

## 2.7 Device 5PP320.1043-39

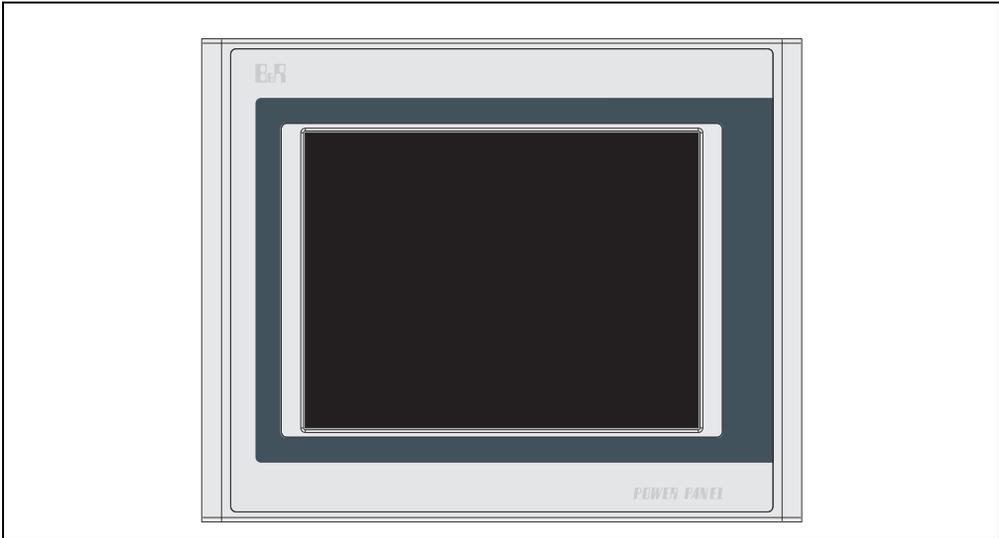


Figure 30: Front view - 5PP320.1043-39

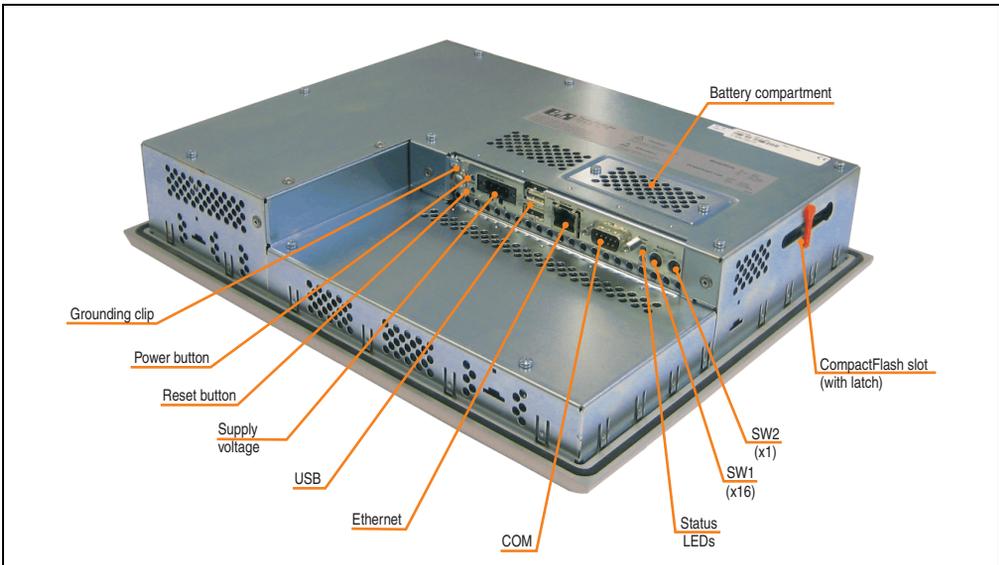


Figure 31: Rear view - 5PP320.1043-39

## 2.7.1 Technical data

Features	5PP320.1043-39
Boot loader / Operating system	BIOS
Processor Type Expanded command set L1 cache L2 cache Floating point unit (FPU) Cooling Method	Geode LX800 500 MHz, 32-bit x86 MMX technology, 3D Now 128 KB (64 KB L cache / 64 KB D cache) 128 KB Yes Passive (heat sink)
Flash	2 MB (for firmware)
Memory Type Quantity	DDR SDRAM 256 MB
Graphics Controller Memory	Geode LX800 8 MB shared memory (reserved by main memory)
SRAM Quantity Battery-buffered	-
Watchdog Controller	MTCX <sup>1)</sup>
Power failure logic Controller Buffer time	MTCX <sup>1)</sup> -
Real-time clock (RTC) Battery-buffered Accuracy	Yes At +25°C: typically 30 ppm (2.5 seconds) <sup>2)</sup> per day
Battery Type Removable Lifespan Backup capacitor (for changing battery) Buffer time	Renata 950 mAh Yes, accessible from the outside 4 years <sup>3)</sup> 10 minutes
Ethernet Controller Transfer rate Connection Cables NE2000-compatible	Intel 82551ER 10/100 MBit/s RJ45 twisted pair (10 Base T / 100 Base T) S/STP (category 5) -
CompactFlash Type Amount Connection	Type I 1 slot Primary IDE device
Serial interface Type UART Transfer rate Connection	RS232, modem-capable, not electrically isolated 16C550 compatible, 16-byte FIFO Max. 115 kBaud 9-pin DSUB

Table 27: Technical data - 5PP320.1043-39

## Technical data • Power Panel 300 with BIOS

Features	5PP320.1043-39
USB interface Type Amount Transfer rate Connection Current load	USB 1.1, USB 2.0 <sup>4)</sup> 2 Low speed (1.5 MBit/s), full speed (12 MBit/s) to high speed (480 MBit/s) <sup>4)</sup> Type A Max. 500 mA per connection
Reset button	Yes, accessible from the outside
Power button	Yes, accessible from the outside
LEDs	1x CF (yellow) 1x combined power (red/green) and user (yellow)
Mode/Node switch	2, 16 digits each
aPCI slots Holding torque for aPCI module	-
Display Type Diagonal Colors Resolution Contrast Viewing angle (see page 536) Horizontal Vertical Background lighting Brightness Half-brightness time <sup>5)</sup> Screen rotation	Color TFT 10.4 in (264 mm) 262,144 colors <sup>4)</sup> VGA, 640 x 480 pixels 600:1 Direction R / direction L = 70° Direction U = 45° / direction D = 35° 450 cd/m <sup>2</sup> 55,000 hours Yes, see chapter 3 "Commissioning", section "Screen rotation" on page 394
Touch screen Touch screen type Technology Controller Degree of transmission	Elo Accu Touch Analog, resistive Elo, serial, 12-bit Up to 80% ±5%
Filter glass Degree of transmission Coating	-
Keys/LED Function keys Soft keys Cursor keys Number block Other keys Key lifespan LED brightness	-
<b>Electrical characteristics</b>	
Power supply Rated voltage Rated current Starting current Power consumption Electrical isolation	18 - 30 VDC 0.63 A Max. 2.8 A Typically 15 W Yes
Bleeder resistance	0 Ω

Table 27: Technical data - 5PP320.1043-39 (Forts.)

Mechanical characteristics	5PP320.1043-39
Outer dimensions	
Width	323 mm
Height	260 mm
Depth	65.5 mm
Front	
Frame	Aluminum, naturally anodized <sup>6)</sup>
Design	Gray <sup>6)</sup>
Membrane	Polyester
Dark gray border around display	Similar to Pantone 432CV <sup>6)</sup>
Light background	Similar to Pantone 427CV <sup>6)</sup>
Gasket	Flat gasket around display front
Housing	Metal
Weight	Approx. 3.7 kg
Environmental characteristics	
Ambient temperature	
Operation	0 to +50°C
Storage	-20 to +70°C
Transport	-20 to +70°C
Relative humidity	See 2.7.2 "Temperature humidity diagram" on page 82
Vibration	
Operation (continuous)	2 - 9 Hz: 1.75 mm amplitude / 9 - 200 Hz: 0.5 g
Operation (occasional)	2 - 9 Hz: 3.5 mm amplitude / 9 - 200 Hz: 1 g
Storage	2 - 8 Hz: 7.5 mm amplitude / 8 - 200 Hz: 2 g / 200 - 500 Hz: 4 g
Transport	2 - 8 Hz: 7.5 mm amplitude / 8 - 200 Hz: 2 g / 200 - 500 Hz: 4 g
Shock	
Operation	15 g, 11 ms
Storage	30 g, 15 ms
Transport	30 g, 15 ms
Protection type	IP20 back side (only with installed CompactFlash card) IP65 / NEMA 250 type 4X, dust and sprayed water protection (front side)
Altitude <sup>7)</sup>	Max. 3000 m

Table 27: Technical data - 5PP320.1043-39 (Forts.)

- 1) Maintenance controller extended.
- 2) At max. specified ambient temperature: typ. 50 ppm (4 seconds) - worst-case 100 ppm (8 seconds).
- 3) Typical lifespan (at 50% buffer operation, temperature +25°C when off, +50°C when on).  
Maximum lifespan in 24-hour operation (no buffer) 6 years at +25°C or 5 years at +50°C.  
Maximum lifespan when switched off: 2 years at +25°C or 1 year at +50°C.
- 4) The actual value depends on the operating system or diver being used.
- 5) At +25°C ambient temperature. Reducing the brightness by 50% can result in an approximate 50% increase of the half-brightness time.
- 6) Depending on the process or batch, there may be visible deviations in the color and surface structure.
- 7) Derating the maximum ambient temperature - typically 1°C per 1000 meters (from 500 meters above sea level).

### 2.7.2 Temperature humidity diagram

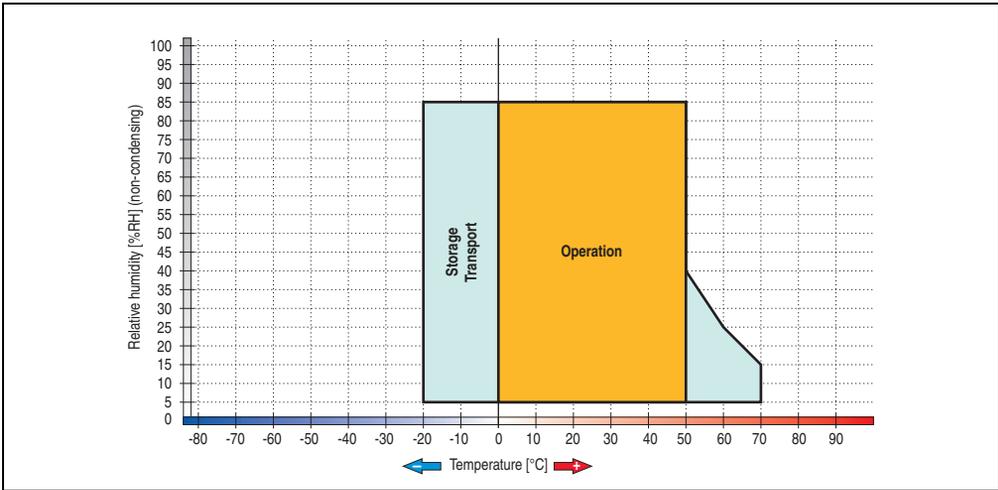


Figure 32: Temperature humidity diagram - 5PP320.1043-39

### 2.7.3 Dimensions

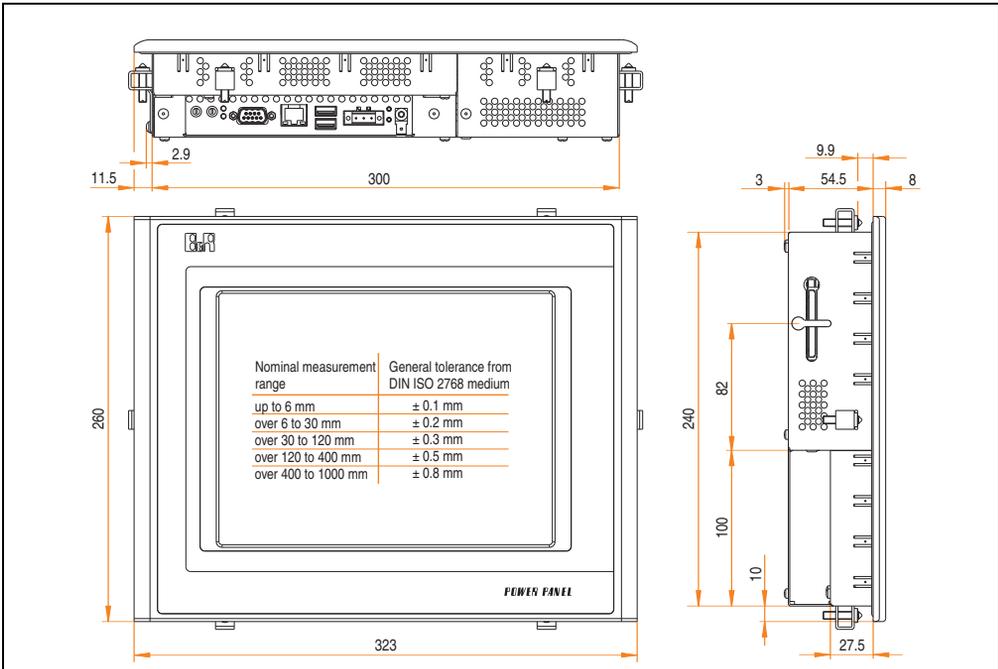


Figure 33: Dimensions - 5PP320.1043-39

### 2.7.4 Cutout installation

The cutout hole is to be made according to the following dimensions for cutout installation. The device must be mounted using the retaining clips included in delivery.

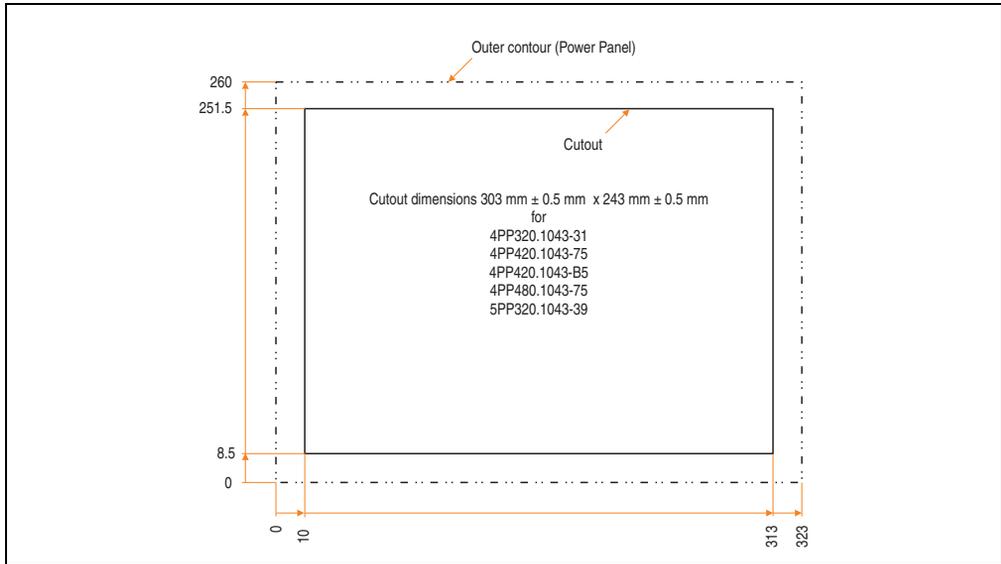


Figure 34: Cutout installation - 5PP320.1043-39

### 2.7.5 Contents of delivery

The following components are included in the delivery of the Power Panel device:

Amount	Component
1	Power Panel PP320 BIOS 10.4" VGA, touch screen
6	Retaining clips included
1	Lithium battery 3 V / 950 mAh included

Table 28: Contents of delivery - 5PP320.1043-39

## 2.8 Device 5PP320.1214-39

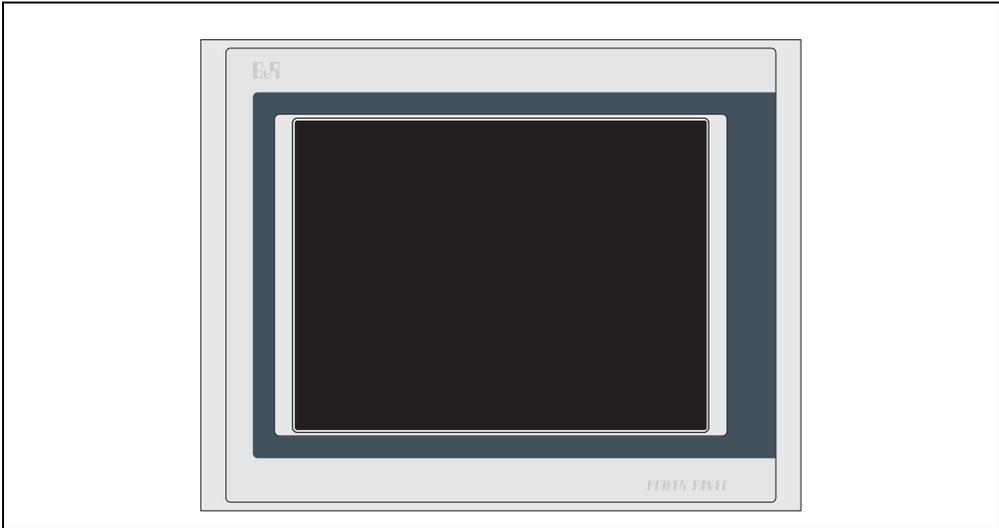


Figure 35: Front view - 5PP320.1214-39

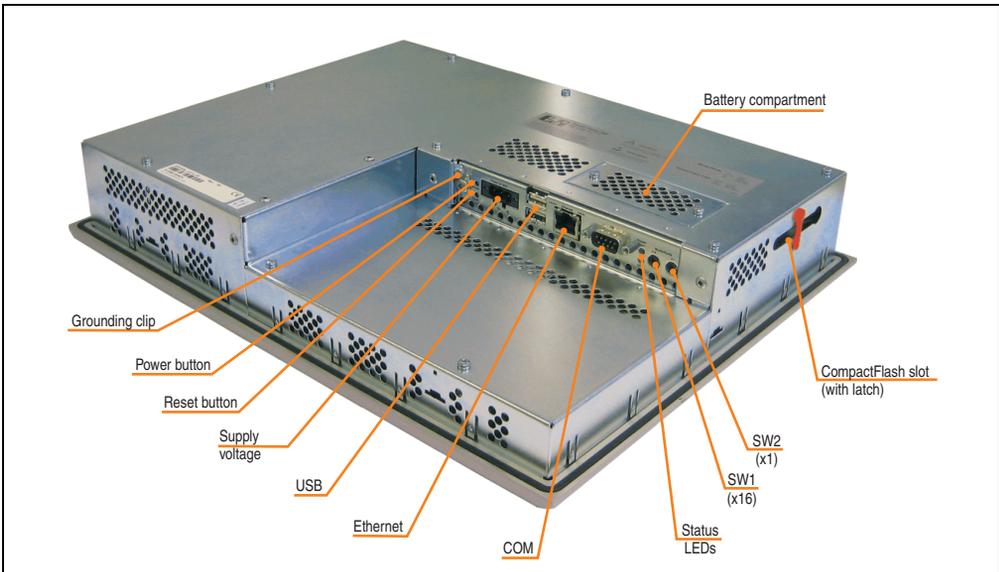


Figure 36: Rear view - 5PP320.1214-39

2.8.1 Technical data

Features	5PP320.1214-39
Boot loader / Operating system	BIOS
Processor Type Expanded command set L1 cache L2 cache Floating point unit (FPU) Cooling Method	Geode LX800 500 MHz, 32-bit x86 MMX technology, 3D Now 128 KB (64 KB L cache / 64 KB D cache) 128 KB Yes Passive (heat sink)
Flash	2 MB (for firmware)
Memory Type Quantity	DDR SDRAM 256 MB
Graphics Controller Memory	Geode LX800 8 MB shared memory (reserved by main memory)
SRAM Quantity Battery-buffered	-
Watchdog Controller	MTCX <sup>1)</sup>
Power failure logic Controller Buffer time	MTCX <sup>1)</sup> -
Real-time clock (RTC) Battery-buffered Accuracy	Yes At +25°C: typically 30 ppm (2.5 seconds) <sup>2)</sup> per day
Battery Type Removable Lifespan Backup capacitor (for changing battery) Buffer time	Renata 950 mAh Yes, accessible from the outside 4 years <sup>3)</sup> 10 minutes
Ethernet Controller Transfer rate Connection Cables NE2000-compatible	Intel 82551ER 10/100 MBit/s RJ45 twisted pair (10 Base T / 100 Base T) S/STP (category 5) -
CompactFlash Type Amount Connection	Type I 1 slot Primary IDE device
Serial interface Type UART Transfer rate Connection	RS232, modem-capable, not electrically isolated 16C550 compatible, 16-byte FIFO Max. 115 kBaud 9-pin DSUB

Table 29: Technical data - 5PP320.1214-39

## Technical data • Power Panel 300 with BIOS

Features	5PP320.1214-39
USB interface	
Type	USB 1.1, USB 2.0 <sup>4)</sup>
Amount	2
Transfer rate	Low speed (1.5 MBit/s), full speed (12 MBit/s) to high speed (480 MBit/s) <sup>4)</sup>
Connection	Type A
Current load	Max. 500 mA per connection
Reset button	Yes, accessible from the outside
Power button	Yes, accessible from the outside
LEDs	1x CF (yellow) 1x combined power (red/green) and user (yellow)
Mode/Node switch	2, 16 digits each
aPCI slots	-
Holding torque for aPCI module	
Display	
Type	Color TFT
Diagonal	12.1 in (307 mm)
Colors	262,144 colors <sup>4)</sup>
Resolution	SVGA, 800 x 600 pixels
Contrast	300:1
Viewing angle (see page 536)	
Horizontal	Direction R / direction L = 70°
Vertical	Direction U = 50° / direction D = 60°
Background lighting	
Brightness	350 cd/m <sup>2</sup>
Half-brightness time <sup>5)</sup>	50,000 hours
Screen rotation	Yes, see chapter 3 "Commissioning", section "Screen rotation" on page 394
Touch screen	
Touch screen type	Elo Accu Touch
Technology	Analog, resistive
Controller	Elo, serial, 12-bit
Degree of transmission	Up to 80% ±5%
Filter glass	-
Degree of transmission	
Coating	
Keys/LED	-
Function keys	
Soft keys	
Cursor keys	
Number block	
Other keys	
Key lifespan	
LED brightness	
<b>Electrical characteristics</b>	
Power supply	
Rated voltage	18 - 30 VDC
Rated current	0.63 A
Starting current	Max. 2.8 A
Power consumption	Typically 15 W
Electrical isolation	Yes
Bleeder resistance	0 Ω

Table 29: Technical data - 5PP320.1214-39 (Forts.)