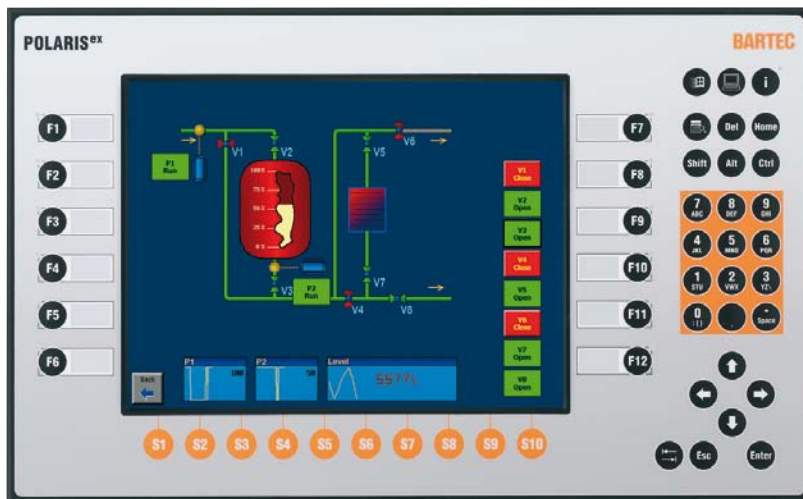


Polaris - Professional DATASHEET

JUNHO 2013

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POLARIS Panel PC 10.4"

Features

- LED technology
- Higher screen resolution
- Touchscreen
- Processor 1.6 GHz
- Remote desktop solution
- Presentation of HTML pages
- Direct connection in hazardous areas
- Option of Windows 7®
- Integrated keyboard customisation

Description

The POLARIS Panel PC 10.4" is an innovative further development of the POLARIS PROFESSIONAL series.

High-resolution displays with LED technology and touchscreen for intuitive as well as comfortable operation are available now in the standard variant.

State-of-the-art LED display technology ensures the optimum contrast even with a large viewing angle.

This Panel PC has been equipped as standard with the latest generation processor, the Intel® Atom™ with 1.6 GHz. The pre-installed operating system is Windows® XP and Windows 7® is optionally possible. Thanks to the integrated keyboard customisation for Windows®, Siemens WinCC flexible®, RS View® or BMS-Graf-pro, the POLARIS Touch Panel can be used for all visualisation tasks.

They can be connected to the control or the process control system through Ethernet, PROFIBUS-DP or various serial COM interfaces.

Of course, here too the user can work with the latest BMS-Graf-Pro Version 7, allowing for example the transfer of projects through Ethernet, the use of graphics lists and the integrated user administration.

Wired electrical connections are facilitated by integrated terminal compartments.

The front-panel fitting design ensures easy installation. On request, the devices are also available as ready-made system solutions in stainless steel enclosures for wall, floor or ceiling mounting.

They also feature an intrinsically safe USB interface for a USB Ex i flash drive. Intrinsically safe input devices can be connected also.

➔ Explosion protection

Ex protection type

ATEX II 2G Ex db eb qb [ib op pr] IIC T4
 II 2D Ex tb IIIC T120°C IP 6X

Certification

IBExU 05 ATEX 1117 X

IECEx

Ex db eb qb [ib] IIC T4
Ex tb IIIC T120°C IP 6X

Certification

IECEx IBE 11.0007 X

Further approvals

INMETRO, GOST-R

Protection class

IP 65 (front)
IP 54 (back)

➔ Technical data

Construction

Front-panel fitting

Display

- 10.4" TFT graphic display
- 262,144 colours
- Resolution SVGA 800 x 600 pixels
- Brightness 400 cd/m²
- Visible surface approx. 211 x 158 mm
- Contrast 700:1
- Touchscreen (resistive)

Background lighting

- LED technology
- Service life approx. 50,000 hours (at +25 °C)

Computer capacity

Intel® Atom™ N270, 1,6 GHz,
2 GB RAM/100 GB HDD

Operating system

Windows® XP Professional or
Windows 7® Ultimate

Keyboard (short-stroke keys)

- Alphanumeric key block
- 4 cursor keys
- 10 special keys
- 12 function keys able to be labelled with LEDs

Interfaces (basic version)

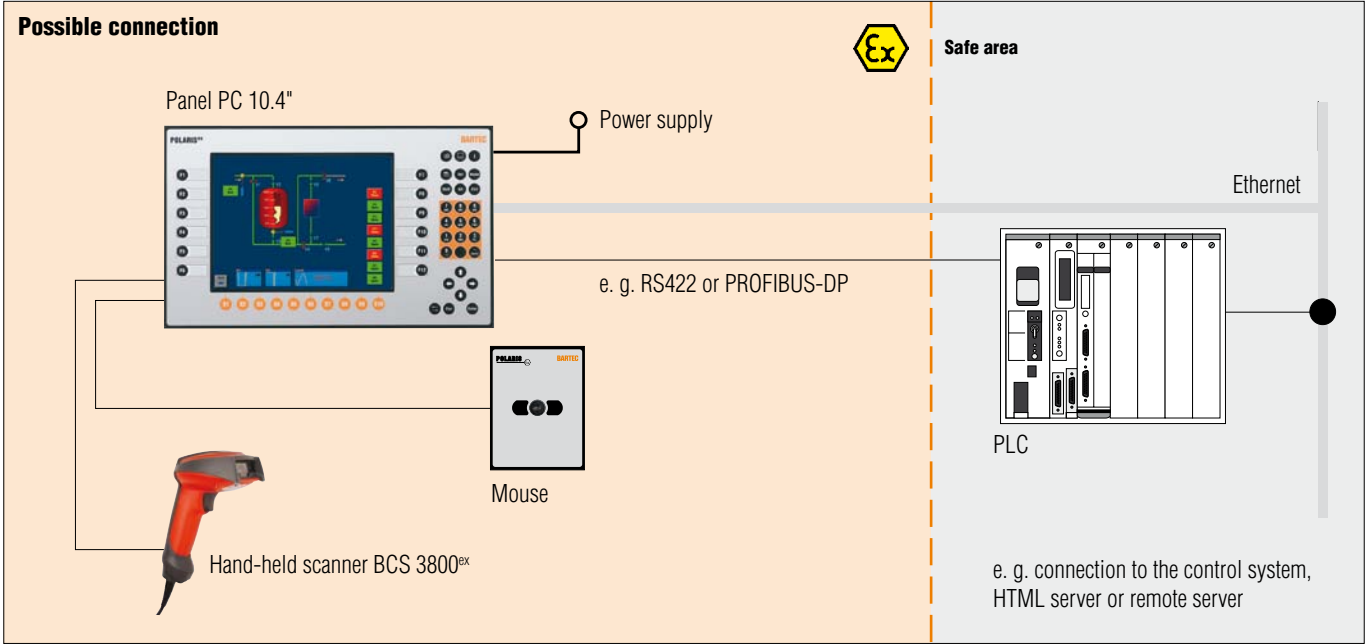
- 1 x Ex e Ethernet 100/10BaseT (option of optical fibres)
- 1 x Ex e RS422
- 1 x Ex i USB for Ex i memory stick
- 1 x Ex i PS/2 for intrinsically safe mouse

Optional interfaces

1 x Ex i Supply module for hand-held scanners

Dimensions (width x height x depth)

400 mm x 246 mm x approx. 130 mm



Wall cut-out
386 mm x 226 mm + 0.5 mm

Weight
approx. 14 kg

Power supply
DC 24 V ± 10 %

Max. power consumption
 $P_{max} < 30 \text{ W}$

Permissible ambient temperatures
Storage -20 °C to +50 °C
Operation 0 °C to +50 °C

Variant
Operation -20 °C to +50 °C
on request (without external heating)

Relative air humidity
5 % to 95 % non-condensing

Vibration
0.7 G/1 mm; 5 Hz to 500 Hz pulse in all 3 axes

Shock
15 G/11 ms pulse in all 3 axes

Material
Front Polyester foil on anodised aluminium plate (conditionally UV-resistant)
Back bichromated sheet steel

Selection chart

Version	Interfaces	Code no.
POLARIS PROFESSIONAL Panel PC 10,4"	RS422	00
	BARTEC PROFIBUS-DP	02
	RS422, supply module for hand-held scanners	04
	BARTEC PROFIBUS-DP, supply module for hand-held scanners	06
	RS232	09
	TTY	11
	RS232, supply module for hand-held scanners	13
	TTY, supply module for hand-held scanners	15
	BARTEC PROFIBUS-DP, Ex d-USB	33
	USB Ex e/RS422	37
	Further Interface combinations on request	XX

➔ **Complete order no. 17-71V1-90** / 000

Please insert correct code.
Technical data subject to change without notice.
You will find the accessoires with order details on the accessories pages.

Operating system	Code no.
Windows® Professional	P
Windows 7® Ultimate	U



POLARIS Panel PC 12,1"

Features

- LED technology
- Higher screen resolution
- Touchscreen
- Processor 1.6 GHz
- Remote desktop solution
- Presentation of HTML pages
- Direct connection in hazardous areas
- Option of Windows 7®
- Integrated keyboard customisation

Description

The POLARIS Panel PC 12.1" is an innovative further development of the POLARIS PROFESSIONAL Serie.

High-resolution displays with LED technology and touchscreen for intuitive as well as comfortable operation are available now in the standard variant.

State-of-the-art LED display technology ensures the optimum contrast even with a large viewing angle.

This Panel PC has been equipped as standard with the latest generation processor, the Intel® Atom™ with 1.6 GHz. The pre-installed operating system is Windows® XP and Windows 7® is optionally possible. Thanks to the integrated keyboard customisation for Windows®, Siemens WinCC flexible®, RS View® or BMS-Graf-pro, the POLARIS Touch Panel can be used for all visualisation tasks. They can be connected to the control or the process control system through Ethernet, PROFIBUS-DP or various serial COM interfaces.

Of course, here too the user can work with the latest BMS-Graf-Pro Version 7, allowing for example the transfer of projects through Ethernet, the use of graphics lists and the integrated user administration.

Wired electrical connections are facilitated by integrated terminal compartments.

The front-panel fitting design ensures easy installation. On request, the devices are also available as ready-made system solutions in stainless steel enclosures for wall, floor or ceiling mounting.

They also feature an intrinsically safe USB interface for a USB Ex i flash drive. Intrinsically safe input devices can be connected also.

Explosion protection

Ex protection type

ATEX Ex II 2G Ex db eb qb [ib op pr] IIC T4
Ex II 2D Ex tb IIIC T120°C IP 6X

Certification

IBEXU 05 ATEX 1117 X

IECEx

Ex db eb qb [ib] IIC T4
Ex tb IIIC T120°C IP 6X

Certification

IECEx IBE 11.0007 X

Further approvals

INMETRO, GOST-R

Protection class

IP 65 (front)
IP 54 (back)

Technical data

Construction

Front-panel fitting

Display

- 12.1" TFT graphic display
- 262,144 colours
- Resolution XGA 1024 x 768 pixels
- Brightness 500 cd/m²
- Visible surface approx. 246 x 184 mm
- Contrast 700:1
- Touchscreen (resistive)

Background lighting

- LED technology
- Service life approx. 50,000 hours (at +25 °C)

Computer capacity

Intel® Atom™ N270, 1,6 GHz,
2 GB RAM/100 GB HDD

Operating system

Windows® XP Professional or
Windows 7® Ultimate

Keyboard (short-stroke keys)

- Alphanumeric key block
- 4 cursor keys
- 12 cursor keys
- 16 function keys able to be labelled with LEDs

Interfaces (basic version)

- 1 x Ex e Ethernet 100/10BaseT (option of optical fibres)
- 1 x Ex e RS422
- 1 x Ex i USB for Ex i memory stick
- 1 x Ex i PS/2 for intrinsically safe mouse

Optional interfaces

1 x Ex i Supply module for hand-held scanners

Dimensions (width x height x depth)

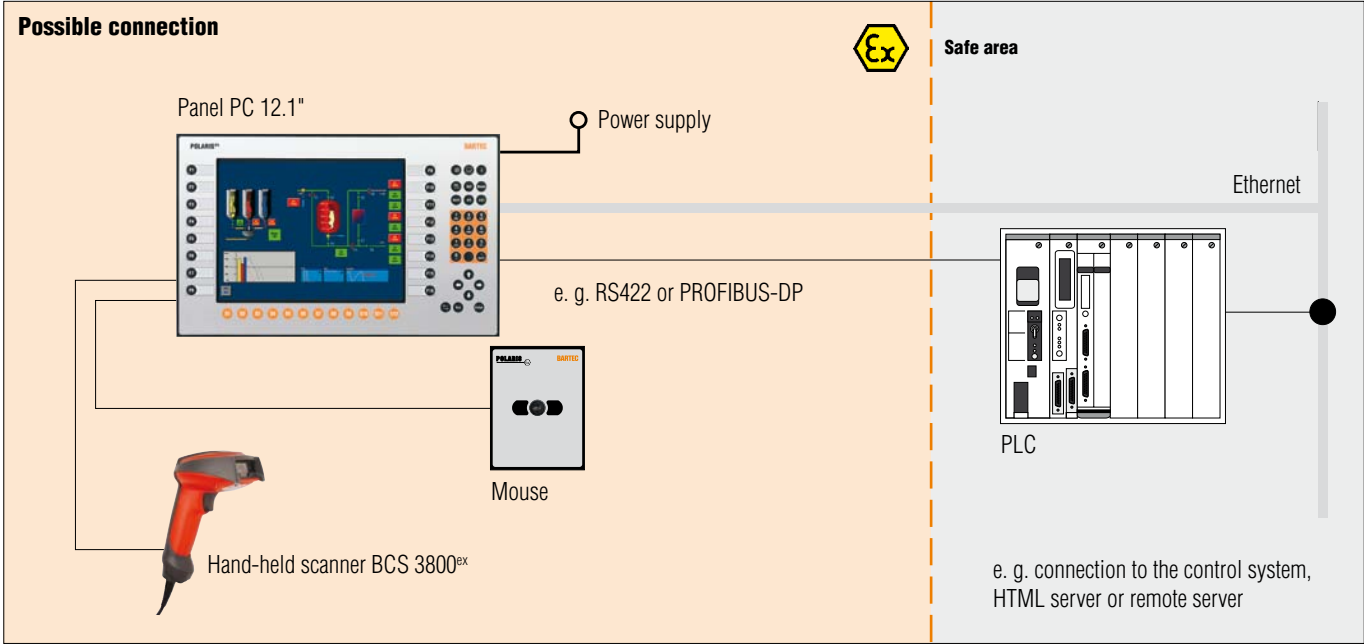
440 mm x 275 mm x approx. 130 mm

Wall cut-out

425 mm x 255 mm + 0.5 mm

Weight

approx. 18 kg



Supply voltage
DC 24 V ± 10 %

Max. power consumption
 $P_{max.} < 35 \text{ W}$

Permissible ambient temperatures
Storage -20 °C to +50 °C
Operation 0 °C to +50 °C

Variant
Operation -20 °C to +50 °C
on request (without external heating)

Relative air humidity
5 % to 95 % non-condensing

Vibration
0.7 G/1 mm; 5 Hz to 500 Hz pulse in all 3 axes

Shock
15 G/11 ms pulse in all 3 axes

Material
Front Polyester foil on anodised aluminium plate (conditionally UV-resistant)
Back bichromated sheet steel

Selection chart		
Version	Interfaces	Code no.
POLARIS PROFESSIONAL Panel PC 12,1"	RS422	00
	BARTEC PROFIBUS-DP	02
	RS422, supply module for hand-held scanners	04
	BARTEC PROFIBUS-DP, supply module for hand-held scanners	06
	Siemens PROFIBUS-DP/MPI interfaces	08
	RS232	09
	TTY	11
	RS232, supply module for hand-held scanners	13
	TTY, supply module for hand-held scanners	15
	BARTEC PROFIBUS-DP, Ex d-USB	33
	USB Ex e/RS422	37
	Further Interface combinations on request	XX

➔ **Complete order no. 17-71V1-80** / 000

Please insert correct code.
Technical data subject to change without notice.
You will find the accessories with order details on the accessories pages.

Operating system	Code no.
Windows® Professional	P
Windows 7® Ultimate	U



POLARIS Panel PC 15" Professional

Features

- Ethernet interface
- Easy front panel fitting
- Intrinsically safe USB interface
- Graphics-capable TFT colour display
- Direct linkage in explosive areas
- Optional touchscreen
- Optional WLAN
- Siemens PROFIBUS-DP/MPI interface

Description

The Panel PC 15" Professional is based on a fast Intel® Pentium® M processor.

The Ethernet interface can be used to connect individual computers or network devices, e. g. a printer, to an existing local network (LAN) (WLAN is also an optional possibility) or local networks can be set up completely wirelessly.

This facilitates a high-performance visualization and operation of the processes directly on site.

The wired electrical connections are realized via a terminal compartment of the "e" type of protection (increased safety).

The state-of-the-art display technology guarantees an optimum contrast, even with large viewing angle. The front panel fitting assures easy installation. Upon request, the devices are also available as turn-key system solutions in a stainless steel enclosure as wall, floor or ceiling mounting versions.

An intrinsically safe USB interface is available for a USB Ex i memory stick.

Intrinsically safe input devices can be connected also. The optional (intrinsically safe) touchscreen offers the optimum in operating comfort.

As a standard, Windows® XP Professional is pre-installed on the Panel PCs, supporting the installation of numerous software packages such as customer-specific software or other conventional standard visualization software.

Of course, here too the operator can also work with the BARTEC "BMS-Graf-pro" programming package (Version 7.xxx or newer).

The BARTEC PROFIBUS-DP interface can only be used in connection with the BARTEC "BMS-Graf-pro" software.

➤ Explosion protection

Ex protection type

ATEX Ex II 2G Ex db eb qb [ib op pr] IIC T4
Ex II 2D Ex tb IIIC T120°C IP 6X

Certification

IBExU 05 ATEX 1117 X

IECEx

Ex db eb qb [ib] IIC T4
Ex tb IIIC T120°C IP 6X

Certification

IECEx IBE 11.0007 X

Further approvals

INMETRO, GOST-R

Protection class

IP 65 (front side)
IP 54 (rear side)

➤ Technical data

Construction

Front panel fitting

Display

- 15" graphics-capable TFT colour display
- 262,144 colours
- XGA resolution, 1024 x 768 pixels
- Brightness up to 350 cd/m²
- Visible area approx. 304 x 228 mm
- Contrast 400:1
- Antireflection coating glass pane
- Optional touchscreen (resistive)

Backlight illumination

- CFL technology
- Service life approx. 50,000 hours (at +25 °C)

Computer capacity

- Pentium® M Processor, 1.1 GHz
- 1 GB RAM, 40 GB memory

Operating system

Windows® XP Professional (pre-installed)

Open platform for customer-specific visualization software, e. g. ProTool, WIN CC flexible, etc.

Interface (Basic version)

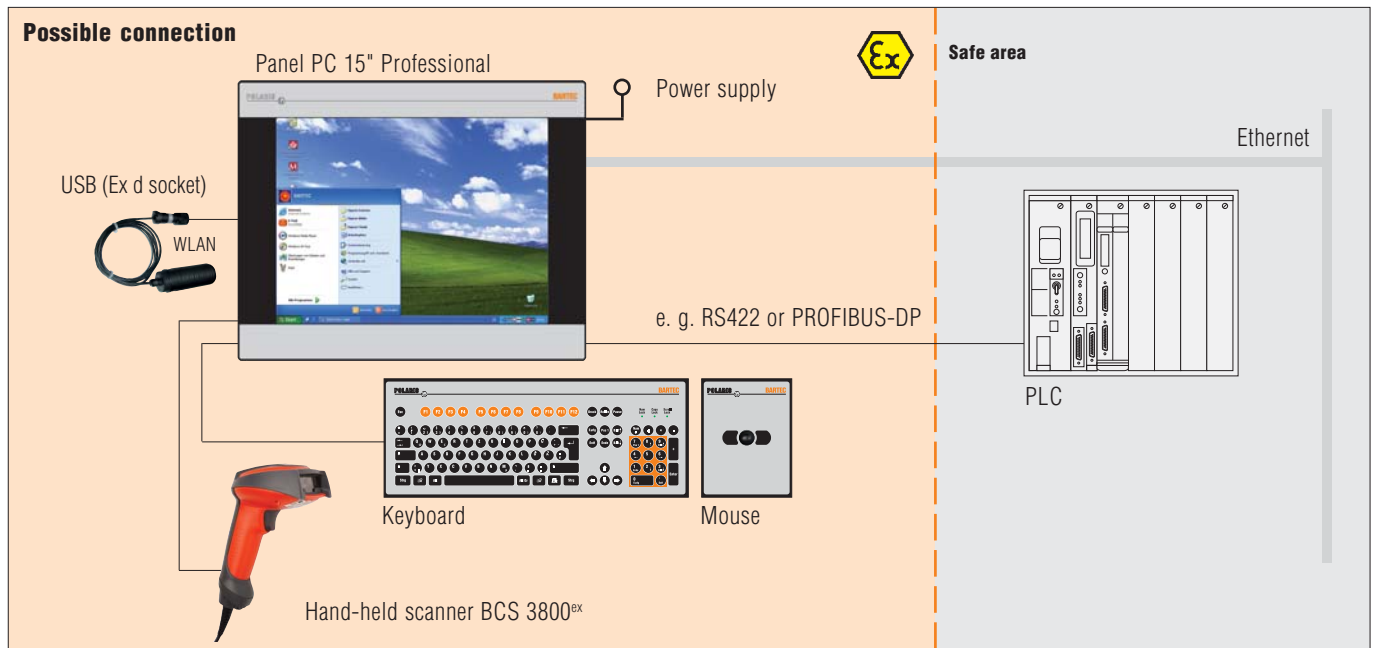
- 1 x Ex e Ethernet 100/10BaseT (option of optical fibres)
- 1 x Ex e RS422
- 1 x Ex i USB for Ex i memory stick
- 2 x Ex i PS/2 for intrinsically safe keyboard and mouse

Optional interface modules

- 1 x Ex i Supply module for hand-held scanner
- 1 x Ex d USB direct connection (via Ex d socket) e. g. connection through WLAN

Dimensions (width x height x depth)

411 mm x 332 mm x approx. 135 mm



Wall cut-out

394.5 mm x 315.5 mm + 0.5 mm

Weight

approx. 23 kg

Power supply

AC 90 up to 253 V, 50 up to 60 Hz

DC 24 V \pm 10 % on request

Max. power consumption

$P_{\text{max.}} < 70 \text{ W}$

Admissible ambient temperature

Storage -20 °C to +50 °C

Operation 0 °C to +50 °C

System solution with heating on request.

Humidity

5 to 95 % non-condensing

Vibration

0.7 G/1 mm; 5 Hz - 500 Hz pulse in

all 3 axes

Shock

15 G, 11 ms pulse in all 3 axes

Material

Front Polyester foil on anodised aluminium plate

(conditionally UV-resistant)

Rear panel galvanised sheet steel, bichromated



POLARIS Panel PC 15" Sunlight Professional

Features

- Sunlight readable display
- Ethernet interface
- Easy front panel fitting
- Intrinsically safe USB interface
- Direct linkage in explosive areas
- Optional touchscreen
- Optional WLAN

Description

The POLARIS Panel PC 15" Sunlight Professional is enhanced with industrial LED backlighting, which reaches a very high brightness of 1,000 cd/m².

Combined with the special characteristics of the front polarizer, this allows excellent readability even under strong sunlight and it is therefore ideal for use outdoors.

The Panel PC 15" Sunlight is based on a fast Intel® Atom™ Processor.

The Ethernet interface can be used to connect individual computers or network devices, e. g. a printer, to an existing local network (LAN) (WLAN is also an optional possibility) or local networks can be set up completely wirelessly.

This facilitates a high-performance visualization and operation of the processes directly on site.

The wired electrical connections are realized via a terminal compartment of the "e" type of protection (increased safety).

The state-of-the-art display technology guarantees an optimum contrast, even with large viewing angle. The front panel fitting assures easy installation.

Upon request, the devices are also available as turn-key system solutions in a stainless steel enclosure as wall, floor or ceiling mounting versions.

An intrinsically safe USB interface is available for a USB Ex i memory stick.

Intrinsically safe input devices can be connected also. The optional (intrinsically safe) touchscreen offers the optimum in operating comfort.

As a standard, Windows XP Professional® is pre-installed on the Panel PC 15" Sunlight, supporting the installation of numerous software packages such as customer-specific software or other conventional standard visualization software.

Of course, here too the operator can also work with the BARTEC "BMS-Graf-pro" programming package (Version 7.xxx or newer).

The BARTEC PROFIBUS-DP interface can only be used in connection with the BARTEC "BMS-Graf-pro" software.

➔ Explosion protection

Ex protection type

ATEX Ex II 2G Ex db eb qb [ib op pr] IIC T4
Ex II 2D Ex tb IIIC T120°C IP 6X

Certification

IBExU 05 ATEX 1117 X

IECEx Ex db eb qb [ib] IIC T4
Ex tb IIIC T120°C IP 6X

Certification

IECEx IBE 11.0007 X

Further approvals

INMETRO, GOST-R

Protection class

IP 65 (front side)
IP 54 (rear side)

➔ Technical data

Construction

Front panel fitting

Display

- 15" graphics-capable TFT colour display
- 262,144 colours
- XGA resolution, 1024 x 768 pixels
- Brightness up to 1000 cd/m²
- Visible area approx. 304 x 228 mm
- Contrast 700:1
- Antireflection coating glass pane
- Optional touchscreen (resistive)

Backlight illumination

- LED technology
- Service life approx. 50,000 hours (at +25 °C)

Computer capacity

- Intel® Atom™ N270, 1.6 GHz
- 1 GB RAM, 40 GB memory

Interface (Basic version)

- 1 x Ex e Ethernet 100/10BaseT (option of optical fibres)
- 1 x Ex e RS422
- 1 x Ex i USB for Ex i memory stick
- 2 x Ex i PS/2 for intrinsically safe keyboard and mouse

Optional interface modules

- 1 x Ex i Supply module for hand-held scanner
- 1 x Ex d USB direct connection (via Ex d socket) e. g. connection through WLAN

Operating system

- Windows XP Professional® (pre-installed)
- Windows 7® (optional)

Dimensions (width x height x depth)

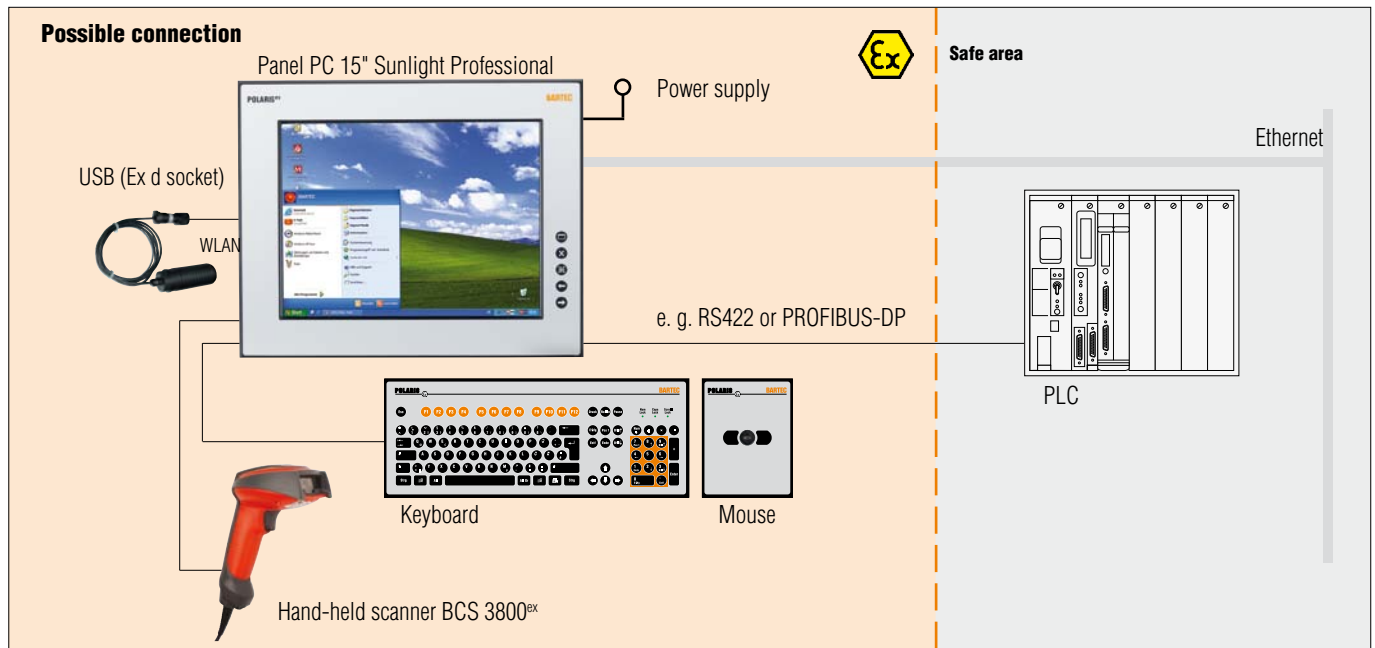
411 mm x 332 mm x approx. 135 mm

Wall cut-out

394.5 mm x 315.5 mm + 0.5 mm

Weight

approx. 23 kg



Power supply

AC 90 up to 253 V, 50 up to 60 Hz
DC 24 V \pm 10 %

Max. power consumption

$P_{\text{max.}} < 70 \text{ W}$

Admissible ambient temperature

Storage -20 °C to +60 °C
Operation -20 °C to +60 °C

Humidity

5 to 95 % non-condensing

Vibration

0.7 G/1 mm; 5 Hz - 500 Hz pulse in
all 3 axes

Shock

15 G, 11 ms pulse in all 3 axes

Material

Front	Polyester foil on anodised aluminium plate (conditionally UV-resistant)
Rear panel	galvanised sheet steel, bichromated



POLARIS Panel PC 19.1" Professional

Features

- Ethernet interface
- Easy front panel fitting
- Intrinsically safe USB interface
- Graphics-capable TFT colour display
- Direct linkage in explosive areas
- Optional touchscreen
- Optional WLAN
- Siemens PROFIBUS-DP/MPI-Interface

Description

The POLARIS Panel PC 19.1" Professional is based on a fast Intel® Pentium® M processor.

The Ethernet interface can be used to connect individual computers or network devices, e.g. a printer, to an existing local network (LAN) (WLAN is also an optional possibility) or local networks can be set up completely wirelessly.

This facilitates a high-performance visualization and operation of the processes directly on site.

The wired electrical connections are realized via a terminal compartment of the "e" type of protection (increased safety).

The state-of-the-art display technology guarantees an optimum contrast, even with large viewing angle.

The front panel fitting assures easy installation. Upon request, the devices are also available as turn-key system solutions in a stainless steel enclosure as wall, floor or ceiling mounting versions.

An intrinsically safe USB interface is available for a USB Ex i memory stick.

Intrinsically safe input devices can be connected also. The optional (intrinsically safe) touchscreen offers the optimum in operating comfort.

As a standard, Windows® XP Professional is pre-installed on the Panel PCs, supporting the installation of numerous software packages such as customer-specific software or other conventional standard visualization software.

Of course, here too the operator can also work with the BARTEC „BMS-Graf-pro“ programming package (Version 7.xxx or newer).

The BARTEC PROFIBUS-DP interface can only be used in connection with the BARTEC „BMS-Graf-pro“ software.

➤ Explosion protection

Ex protection type

ATEX Ex II 2G Ex db eb qb [ib op pr] IIC T4
Ex II 2D Ex tb IIIC T120°C IP 6X

Certification

IBExU 05 ATEX 1117 X

IECEx

Ex db eb qb [ib] IIC T4
Ex tb IIIC T120°C IP 6X

Certification

IECEx IBE 11.0007 X

Further approvals

INMETRO, GOST-R

Protection class

IP 65 (front side)
IP 54 (rear side)

➤ Technical data

Construction

Front panel fitting

Display

- 19.1" graphics-capable TFT colour display
- 16.7 million colours
- SXGA resolution, 1280 x 1024 pixels
- Brightness 300 cd/m²
- Visible area approx. 380 x 305 mm
- Contrast 1300:1
- Antireflection coating glass pane
- Optional touchscreen (resistive)

Backlight illumination

- CFL illumination
- Service life approx. 40,000 hours (at +25 °C)

Computer capacity

- Pentium® M Processor, 1.1 GHz
- 1 GB RAM, 40 GB memory

Operating system

Windows® XP Professional (pre-installed)

Open platform for customer-specific visualization software, e. g. ProTool, WIN CC flexible, etc.

Interface (Basic version)

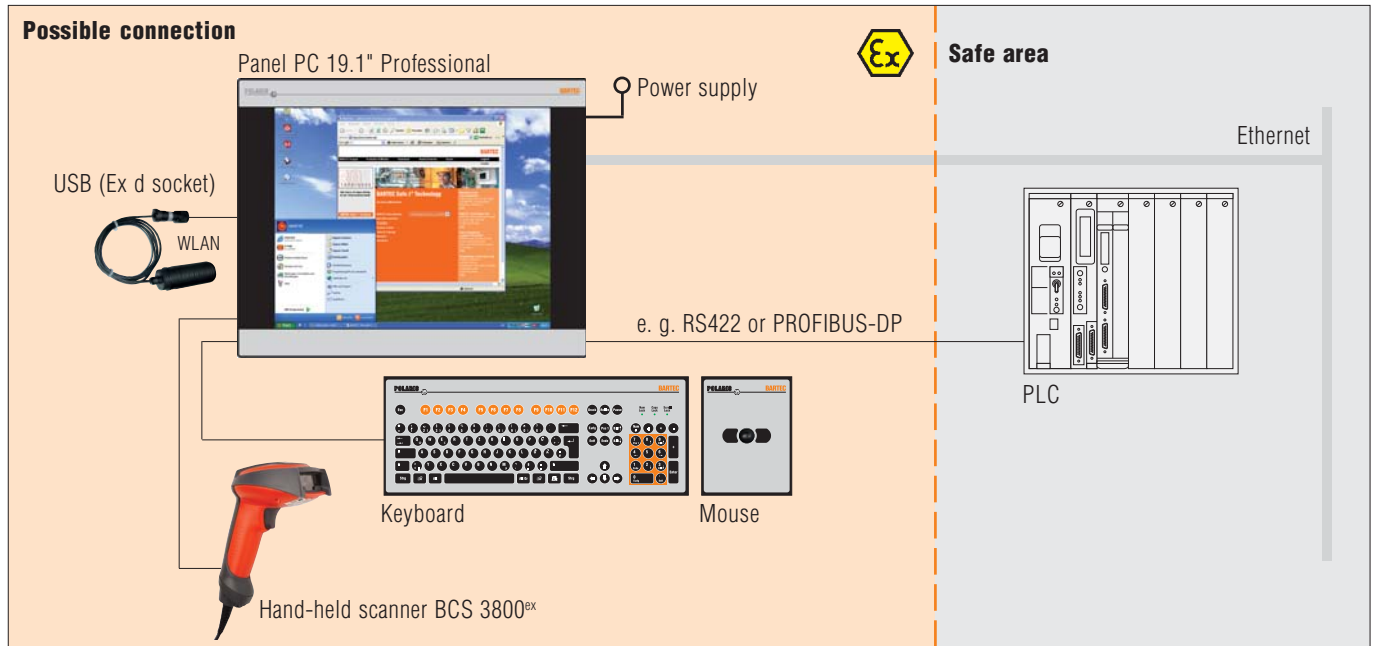
- 1 x Ex e Ethernet 100/10BaseT (option of optical fibres)
- 1 x Ex e RS422
- 1 x Ex i USB for Ex i memory stick
- 2 x Ex i PS/2 for intrinsically safe keyboard and mouse

Optional interface modules

- 1 x Ex i Supply module for hand-held scanner
- 1 x Ex d USB direct connection (via Ex d socket) e. g. connection by means of WLAN

Dimensions (width x height x depth)

498 mm x 400 mm x approx. 135 mm



Wall cut-out

484 mm x 386.5 mm + 0.5 mm

Weight

approx. 33 kg

Power supply

AC 90 to 253 V, 50 to 60 Hz
DC 24 V \pm 10 % on request

Max. power consumption

$P_{max.} < 70 \text{ W}$

Admissible ambient temperature

Storage -20 °C to +50 °C

Operation 0 °C to +50 °C

System solution with heating on request.

Humidity

5 to 95 % non-condensing

Vibration

0.7 G/1 mm; 5 Hz - 500 Hz pulse in
all 3 axes

Shock

15 G, 11 ms pulse in all 3 axes

Material

Front Polyester foil on anodised
aluminium plate
(conditionally UV-resistant)
Rear panel galvanised sheet steel,
bichromated



POLARIS PROFESSIONAL

POLARIS II Panel PC 19.1" for ATEX Zone 2 and ATEX Zone 21/22

BARTEC



POLARIS II Panel PC 19.1"

for ATEX Zone 2 and ATEX Zone 21/22

Features

- In the stainless enclosure tiltable
- Ethernet interface
- Graphics-capable TFT colour display
- Direct linkage in hazardous areas
- Optional touchscreen
- Optional WLAN

Description

The POLARIS II Panel PC 19.1" is based on a fast Intel® Atom™ Processor.

The Ethernet interface enables individual computers or network devices such as for example a printer to be connected to an existing local network (LAN) (optionally through WLAN also) or local networks to be set up completely wirelessly.

Allows high-performance visual display and operation of the processes directly on site.

State-of-the-art display technology provides optimum contrast even with a large viewing angle.

To allow the greatest ease in utilisation the devices are available for wall, floor or table mounting.

A keyboard with integrated trackball or touchpad can be connected. There is also the option of a touchscreen for the ultimate in operating ease.

As standard, the POLARIS II Panel PC 19.1" has pre-installed Windows® XP Professional. This means that the PCs are open for many different software packages, for example customized software or various types of commercially available standard visualisation software.

Explosion protection

ATEX Zone 2

Ex protection type

Ex II 3G Ex nA IIC T5

Certification

IBExU 09 ATEX B009

ATEX Zone 21/22

Ex protection type

Ex II 2D Ex tD A21 IP65 T100 °C
-25 °C ≤ T_a ≤ +50 °C

Certification

IBExU 09 ATEX 1113 X

Further approval

GOST-R

Protection class

IP 65

Technical data

Construction

Stainless steel enclosure

Display

- 19.1" graphics-capable TFT colour display
- 16.7 million colours
- SXGA resolution, 1280 x of 1024 pixels
- Brightness 300 cd/m²
- Visible surface approx. 376 x 301 mm
- Contrast 1300:1
- Option of touchscreen (resistive)

Backlighting

- CFL technology
- Service life approx. 50,000 hours (at +25 °C)

Computer capacity

- Intel® Atom™ Processor 1.6 GHz
- 1 GB RAM
- 8 GB CF memory
- further memory variants available on request

Interfaces (basic version)

- 2 x Ethernet 100BaseT
- 2 x PS/2 for keyboard and mouse
- 2 x RS232 Sub D (2 x RS232 optional)
- 4 x USB

Operating system

Windows® XP Professional (pre-installed)

Dimensions (width x height x depth)

610 mm x 450 mm x approx. 100 mm

Weight

approx. 17 kg

Rated voltage

AC 110 to 230 V, 47 to 63 Hz
DC 24 V

Input voltage range

AC 90 to 253 V
DC 24 V ± 10 %

Max. power consumption

P_{max} < 75 W

Permissible ambient temperatures

Storage -25 °C to +60 °C
Operation 0 °C to +50 °C

Relative air humidity

5 to 95 % non-condensing

Material

Stainless steel

Optional accessories

- Keyboard with integrated trackball 38 mm
- Keyboard with integrated trackball 50 mm
- Keyboard with integrated touchpad



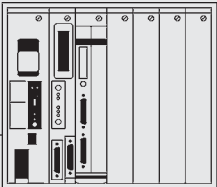
Possible connection



Safe area



Ethernet



PLC



POLARIS PROFESSIONAL

POLARIS II Panel PC 22" for ATEX Zone 2 and ATEX Zone 21/22

BARTEC



POLARIS II PANEL PC 22"

for ATEX Zone 2 and ATEX Zone 21/22

Features

- In the stainless enclosure tiltable
- Ethernet interface
- Graphics-capable TFT colour display
- Direct linkage in hazardous areas
- Optional touchscreen
- Optional WLAN

Description

The POLARIS II Panel PC 22" is based on a fast Intel® Atom™ Processor.

The Ethernet interface enables individual computers or network devices such as for example a printer to be connected to an existing local network (LAN) (optionally through WLAN also) or local networks to be set up completely wirelessly.

Allows high-performance visual display and operation of the processes directly on site.

State-of-the-art display technology provides optimum contrast even with a large viewing angle.

To allow the greatest ease in utilisation the devices are available for wall, floor or table mounting.

A keyboard with integrated trackball or touchpad can be connected. There is also the option of a touch screen for the ultimate in operating ease.

As standard, the POLARIS Professional 22" has pre-installed Windows®XP Professional. This means that the PCs are open for many different software packages, for example customized software or various types of commercially available standard visualisation software.

Explosion protection

ATEX Zone 2

Ex protection type

Ex II 3G Ex nA IIC T5

Certification

IBExU 09 ATEX B009

ATEX Zone 21/22

Ex protection type

Ex II 2D Ex tD A21 IP65 T100 °C
-25 °C ≤ T_a ≤ +50 °C

Certification

IBExU 09 ATEX 1113 X

Further approval

GOST-R

Protection class

IP 65

Technical data

Construction

Stainless steel enclosure

Display

- 22" graphics-capable TFT colour display
- 16.7 million colours
- WSXGA+ resolution, 1680 x of 1050 pixels
- Brightness 300 cd/m²
- Visible surface approx. 474 x 296 mm
- Contrast 1000:1
- Option of touchscreen (resistive)

Backlighting

- CFL technology
- Service life approx. 50.000 hours (at +25 °C)

Computer capacity

- Intel® Atom™ Processor 1.6 GHz
- 1 GB RAM
- 8 GB CF memory
- further memory variants available on request

Interfaces (basic version)

- 2 x Ethernet 100BaseT
- 2 x PS/2 for keyboard and mouse
- 2 x RS232 Sub D (2 x RS232 optional)
- 4 x USB

Operating system

Windows®XP Professional (pre-installed)

Dimensions (width x height x depth)

610 mm x 450 mm x approx. 100 mm

Weight

approx. 17 kg

Rated voltage

AC 110 to 230 V, 47 to 63 Hz
DC 24 V

Input voltage range

AC 90 to 253 V
DC 24 V ± 10 %

Max. power consumption

P_{max.} < 75 W

Permissible ambient temperatures

Storage -25 °C to +60 °C
Operation 0 °C to +50 °C

Relative air humidity

5 to 95 % non-condensing

Material

Stainless steel

Optional accessories

- Keyboard with integrated trackball 38 mm
- Keyboard with integrated trackball 50 mm
- Keyboard with integrated touchpad



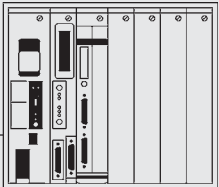
Possible connection



Safe area



Ethernet



PLC



POLARIS Panel PC 24" Professional

Features

- Ethernet interface
- Easy front panel fitting
- Intrinsically safe USB interface
- Full HD resolution
- Direct linkage in explosive areas
- Optional touchscreen
- Optional WLAN
- Siemens PROFIBUS-DP/MPI-Interface

Description

The POLARIS Panel PC 24" Professional is based on a fast Intel® Atom™ Processor.

The Ethernet interface can be used to connect individual computers or network devices, e.g. a printer, to an existing local network (LAN) (WLAN is also an optional possibility) or local networks can be set up completely wirelessly.

This facilitates a high-performance visualization and operation of the processes directly on site.

The wired electrical connections are realized via a terminal compartment of the "e" type of protection (increased safety).

The state-of-the-art display technology guarantees an optimum contrast, even with large viewing angle.

The front panel fitting assures easy installation. Upon request, the devices are also available as turn-key system solutions in a stainless steel enclosure as wall, floor or ceiling mounting versions.

An intrinsically safe USB interface is available for a USB Ex i memory stick.

Intrinsically safe input devices can be connected also. The optional (intrinsically safe) touchscreen offers the optimum in operating comfort.

As a standard, Windows XP Professional® is pre-installed on the Panel PCs, supporting the installation of numerous software packages such as customer-specific software or other conventional standard visualization software.

Of course, here too the operator can also work with the BARTEC "BMS-Graf-pro" programming package (Version 7.xxx or newer).

The BARTEC PROFIBUS-DP interface can only be used in connection with the BARTEC "BMS-Graf-pro" software.

➤ Explosion protection

Ex protection type

ATEX Ex II 2G Ex db eb qb [ib op pr] IIC T4
Ex II 2D Ex tb IIIC T120°C IP 6X

Certification

IBExU 05 ATEX 1117 X

IECEx Ex db eb qb [ib] IIC T4
Ex tb IIIC T120°C IP 6X

Certification

IECEx IBE 11.0007 X

Protection class

IP 65 (front side)

IP 54 (rear side)

➤ Technical data

Construction

Front panel fitting

Display

- 24" graphics-capable TFT colour display
- 16.7 million colours
- Full HD resolution, 1920 x 1080 pixels
- Brightness 300 cd/m²
- Visible area approx. 531 x 299 mm
- Contrast 3000:1
- Antireflection coating glass pane
- Optional touchscreen (resistive)

Backlight illumination

LED illumination

Computer capacity

- Intel® Atom™ Processor, 1.6 GHz
- 1 GB RAM, optional 2 GB RAM
- 100 GB SATA HD

Operating system

Windows XP Professional® (pre-installed)
Windows 7® (optional)

Open platform for customer-specific visualization software, e. g. ProTool, WIN CC flexible, etc.

Interface (Basic version)

- 1 x Ex e Ethernet 100/10BaseT (option of optical fibres)
- 1 x Ex e RS422
- 1 x Ex i USB for Ex i memory stick
- 2 x Ex i PS/2 for intrinsically safe keyboard and mouse

Optional interface modules

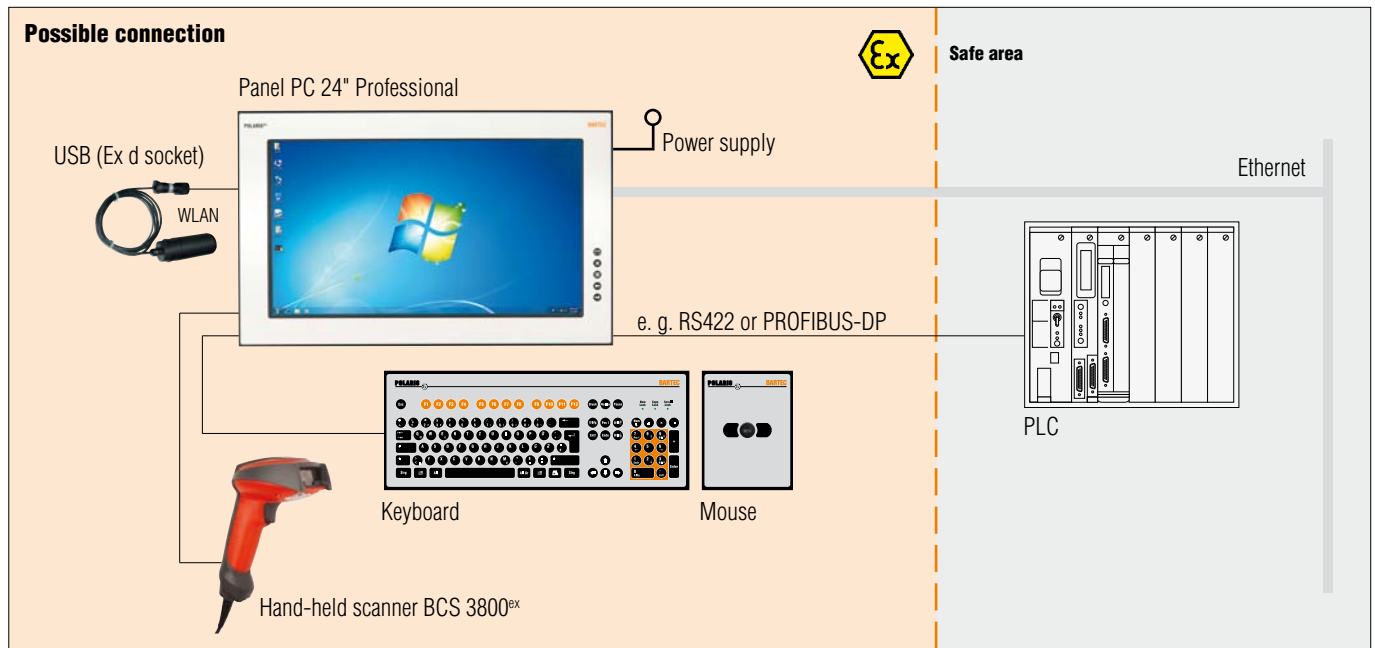
- 1 x Ex i Supply module for hand-held scanner
- 1 x Ex d USB direct connection (via Ex d socket) e. g. connection by means of WLAN
- 1 x Ex e USB

Dimensions (width x height x depth)

644 mm x 406 mm x approx. 135 mm

Wall cut-out

630 mm x 392 mm + 0.5 mm



Weight

approx. 40 kg

Power supply

AC 90 to 253 V, 50 to 60 Hz
DC 24 V \pm 10 % on request

Max. power consumption

$P_{max} < 100$ W
depending on the variant

Admissible ambient temperature

Storage -20 °C to +50 °C
Operation 0 °C to +50 °C

System solution with heating on request.

Humidity

5 to 95 % non-condensing

Vibration

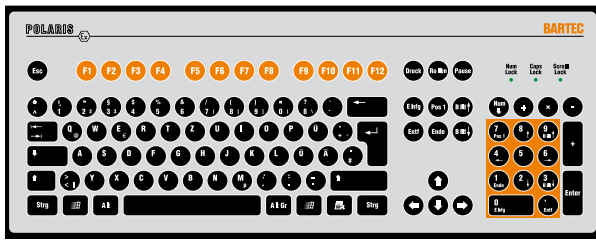
0.7 G/1 mm; 5 Hz - 500 Hz pulse in
all 3 axes

Shock

15 G, 11 ms pulse in all 3 axes

Material

Front Polyester foil on anodised
aluminium plate
(conditionally UV-resistant)
Rear panel galvanised sheet steel,
bichromated



Keyboard

Features

- Easy front panel fitting
- Modular construction

Description

The intrinsically safe keyboard and the mouse variants are intended for POLARIS Professional and POLARIS Remote for zone 1 and 2 and for zone 21 and 22.

They are connected directly to the POLARIS Panel PC or POLARIS Remote. The chemically resistant polyester foil is easy to clean and resistant to a lot of aggressive fluids. The keyboard is available in various languages. A stainless steel desktop housing for the keyboard and mouse is available as an optional accessory.



Enclosure for mouse and keyboard

Explosion protection

Ex protection type ATEX Ex II 2G Ex ib IIC T4
 Ex II 2D ib IIIC T120 °C IP 6X

Certification IExU 05 ATEX 1117 X

IECEX Ex ib IIC T4
Ex ib IIIC T120°C IP 6X

Certification IECEX IBE 11.0007 X

Further approvals INMETRO, GOST-R

Protection class IP 65

Technical data

Construction Front panel fitting

Material Polyester foil on aluminium sheet
(conditionally UV-resistant)

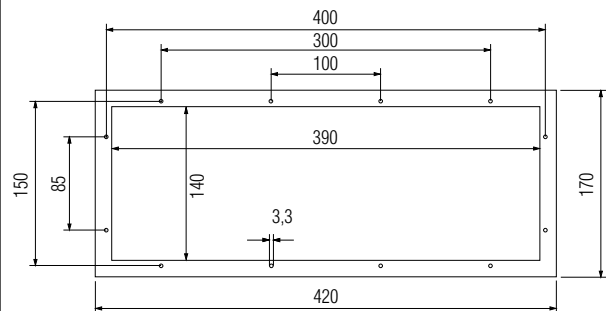
Dimensions 420 mm x 170 mm (width x height)

Wall cut-out 390 mm x 140 mm

Installation depth 18 mm

Weight approx. 700 g

Dimensions and wall cut-out for keyboard (in mm)



all hole diameter: 3.3 mm

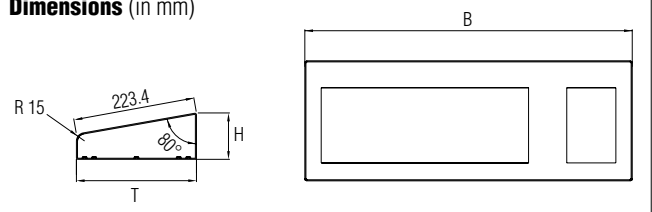
Technical data

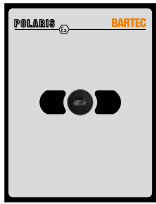
Material Stainless steel 1.4301; AISI 304

Dimensions 600 mm x 85 mm x 220 mm (B x H x T)

Protection class IP 65

Dimensions (in mm)





Mouse

Explosion protection

Ex protection type

ATEX II 2G Ex ib IIC T4
 II 2D ib IIIC T120 °C IP 6X

Certification

IBExU 05 ATEX 1117 X

IECEX

Ex ib IIC T4
Ex ib IIIC T120°C IP 6X

Certification

IECEX IBE 11.0007 X

Further approvals

INMETRO, GOST-R

Protection class

IP 65

Technical data

Construction

Front panel fitting

Material

Polyester foil on aluminium sheet
(conditionally UV-resistant)

Dimensions

130 mm x 170 mm (width x height)

Wall cut-out

100 mm x 140 mm

Installation depth

15 mm

Weight

approx. 270 g



Trackball Joystick

Explosion protection

Ex protection type

ATEX II 2G Ex ib IIC T4
 II 2D ib IIIC T120 °C IP 6X

Certification

IBExU 05 ATEX 1117 X

IECEX

Ex ib IIC T4
Ex ib IIIC T120°C IP 6X

Certification

IECEX IBE 11.0007 X

Further approvals

INMETRO, GOST-R

Protection class

IP 65

Technical data

Construction

Front panel fitting

Material

Polyester foil on aluminium sheet
(conditionally UV-resistant)

Dimensions

130 mm x 170 mm (width x height)

Wall cut-out

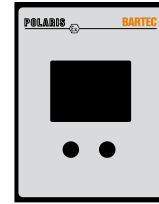
100 mm x 140 mm

Installation depth

43 mm

Weight

approx. 500 g



Touchpad

Explosion protection

Ex protection type

ATEX II 2G Ex ib IIC T4
 II 2D ib IIIC T120 °C IP 6X

Certification

IBExU 05 ATEX 1117 X

IECEX

Ex ib IIC T4
Ex ib IIIC T120°C IP 6X

Certification

IECEX IBE 11.0007 X

Further approvals

INMETRO, GOST-R

Protection class

IP 65

Technical data

Construction

Capacitive touchpad for front panel fitting

Material

Polyester foil on aluminium sheet
(conditionally UV-resistant)

Dimensions

130 mm x 170 mm (width x height)

Wall cut-out

100 mm x 140 mm

Installation depth

15 mm

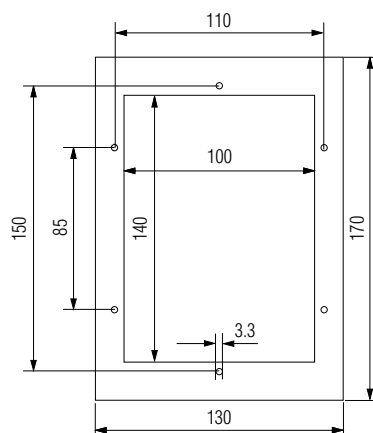
Weight

approx. 250 g

Dimensions and wall cut-out (mm)

- Mouse
- Trackball
- Joystick
- Touchpad

all hole diameter: 3.3 mm



Technical data subject to change without notice.



USB device WLAN

Features

- Real time data access
- Safe separation between safe area and ex area over transmit-strain

Description

By means of wireless LAN technology (optional), data can be exchanged wirelessly for the first time via an internal USB interface.

Explosion protection

Ex protection type

Ex II 2G Ex q II T4
Ex II 2D Ex tD A21 IP 6X T 120 °C

Certification

IBExU 05 ATEX 1188 X

Protection class (screw base)

IP 54

Technical data

Antenna WLAN

Standards

IEEE 802.11b; IEEE 802.11g

Bus Type

USB 2.0 Type A

Emissions Type

DSSS

Frequency band

2.4 ~ 2.483 MHz

Data rate

Auto Fallback
54, 48, 36, 24, 19, 12, 9, 6 Mbps
11, 5.5, 2, 1 Mbps

Modulation type

OFDM mit BPSK, QPSK, 16QAM,
64 QAM (11g), BPSK, QPSK, CCK (11b)

Media Access Protokoll

CSMA/CA

Antenna

Internal

Transmit power

12 dBm (typical)

Channel number

1 ~ 11 channels (North America)
1 ~ 13 channels (EU)
1 ~ 14 channels (Japan)

Security support

64/128-bit WEP/WPA-TKIP
IEEE 802.1x authentication
AES Encryption

Working mode

Infrastructure, Ad-hoc, Stations mode

Power supply

DC 5 V ± 10 %, 500 mA

Dimensions

Ø 50 mm x 139.5 mm

Admissible operating temperature

-20 °C ≤ T_a ≤ 60 °C

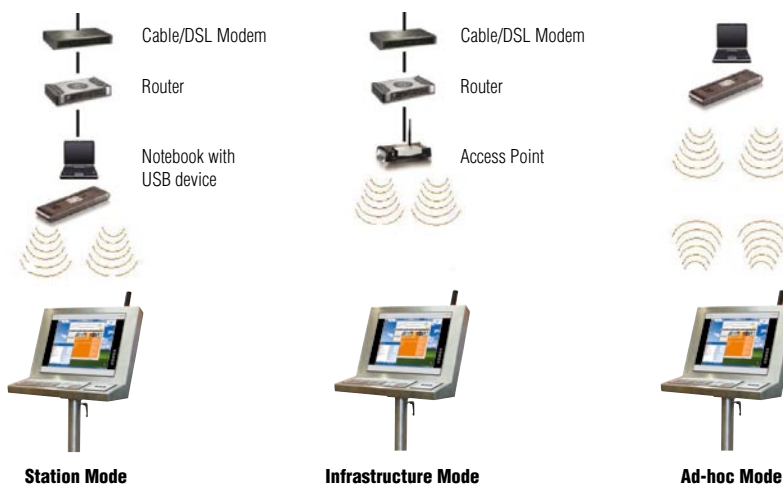
Weight

Approx. 500 g

Note

For using the USB device the USB connection (Ex d-socket) must exist at the POLARIS series Professional and Comfort.




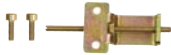




Product diagram



Technical data subject to change without notice.




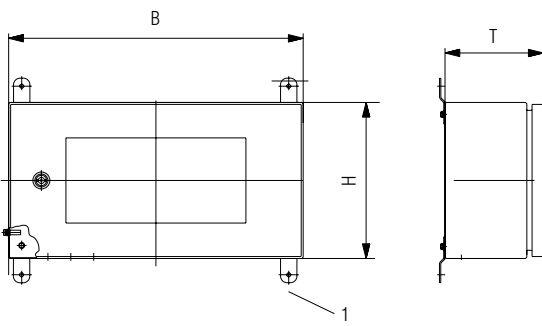


Selection chart Accessories

Illustration	Description	
	Ex i USB Stick for ATEX/IECEx Zone 1 and Zone 21 Ex i memory stick 4 GB Ex i recovery stick	
	Connection cable for keyboard and mouse keyboard and mouse 1.8 m keyboard and mouse 3.0 m keyboard and trackball/joystick 1.8 m keyboard and trackball/joystick 3.0 m keyboard and touchpad 1.8 m keyboard and touchpad 3.0 m	
	Reinforcement frame Panel PC 12.1" W Panel PC 12.1" Panel PC 15" Panel PC 19.1"	
	Mounting clamps set 4 pieces 6 pieces	
	Label strip white DIN A4 sheet, for laser printer	
	LAN STP cable CAT.7 4 x 2 x 23 AWG, outer diameter: 7.9 mm CAT.7 4 x 2 x 22 AWG, outer diameter: 18 mm; armoured Note: Additional cable glands for armouring necessary	
	External converter Converter external RS232 - RS422, Non Ex	
	MPI interface Converter external MPI - RS422, Non Ex	
	Original packing Panel PC 12.1" W Panel PC 12.1" Panel PC 15" Panel PC 19.1"	


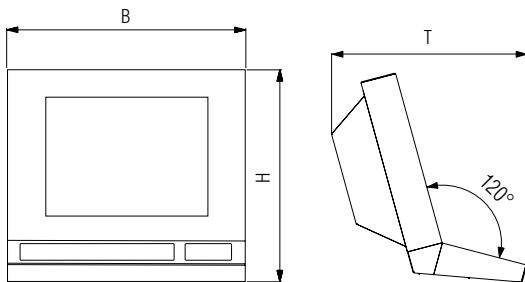

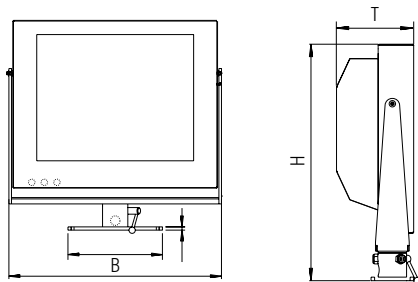


Selection chart stainless steel enclosure "Standard"


Illustration	Description	
  	<p>Stainless steel enclosure "Standard"</p> <p>Technical data</p> <p>Material Stainless steel 1.4404; AISI 316 L</p> <p>Surface Brushed</p> <p>Protection class IP 65</p> <p>■ for floor mounting with stand for ATEX Zone 1</p> <p style="text-align: right;">Dimensions in mm (B x H x T)</p> <p>Panel PC 12.1" W 560 x 320 x 200</p> <p>Panel PC 12.1" 600 x 350 x 200</p> <p>Panel PC 15" 650 x 500 x 210</p> <p>Panel PC 19.1" 760 x 600 x 210</p> <p>Complete solution with installed equipment</p> <p>■ for wall mounting including mounting straps for ATEX Zone 1</p> <p style="text-align: right;">Dimensions in mm (B x H x T)</p> <p>Panel PC 12.1" W 560 x 320 x 200</p> <p>Panel PC 12.1" 600 x 350 x 200</p> <p>Panel PC 15" 650 x 500 x 210</p> <p>Panel PC 19.1" 760 x 600 x 210</p> <p>Complete solution with installed equipment</p> <div style="text-align: center;">  </div> <p>1 mounting strap for wall mounting</p> <p>■ Special version for ATEX Zone 1 and Zone 21</p> <p>for floor mounting with stand</p> <p>for wall mounting with or without support arm</p> <p>with additional components</p> <ul style="list-style-type: none"> ■ possible assembly: switch modules and/or heating ■ for wall mounting with mounting straps or support arm as well as for floor mounting with stand 	



Selection chart Stainless steel enclosure "Exklusiv II"

Illustration	Description												
	<p>Stainless steel enclosure “Exklusiv II”</p> <p>Technical data</p> <table> <tr> <td>Material</td><td>Stainless steel 1.4301; AISI 304</td></tr> <tr> <td>Surface</td><td>Grinded; grit 240</td></tr> <tr> <td>Protection class</td><td>IP 65</td></tr> </table> <p>■ without brackets for ATEX Zone 1</p> <table> <tr> <td></td><td>Dimensions in mm (B x H x T)</td></tr> <tr> <td>Panel PC 15"</td><td>650 x 578 x 543</td></tr> <tr> <td>Panel PC 19.1"</td><td>650 x 578 x 543</td></tr> </table> <p>Complete solution with installed equipment</p> 	Material	Stainless steel 1.4301; AISI 304	Surface	Grinded; grit 240	Protection class	IP 65		Dimensions in mm (B x H x T)	Panel PC 15"	650 x 578 x 543	Panel PC 19.1"	650 x 578 x 543
Material	Stainless steel 1.4301; AISI 304												
Surface	Grinded; grit 240												
Protection class	IP 65												
	Dimensions in mm (B x H x T)												
Panel PC 15"	650 x 578 x 543												
Panel PC 19.1"	650 x 578 x 543												
	<p>■ for table mounting swivel/tilt for ATEX Zone 1</p> <table> <tr> <td></td><td>Dimensions in mm (B x H x T)</td></tr> <tr> <td>Panel PC 15"</td><td>770 x 685 x 218</td></tr> <tr> <td>Panel PC 19.1"</td><td>770 x 685 x 218</td></tr> </table> <p>Complete solution with installed equipment</p> 		Dimensions in mm (B x H x T)	Panel PC 15"	770 x 685 x 218	Panel PC 19.1"	770 x 685 x 218						
	Dimensions in mm (B x H x T)												
Panel PC 15"	770 x 685 x 218												
Panel PC 19.1"	770 x 685 x 218												

**Selection chart Stainless steel enclosure “Exklusiv II”/Accessories**

Illustration	Description	
	<p>Stainless steel enclosure “Exklusiv II”</p> <p>Technical data</p> <p>Material Stainless steel 1.4301; AISI 304</p> <p>Surface Grinded; grit 240</p> <p>Protection class IP 65</p> <p>■ Special enclosure for table mounting without brackets for ATEX Zone 1</p> <p>■ up to seven switch modules</p> <p>Panel PC 15" </p>	

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