

6. Power Panel PP41

6.1 Order Data

Model Number	Short Description
	Power Panel
4P3040.00-490 ¹⁾	Power Panel PP41, 5.7 inch QVGA black/white LC display, 8 softkeys and 32 function keys, system compatible 2003 CPU, 700 KB SRAM, 1.4 MB FlashPROM, 1 PCMCIA slot, 1 RS232 interface, 1 CAN interface: electrically isolated, network capable, 6 slots for screw-in modules, 10 digital inputs 24 VDC, 8 digital outputs 24 VDC, 0.4 A, IP65 protection (from front), 205 x 220 mm (WxH), 24 VDC, Order TB712 terminal blocks separately!
	Accessories
0AC201.9	Lithium batteries, 5 pcs., 3 V / 950 mAh, button cell
0MC111.9	PCMCIA memory card, 2MB FlashPROM
0MC211.9	PCMCIA memory card, 2MB SRAM
4A0034.00-000	Set of legend strips for 4P3040.00-490 (für 10 Geräte)
4EX101.00	Power Panel expansion for PP41, 1 insert slot for interface module inserts
7TB712.9	Terminal block, 12 pin, screw clamps
7TB712.91	Terminal block, 12 pin, cage clamps
7TB712:90-02	Terminal block, 12 pin, 20 pcs., screw clamps
7TB712:91-02	Terminal block, 12 pin, 20 pcs., cage clamps

Table 5: Order data for PP41

- 1) All parts required to install the Power Panel, including key legend sheets, are included in its delivery. The backup battery and the 4 pin terminal block for the supply are also included. Two 12 pin terminal blocks must be ordered separately.

6.2 Photo



Figure 5: PP41

6.3 Technical Data

Product ID	PP41
General Information	
C-UL-US Listed	In preparation
Standards Temperature Shock / Tests Carried Out Vibration / Tests Carried Out Emission / Tests Carried Out Immunity / Tests Carried Out	IEC61131-2 / IEC60068-2-x IEC61131-2 / IEC60068-2-27 IEC61131-2 / IEC60068-2-6 EN50081-2 / EN55022+A1 IEC61131-2 / IEC61000-4-x
Processor	
Additional I/O Processor	Handles I/O data points
Instruction Cycle Time (Average value with 70% bit and 30% analog processing)	0.4 μ s
Standard Memory User RAM System PROM User PROM	700 Kbyte SRAM 600 KByte FlashPROM 1.4 MByte FlashPROM

Table 6: Technical data for PP41

Product ID	PP41
Data Buffering Backup Battery Buffer Current Typical Maximum	Lithium battery 3 V / 950 mAh 10 μ A 200 μ A
Hardware Watchdog	Yes
Voltage Monitoring	The internal supply is monitored for overvoltage and undervoltage
Fan	No
Peripherals	
Real-Time Clock Resolution	Nonvolatile 1 sec
Status Display	LEDs
System Bus for Expansions	Expansion module EX101 Insert slot for B&R SYSTEM 2005 interface module inserts
Slots for B&R 2003 Screw-in Modules Suitable for IF Modules (without CAN) TPU Functionality Support Suitable for CAN Communication	6 Slots 1-3 Slots 4-6 Slot 1 with interface module 4IF370.7
PCMCIA slot (See "PCMCIA Slot" on page 37.) Standard Card Height Card Type Memory Size SRAM FlashPROM	1 JEIDA V 4.0 or PCMCIA Standard Release 2.0 Max. 3 mm Memory cards Max. 4 MByte Max. 4 MByte
Standard Communication Interfaces	
Application Interface IF1 Electrical Isolation Design Max. Distance Max. Baud Rate	RS232 No 9 pin DSUB plug 15 m / 19200 Baud 115.2 kBaud
Application Interface IF2 Electrical Isolation Design Max. Distance Max. Baud Rate	CAN Yes 9 pin DSUB plug 1,000 m 500 kBaud
Digital Inputs	
Number of Inputs	10
Inputs with Additional Functions (TPU)	Inputs 1-4
Input Frequency (TPU)	50 kHz (Incremental encoder operation)
Wiring	Sink
Input Voltage Minimum Nominal Maximum	18 VDC 24 VDC 30 VDC
Input Current at Nominal Voltage	Approx. 4 mA
Input Delay	Max. 1 ms (not TPU)

Table 6: Technical data for PP41 (cont.)

Power Panel • Power Panel PP41

Product ID	PP41
Electrical Isolation Input - PLC Input - Output	Yes Yes
Digital Outputs	
Amount/Type Highside Driver IC (Transistor) Potential-Free Relay Contact	8 1
Switching Voltage Minimum Nominal Maximum	18 VDC 24 VDC 30 VDC
Continuous Current per Output Module	Max. 0.4 A Max. 3.2 A
Load for Potential-Free Relay Contact	Max. 0.5 A
Leakage Current when Switched Off	12 µA
Overload Protection	Yes
Switching On after Overload Cutoff	Automatically within seconds (depends on the panel temperature)
Continuous Short Circuit Current	Typ. 4 A
Internal Protective Circuit	Yes
Braking Voltage when Switching Off Inductive Loads	47 V
Switching Delay Log. 0 - Log. 1 Log. 1 - Log. 0	Max. 450 µs Max. 450 µs
Electrical Isolation Output - PLC Output - Input	Yes Yes
HMI	
Display Type	LCD B/W
Resolution	QVGA (320 x 240 pixels)
Display Diagonal	5.7" (145 mm)
Background Lighting Brightness Lifespan ¹⁾ ²⁾	150 cd/m ² 20000 h
Reading Angle	Approx. 35°
Keyboard Number of Keys Design Function Keys System Keys	40 membrane keys Covered keypad with metallic snap-action disks 16, with LEDs, labeled with legend sheets 24 (number block, cursor block, control keys)
Front	Multi-layered front with insertion slots for key legends
Protection According to IEC 60529	IP65 (from front)

Table 6: Technical data for PP41 (cont.)

Product ID	PP41
Power Supply	
Input Voltage Minimum Nominal Maximum	18 VDC 24 VDC 30 VDC
Power Consumption	Max. 20 W
Output Power for Screw-in Modules and PCMCIA Interface	11 W
Operational Conditions	
Installation	Vertical, $\pm 45^\circ$
Altitude	Max. 3,000 m
Environmental Temperature during Operation ³⁾	0 to 50 °C
Relative Humidity during Operation	10 to 90% (non-condensing)
Storage Conditions	
Storage Temperature	-20 to 60 °C
Relative Humidity for Storage	5 to 95 % (non-condensing)
Mechanical Characteristics	
Weight	Approx. 1.95 kg
Dimensions Width Height Depth	205 mm 220 mm 110.4 mm

Table 6: Technical data for PP41 (cont.)

- 1) 25 °C environmental temperature.
 2) Brightness reduced to 50 %.
 3) Depending on installation.

6.4 Images

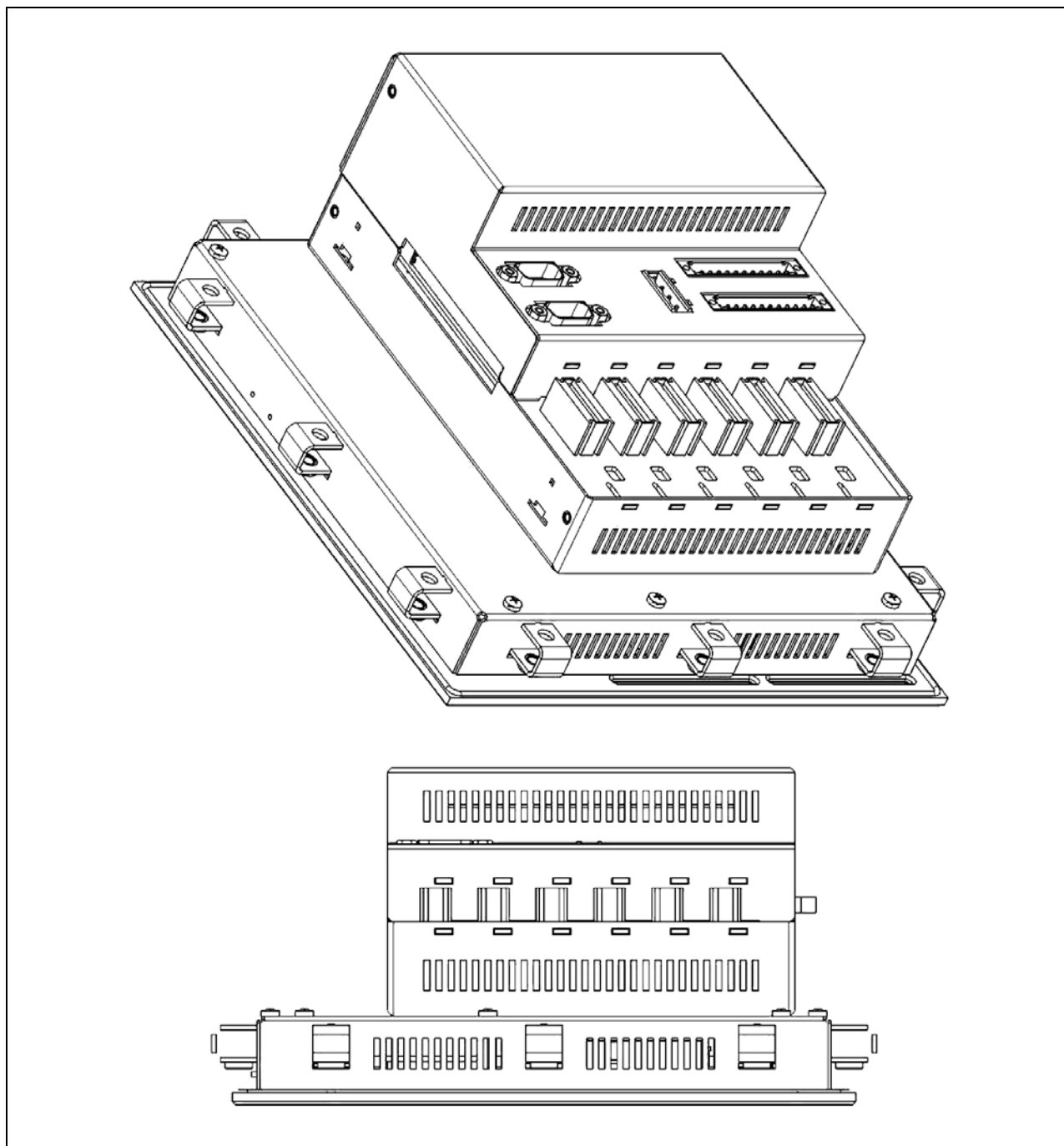


Figure 6: PP41

6.5 Dimensions

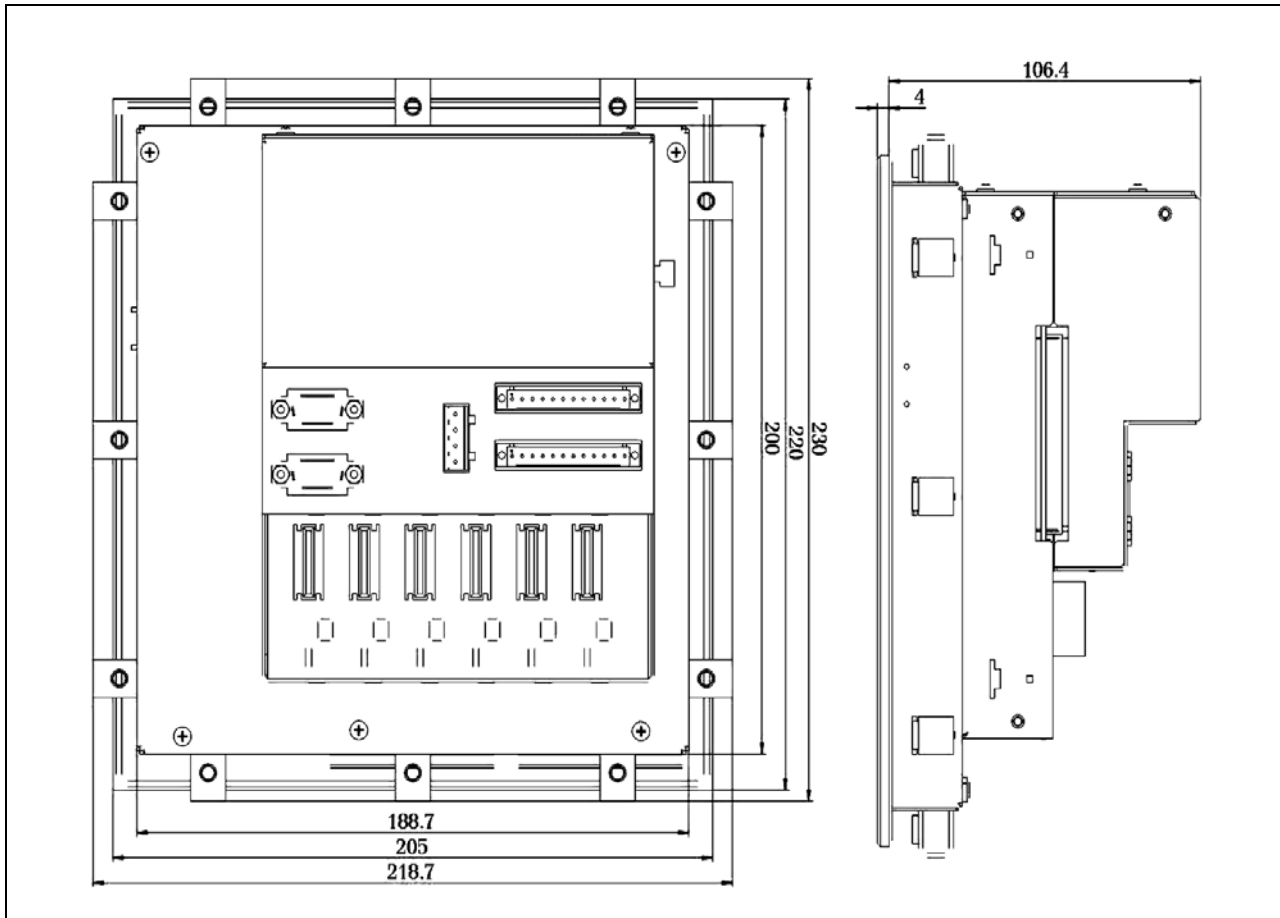


Figure 7: PP41 dimensions

7. Power Panel Expansion EX101 Module

7.1 General Information

The expansion module EX101 can be installed on the Power Panel PP41. B&R SYSTEMS 2005 interface module inserts can be operated in the EX101 insert slot.

A description for interface module inserts can be found in the "B&R SYSTEM 2005 User's Manual" (model no.: MASYS22005-E).

7.2 Order Data

Model Number	Short Description
4EX101.00	Power Panel expansion for PP41, 1 insert slot for interface module inserts

Table 7: Order data for EX101