

## Technical data

### CPU 21x

#### General

Electrical data	VIPA 214-1BC02, VIPA 214-1BA02 ... VIPA 216-1BA02
Power supply	DC 24V (20.4 ... 28.8V)
Current consumption	max. 1.5A
Dissipation power	max. 3.5W
Status indicators (LEDs)	by means of LEDs located on the front
Connections / interfaces	MP <sup>2</sup> I interface for data communication
Clock, memory/clock backup	yes / Lithium accumulator, 30 days backup
Output current to backplane bus	max. 3A
Bit memory	8192 Bit (M0.0...M1023.7)
Timer	256 (T0...T255)
Counters	256 (Z0 ... Z255)
Number of Blocks	FB FC DB
	1024 (FB0...FB1023)
	1024 (FC0...FC1023)
	2047 (DB1...DB2047)
Total addressing space input / output	1024/1024Byte, each 128 Byte for process image (PA)
Process image Inputs	1024Bit (I0.0...I127.7)
Process image Outputs	1024Bit (O0.0...O127.7)
Combination with peripheral modules	
max. no. of modules	32
max. digital I/O	32
max. analog I/O	16
Addressable inputs, outputs	1024 (digital), 128/128 (analog)
Dimensions and weight	
Dimensions (WxHxD) in mm	25.4x76x80
Weight	80g

#### Module specific

	CPU 214C	CPU 214	CPU 215	CPU 216
Work memory	32kByte	48kByte	96kByte	128kByte
Load memory	40kByte	80kByte	144kByte	192kByte
Cycle time bit operations	0.18µs	0.18µs	0.18µs	0.18µs
Cycle time word operations	0.78µs	0.78µs	0.78µs	0.78µs
Order-No.:	214-1BC02	214-1BA02	215-1BA02	216-1BA02

**CPU 21x-2BT10**

Electrical data	VIPA 214-2BT10 ... VIPA 216-2BT10
Power supply	DC 24V (20.4 ... 28.8V)
Current consumption	max. 1.5A
Dissipation power	max. 6W
Potential separation	≥ 500V AC to Ethernet
Status indicator (LEDs)	like CPU 21x additionally with LEDs for the Ethernet section
Connections/interfaces	like CPU 21x additionally with RJ45 jack (Ethernet)
Ethernet interface	CP 243
Connector	RJ45
Network topology	Star topology
Medium	Twisted pair
Transfer rate	10/100Mbit
Overall length	max. 100m per segment
PG/OP channel	8 (32 with CP firmware version 1.7.4 and up)
Configurable connections:	16
Dimensions and weight	
Dimensions (WxHxD) in mm	50.8x76x80
Weight	150g

**CPU 21x-2BT02**

Electrical data	VIPA 214-2BT02 ... VIPA 216-2BT02
Power supply	DC 24V (20.4 ... 28.8V)
Current consumption	max. 1.5A
Dissipation power	max. 6W
Potential separation	≥ 500V AC to Ethernet
Status indicator (LEDs)	like CPU 21x additionally with LEDs for the Ethernet section
Connections/interfaces	like CPU 21x additionally with RJ45 jack (Ethernet)
Ethernet interface	CP 243
Connector	RJ45
Network topology	Star topology
Medium	Twisted pair
Transfer rate	10Mbit
Overall length	max. 100m per segment
PG/OP channel	-
Configurable connections:	32
Dimensions and weight	
Dimensions (WxHxD) in mm	50.8x76x80
Weight	150g

**CPU 21xDPM**

Electrical Data	VIPA 214-2BM02 ... VIPA 216-2BM02
Power supply	DC 24V (20.4 ... 28.8V)
Current consumption	max. 1.5A
Dissipation power	max. 5W
Potential separation	≥ 500V AC to fieldbus
Status monitoring (LEDs)	like CPU 21x additionally with LEDs for the Profibus section
Adapters/interfaces	like CPU 21x additionally with 9pin D-type jack (Profibus)
Profibus interface	
Connector	9pin D-type jack
Network topology	Linear bus, active bus termination at both ends
Medium	Screened and drilled twisted pair cable. Depending on environment screening may be omitted.
Transfer rate	9.6kBaud up to 12MBaud
Overall length	100m at 12 MBaud without repeater, up to 1000m with repeater
max. no. of stations	32 stations on every segment without repeater. Expandable to 126 stations with repeater.
Combination with peripheral modules	
max. number of slaves	125
max. number of input bytes	1024
max. number of output bytes	1024
Dimensions and Weight	
Dimensions (WxHxD) in mm	50.8x76x80
Weight	150g

**CPU 21xDP**

Electrical data	VIPA 214-2BP02 ... VIPA 216-2BP02
Power supply	DC 24V (20.4 ... 28.8V)
Current consumption	max. 1.5A
Dissipation power	max. 5W
Potential separation	≥ 500V AC to fieldbus
Status indicator (LEDs)	like CPU 21x additionally with LEDs for the Profibus section
Adapters/interfaces	like CPU 21x additionally with 9pin D-type jack (Profibus)
Profibus interface	
Connector	9pin D-type jack
Network topology	Linear bus, active bus termination at both ends
Medium	Screened and drilled twisted pair cable. Depending on environment screening may be omitted.
Transfer rate	9.6kBaud up to 12MBaud
Overall length	100m at 12 MBaud without repeater, up to 1000m with repeater
max. no. of stations	32 stations on every segment without repeater. Expandable to 126 stations with repeater.
Dimensions and weight	
Dimensions (WxHxD) in mm	50.8x76x80
Weight	150g

**CPU 21xCAN**

Electrical Data	VIPA 214-2CM02 ... VIPA 216-2CM02
Power supply	DC 24V (20.4 ... 28.8V)
Current consumption	max. 1.5A
Dissipation power	max. 5W
Potential separation	≥ 500V AC to fieldbus
Status monitoring (LEDs)	like CPU 21x additionally with LEDs for the CAN section
Adapters/interfaces	like CPU 21x additionally with 9pin D-type jack (CAN)
CAN interface	
Connector	9pin D-type jack
Network topology	Linear bus, active bus termination at both ends
Medium	Screened and drilled twisted pair cable. Depending on environment screening may be omitted.
Transfer rate	10kBaud up to 1MBaud
Overall length	without repeater 1000m at 50kBaud
max. no. of stations	126 stations
Combination with peripheral modules	
max. number of slaves	125
max. number of TxPDOs	40
max. number of RxPDOs	40
max. number of input bytes	384
max. number of output bytes	384
Dimensions and Weight	
Dimensions (WxHxD) in mm	50.8x76x80
Weight	150g

**CPU 21xSER-1**

Module specific	VIPA 214-2BS12...216-2BS12	VIPA 214-2BS32...216-2BS32
Power supply	DC 24V (20.4 ... 28.8)	
Current consumption	max. 1.5A	
Dissipation power	max. 5W	
Potential separation	≥ 500V AC to serial interface	
Status indicator (LEDs)	like CPU 21x	
RS232 interface integrated	yes	-
RS485 interface integrated	-	yes
Dimensions and weight		
Dimensions (WxHxD) in mm	50.8x76x80	
Weight	150g	

**CPU 21xSER-2**

Electrical data	VIPA 214-2BS02 ... VIPA 216-2BS02
Power supply	DC 24V (20.4 ... 28.8V)
Current consumption	max. 1.5A
Dissipation power	max. 5W
Potential separation	-
Status indicator (LEDs)	like CPU 21x additionally with LEDs for serial communication
Adapters/interfaces	like CPU 21x additionally with 2x 9pin D-type jack (serial communication)
Interfaces	
COM 1, COM 2	2 integrated RS232 interfaces
Dimensions and weight	
Dimensions (WxHxD) in mm	50.8x76x80
Weight	150g