



[1] **EU-TYPE EXAMINATION CERTIFICATE - Translation**

[2] Equipment or protective systems intended for use in potentially explosive atmospheres, Directive 2014/34/EU

[3] EU-type examination certificate number **IBExU24ATEX1023 X** | Issue 0

[4] Product: **POLARIS Smart HMI**  
Type: 17-71V\*-\*\*\*\*/\*\*\*\*

[5] Manufacturer: BARTEC GmbH

[6] Address: Max-Eyth-Straße 16  
97980 Bad Mergentheim  
GERMANY

[7] This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

[8] IBExU Institut für Sicherheitstechnik GmbH, notified body number 0637 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the essential health and safety requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential test report IB-23-3-0163.

[9] Compliance with the essential health and safety requirements has been assured by compliance with: EN IEC 60079-0:2018, EN 60079-5:2015, EN IEC 60079-7:2015/A1:2018, EN 60079-11:2012, EN 60079-18:2015/A1:2017 and EN 60079-31:2014 except in respect of those requirements listed at item [18] of the schedule.

[10] If the sign "X" is placed after the certificate number, it indicates that the product is subject to the specific conditions of use specified in the schedule to this certificate.

[11] This EU-type examination certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

[12] The marking of the product shall include the following:

POLARIS Smart HMI: Type 17-71V9-\*\*\*\*/\*\*\*\* \*\*\*\*:

II 2 G Ex eb q [ib] IIC T4 Gb

II 2 D Ex tb IIIC T120 °C Db

-20 °C ≤ T<sub>a</sub> ≤ +60 °C

Smart AC Power Supply Type 17-71VY-E0\*\*/\*\*\*\*

II 2 G Ex eb mb IIC T4 Gb

II 2 D Ex mb tb IIIC T120 °C Db

-20 °C ≤ T<sub>a</sub> ≤ +60 °C

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By order

Dipl.-Ing. K. Willamowski



Certificates without signature and seal are not valid. Certificates may only be duplicated completely and unchanged. In case of dispute, the German text shall prevail.

Freiberg, 2024-12-19

[13] **Schedule**

[14] **Certificate number IBExU24ATEX1023 X | Issue 0**

[15] **Description of product**

The POLARIS Smart HMI is a panel PC for use in potentially explosive atmospheres and it serves for visualisation and operation via a screen. It is operated via the built-in touch display. The device includes connection options for USB and Ethernet. Here, the accessories type 17-71VZ-\*\*\*\*/\*\*\*\*\* may be connected.

The devices are provided in various dimensions. It consist of metal housings filled with glass spheres, a safety glass pane and contain the display with touch, power supplies, CPU, storage medium as well as electronic control units and associated equipment.

The POLARIS Smart HMI can be supplied by means of Smart AC Power Supply or directly with 24 V DC.

The Smart Power Supply is a power supply unit consisting of the encapsulated electronic part and a connection compartment with increased safety.

**Technical data:**

Type designation	POLARIS SMART HMI Type 17-71V9-****/*****	Smart AC Power Supply Type 17-71VY-E0**/*****
ambient temperature range	-20 °C ... +60 °C	-20 °C ... +60 °C
degree of protection of enclosure	≥ IP64	≥ IP64

**Electrical data**

**POLARIS SMART HMI**

**Supply voltage (terminals X1...X3)**

Rated voltage 24 V DC  
Nominal current Max. 3 A

Maximum Voltage  $U_m$  253 V

**Ethernet (10/100 Base T), (terminals X4...X7)** up to 5 V AC/DC

**USB (terminals X8...X15)** up to 5.5 V AC/DC

**Intrinsically safe data- and supply circuits** in type of protection Ex ib IIC

USB1 Ex-i and USB2 Ex-i

$U_o$	5.89 V
$I_o$	2.845 A
$I_{stationary}$	483 mA
$P_o^*$	1.94 W
$C_o$	40 $\mu$ F
$L_o$	5 $\mu$ H

\* consideration for thermal ignition

Linear characteristic

**Polaris Smart AC Power Supply**

- supply voltage 100...240 V AC
- output voltage 12 V or 24 V DC
- output power 100 W

**[16] Test report**

The test results are recorded in the confidential test report IB-23-3-0163 of 2024-12-18.  
The test documents are part of the test report and they are listed there.

*Summary of the test results*

The devices POLARIS SMART HMI Type 17-71V\*-\*\*\*\*/\*\*\*\* fulfil the requirements of explosion protection for Group II and Category 2 G or 2 D in type of protection powder filling in combination with increased safety, intrinsic safety and encapsulation for gases of the Explosion Group IIC and Temperature Class T4 as well as protection by enclosure for dusts of the Explosion Group IIIC and a maximum surface temperature of 120 °C.

**[17] Specific conditions of use**

- The intrinsically safe circuits and the enclosure are galvanically connected. Equipotential bonding shall be maintained in the intrinsically safe circuit.
- The devices have to installed protected against electrostatic charges. Cleaning is permitted only with a damp cloth. Further information are mentioned in the instructions.
- The specific conditions of use of accessories have to be met. The USB flash drive (Stick) type 17-A1Z0-0007 may only be operated in an ambient temperature range between -20 °C and +50 °C.

**[18] Essential health and safety requirements**

In addition to the essential health and safety requirements (EHSRs) covered by the standards listed at item [9], the following are considered relevant to this product, and conformity is demonstrated in the test report:

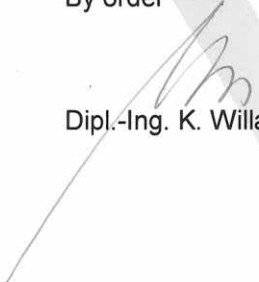
None

**[19] Drawings and Documents**

The documents are listed in the test report.

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Freiberg, 2024-12-19

**IBEXU**