max.	8
Data length, max.	32768 byte
UDP	Si
Number of connections, max.	8
Data length, max.	1472 byte
Web server	
supported	Si
Number of HTTP clients	5
User-defined websites	Si
PROFINET CBA (at set setpoint communication load)	
Setpoint for the CPU communication load	50 %
Number of remote interconnection partners	32
Number of functions, master/slave	30
Total of all master/slave connections	1000
Data length of all incoming connections master/slave, max.	4000 byte
Data length of all outgoing connections master/slave, max.	4000 byte
Number of device-internal and PROFIBUS interconnections	500
Data length of device-internal und PROFIBUS interconnections, max.	4000 byte
Data length per connection, max.	1400 byte
Remote interconnections with acyclic transmission	
Sampling frequency: Sampling time, min.	500 ms
Number of incoming interconnections	100
Number of outgoing interconnections	100
Data length of all incoming interconnections, max.	2000 byte
Data length of all outgoing interconnections, max.	2000 byte
Data length per connection, max.	1400 byte
Remote interconnections with cyclic transmission	
Transmission frequency: Transmission interval, min.	1 ms
Number of incoming interconnections	200

Number of outgoing interconnections	200
Data length of all incoming interconnections, max.	2000 byte
Data length of all outgoing interconnections, max.	2000 byte
Data length per connection, max.	450 byte
HMI variables via PROFINET (acyclic)	
Number of stations that can log on for HMI variables (PN OPC/iMap)	3
HMI variable updating	500 ms
Number of HMI variables	200
Data length of all HMI variables, max.	2000 byte
PROFIBUS proxy functionality	
supported	Si
Number of linked PROFIBUS devices	16
Data length per connection, max.	240 byte
iPAR server	
supported	Si
Number of connections	
overall	12
usable for PG communication	11
reserved for PG communication	1
adjustable for PG communication, min.	1
adjustable for PG communication, max.	11
usable for OP communication	11
reserved for OP communication	1
adjustable for OP communication, min.	1
adjustable for OP communication, max.	11
usable for S7 basic communication	10
reserved for S7 basic communication	0
adjustable for S7 basic communication, min.	0
adjustable for S7 basic communication, max.	10
usable for S7 communication	10
adjustable for S7 communication, max.	10
total number of instances, max.	32
usable for routing	4
S7 message functions	
Number of login stations for message functions, max.	12
Process diagnostic messages	Si
simultaneously active Alarm-S blocks, max.	300
Test commissioning functions	

Status block	Si
Função do produto / [nicht versorgt - der Test-/Inbetriebnahmefunktion] / [nicht versorgt - Einzelschritt]	Si
Number of breakpoints	4
Status/control	
Status/control variable	Si
Number of variables, max.	30
of which status variables, max.	30
of which control variables, max.	14
Forcing	
Forcing	Si
Number of variables, max.	10
Diagnostic buffer	
present	Si
Number of entries, max.	500
adjustable	No
of which powerfail-proof	100
Interrupts/diagnostics/status information	
Alarms	
Função do produto / [nicht versorgt - Alarme]	Si
Diagnostic messages	
Função do produto / Função de diagnóstico	Si
Diagnostics indication LED	
Bus activity PROFINET P1-LINK (green)	Si
Bus activity PROFINET P2-LINK (green)	Si
Bus activity PROFINET P3-LINK (green)	Si
Bus fault BF-PN (red)	Si
Maintenance information MT (yellow)	Si
Execução do visor / [nicht versorgt - für Diagnosefunktion: Sammelfehler SF] / [nicht versorgt - LED rot]	Si
Execução do visor / [nicht versorgt - für Diagnosefunktion: Überwachung 24 V-Spannungsversorgung ON] / [nicht versorgt - LED grün]	Si
Galvanic isolation	
Separação potencial / [nicht versorgt - zwischen PROFIBUS DP und allen anderen Stromkreisen]	Si
Degree and class of protection	
Classe de protecção IP	IP20
Configuration	
Configuration software	

STEP 7	Si
Programming	
Nesting levels	8
Programming language	
LAD	Si
FBD	Si
STL	Si
SCL	Si
CFC	Si
GRAPH	Si
HiGraph®	Si
Know-how protection	
User program protection/password protection	Si
Block encryption	Si
Cycle time monitoring	
lower limit	1 ms
upper limit	6000 ms
adjustable	Si
preset	150 ms
Dimensions	
Largura	120 mm
Altura	119,5 mm
Profundidade	75 mm
Weights	
Weight, approx.	320 g
Status	28/Jul/2014