

4.7 Power Panel T50 - 15.6" variants

4.7.1 Order data

Order number	Short description	Figure
	Power Panel T50	
6PPT50.156B-10B	Power Panel T50, 15.6", glass front, 1x Gigabit Ethernet. CPU and memory: 800 MHz dual core (ARM Cortex-A9), 1 GB RAM, 512 MB onboard flash drive. Display and touch screen: 15.6", 1366 x 768 (HD) resolution, projected capacitive touch screen, multi-touch support, glass front with black frame, landscape and portrait format configurable with software. Interfaces: 1x Ethernet 10/100/1000 Mbit/s, 2x USB 2.0. Client software: Integrated service page, VNC client, embedded web browser.	
6PPT50.156B-10A	Power Panel T50, 15.6", glass front (anti-glare), 1x Gigabit Ethernet. CPU and memory: 800 MHz dual core (ARM Cortex-A9), 1 GB RAM, 512 MB onboard flash drive. Display and touch screen: 15.6", 1366 x 768 (HD) resolution, projected capacitive touch screen, multi-touch support, anti-glare glass front with black frame, landscape and portrait format configurable with software. Interfaces: 1x Ethernet 10/100/1000 Mbit/s, 2x USB 2.0. Client software: Integrated service page, VNC client, embedded web browser.	
6PPT50.156B-16B	Power Panel T50, 15.6", glass front, 2x Gigabit Ethernet (integrated switch). CPU and memory: 800 MHz dual core (ARM Cortex-A9), 1 GB RAM, 512 MB onboard flash drive. Display and touch screen: 15.6", 1366 x 768 (HD) resolution, projected capacitive touch screen, multi-touch support, glass front with black frame, landscape and portrait format configurable with software. Interfaces: 2x Ethernet 10/100/1000 Mbit/s (integrated switch), 2x USB 2.0. Client software: Integrated service page, VNC client, embedded web browser.	
6PPT50.156B-16A	Power Panel T50, 15.6", glass front (anti-glare), 2x Gigabit Ethernet (integrated switch). CPU and memory: 800 MHz dual core (ARM Cortex-A9), 1 GB RAM, 512 MB onboard flash drive. Display and touch screen: 15.6", 1366 x 768 (HD) resolution, projected capacitive touch screen, multi-touch support, anti-glare glass front with black frame, landscape and portrait format configurable with software. Interfaces: 2x Ethernet 10/100/1000 Mbit/s (integrated switch), 2x USB 2.0. Client software: Integrated service page, VNC client, embedded web browser.	
	Included in delivery	
	Terminal blocks	
0TB6102.2110-01	Accessory terminal block, 2-pin (3.81), cage clamp terminal block 1.5 mm ²	
	Optional accessories	
	Other	
6ACCRPP2.0001-000	Installation kit for Power Panel T-Series variants: 9x retaining clips with torque limiting, 1x 2-pin cage clamp terminal block, 1x 2-pin screw clamp terminal block. See the accessories of the Power Panel variant in the corresponding data sheet or on the website.	
	Terminal blocks	
0TB6102.2010-01	Accessory terminal block, 2-pin (3.81), screw clamp terminal block 1.5 mm ²	
	USB accessories	
5MMUSB.2048-01	USB 2.0 flash drive 2048 MB B&R	
5MMUSB.4096-01	USB 2.0 flash drive 4096 MB B&R	

Table: Power Panel T50 - 15.6" variants - Order data

4.7.2 Content of delivery

Name	Quantity	Description
0TB6102.2110-01	1	Accessory terminal block, 2-pin (3.81), cage clamp terminal block 1.5 mm ²
-	1	Accessory set 9x retaining clip for securing the panel in the installation cutout
-	2	Cable clamps for securing / strain relief of connecting cables.

4.7.3 Technical data

Order number	6PPT50.156B-10B	6PPT50.156B-10A	6PPT50.156B-16B	6PPT50.156B-16A
General information				
LEDs	Ethernet (Link, Activity, Speed)			
B&R ID code	0xF1FB	0xF1FD	0xF1FC	0xF1FE
Cooling	Passive			
Power button	No			
Reset button	No			
Buzzer	Yes			
Support				
mapp View	Yes ¹⁾			
Certifications				
CE	Yes			
UKCA	Yes			
UL	cULus E115267 Industrial control equipment			
DNV	Temperature: B (0 - 55°C) Humidity: B (up to 100%) Vibration: A (0.7 g) EMC: B (bridge and open deck)			
LR	ENV1			
ABS	Yes			
BV	EC31B Temperature: 5 - 55°C Vibration: 0.7 g EMC: Bridge and open deck			
EAC	Yes			
Controller				
Operating system	PPT50 system			
Real-time clock	No			
Processor				
Type	ARM Cortex-A9, dual core			
Clock frequency	800 MHz			
L1 cache	64 kB			
L2 cache	512 kB			
Flash	512 MB			
Mode/Node switches	No			
DRAM	1 GB (64-bit bandwidth)			
Display				
Type	TFT color			
Diagonal	15.6"			
Colors	16.7 million (RGB, 8 bits per channel)			
Resolution	HD, 1366 x 768 pixels			
Contrast	Typ. 1000:1			
Viewing angles				
Horizontal	Direction L / Direction R = Typ. 85°			
Vertical	Direction U / Direction D = Typ. 85°			
Backlight				
Type	LED			
Brightness	Typ. 400 cd/m²			
Half-brightness time ²⁾	70,000 h			
Touch screen				
Type	Multi-touch			
Technology	PCT (projected capacitive touch)			
Surface	Glass, chemical-ly hardened (6H)	Glass, chemically hard-ened (6H), anti-glare	Glass, chemical-ly hardened (6H)	Glass, chemically hard-ened (6H), anti-glare
Screen rotation	Yes			
Interfaces				
Interface				
Connection	ETH1 (IF1)		ETH1 (IF1) and ETH2 (IF2)	
Type	Ethernet			
Variant	Shielded RJ45		Shielded RJ45 (integrated 2-port switch)	
Line length	Max. 100 m between 2 stations (segment length)			
Max. transfer rate	10/100/1000 Mbit/s			
Transfer				
Physical layer	10BASE-T / 100BASE-TX / 1000BASE-T			
Half-duplex	Yes			
Full-duplex	Yes			
Autonegotiation	Yes			
Auto-MDI/MDIX	Yes			

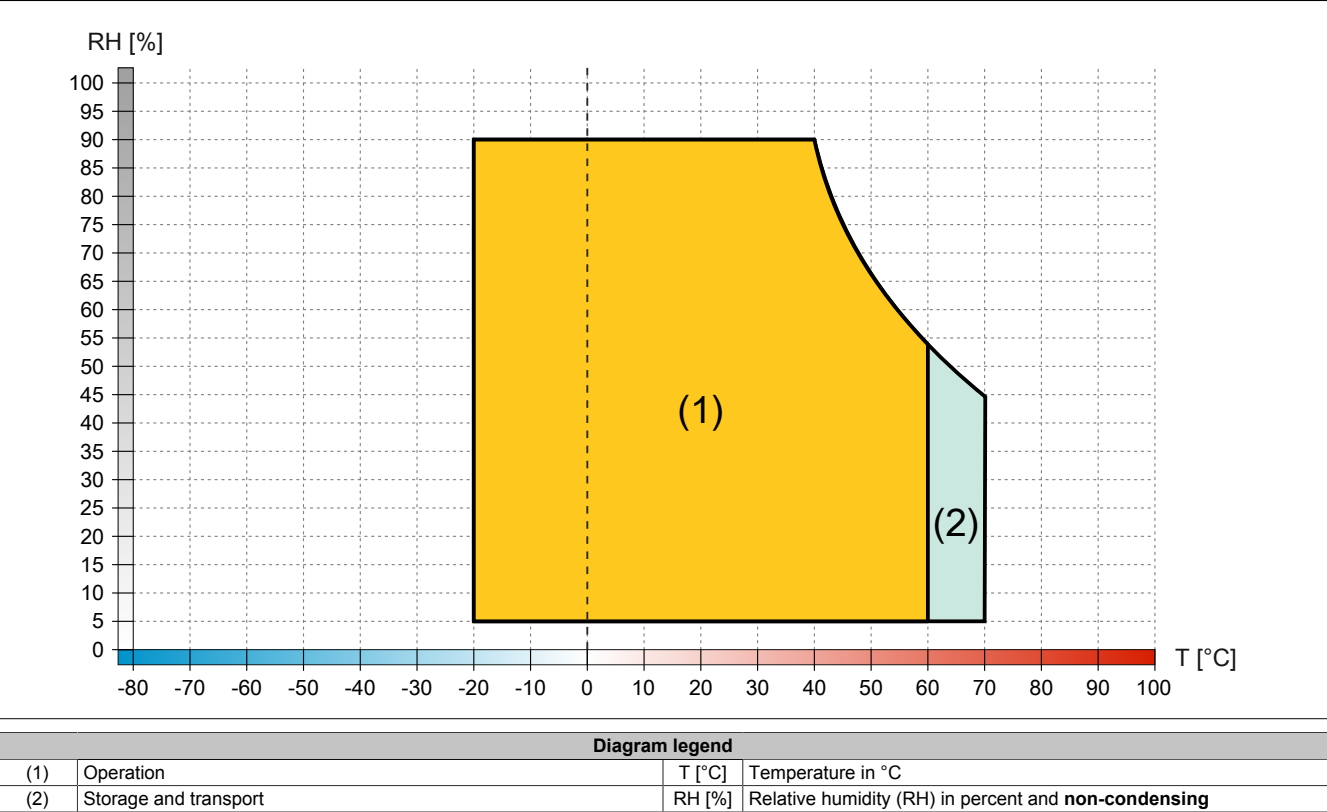
Table: Power Panel T50 - 15.6" variants - Technical data

Order number	6PPT50.156B-10B	6PPT50.156B-10A	6PPT50.156B-16B	6PPT50.156B-16A
Interface IF3				
Type			USB 2.0	
Variant			Type A	
Current-carrying capacity			0.5 A	
Interface IF4				
Type			USB 2.0	
Variant			Type A	
Current-carrying capacity			0.5 A	
Electrical properties				
Nominal voltage			24 VDC	
Power consumption			Typ. 15.7 W ³⁾	
Max. power consumption			22.1 W ³⁾	
Fuse			3 A slow-blow, internal ⁴⁾	
Voltage range			24 VDC (-25 % / +30 %)	
Reverse polarity protection			Yes	
Electrical isolation		Ethernet (ETH1/IF1) to other interfaces, power supply and ground		Ethernet (ETH1/IF1 and EHT2/IF2) to other interfaces, power supply and ground
Operating conditions				
Permissible mounting orientations				
Standard mounting orientation			Vertical	
Inclination			±25°	
Rotation			In 90° increments (portrait/landscape)	
All other mounting orientations			With derating: Max. operating temperature minus 5°C	
Installation elevation above sea level				
0 to 2000 m			No limitation	
>2000 m			Reduction of ambient temperature by 0.5°C per 100 m	
Degree of protection per EN 60529			Front: IP65, Back: IP20	
Ambient conditions				
Temperature				
Operation			-20 to 60°C	
Storage			-20 to 70°C	
Transport			-20 to 70°C	
Relative humidity			See temperature/humidity diagram.	
Mechanical properties				
Front				
Design			Black	
Dimensions				
Width			414 mm	
Height			258.5 mm	
Depth			41.7 mm	
Weight			3.1 kg	

Table: Power Panel T50 - 15.6" variants - Technical data

- 1) Due to the power of the Power Panel, the following widget classes are fully supported: A, B.
- 2) At 25°C ambient temperature. Reducing the brightness by 50% can typically result in an approximately 50% increase in the half-brightness time.
- 3) Additional power consumption per USB interface: Max. 2.75 W (depending on the connected USB device)
- 4) The internal fuse cannot be replaced by the user or reset.

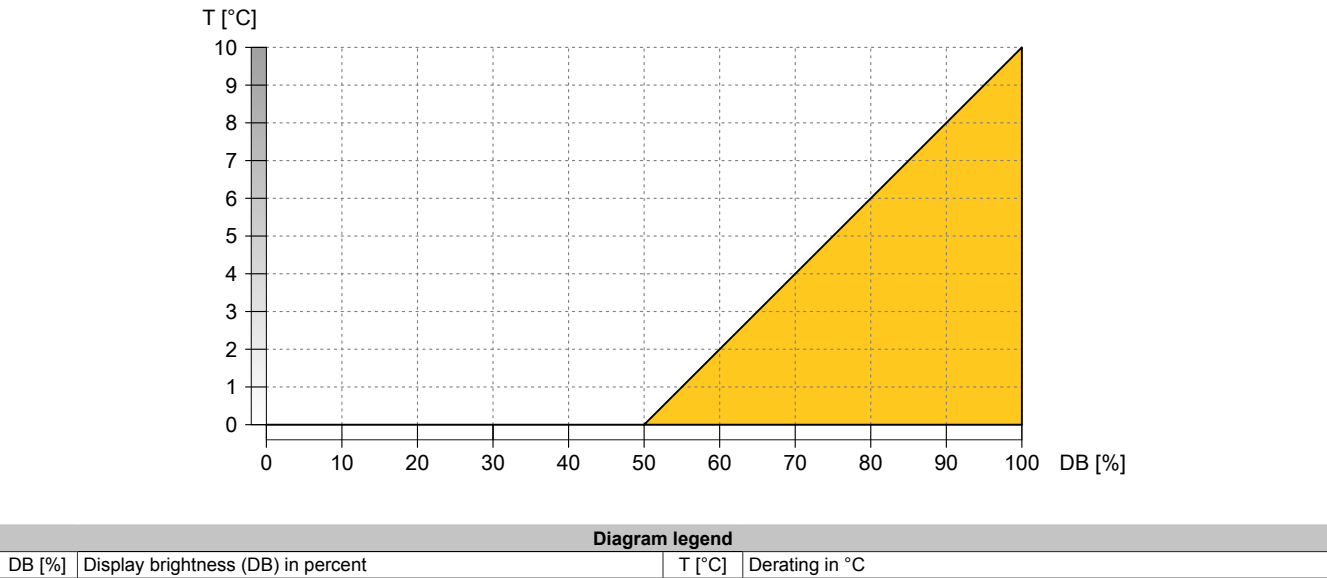
4.7.4 Temperature/Humidity diagram



4.7.5 Derating of the display brightness

Display brightness of 15.6" variants

Operating the display at the maximum ambient temperature (see technical data) and maximum display brightness results in impairments in the display. The following derating of the display brightness must therefore be observed:



Information:

The display brightness can be derated in two ways:

- 1) Reducing the display brightness according to the max. ambient temperature.
- 2) Observing the maximum permissible ambient temperature for the selected display brightness.

Examples illustrating the two derating possibilities

Reduction of the display brightness

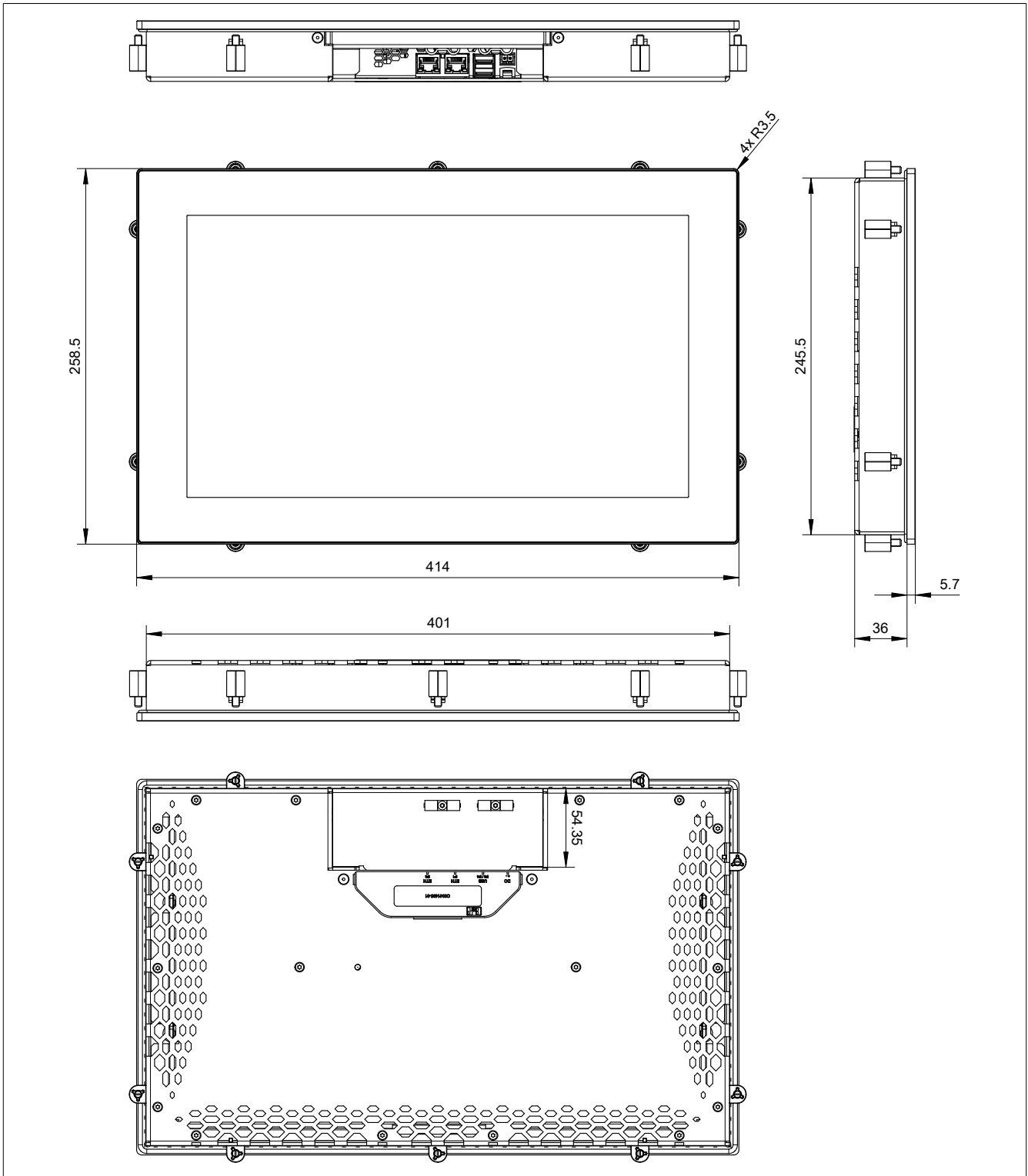
Example 1: If the Power Panel is operated at the maximum permitted ambient temperature, the display brightness must be reduced to 50%.

Example 2: If the ambient temperature is kept 5°C below the maximum permissible ambient temperature using appropriate measures, the display brightness must be reduced to at least 75%.

Reduction of the maximum permissible ambient temperature

Example 3: If the Power Panel should be operated continuously with a display brightness of 100%, appropriate measures must be taken to keep the ambient temperature at least 10°C below the maximum permitted ambient temperature.

4.7.6 Dimensions



Device description

1	9x retaining clips with torque limiting
2	Anodized front plate E6/C8 (black)
3	Powder-coated cover, RAL 9005, fine structure, flat

Dimensions of the installation cutout for this Power Panel variant: 403 ±1 mm x 247.5 ±1 mm

See also "[Requirements for the installation cutout](#)" on page 46.