

TYPE EXAMINATION CERTIFICATE



Equipment or Protective System intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

- [3] Type Examination Certificate Number: **UL 22 ATEX 2478X Rev. 0**
- [4] Product: **VisuNet FLX Box PC - BPC3200**
- [5] Manufacturer: **Pepperl+Fuchs SE**
- [6] Address: **Lilienthalstrasse 200, 68307 Mannheim, Germany**
- [7] This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
- [8] UL International Demko A/S 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 Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014.
- The examination and test results are recorded in confidential report no. **DK/ULD/ExTR22.0017/00**.
- [9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
- EN IEC 60079-0:2018 EN IEC 60079-7: 2015/A1:2018 EN 60079-11:2012**
- 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 Type examination certificate relates only to the design of the specified product, and not to specific items of product subsequently manufactured.
- [12] The marking of the product shall include the following:

 **II 3 G Ex ec [ic Gc] IIC T4 Gc**

Certification Manager
Jan-Erik Storgaard

Certification Body

This is to certify that the sample(s) of the Product described herein ("Certified Product") has been investigated and found in compliance with the Standard(s) indicated on this Certificate, in accordance with the ATEX Product Certification Program Requirements. This certificate and test results obtained apply only to the product sample(s) submitted by the Manufacturer. UL did not select the sample(s) or determine whether the sample(s) provided were representative of other manufactured product. UL has not established Follow-Up Service or other surveillance of the product. The Manufacturer is solely and fully responsible for conformity of all product to all applicable Standards, specifications, requirements or Directives. The test results may not be used, in whole or in part, in any other document without UL's prior written approval.

Date of issue: 2022-07-27

UL International Demko A/S, Borupvang 5A, 2750 Ballerup, Denmark
Tel. +45 44 85 65 65, info.dk@ul.com, www.ul.com

[13]

[14]

Schedule TYPE EXAMINATION CERTIFICATE No. UL 22 ATEX 2478X Rev. 0

C:	128GB
D:	256GB
E:	512GB
K:	32GB wide temperature grade for operating temperature range B
L:	64GB wide temperature grade for operating temperature range B
M:	128GB wide temperature grade for operating temperature range B
P:	256GB wide temperature grade for operating temperature range B
Q:	512GB wide temperature grade for operating temperature range B
Operating System & Software (not safety-relevant)	
1:	Win10
2:	P+F RM Shell
X:	Can be an alphanumeric character, representing another Operating System & Software
Housing	
NN	None
VIII –	Special Accessories (not safety-relevant)
N:	None
IX –	Options (not safety-relevant)
NO:	Standard, No options

The optical radiation output of the product with respect to explosion protection, according to Annex II clause 1.3.1 of the Directive 2014/34/EU is covered in this certificate based on Exception 1) to the scope of EN 60079-28:2015.

Temperature range:

The ambient temperature range is 0 °C to +45 °C T4 or -20°C to +55°C T4 (see Nomenclature).

Electrical data

24 Vdc +/- 20% SELV/PELV/Class 2

Intrinsically safe specifications:

U_m: 30 Vdc

Ex i USB ports

U_o: ≤ 5.3 V

I_o: ≤ 240 mA

P_o: ≤ 1.27 W

L_i: negligible

C_i: ≤ 11 µF

Output characteristic: rectangular

For group IIC:

Co = 989µF

Lo = 50µH

Following values of Lo and Co can be applied combined. (Ci already subtracted)

Co (uF)	6	15	32	129	989
Lo (uH)	20	10	5	2	1

For group IIB/IIIC:

Co = 989µF

Lo =1400µH

Following values of Lo and Co can be applied combined. (Ci already subtracted)

Co (uF)	5	32	76	329	989
Lo (uH)	1000	200	50	10	4

For group IIA:

Co = 989µF

Lo = 5500µH

Following values of Lo and Co can be applied combined. (Ci already subtracted)



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Schedule TYPE EXAMINATION CERTIFICATE No. UL 22 ATEX 2478X Rev. 0

Co (uF)	14	28	75	239	989
Lo (uH)	1000	500	100	20	4

Ex i Remote Power (connector for external switch)

Uo: ≤ 5 V
 Io: ≤ 10 mA
 Po: ≤ 50 mW
 Li: negligible
 Ci: ≤ 1 μF

For group IIC:

Co = 999 μF

Lo = 100 mH

Following values of Lo and Co can be applied combined. (Ci already subtracted)

Co [μF]	2.1	3.8	11	31	189
Lo [μH]	100000	5000	100	10	2

Routine tests:

N/A

[16]

Descriptive Documents

The scheduled drawings are listed in the report no. provided under item no. [8] on page 1 of this Type Examination Certificate.

[17]

Special Conditions of Use:

- The equipment shall be installed in an enclosure that provides a degree of protection not less than IP 54 in accordance with EN 60079-0 and used in an environment of not more than pollution degree 2 as defined in EN 60664-1.
- Connections of non-intrinsically safe circuits must be secured against loosening by suitable means.
- Connection to non-intrinsically safe interface Audio Jack is not allowed in hazardous areas.
- Connection to non-intrinsically safe card interfaces e.g., PCIe is not allowed in hazardous areas.

[18]

Essential Health and Safety Requirements

The Essential Health and Safety Requirements (EHSRs) covered by the standards listed at item 9

Additional information

The trademark  **PEPPERL+FUCHS** will be used as the company identifier on the marking label.



TYPE EXAMINATION CERTIFICATE



Equipment or Protective System intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

[3] Type Examination Certificate Number: **UL 22 ATEX 2478X Rev. 1**

[4] Product: **VisuNet FLX Box PC - BPC3200**

[5] Manufacturer: **Pepperl+Fuchs SE**

[6] Address: **Lilienthalstrasse 200, 68307 Mannheim, Germany**

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

[8] UL International Demko A/S 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 Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014.

The examination and test results are recorded in confidential report no. **DK/ULD/ExTR22.0017/01**.

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0:2018 EN IEC 60079-7:2015/A1:2018 EN 60079-11:2012

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 Type examination certificate relates only to the design of the specified product, and not to specific items of product subsequently manufactured.

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

 **II 3 G Ex ec [ic Gc] IIC T4 Gc**

Certification Manager
Thomas Wilson

Certification Body

This is to certify that the sample(s) of the Product described herein ("Certified Product") has been investigated and found in compliance with the Standard(s) indicated on this Certificate, in accordance with the ATEX Product Certification Program Requirements. This certificate and test results obtained apply only to the product sample(s) submitted by the Manufacturer. UL did not select the sample(s) or determine whether the sample(s) provided were representative of other manufactured product. UL has not established Follow-Up Service or other surveillance of the product. The Manufacturer is solely and fully responsible for conformity of all product to all applicable Standards, specifications, requirements or Directives. The test results may not be used, in whole or in part, in any other document without UL's prior written approval.

Date of issue: 2022-07-27

Re-issued: 2023-03-03

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[13]

[14]

Schedule TYPE EXAMINATION CERTIFICATE No. UL 22 ATEX 2478X Rev. 1

	B:	64GB
	C:	128GB
	D:	256GB
	E:	512GB
	K:	32GB wide temperature grade for operating temperature range B
	L:	64GB wide temperature grade for operating temperature range B
	M:	128GB wide temperature grade for operating temperature range B
	P:	256GB wide temperature grade for operating temperature range B
	Q:	512GB wide temperature grade for operating temperature range B
	Operating System & Software (not safety-relevant)	
	1:	Win10
	2:	P+F RM Shell
	X:	Can be an alphanumeric character, representing another Operating System & Software
	Housing	
	NN	None
VIII –	Special Accessories (not safety-relevant)	
	N:	None
IX –	Options (not safety-relevant)	
	N0:	Standard, No options

The optical radiation output of the product with respect to explosion protection, according to Annex II clause 1.3.1 of the Directive 2014/34/EU is covered in this certificate based on Exception 1) to the scope of EN 60079-28:2015.

Temperature range:

The ambient temperature range is 0 °C to +45 °C T4 or -20°C to +55°C T4 (see Nomenclature).

Electrical data

24 Vdc +/- 20% SELV/PELV/Class 2

Intrinsically safe specifications:

U_m: 30 Vdc

Ex i USB ports

U_o: ≤ 5.3 V

I_o: ≤ 240 mA

P_o: ≤ 1.27 W

L_i: negligible

C_i: ≤ 11 µF

Output characteristic: rectangular

For group IIC:

Co = 989µF

Lo = 50µH

Following values of Lo and Co can be applied combined. (Ci already subtracted)

Co (uF)	6	15	32	129	989
Lo (uH)	20	10	5	2	1

For group IIB/IIIC:

Co = 989µF

Lo = 1400µH

Following values of Lo and Co can be applied combined. (Ci already subtracted)

Co (uF)	5	32	76	329	989
Lo (uH)	1000	200	50	10	4

For group IIA:

Co = 989µF

Lo = 5500µH



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[14]

Schedule TYPE EXAMINATION CERTIFICATE No. UL 22 ATEX 2478X Rev. 1

Following values of Lo and Co can be applied combined. (Ci already subtracted)

Co (uF)	14	28	75	239	989
Lo (uH)	1000	500	100	20	4

Ex i Remote Power (connector for external switch)

Uo: ≤ 5 V

Io: ≤ 10 mA

Po: ≤ 50 mW

Li: negligible

Ci: ≤ 1 μF

For group IIC:

Co = 999 μF

Lo = 100 mH

Following values of Lo and Co can be applied combined. (Ci already subtracted)

Co [μF]	2.1	3.8	11	31	189
Lo [μH]	100000	5000	100	10	2

Routine tests:

N/A

[16]

Descriptive Documents

The scheduled drawings are listed in the report no. provided under item no. [8] on page 1 of this Type Examination Certificate.

[17]

Special Conditions of Use:

- The equipment shall be installed in an enclosure that provides a degree of protection not less than IP 54 in accordance with EN IEC 60079-0 and used in an environment of not more than pollution degree 2 as defined in EN 60664-1.
- Connections of non-intrinsically safe circuits must be secured against loosening by suitable means.
- Connection to non-intrinsically safe interface Audio Jack is not allowed in hazardous areas.
- Connection to non-intrinsically safe card interfaces e.g., PCIe is not allowed in hazardous areas.

[18]

Essential Health and Safety Requirements

The Essential Health and Safety Requirements (EHSRs) covered by the standards listed at item 9.

Additional information

The trademark  **PEPPERL+FUCHS** will be used as the company identifier on the marking label.

TYPE EXAMINATION CERTIFICATE



Equipment or Protective System intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

- [3] Type Examination Certificate Number: **UL 22 ATEX 2478X Rev. 2**
- [4] Product: **VisuNet FLX Box PC - BPC3200**
- [5] Manufacturer: **Pepperl+Fuchs SE**
- [6] Address: **Lilienthalstrasse 200, 68307 Mannheim, Germany**
- [7] This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
- [8] UL International Demko A/S 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 Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014.
- The examination and test results are recorded in confidential report no. **DK/ULD/ExTR22.0017/02.**
- [9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
- EN IEC 60079-0:2018 EN IEC 60079-7:2015/A1:2018 EN 60079-11:2012**
- Where additional criteria beyond those given here have been used, they are listed at item 18 in 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" listed under item 17 of this certificate.
- [11] This Type examination certificate relates only to the design of the specified product, and not to specific items of product subsequently manufactured.
- [12] The marking of the product shall include the following (marking is provided in the Schedule as a part of item 15, if applicable):

 **II 3 G Ex ec [ic Gc] IIC T4 Gc**

Certification Manager
Thomas Wilson

This is to certify that the sample(s) of the Product described herein ("Certified Product") has been investigated and found in compliance with the Standard(s) indicated on this Certificate, in accordance with the ATEX Product Certification Program Requirements. This certificate and test results obtained apply only to the product sample(s) submitted by the Manufacturer. UL did not select the sample(s) or determine whether the sample(s) provided were representative of other manufactured product. UL has not established Follow-Up Service or other surveillance of the product. The Manufacturer is solely and fully responsible for conformity of all product to all applicable Standards, specifications, requirements or Directives. The test results may not be used, in whole or in part, in any other document without UL's prior written approval.

Date of issue: 2022-07-27

Re-issued: 2023-11-13

Certification Body

UL International Demko A/S, Borupvang 5A, 2750 Ballerup, Denmark
Tel. +45 44 85 65 65, info.dk@ul.com, www.ul.com

[13]

[14]

Schedule TYPE EXAMINATION CERTIFICATE No. UL 22 ATEX 2478X Rev. 2

	B:	64GB
	C:	128GB
	D:	256GB
	E:	512GB
	K:	32GB wide temperature grade for operating temperature range B
	L:	64GB wide temperature grade for operating temperature range B
	M:	128GB wide temperature grade for operating temperature range B
	P:	256GB wide temperature grade for operating temperature range B
	Q:	512GB wide temperature grade for operating temperature range B
	Operating System & Software (not safety-relevant)	
	1:	Win10
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	NN	None
VIII –	Special Accessories (not safety-relevant)	
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P_o: ≤ 1.27 W

L_i: negligible

C_i: ≤ 11 µF

Output characteristic: rectangular

For group IIC:

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Lo = 50µH

Following values of Lo and Co can be applied combined. (Ci already subtracted)

Co (uF)	6	15	32	129	989
Lo (uH)	20	10	5	2	1

For group IIB/IIIC:

Co = 989µF

Lo = 1400µH

Following values of Lo and Co can be applied combined. (Ci already subtracted)

Co (uF)	5	32	76	329	989
Lo (uH)	1000	200	50	10	4

[13]

[14]

Schedule TYPE EXAMINATION CERTIFICATE No. UL 22 ATEX 2478X Rev. 2

For group IIA:

Co = 989µF

Lo = 5500µH

Following values of Lo and Co can be applied combined. (Ci already subtracted)

Co (µF)	14	28	75	239	989
Lo (µH)	1000	500	100	20	4

Ex i Remote Power (connector for external switch)

Uo: ≤ 5 V

Io: ≤ 10 mA

Po: ≤ 50 mW

Li: negligible

Ci: ≤ 1 µF

For group IIC:

Co = 999 µF

Lo = 100 mH

Following values of Lo and Co can be applied combined. (Ci already subtracted)

Co [µF]	2.1	3.8	11	31	189
Lo [µH]	100000	5000	100	10	2

Routine tests:

N/A

[16]

Descriptive Documents

The scheduled drawings are listed in the report no. provided under item no. [8] on page 1 of this Type Examination Certificate.

[17]

Specific Conditions of Use:

- The equipment shall be installed in an enclosure that provides a degree of protection not less than IP 54 in accordance with EN IEC 60079-0 and used in an environment of not more than pollution degree 2 as defined in EN 60664-1.
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[18]

Essential Health and Safety Requirements

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Additional information

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