

Data sheet VIPA CPU 315PN (315-4PN23)

### Technical data

Order no.	315-4PN23
Туре	VIPA CPU 315PN
General information	
Note	
Features	Powered by SPEED7
T GUILLIES	Work memory [KB]: 1.0244.096 Integrated PROFINET controller Interface [RJ45]: PROFINET Interface [RJ45]: Ethernet PG/OP communication Interface [RS485]: MPI Interface [RS485]: PROFIBUS master/slave, PtP: ASCII, STX/ETX, 3964(R), USS master, Modbus master/slave SD/MMC card slot with locking, up to 32 modules stackable, programmable with WinPLC7, SIMATIC Manager and TIA Portal
SPEED-Bus	-
Technical data power supply	
Power supply (rated value)	DC 24 V
Power supply (permitted range)	DC 20.428.8 V
Reverse polarity protection	yes
Current consumption (no-load operation)	270 mA
Current consumption (rated value)	1.1 A
Inrush current	6 A
²t	0.28 A²s
Max. current drain at backplane bus	2.5 A
Max. current drain load supply	-
Power loss	8.5 W
Load and working memory	
Load memory, integrated	4 MB
Load memory, maximum	4 MB
Work memory, integrated	1 MB
Work memory, maximal	4 MB
Memory divided in 50% program / 50% data	yes
Memory card slot	SD/MMC-Card with max. 2 GB
Hardware configuration	
Racks, max.	4
Modules per rack, max.	8 in multiple-, 32 in a single-rack configuration
Number of integrated DP master	1
Number of DP master via CP	4
Operable function modules	8
Operable communication modules PtP	8
Operable communication modules LAN	8
Status information, alarms, diagnostics	
Status display	yes
Interrupts	no
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Process alarm	no
Diagnostic interrupt	no
Diagnostic functions	yes
Diagnostics information read-out	possible
Supply voltage display	green LED
Group error display	red SF LED
Channel error display	none
Chainer end display	Hone
Command processing times	
Bit instructions, min.	0.01 µs
Word instruction, min.	0.01 µs
Double integer arithmetic, min.	0.01 µs
Floating-point arithmetic, min.	0.06 µs
Timers/Counters and their retentive characteri	stics
Number of S7 counters	512
S7 counter remanence	adjustable 0 up to 512
S7 counter remanence adjustable	C0 C7
Number of S7 times	512
S7 times remanence	adjustable 0 up to 512
S7 times remanence adjustable	not retentive
Data range and retentive characteristic	
Number of flags	8192 Byte
Bit memories retentive characteristic adjustable	adjustable 0 up to 8192
Bit memories retentive characteristic preset	MB0 MB15
Number of data blocks	4095
Max. data blocks size	64 KB
Number range DBs	1 4095
Max. local data size per execution level	3072 Byte
Max. local data size per block	3072 Byte
Blocks	
Number of OBs	24
Maximum OB size	64 KB
Total number DBs, FBs, FCs	-
Number of FBs	2048
Maximum FB size	64 KB
Number range FBs	0 2047
Number of FCs	2048
Maximum FC size	64 KB
Number range FCs	0 2047
Maximum nesting depth per priority class	8
Maximum nesting depth additional within an error OB	4
Time	
Real-time clock buffered	yes
Clock buffered period (min.)	6 w
Type of buffering	Vanadium Rechargeable Lithium Battery
Load time for 50% buffering period	20 h
Load time for 100% buffering period	48 h
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Number of operating hours counter         8           Clock synchronization         yes           Synchronization via MPI         Massier/Slave           Synchronization via Ethemet (NTP)         Slave           Address areas (I/O)         University of the state of the stat	Accuracy (max. deviation per day)	10 s
Clock synchronization va MPI         Master/Slave           Synchronization via MPI         Master/Slave           Synchronization via Ethemet (NTP)         Slave           Address areas (UO)         Input I/O address area         2048 Byte           Output I/O address area         2048 Byte           Process image adjustable         yes           Input process image preset         256 Byte           Output process image preset         256 Byte           Output process image maximal         2048 Byte           Output process image maximal         2044 Byte           Output process image maximal         2048 Byte           Output process image maximal         2024		8
Synchronization via MPI         Master/Slave           Synchronization via Ethernet (NTP)         Slave           Address areas (I/O)         Slave           Input I/O address area         2048 Byte           Process image adjustable         yes           Input process image preset         256 Byte           Output process image preset         256 Byte           Input process image maximal         2048 Byte           Output process image maximal         2048 Byte           Injuit process image maximal         2048 Byte           Output process image maximal         2044           Injuit process image maximal         2024           Injuit process image maximal         2024           Analog injuit put put put put put put put put put pu		yes
Address areas (VO) Input I/O address area	Synchronization via MPI	Master/Slave
Input I/O address area         2048 Byte           Output I/O address area         2048 Byte           Process image adjustable         yes           Input process image preset         256 Byte           Output process image preset         256 Byte           Input process image maximal         2048 Byte           Output process image maximal         2048 Byte           Output process image maximal         2048 Byte           Digital prupts         16384           Digital outputs         16384           Digital prupts central         1024           Integrated digital prupts         -           Integrated digital outputs         -           Integrated digital outputs         1024           Analog inputs         1024           Analog inputs         1024           Analog outputs, central         256           Analog outputs, central         256           Integrated analog inputs         -           Integrated analog inputs         -           Order process image maximal         256           Analog outputs, central         256           Integrated analog outputs         -           Order processor         -           Communication assume         yes     <	Synchronization via Ethernet (NTP)	Slave
Input I/O address area         2048 Byte           Output I/O address area         2048 Byte           Process image adjustable         yes           Input process image preset         256 Byte           Output process image preset         256 Byte           Input process image maximal         2048 Byte           Output process image maximal         2048 Byte           Output process image maximal         2048 Byte           Digital prupts         16384           Digital outputs         16384           Digital prupts central         1024           Integrated digital prupts         -           Integrated digital outputs         -           Integrated digital outputs         1024           Analog inputs         1024           Analog inputs         1024           Analog outputs, central         256           Analog outputs, central         256           Integrated analog inputs         -           Integrated analog inputs         -           Order process image maximal         256           Analog outputs, central         256           Integrated analog outputs         -           Order processor         -           Communication assume         yes     <		
Output I/O address area         2048 Byte           Process image adjustable         yes           Input process image preset         256 Byte           Output process image maximal         2048 Byte           Input process image maximal         2048 Byte           Output process image maximal         2048 Byte           Digital inputs         16384           Digital inputs         16384           Digital outputs         1024           Integrated digital inputs         -           Integrated digital outputs         -           Analog inputs         1024           Analog outputs         1024           Analog outputs         1024           Analog outputs         1024           Analog outputs         1024           Analog outputs, central         256           Integrated analog inputs         -           Integrated analog outputs         -           Communication functions         9es           PG/OP channel         yes           Global data communication         yes           S7 basic communication         yes           S7 basic communication, user data per job         76 Byte           S7 communication, user data per job         70 Byte      <		
Process image adjustable   yes		*
input process image preset         256 Byte           Output process image preset         256 Byte           Input process image maximal         2048 Byte           Output process image maximal         2048 Byte           Output process image maximal         2048 Byte           Output process image maximal         2048 Byte           Digital outputs         16384           Digital outputs         1024           Oligital outputs central         1024           Integrated digital inputs         -           Integrated digital outputs         -           Analog inputs         1024           Analog outputs, central         256           Analog outputs, central         256           Integrated analog inputs         -           Integrated analog outputs         -           PG/OP channel         yes           PG/OP channel         yes           Slobal data communication         yes           Sr oammunication user data per job		2048 Byte
Output process image preset         256 Byte           Input process image maximal         2048 Byte           Output process image maximal         2048 Byte           Digital inputs         16384           Digital inputs         16384           Digital inputs central         1024           Digital inputs central         1024           Integrated digital outputs         -           Analog inputs         1024           Analog inputs         1024           Analog outputs         1024           Analog outputs         1024           Analog inputs, central         256           Integrated analog inputs, central         256           Integrated analog outputs         -           Communication functions         -           PG/OP channel         yes           Global data communication         yes           Size of GD packets, max.         22 Byte           S7 basic communication         yes           S7 basic communication, user data per job         76 Byte           S7 communication as server         yes           S7 communication as client         -           S7 communication, user data per job         160 Byte           Number of connections, max.         32 <td></td> <td></td>		
input process image maximal         2048 Byte           Output process image maximal         2048 Byte           Digital inputs         16384           Digital outputs         16384           Digital toutputs central         1024           Digital outputs central         1024           Integrated digital inputs         -           Integrated digital outputs         1024           Analog inputs         1024           Analog inputs, central         256           Analog inputs, central         256           Analog inputs, central         256           Integrated analog outputs         -           Integrated analog outputs         -           Formunication functions         PS           PG/OP channel         yes           Global data communication         yes           Size of GD packets, max.         22 Byte           Size of GD packets, max.         22 Byte           Size or ommunication         yes           Size or ommunication         yes           Size or ommunication as exert         yes           Size or ommunication as server         yes           Size or ommunication as exert         yes           Size or ommunication, user data per job         160 B		
Output process image maximal         2048 Byte           Digital inputs         16384           Digital outputs         16384           Digital outputs central         1024           Digital outputs central         1024           Integrated digital inputs         -           Integrated digital outputs         -           Analog inputs         1024           Analog outputs, central         256           Analog outputs, central         256           Integrated analog inputs         -           Integrated analog outputs         -           Communication functions           PG/OP channel           yes           Global data communication         yes           Number of GD circuits, max.         8           Size of GD packets, max.         22 Byte           S7 basic communication         yes           S7 basic communication         yes           S7 communication user data per job         76 Byte           S7 communication as client         -           S7 communication, user data per job         160 Byte           Number of connections, max.         32           Type of interface         RS485           Connector <t< td=""><td></td><td></td></t<>		
Digital inputs         16384           Digital outputs         16384           Digital outputs central         1024           Digital outputs central         1024           Integrated digital inputs         -           Integrated digital outputs         -           Analog inputs         1024           Analog outputs         1024           Analog outputs, central         256           Analog outputs, central         256           Integrated analog inputs         -           Integrated analog outputs         -           Communication functions         -           PG/OP channel         yes           Global data communication         yes           Global data communication         yes           ST Dasic communication         yes           ST Dasic communication         yes           ST basic communication         yes           ST communication, user data per job         76 Byte           ST communication as client         -           ST communication, user data per job         100 Byte           Number of connections, max.         32           Functionality Sub-D interfaces         RS485           Connector         Sub-D, 9-pin, female		<u> </u>
Digital outputs         16384           Digital inputs central         1024           Digital outputs central         1024           Integrated digital inputs         -           Integrated digital outputs         1024           Analog outputs         1024           Analog outputs, central         256           Analog inputs, central         256           Analog outputs, central         256           Integrated analog inputs         -           Integrated analog outputs         -           Communication functions         Ves           PG/OP channel         yes           Global data communication         yes           Number of GD circuits, max.         8           Size of GD packets, max.         22 Byte           S7 basic communication         yes           S7 basic communication, user data per job         76 Byte           S7 communication as server         yes           S7 communication, user data per job         160 Byte           Number of connections, max.         32           Functionality Sub-D interfaces         X2           Type         X2           Type of interface         RS485           Connector         Sub-D, 9-pin, female		<u> </u>
Digital inputs central         1024           Digital outputs central         1024           Integrated digital inputs         -           Integrated digital outputs         -           Analog inputs         1024           Analog untputs, central         256           Analog outputs, central         256           Integrated analog inputs         -           Integrated analog outputs         -           Communication functions           PG/OP channel           yes           Global data communication         yes           Number of SD circuits, max.         8           Size of GD packets, max.         22 Byte           S7 basic communication         yes           S7 basic communication, user data per job         76 Byte           S7 communication as server         yes           S7 communication as client         -           S7 communication, user data per job         160 Byte           Number of connections, max.         32           Functionality Sub-D interfaces           Type         X2           Type of interface         R5485           Connector         Sub-D, 9-pin, female           Electrically isolated		
Digital outputs central   1024     Integrated digital inputs   -     Integrated digital outputs   -     Analog inputs   1024     Analog outputs   1024     Analog outputs   1024     Analog outputs   256     Integrated analog inputs   256     Integrated analog outputs   -     Integrated analog outputs   -     Communication functions     PG/OP channel   yes     Global data communication   yes     Number of GD circuits, max.   8     Size of GD packets, max.   22 Byte     S7 basic communication, user data per job   76 Byte     S7 communication as server   yes     S7 communication as server   yes     S7 communication as client   -     S7 communication user data per job   160 Byte     Number of connections, max.   32     Functionality Sub-D interfaces     Type   X2     Type ( interface   R5485     Connector   Sub-D, 9-pin, female     Electrically isolated   MPI   MPI/RS232)   -     DP master   -     DP slave   -		
Integrated digital inputs         -           Integrated digital outputs         -           Analog inputs         1024           Analog inputs, central         256           Analog outputs, central         256           Integrated analog inputs         -           Integrated analog outputs         -           Communication functions         -           PG/OP channel         yes           Global data communication         yes           Number of GD circuits, max.         8           Size of GD packets, max.         22 Byte           S7 basic communication         yes           S7 basic communication, user data per job         76 Byte           S7 communication as server         yes           S7 communication as client         -           S7 communication sure data per job         160 Byte           Number of connections, max.         32           Functionality Sub-D interfaces         X2           Type of interface         RS485           Connector         Sub-D, 9-pin, female           Electrically isolated         yes           MPI         yes           MPI (MPI/RS232)         -           DP master         -           DP slave </td <td></td> <td></td>		
Integrated digital outputs 1024 Analog inputs 1024 Analog outputs 1024 Analog outputs 256 Analog outputs, central 256 Integrated analog outputs, central 256 Integrated analog outputs 256 Integrated analog outputs 356 Communication functions  PG/OP channel yes Global data communication yes Size of GD packets, max. 8 Size of GD packets, max. 22 Byte S7 basic communication, user data per job 76 Byte S7 communication, user data per job 76 Byte S7 communication as client 257 S7 communication as client 257 S7 communication, user data per job 160 Byte S7 communication as client 257 Connector Sub-D, 9-pin, female Electrically isolated yes MPI yes MPI (MPI/RS232) -		1024
Analog inputs         1024           Analog outputs         1024           Analog inputs, central         256           Analog outputs, central         256           Integrated analog inputs         -           Integrated analog outputs         -           Communication functions           PG/OP channel         yes           Global data communication         yes           Number of GD circuits, max.         8           Size of GD packets, max.         22 Byte           S7 basic communication         yes           S7 basic communication, user data per job         76 Byte           S7 communication as server         yes           S7 communication as server         yes           S7 communication, user data per job         160 Byte           Number of connections, max.         32           Functionality Sub-D interfaces           Type         X2           Type of interface         RS485           Connector         Sub-D, 9-pin, female           Electrically isolated         yes           MPI         yes           MP2 (MPI/RS232)         -           DP master         -		•
Analog outputs 1024  Analog inputs, central 256  Analog outputs, central 256  Integrated analog inputs - Integrated analog outputs -  Communication functions  PG/OP channel yes Global data communication yes Number of GD circuits, max. 8 Size of GD packets, max. 22 Byte S7 basic communication yes S7 communication yes S7 communication yes S7 communication yes S8 communication yes S8 communication yes S9 communication yes S9 communication yes S1 communication yes S2 communication yes S3 communication as server yes S4 communication as server yes S5 communication, user data per job 160 Byte Number of connections, max. 32  Functionality Sub-D interfaces Type X2 Type X2 Type interface RS485 Connector Sub-D, 9-pin, female Electrically isolated yes MPI yes MP2  (MPU/RS232) - DP master - DP slave -	Integrated digital outputs	-
Analog inputs, central         256           Analog outputs, central         256           Integrated analog inputs         -           Integrated analog outputs         -           Communication functions           PG/OP channel           yes           Global data communication         yes           Number of GD circuits, max.         8           Size of GD packets, max.         22 Byte           S7 basic communication         yes           S7 communication, user data per job         76 Byte           S7 communication as server         yes           S7 communication as client         -           S7 communication, user data per job         160 Byte           Number of connections, max.         32           Functionality Sub-D interfaces           Type         X2           Type of interface         RS485           Connector         Sub-D, 9-pin, female           Electrically isolated         yes           MPI         yes           MP2 (MPI/RS232)         -           DP master         -           DP slave         -	Analog inputs	1024
Analog outputs, central Integrated analog inputs Integrated analog outputs  Communication functions  PG/OP channel  Global data communication  Number of GD circuits, max.  Size of GD packets, max.  22 Byte  S7 basic communication  yes  S7 basic communication  yes  S7 communication  yes  S7 communication  yes  S7 communication  yes  S7 communication as server  yes  S7 communication, user data per job  160 Byte  Number of connections, max.  32  Functionality Sub-D interfaces  Type  X2  Type of interface  RS485  Connector  Sub-D, 9-pin, female  Electrically isolated  yes  MPI  yes  MPI  MPP/RS232)  - DP master  D Slave  -  -  -  -  -  -  -  -  -  -  -  -  -		1024
Integrated analog inputs - Integrated analog outputs - Communication functions  PG/OP channel yes Global data communication yes Number of GD circuits, max. 8 Size of GD packets, max. 22 Byte S7 basic communication yes S7 basic communication yes S7 communication yes S7 communication yes S7 communication yes S7 communication server yes S7 communication as client - S7 communication, user data per job 160 Byte Number of connections, max. 32  Functionality Sub-D interfaces  Type X2 Type interface RS485 Connector Sub-D, 9-pin, female Electrically isolated yes MPI yes MP2 (MPI/RS232) - DP master - DP slave	Analog inputs, central	256
Integrated analog outputs	Analog outputs, central	256
Communication functions  PG/OP channel yes  Global data communication yes  Number of GD circuits, max. 8 Size of GD packets, max. 22 Byte S7 basic communication yes S7 basic communication, user data per job 76 Byte S7 communication yes S7 communication yes S7 communication as server yes S7 communication as client - S7 communication, user data per job 160 Byte Number of connections, max. 32  Functionality Sub-D interfaces  Type X2 Type of interface RS485  Connector Sub-D, 9-pin, female Electrically isolated yes MPI MPI MPI MPI MPI MPI MPI MPI MPI MS485  Connector Sub-D slave - D slave		-
PG/OP channel yes Global data communication yes Number of GD circuits, max. 8 Size of GD packets, max. 22 Byte S7 basic communication yes S7 basic communication, user data per job 76 Byte S7 communication yes S7 communication as server yes S7 communication as client - S7 communication, user data per job 160 Byte Number of connections, max. 32  Functionality Sub-D interfaces Type X2 Type of interface RS485 Connector Sub-D, 9-pin, female Electrically isolated yes MPI yes MP2I (MPI/RS232) - DP master - DP slave  S2 Byte S8 Server Save Save Save Save Save Save Save Save	Integrated analog outputs	-
Solution	Communication functions	
Number of GD circuits, max.  Size of GD packets, max.  22 Byte  S7 basic communication  yes  S7 basic communication, user data per job  76 Byte  S7 communication  yes  S7 communication as server  yes  S7 communication as client  -  S7 communication, user data per job  160 Byte  Number of connections, max.  32  Functionality Sub-D interfaces  Type  X2  Type of interface  RS485  Connector  Sub-D, 9-pin, female  Electrically isolated  yes  MPI  MPI (MPI/RS232)  -  DP master  -  DP slave  22 Byte  8  8  8  8  8  8  8  8  8  8  8  8  8	PG/OP channel	yes
Size of GD packets, max.  22 Byte  S7 basic communication  yes  57 basic communication, user data per job  76 Byte  57 communication  yes  57 communication as server  yes  57 communication as client  -  S7 communication, user data per job  160 Byte  Number of connections, max.  32  Functionality Sub-D interfaces  Type  X2  Type of interface  RS485  Connector  Sub-D, 9-pin, female  Electrically isolated  MPI  yes  MPI  yes  MPI  MPI (MPI/RS232)  -  DP master  -  DP slave  -  22 Byte  28 Byte  160 Byte  160 Byte  22  X2  24  X2  X2  X2  X2  X2  X3  X4  X5  X5  X5  X5  X5  X5  X5  X5  X5	Global data communication	yes
S7 basic communication yes S7 basic communication, user data per job 76 Byte S7 communication yes S7 communication server yes S7 communication as server S7 communication as client - S7 communication, user data per job 160 Byte Number of connections, max. 32  Functionality Sub-D interfaces  Type X2 Type of interface RS485  Connector Sub-D, 9-pin, female Electrically isolated yes MPI yes MPI yes MPI yes MPI yes MPI S1322) DP master DP slave -  T6 Byte	Number of GD circuits, max.	8
S7 basic communication, user data per job  76 Byte  77 communication  99 yes  78 communication as server  99 yes  78 communication as client  -  \$7 communication, user data per job  160 Byte  Number of connections, max.  32  Functionality Sub-D interfaces  Type  X2  Type of interface  RS485  Connector  Sub-D, 9-pin, female  Electrically isolated  yes  MPI  yes  MPI (MPI/RS232)  -  DP master  DP slave  -  76 Byte  76 Byte  76 Byte  76 Byte  78 Byte  78 Byte  160 Byte  -  Uses  -  160 Byte  -  99 Byte  -  160 Byte  -  99 Syte  -  160 Byte  -  99 Syte  -  160 Byte  -  160 Byte  -  99 Syte  -  160 Byte  -  160 Byte  -  160 Byte  -  160 Byte  -  99 Syte  -  160 Byte  -  160 Byt	Size of GD packets, max.	22 Byte
S7 communication yes S7 communication as server yes S7 communication as client S7 communication, user data per job 160 Byte Number of connections, max. 32  Functionality Sub-D interfaces Type X2 Type of interface RS485 Connector Sub-D, 9-pin, female Electrically isolated yes MPI yes MP2 (MPI/RS232) DP master DP slave	S7 basic communication	yes
S7 communication as server  S7 communication as client  S7 communication, user data per job  Number of connections, max.  Functionality Sub-D interfaces  Type  X2  Type of interface  RS485  Connector  Sub-D, 9-pin, female  Electrically isolated  yes  MPI  MPI (MPI/RS232)  DP master  DP slave  yes  yes  yes  160 Byte   X2  X2  X2  X2  X2  X2  X2  X2  X3  X4  X4  X5  X5  X5  X5  X5  X5  X5  X5	S7 basic communication, user data per job	76 Byte
S7 communication as client - S7 communication, user data per job 160 Byte  Number of connections, max. 32  Functionality Sub-D interfaces  Type X2  Type of interface RS485  Connector Sub-D, 9-pin, female  Electrically isolated yes  MPI yes  MPI yes  MPI (MPI/RS232) - DP master - DP slave -	S7 communication	yes
S7 communication, user data per job  Number of connections, max.  32  Functionality Sub-D interfaces  Type X2  Type of interface RS485  Connector Sub-D, 9-pin, female  Electrically isolated yes  MPI yes  MP2I (MPI/RS232)  DP master  DP slave  160 Byte  32  X2  Type of interface RS485  Connector Sub-D, 9-pin, female  yes	S7 communication as server	yes
Number of connections, max.32Functionality Sub-D interfacesTypeX2Type of interfaceRS485ConnectorSub-D, 9-pin, femaleElectrically isolatedyesMPIyesMP2I (MPI/RS232)-DP master-DP slave-	S7 communication as client	-
Type X2 Type of interface RS485  Connector Sub-D, 9-pin, female  Electrically isolated yes  MPI yes  MP2  (MPI/RS232) -  DP master -  DP slave  DP slave  DR  A2  A2  A2  A2  B2  A2  B2  B3  B4  B5  B4  B5  B5  B4  B5  B5  B5  B5	S7 communication, user data per job	160 Byte
Type of interface RS485  Connector Sub-D, 9-pin, female  Electrically isolated yes  MPI yes  MP2I (MPI/RS232) -  DP master -  DP slave -  X2  RS485  RS485  Sub-D, 9-pin, female  yes	Number of connections, max.	32
Type of interface RS485  Connector Sub-D, 9-pin, female  Electrically isolated yes  MPI yes  MP2I (MPI/RS232) -  DP master -  DP slave -  X2  RS485  RS485  Sub-D, 9-pin, female  yes	Functionality Sub-D interfaces	
Connector Sub-D, 9-pin, female  Electrically isolated yes  MPI yes  MP2I (MPI/RS232) -  DP master -  DP slave		X2
Connector Sub-D, 9-pin, female  Electrically isolated yes  MPI yes  MP2I (MPI/RS232) -  DP master -  DP slave -		RS485
Electrically isolated         yes           MPI         yes           MP2I (MPI/RS232)         -           DP master         -           DP slave         -		Sub-D, 9-pin, female
MPI         yes           MP2I (MPI/RS232)         -           DP master         -           DP slave         -	Electrically isolated	<u> </u>
MP²I (MPI/RS232)         -           DP master         -           DP slave         -	·	·
DP master - DP slave -	MP²I (MPI/RS232)	
		-
Point-to-point interface -	DP slave	-
	Point-to-point interface	-



5V DC Power supply	max. 90mA, isolated
24V DC Power supply	max. 100mA, non-isolated
Туре	X3
Type of interface	RS485
Connector	Sub-D, 9-pin, female
Electrically isolated	yes
MPI	-
MP²I (MPI/RS232)	-
DP master	yes
DP slave	yes
Point-to-point interface	yes
5V DC Power supply	max. 90mA, isolated
24V DC Power supply	max. 100mA, non-isolated
Functionality MPI	
Number of connections, max.	32
PG/OP channel	yes
Routing	yes
Global data communication	yes
S7 basic communication	yes
S7 communication	yes
S7 communication as server	yes
S7 communication as client	-
Transmission speed, min.	19.2 kbit/s
Transmission speed, max.	12 Mbit/s
Functionality PROFIBUS master	
Number of connections, max.	32
PG/OP channel	yes
Routing	yes
S7 basic communication	yes
S7 communication	yes
S7 communication as server	yes
S7 communication as client	
Activation/deactivation of DP slaves	yes
Direct data exchange (slave-to-slave communication)	-
DPV1	yes
Transmission speed, min.	9.6 kbit/s
Transmission speed, max.	12 Mbit/s
Number of DP slaves, max.	124
Address range inputs, max.	8 KB
Address range outputs, max.	8 KB
User data inputs per slave, max.	244 Byte
User data outputs per slave, max.	244 Byte
Functionality PROFIBUS slave	
I diletionality i Noi iboo slave	
Number of connections, max.	32
	32 yes

87 communication as server         yes           57 communication as client         -           Direct data exchange (alaw-to-slave communication)         -           DPV1         yes           Transmission speed, min.         9.6 kbit/s           Transmission speed, min.         12 Mibit/s           Automatic detection of transmission speed         -           Transfer memory inputs, max.         244 Byte           Transfer memory outputs, max.         32 Byte           Address areas, max.         32           User data per address area, max.         32 Byte           Functionality RJ45 interfaces         Type           Type         X5           Type all interface         Ethernet 10/100 MBH           Connector         RJ445           Electrically isolated         yes           PG/OP channel         yes           Number of connections, max.         4           Productive connections         -           Fieldbus         -           Type of interface         Ethernet 10/100 MBH           Connector         RJ45           Electrically isolated         yes           PG/OP channel         yes           Number of connections, max.         8 <t< th=""><th>S7 communication</th><th>yes</th></t<>	S7 communication	yes
Direct data exchange (slave-to-alave communication)   -	S7 communication as server	yes
DPV1	S7 communication as client	
Transmission speed, min. 9.6 kbit/s Transmission speed, max. 12 Mbit/s Automatic detection of transmission speed - Transfer memory outputs, max. 244 Byte Transfer memory outputs, max. 244 Byte Address areas, max. 32 User data per address area, max. 32 Functionality RJ45 Interfaces Type Interface Ethernet 10/100 MBit Connector RJ46 Electrically isolated yes Fo/OP channel yes Number of connections, max. 4 Productive connections Fieldbus - Type Interface Ethernet 10/100 MBit Connector RJ46 Fieldbus - Fie	Direct data exchange (slave-to-slave communication)	-
Transmission speed, max.	DPV1	yes
Automatic detection of transmission speed   -	Transmission speed, min.	9.6 kbit/s
Transfer memory inputs, max.         244 Byte           Address areas, max.         32           User data per address area, max.         32 Byte           Functionality RJ45 interfaces         Type Interface           Type Of interface         Ethernet 10/100 MBit           Connector         RJ45           Electrically isolated         yes           PG/OP channel         yes           Number of connections, max.         4           Productive connections         -           Fieldbus         -           Type Interface         Ethernet 10/100 MBit           Connector         RJ45           Electrically isolated         yes           PG/OP channel         yes           Number of connections, max.         8           Productive connections         yes           Fieldbus         -           Point-to-point communication         yes           Pipe communication         yes           Pipe communication         yes           RS422 interface         -           RS422 interface         -           RS425 interface         yes           Connector         Sub-D, 9-pin, female           Transmission speed, mix.         115.5 kbit/s <td>Transmission speed, max.</td> <td>12 Mbit/s</td>	Transmission speed, max.	12 Mbit/s
Transfer memory outputs, max.         244 Byte           Address areas, max.         32           User data per address area, max.         32 Byte           Functionality RJ45 interfaces         Type           Type of interface         Ethernet 10/100 MBit           Connector         RJ45           Electrically isolated         yes           PG/OP channel         yes           Number of connections, max.         4           Productive connections         -           Fieldbus         -           Type         X8           Type of interface         Ethernet 10/100 MBit           Connector         RJ45           Electrically isolated         yes           PG/OP channel         yes           Number of connections, max.         8           Productive connections         yes           Fieldbus         -           Point-to-point communication         yes           Pipe communication         yes           Productive connection         yes           Pipe communication         yes           Productive connection         yes           RS42z interface         -           RS42z interface         -           RS	Automatic detection of transmission speed	-
Address areas, max.   32	Transfer memory inputs, max.	244 Byte
User data per address area, max.   32 Byte	Transfer memory outputs, max.	244 Byte
Type	Address areas, max.	32
Type         X5           Type of interface         Ethernet 10/100 MBit           Connector         R,145           Electrically isolated         yes           PG(OP channel         yes           Number of connections, max.         4           Productive connections         -           Fieldbus         -           Type         X8           Type of interface         Ethernet 10/100 MBit           Connector         R,145           Electrically isolated         yes           PG(OP channel         yes           Number of connections, max.         8           Productive connections         yes           Fieldbus         -           Point-to-point communication         yes           PIP communication         yes           Interface isolated         yes           RS232 interface         -           RS4232 interface         yes           RS4242 interface         yes           RS4425 interface         yes           Connector         Sub-D, 9-pin, female           Transmission speed, mix.         115.5 kbits           Transmission speed, mix.         500 m           Obint-to-point protocol <t< td=""><td>User data per address area, max.</td><td>32 Byte</td></t<>	User data per address area, max.	32 Byte
Type of interface	Functionality RJ45 interfaces	
Connector	Туре	X5
Electrically isolated	Type of interface	Ethernet 10/100 MBit
PG/OP channel         yes           Number of connections, max.         4           Productive connections         -           Fieldbus         -           Type         X8           Type of interface         Ethernet 10/100 MBit           Connector         R.145           Electrically isolated         yes           PG/OP channel         yes           Number of connections, max.         8           Productive connections         yes           Fieldbus         -           Point-to-point communication         yes           PIP communication         yes           RS232 interface isolated         yes           RS232 interface         -           RS422 interface         yes           Connector         Sub-D. 9-pin, female           Transmission speed, min.         150 bit/s           Transmission speed, max.         115.5 kbit/s           Cable length, max.         500 m           Point-to-point protocol         yes           3864(R) protocol         yes           3864(R) protocol         yes           Modbus master protocol         yes	Connector	RJ45
Number of connections, max.	Electrically isolated	yes
Productive connections         -           Fieldbus         -           Type         X8           Type of interface         Ethernet 10/100 MBit           Connector         RJ45           Electrically isolated         yes           PG/OP channel         yes           Number of connections, max.         8           Productive connections         yes           Fieldbus         -           Point-to-point communication         yes           PIP communication         yes           Interface isolated         yes           RS232 interface         -           RS422 interface         -           RS485 interface         yes           Connector         Sub-D, 9-pin, female           Transmission speed, min.         150 bit/s           Transmission speed, max.         115.5 kbit/s           Cable length, max.         500 m           Point-to-point protocol         yes           STX/ETX protocol         yes           STX/ETX protocol         yes           RK512 protocol         yes           Modbus master protocol         yes	PG/OP channel	yes
Type	Number of connections, max.	4
Type         X8           Type of interface         Ethernet 10/100 MBit           Connector         RJ45           Electrically isolated         yes           PG/OP channel         yes           Number of connections, max.         8           Productive connections         yes           Fieldbus         -           Point-to-point communication         yes           PtP communication         yes           Interface isolated         yes           RS232 Interface         -           RS422 Interface         -           RS432 Interface         yes           Connector         Sub-D, 9-pin, female           Transmission speed, min.         150 bit/s           Transmission speed, max.         115.5 kbit/s           Cable length, max.         500 m           Point-to-point protocol         ASCII protocol           ASCII protocol         yes           STX/ETX protocol         yes           RK512 protocol         yes           Modbus master protocol         yes	Productive connections	•
Type of interface         Ethernet 10/100 MBit           Connector         RJ45           Electrically isolated         yes           PG/OP channel         yes           Number of connections, max.         8           Productive connections         yes           Fieldbus         -           Point-to-point communication         yes           Pit communication         yes           Interface isolated         yes           RS232 interface         -           RS422 interface         -           RS485 interface         yes           Connector         Sub-D, 9-pin, female           Transmission speed, min.         150 bit/s           Transmission speed, max.         115.5 kbit/s           Cable length, max.         500 m           Point-to-point protocol         yes           STX/ETX protocol         yes           RK512 protocol         -           USS master protocol         yes           Modbus master protocol         yes	Fieldbus	•
Type of interface         Ethernet 10/100 MBit           Connector         RJ45           Electrically isolated         yes           PG/OP channel         yes           Number of connections, max.         8           Productive connections         yes           Fieldbus         -           Point-to-point communication         yes           Pit communication         yes           Interface isolated         yes           RS232 interface         -           RS422 interface         -           RS485 interface         yes           Connector         Sub-D, 9-pin, female           Transmission speed, min.         150 bit/s           Transmission speed, max.         115.5 kbit/s           Cable length, max.         500 m           Point-to-point protocol         yes           STX/ETX protocol         yes           RK512 protocol         -           USS master protocol         yes           Modbus master protocol         yes		
Connector         RJ45           Electrically isolated         yes           PG/OP channel         yes           Number of connections, max.         8           Productive connections         yes           Fieldbus         -           Point-to-point communication           Pit communication           PtP communication         yes           Interface isolated         yes           RS232 interface         -           RS422 interface         -           RS485 interface         yes           Connector         Sub-D, 9-pin, female           Transmission speed, min.         150 bit/s           Transmission speed, max.         115.5 kbit/s           Cable length, max.         500 m           Point-to-point protocol           ASCII protocol         yes           STX/ETX protocol         yes           3964(R) protocol         yes           RK512 protocol         -           USS master protocol         yes           Modbus master protocol         yes	Туре	X8
Electrically isolated         yes           PG/OP channel         yes           Number of connections, max.         8           Productive connections         yes           Fieldbus         -           Point-to-point communication           PtP communication         yes           Interface isolated         yes           RS232 interface         -           RS422 interface         -           RS485 interface         yes           Connector         Sub-D, 9-pin, female           Transmission speed, min.         150 bit/s           Transmission speed, max.         115.5 kbit/s           Cable length, max.         500 m           Point-to-point protocol           ASCII protocol         yes           STX/ETX protocol         yes           RK512 protocol         -           USS master protocol         yes           Modbus master protocol         yes	Type of interface	Ethernet 10/100 MBit
PG/OP channel         yes           Number of connections, max.         8           Productive connections         yes           Fieldbus         -           Point-to-point communication         yes           PtP communication         yes           Interface isolated         yes           RS232 interface         -           RS422 interface         yes           Connector         Sub-D, 9-pin, female           Transmission speed, min.         150 bit/s           Transmission speed, max.         115.5 kbit/s           Cable length, max.         500 m           Point-to-point protocol         yes           STX/ETX protocol         yes           3964(R) protocol         yes           RK512 protocol         -           USS master protocol         yes           Modbus master protocol         yes	Connector	RJ45
Number of connections, max.         8           Productive connections         yes           Fieldbus         -           Point-to-point communication         yes           PtP communication         yes           Interface isolated         yes           RS232 interface         -           RS422 interface         -           RS485 interface         yes           Connector         Sub-D, 9-pin, female           Transmission speed, min.         150 bit/s           Transmission speed, max.         115.5 kbit/s           Cable length, max.         500 m           Point-to-point protocol         yes           STX/ETX protocol         yes           3964(R) protocol         yes           RK512 protocol         -           USS master protocol         yes           Modbus master protocol         yes	Electrically isolated	yes
Productive connections         yes           Fieldbus         -           Point-to-point communication         yes           PtP communication         yes           Interface isolated         yes           RS232 interface         -           RS422 interface         -           RS485 interface         yes           Connector         Sub-D, 9-pin, female           Transmission speed, min.         150 bit/s           Transmission speed, max.         115.5 kbit/s           Cable length, max.         500 m           Point-to-point protocol         yes           STX/ETX protocol         yes           STX/ETX protocol         yes           RK512 protocol         -           USS master protocol         yes           Modbus master protocol         yes	PG/OP channel	yes
Point-to-point communication	Number of connections, max.	8
Point-to-point communication         yes           Interface isolated         yes           RS232 interface         -           RS422 interface         -           RS485 interface         yes           Connector         Sub-D, 9-pin, female           Transmission speed, min.         150 bit/s           Transmission speed, max.         115.5 kbit/s           Cable length, max.         500 m           Point-to-point protocol         yes           STX/ETX protocol         yes           3964(R) protocol         yes           RK512 protocol         -           USS master protocol         yes           Modbus master protocol         yes	Productive connections	yes
PtP communication         yes           Interface isolated         yes           RS232 interface         -           RS422 interface         -           RS485 interface         yes           Connector         Sub-D, 9-pin, female           Transmission speed, min.         150 bit/s           Transmission speed, max.         115.5 kbit/s           Cable length, max.         500 m           Point-to-point protocol           ASCII protocol         yes           STX/ETX protocol         yes           3964(R) protocol         yes           RK512 protocol         -           USS master protocol         yes           Modbus master protocol         yes	Fieldbus	-
Interface isolated	Point-to-point communication	
RS232 interface       -         RS422 interface       -         RS485 interface       yes         Connector       Sub-D, 9-pin, female         Transmission speed, min.       150 bit/s         Transmission speed, max.       115.5 kbit/s         Cable length, max.       500 m         Point-to-point protocol       yes         STX/ETX protocol       yes         3964(R) protocol       yes         RK512 protocol       -         USS master protocol       yes         Modbus master protocol       yes	PtP communication	yes
RS422 interface         -           RS485 interface         yes           Connector         Sub-D, 9-pin, female           Transmission speed, min.         150 bit/s           Transmission speed, max.         115.5 kbit/s           Cable length, max.         500 m           Point-to-point protocol           ASCII protocol         yes           STX/ETX protocol         yes           3964(R) protocol         yes           RK512 protocol         -           USS master protocol         yes           Modbus master protocol         yes	Interface isolated	yes
RS485 interface yes  Connector Sub-D, 9-pin, female  Transmission speed, min. 150 bit/s  Transmission speed, max. 115.5 kbit/s  Cable length, max. 500 m  Point-to-point protocol  ASCII protocol yes  STX/ETX protocol yes  RK512 protocol yes  RK512 protocol yes  Modbus master protocol yes  Modbus master protocol yes	RS232 interface	-
Connector Sub-D, 9-pin, female  Transmission speed, min. 150 bit/s  Transmission speed, max. 115.5 kbit/s  Cable length, max. 500 m  Point-to-point protocol  ASCII protocol yes  STX/ETX protocol yes  RK512 protocol yes  RK512 protocol yes  Modbus master protocol yes  Modbus master protocol yes	RS422 interface	-
Transmission speed, min.  Transmission speed, max.  115.5 kbit/s  Cable length, max.  500 m  Point-to-point protocol  ASCII protocol  STX/ETX protocol  9es  3964(R) protocol  Ves  RK512 protocol  USS master protocol  Modbus master protocol  yes  yes	RS485 interface	yes
Transmission speed, max.  Cable length, max.  500 m  Point-to-point protocol  ASCII protocol  STX/ETX protocol  yes  3964(R) protocol  RK512 protocol  USS master protocol  Modbus master protocol  yes	Connector	Sub-D, 9-pin, female
Cable length, max. 500 m  Point-to-point protocol  ASCII protocol yes  STX/ETX protocol yes  3964(R) protocol yes  RK512 protocol -  USS master protocol yes  Modbus master protocol yes	Transmission speed, min.	150 bit/s
Point-to-point protocol  ASCII protocol yes  STX/ETX protocol yes  3964(R) protocol yes  RK512 protocol -  USS master protocol yes  Modbus master protocol yes	Transmission speed, max.	115.5 kbit/s
ASCII protocol yes  STX/ETX protocol yes  3964(R) protocol yes  RK512 protocol -  USS master protocol yes  Modbus master protocol yes	Cable length, max.	500 m
STX/ETX protocol yes  3964(R) protocol yes  RK512 protocol -  USS master protocol yes  Modbus master protocol yes	Point-to-point protocol	
3964(R) protocol yes  RK512 protocol -  USS master protocol yes  Modbus master protocol yes	ASCII protocol	yes
RK512 protocol - USS master protocol yes Modbus master protocol yes	STX/ETX protocol	yes
USS master protocol yes  Modbus master protocol yes	3964(R) protocol	yes
Modbus master protocol yes	RK512 protocol	-
	USS master protocol	yes
Modbus slave protocol -	Modbus master protocol	yes
	Modbus slave protocol	-



Special protocols	-
Properties PROFINET I/O controller	
Realtime Class	-
Conformance Class	PROFINET IO
Number of PN IO devices	128
IRT support	-
Shared Device supported	-
MRP Client supported	-
Prioritized start-up	-
Number of PN IO lines	1
Address range inputs, max.	2 KB
Address range outputs, max.	2 KB
Transmiting clock	1 ms
Update time	1 ms 512 ms
Isochronous mode	-
Parallel operation as controller and I-Device	-
Ethernet communication CP	
Number of configurable connections, max.	8
Number of productive connections by Siemens NetPro, max.	8
S7 connections	BSEND, BRCV, GET, PUT, Connection of active and passive data handling
User data per S7 connection, max.	32 KB
TCP-connections	FETCH PASSIV, WRITE PASSIV, Connection of passive data handling
User data per TCP connection, max.	64 KB
ISO-connections	-
User data per ISO connection, max.	-
ISO on TCP connections (RFC 1006)	FETCH PASSIV, WRITE PASSIV, Connection of passive data handling
User data per ISO on TCP connection, max.	32 KB
UDP-connections	-
User data per UDP connection, max.	-
UDP-multicast-connections	-
UDP-broadcast-connections	-
Ethernet open communication	
Number of connections, max.	8
ISO on TCP connections (RFC 1006)	TSEND, TRCV, TCON, TDISCON
User data per ISO on TCP connection, max.	8 KB
TCP-Connections native	TSEND, TRCV, TCON, TDISCON
User data per native TCP connection, max.	8 KB
User data per ad hoc TCP connection, max.	1460 Byte
UDP-connections	TUSEND, TURCV
User data per UDP connection, max.	1472 Byte
Management & diagnosis	
Protocols	ICMP DCP
Web based diagnosis	
NCM diagnosis	yes
Housing	

Material	PPE	
Mounting	Rail System 300	
Mechanical data		
Dimensions (WxHxD)	80 mm x 125 mm x 120 mm	
Net weight	430 g	
Weight including accessories		
Gross weight	-	
Environmental conditions		
Operating temperature	0 °C to 60 °C	
Storage temperature	-25 °C to 70 °C	
Certifications		
UL certification	yes	
KC certification	yes	