



SIMATIC DP, IM151-7 CPU FOR ET200S,
128 KB WORKING MEMORY INTEGR. PROFIBUS DP
INTERFACE (9 PIN SUB-D, FEMALE) AS DP SLAVE,
W/O BATTERY SIMATIC MMC REQUIRED

Supply voltage	
24 V DC	Ja
Voedingsspanning / bij DC / nominale waarde / minimaal	19,2 V
Voedingsspanning / bij DC / nominale waarde / maximaal	28,8 V
Productfunctie / bescherming tegen onjuiste polariteit	Ja
Mains buffering	
Mains/voltage failure buffering time	5 ms
Input current	
Inrush current, max.	1,8 A
Spanningen en stromen / I ² t	0,09 A ² ·s
from supply voltage 1L+, max.	320 mA
Output current	
Current output to backplane bus (5 V DC), max.	700 mA
Power loss	
Werkelijk vermogensverlies / typisch	4,2 W
Memory	
Work memory	
integrated	128 kbyte

expandable	Nee
Size of retentive memory for retentive data blocks	64 kbyte
Load memory	
Plug-in (MMC)	Ja
Plug-in (MMC), max.	8 Mbyte
Data management on MMC (after last programming), min.	10 a
Backup	
present	Ja
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 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	Ja
lower limit	0
upper limit	255
Counting range	
lower limit	0
upper limit	999
IEC counter	
present	Ja
S7 times	
Number	256
Retentivity	
adjustable	Ja
lower limit	0
upper limit	255
Time range	
lower limit	10 ms
upper limit	9990 s
IEC timer	
present	Ja
Data areas and their retentivity	
Flag	
Number, max.	256 byte
Retentivity available	Ja
Number of clock memories	8
Data blocks	
Number, max.	1024
Size, max.	64 kbyte
Retentivity adjustable	Ja
Local data	
per priority class, max.	32 kbyte
Address area	
I/O address area	
Inputs	2048 byte
Outputs	2048 byte

of which distributed	
Inputs	2048 byte
Outputs	2048 byte
Process image	
Inputs	2048 byte
Outputs	2048 byte
Inputs, adjustable	2048 byte
Outputs, adjustable	2048 byte
Inputs, default	128 byte
Outputs, default	128 byte
Digital channels	
Inputs	16336
Outputs	16336
Inputs, of which central	496
Outputs, of which central	496
Analog channels	
Inputs	1021
Outputs	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	
Hardware clock (real-time clock)	Ja
battery-backed and synchronizable	Ja
Deviation per day, max.	10 s
Backup time	6 wk
Operating hours counter	
Number	1
retentive	Ja
Clock synchronization	
supported	Ja
to MPI, master	Ja
to MPI, slave	Ja
to DP, master	Ja

to DP, slave	Ja
in AS, master	Nee
in AS, slave	Nee
Interfaces	
PROFINET IO	
Aantal interfaces / conform PROFINET	0
WLAN	
Aantal interfaces / conform Wireless	0
1. Interface	
isolated	Ja
Power supply to interface (15 to 30 V DC), max.	80 mA
Functionality	
MPI	Ja
DP master	Nee
DP slave	Ja
Point-to-point connection	Nee
MPI	
Transmission rate, max.	12 Mbit/s
Services	
PG/OP communication	Ja
Routing	Ja
Global data communication	Ja
S7 basic communication	Ja
S7 communication	Ja
S7 communication, as client	Nee
S7 communication, as server	Ja
DP slave	
Transmission rate, max.	12 Mbit/s
automatic baud rate search	Ja
Address area, max.	32
User data per address area, max.	32 byte
Services	
PG/OP communication	Ja
Routing	Ja
Global data communication	Nee
S7 basic communication	Nee
S7 communication	Ja
S7 communication, as client	Nee

S7 communication, as server	Ja
Direct data exchange (slave-to-slave communication)	Ja
DPV1	Nee
Transfer memory	
Inputs	244 byte
Outputs	244 byte
2. Interface	
isolated	Ja
Functionality	
MPI	Nee
DP master	Ja
DP slave	Nee
DP master	
Transmission rate, max.	12 Mbit/s
Number of DP slaves, max.	32
Services	
PG/OP communication	Ja
Routing	Ja
Global data communication	Nee
S7 basic communication	Ja
S7 communication	Ja
S7 communication, as client	Nee
S7 communication, as server	Ja
Equidistance mode support	Ja
Isochronous mode	Nee
SYNC/FREEZE	Ja
Activation/deactivation of DP slaves	Ja
Number of DP slaves that can be simultaneously activated/deactivated, max.	8
Direct data exchange (slave-to-slave communication)	Ja
DPV1	Ja
Address area	
Inputs, max.	2 kbyte
Outputs, max.	2 kbyte
User data per DP slave	
Inputs, max.	244 byte
Outputs, max.	244 byte
Isochronous mode	
Isochronous mode (application synchronized up to terminal)	Nee

Communication functions	
PG/OP communication	Ja
Data record routing	Ja
Global data communication	
supported	Ja
Number of GD loops, max.	8
Number of GD packets, max.	8
Number of GD packets, transmitter, max.	8
Number of GD packets, receiver, max.	8
Size of GD packets, max.	22 byte
Size of GD packet (of which consistent), max.	22 byte
S7 basic communication	
supported	Ja
User data per job, max.	76 byte
User data per job (of which consistent), max.	76 byte
S7 communication	
supported	Ja
as server	Ja
as client	Nee
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 routing	4
S7 message functions	
Number of login stations for message functions, max.	12
Process diagnostic messages	Ja
simultaneously active Alarm-S blocks, max.	300

Test commissioning functions	
Status block	Ja
Single step	Ja
Number of breakpoints	4
Status/control	
Status/control variable	Ja
Number of variables, max.	30
of which status variables, max.	30
of which control variables, max.	14
Forcing	
Forcing	Ja
Number of variables, max.	10
Diagnostic buffer	
present	Ja
Number of entries, max.	500
adjustable	Nee
of which powerfail-proof	100
Number of entries readable in RUN, max.	499
adjustable	Ja
preset	10
Service data	
can be read out	Ja
Interrupts/diagnostics/status information	
Alarms	
Alarms	Ja
Diagnostic messages	
Productfunctie / diagnosefunctie	Ja
Diagnostics indication LED	
Group error SF (red)	Ja
Monitoring 24 V voltage supply ON (green)	Ja
Galvanic isolation	
between PROFIBUS DP and all other circuit components	Ja
Degree and class of protection	
Beschermingsklasse IP	IP20
Configuration	
Configuration software	
STEP 7 Lite	Nee
Programming	

Nesting levels	8
Programming language	
LAD	Ja
FBD	Ja
STL	Ja
SCL	Ja
CFC	Ja
GRAPH	Ja
HiGraph®	Ja
Know-how protection	
User program protection/password protection	Ja
Block encryption	Ja
Cycle time monitoring	
lower limit	1 ms
upper limit	6000 ms
adjustable	Ja
preset	150 ms
Dimensions	
Breedte	60 mm
Hoogte	119,5 mm
Diepte	75 mm
Weights	
Weight, approx.	200 g
Status	28-jul-2014