Physical-Technical Testing Institute
Ostrava - Radvanice

EU - Type Examination Certificate

(1)

(2) **Equipment or Protective Systems Intended for Use in Potentially Explosive Atmospheres (Directive 2014/34/EU)**

(3) EU - Type Examination Certificate number:

FTZÚ 17 ATEX 0052X

(4) Product: **Flameproof luminaire type AQUA-70-Ex-LED**

(5) Manufacturer: **VYRTYCH a.s.**

(6) Address: **Židněves 116, 294 06 Březno, Czech Republic**

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

(8) The Physical-Technical Testing Institute, Notified Body number 1026, in accordance with Articles 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26.02.2014, 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 confidential Report number:

17/0052 dated 20.09.2017

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 60079-0:2012+A11:2013, EN 60079-1:2014, EN 60079-7:2015, EN 60079-18:2014, EN 60079-31:2014, EN 60079-28:2015

(10) If the sign "X" is placed after the certificate number, it indicates that the product is subject to Specific Conditions of Use specified in the schedule to this certificate.

(11) This 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:

II 2G Ex db eb mb op is IIC T4 Gb – see cl. 15

II 2D Ex tb op is IIIC T62°C Db

This certificate is valid till: **30.09.2022**

Responsible person:

Dipl. Ing. Lukáš Martinák
Head of Certification Body

Date of issue: 21.09.2017

This certificate is granted subject to the general conditions of the FTZÚ, s.p.
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Physical-Technical Testing Institute, s.p., Pikartská 1337/7, 716 07 Ostrava - Radvanice, Czech Republic
tel +420 595 223 111, fax +420 596 232 672, ftzu@ftzu.cz, www.ftzu.cz

(13) **Schedule**

(14) # EU - Type Examination Certificate No. FTZÚ 17 ATEX 0052X

(15) Description of Product:

The flameproof luminaire type AQUA-70-Ex LED consists of three parts: polycarbonate tube with internal aluminium covering profile, polycarbonate side plugs with sealing and plastic or metal Ex- cable glands (resp. blanking elements) – see document "Technical conditions for mounting" and aluminium profile with electrical package.

On the aluminium profile are installed: electronic ballast type HFX LED in Ex-protection Ex eb mb IIC T4 Gb, three-pole (multipole) terminal block WAGO 262-283 or 262-233 in Ex- protection Ex e IIC Gb for connecting supply cable with wires to 4mm^2, off-load switch VOD-Ex in Ex- protection Ex db IIC Gb – alternative facility. As light source is used LED module type ARC 600 (25W) or ARC 1200 (50W) in Ex-protection Ex mb op is IIC T4 Gb.

Electrical parameters:
Nominal voltage: 110-254V AC; 50/60Hz; or 220-250V DC.

The marking of product without off-load switch: **Ex II 2G Ex eb mb op is IIC T4 Gb**

(16) Report Number.: 17/0052

(17) Specific Conditions of Use:

1. Ambient temperature range: -20°C ≤ Tamb ≤ +50°C.
2. The type luminaire without installed off-load switch must be labelled "Do not open when energized".
3. The luminaire is intended for fixed installation and must be labelled "Warning - potential danger of electrostatic charging" - see Technical conditions.
4. The Technical conditions of maintenance must be complied.
5. The power supply cable shall be effectively fixed to prevent pulling or twisting.

Responsible person:

Dipl. Ing. Lukáš Martinák
Head of Certification Body

PHYSICAL-TECHNICAL TESTING INSTITUTE FTZÚ TECHNICKÝ ZKUŠEBNÍ ÚSTAV AO 210 NB 1026

Date of issue: 21.09.2017

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(13) **Schedule**

(14) **EU - Type Examination Certificate No. FTZÚ 17 ATEX 0052X**

(18) Essential Health and Safety Requirements:

Compliance with the Essential Health and Safety Requirements is covered by standards mentioned in clause (9) of this certificate.

(19) Drawings and Documents:

Number	Sheets	Issue	Date	Description
--	3	00	21.07.2017	Technical description
--	1	00	19.07.2017	Technical conditions for mounting
Assembly AQUA-70-Ex-LED	1	01	24.05.2017	Drawing
Labels	1	--	19.07.2017	Drawing

Responsible person:

Dipl. Ing. Lukáš Martinák
Head of Certification Body

PHYSICAL-TECHNICAL TESTING INSTITUTE FTZÚ Ex AO 210 NB 1026

Date of issue: 21.09.2017

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Physical-Technical Testing Institute
Ostrava - Radvanice

(1) Supplementary EU - Type Examination Certificate No.1

(2) **Equipment or Protective Systems Intended for Use in Potentially Explosive Atmospheres (Directive 2014/34/EU)**

(3) EU - Type Examination Certificate number:

FTZÚ 17 ATEX 0052X

(4) Product: **Flameproof luminaire type AQUA-70-Ex-LED**

(5) Manufacturer: **VYRTYCH a.s.**

(6) Address: **Židněves 116, 294 06 Březno, Czech Republic**

(7) This supplementary certificate extends EU - Type Examination Certificate No. FTZÚ 17 ATEX 0052X to apply to products designed and constructed in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule attached to this certificate and the documents therein referred to.

(8) The Physical-Technical Testing Institute, Notified Body number 1026, in accordance with Articles 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26.02.2014, certifies that this product, as modified by this supplementary certificate, 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.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0:2018; EN 60079-1:2014; EN 60079-7:2015
EN 60079-18:2014; EN 60079-31:2014; EN 60079-28:2015

(10) If the sign "X" is placed after the certificate number, it indicates that the product is subject to Specific Conditions of Use specified in the schedule to this certificate.

(11) The marking of the product shall include the following:

II 2G Ex db eb mb op is IIC T4 Gb – see cl.15
II 2D Ex tb op is IIIC T62°C Db

(12) This certificate is valid till: **31.01.2026**

Responsible person:
Dipl. Ing. Lukáš Martinák
Head of Certification Body

PHYSICAL-TECHNICAL TESTING INSTITUTE FTZÚ Ex AO 210 NB 1026

Date of issue: 29.01.2021

This certificate is granted subject to the general conditions of the FTZÚ, s.p.
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(13) **Schedule**

(14) Supplementary EU - Type Examination Certificate No. 1 to FTZÚ 17 ATEX 0052X

(15) Description of the variation to the Product:

The subject of this supplementary certificate is:

- Modification of certified apparatus;
- Verification according to the newest standards;
- Prolongation of certificate validity.

This supplementary certificate describes of using new version of LED module with marking BG4 as a basic used component, existing LED module with marking BG3 shall be used as alternative component.

Design, type marking and electrical parameters of luminaire mentioned in the basic certificate remain unchanged.

The luminaire is verified according to new standard EN IEC 60079-0:2018.

The marking of product without off-load switch: Ex **II 2G Ex eb mb op is IIC T4 Gb**

(16) Report Number: 17/0052/1

(17) Specific Conditions of Use:

1. Ambient temperature range: -20°C ≤ Ta ≤ +50°C.
2. The type luminaire without installed off-load switch must be labelled "Do not open when energized".
3. The luminaire is intended for fixed installation and must be labelled "Warning - potential danger of electrostatic charging" - see Technical conditions for mounting.
4. The Technical conditions for mounting must be complied.

(18) Essential Health and Safety Requirements:

Compliance with the Essential Health and Safety Requirements is covered by standards mentioned in clause (9) of this supplementary certificate.

(19) Drawings and Documents:

Number	Issue	Sheets	Date	Description
--	02	3	03.12.2020	Technical description
--	01	1	20.01.2020	Technical conditions for mounting
Labels	d)	1	03.12.2020	Drawing

Responsible person:

Dipl. Ing. Lukáš Martinák
Head of Certification Body

PHYSICAL-TECHNICAL TESTING INSTITUTE FTZÚ Ex AO 210 NB 1026

Date of issue: 29.01.2021

This certificate is granted subject to the general conditions of the FTZÚ, s.p.
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Physical-Technical Testing Institute
Ostrava - Radvanice

(1) Supplementary EU - Type Examination Certificate No.2

(2) **Equipment or Protective Systems Intended for Use in Potentially Explosive Atmospheres (Directive 2014/34/EU)**

(3) EU - Type Examination Certificate number:

FTZÚ 17 ATEX 0052X

(4) Product: **Flameproof luminaire type AQUA-70-Ex-LED**

(5) Manufacturer: **VYRTYCH a.s.**

(6) Address: **Židněves 116, 294 06 Březno, Czech Republic**

(7) This supplementary certificate extends EU - Type Examination Certificate No. FTZÚ 17 ATEX 0052X to apply to products designed and constructed in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule attached to this certificate and the documents therein referred to.

(8) The Physical-Technical Testing Institute, Notified Body number 1026, in accordance with Articles 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26.02.2014, certifies that this product, as modified by this supplementary certificate, 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.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0:2018, EN 60079-1:2014, EN 60079-7:2015+A1:2018, EN 60079-18:2015+A1:2017, EN 60079-31:2014, EN 60079-28:2015

(10) If the sign "X" is placed after the certificate number, it indicates that the product is subject to Specific Conditions of Use specified in the schedule to this certificate.

(11) The marking of the product shall include the following:

II 2G Ex db eb mb op is IIC T4 Gb – see cl. (15)
II 2D Ex tb op is IIIC T62°C Db

(12) This certificate is valid till: **31.01.2031**

Date of issue: 30.01.2026

Dipl. Ing. Lukáš Martinák
Representative of Notified Body No. 1026

This certificate is not valid without the signature and stamp of Notified Body No. 1026.
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Physical-Technical Testing Institute
Ostrava - Radvanice

(13) **Schedule**

(14) Supplementary EU - Type Examination Certificate No. 2 to FTZÚ 17 ATEX 0052X

(15) Description of the variation to the Product:

The subject of this supplementary certificate is:

- Extension of certificate validity.

The design and technical parameters of this product remain unchanged.

The marking of product without off-load switch: Ⓔx **II 2G Ex eb mb op is IIC T4 Gb**

(16) Report Number: 17/0052/2

(17) Specific Conditions of Use:

1. Ambient temperature range: -20°C ≤ Ta ≤ +50°C.
2. The type luminaire without installed off-load switch must be labelled "Do not open when energized".
3. The luminaire is intended for fixed installation and must be labelled "Warning - potential danger of electrostatic charging" - see Technical conditions for mounting.
4. The Technical conditions for mounting must be complied.
5. The luminaire shall be installed to avoid a risk from propagating brush discharges for application in explosive dust atmosphere.

(18) Essential Health and Safety Requirements:

Compliance with the Essential Health and Safety Requirements is covered by standards mentioned in clause (9) of this supplementary certificate.

(19) Drawings and Documents:

The original documentation specified in the Supplement No. 1 of this certificate remains valid.

Dipl. Ing. Lukáš Martinák
Representative of Notified Body No. 1026

PHYSICAL-TECHNICAL TESTING INSTITUTE FTZÚ TECHNICKÝ ZKUŠEBNÍ ÚSTAV NB 1026

Date of issue: 30.01.2026

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Physical-Technical Testing Institute
Ostrava - Radvanice

(1) Supplementary EU - Type Examination Certificate No.3

(2) **Equipment or Protective Systems Intended for Use in Potentially Explosive Atmospheres (Directive 2014/34/EU)**

(3) EU - Type Examination Certificate number:

FTZÚ 17 ATEX 0052X

(4) Product: **Flameproof luminaire type AQUA-70-Ex1/21**

(5) Manufacturer: **VYRTYCH a.s.**

(6) Address: **Židněves 116, 294 06 Březno, Czech Republic**

(7) This supplementary certificate extends EU - Type Examination Certificate No. FTZÚ 17 ATEX 0052X to apply to products designed and constructed in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule attached to this certificate and the documents therein referred to.

(8) The Physical-Technical Testing Institute, Notified Body number 1026, in accordance with Articles 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26.02.2014, certifies that this product, as modified by this supplementary certificate, 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.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0:2018, EN 60079-1:2014, EN 60079-7:2015+A1:2018, EN 60079-18:2015+A1:2017, EN 60079-31:2014

(10) If the sign "X" is placed after the certificate number, it indicates that the product is subject to Specific Conditions of Use specified in the schedule to this certificate.

(11) The marking of the product shall include the following:

II 2G Ex db eb mb IIC T4 Gb – see cl. (15)
II 2D Ex tb IIIC T85°C Db

(12) This certificate is valid till: **30.09.2031**

Dipl. Ing. Lukáš Martinák
Representative of Notified Body No. 1026

PHYSICAL-TECHNICAL TESTING INSTITUTE FTZÚ TECHNICKÝ ZKUŠEBNÍ ÚSTAV NB 1026

Date of issue: 18.09.2026

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(13) **Schedule**

(14) # Supplementary EU - Type Examination Certificate No. 3 to FTZÚ 17 ATEX 0052X

(15) Description of the variation to the Product:

The subject of this supplementary certificate is:

- Modification of certified product.
- Evaluation according to the newest standard EN IEC 60079-31:2024.
- Extension of certificate validity

The following changes were made to the flameproof luminaire:

1) Change in luminaire type marking to AQUA-70-Ex1/21 and luminaire designation system - see Annex.
2) Use only new-generation electronic components (driver and LED module) and terminal blocks.

Due to the above changes, the Ex marking (11) has been updated and the "Specific Conditions of Use" (17) have been specified.

Electrical parameters:

Nominal voltage:
110 - 127 V AC;50/60Hz; or 110 - 127 V DC
220 - 254 V AC;50/60Hz; or 220 - 250 V DC

Additional parameters – see Annex.

The marking of product without off-load switch: Ⓔx **II 2G Ex eb mb IIC T4 Gb**

The luminaire contains LEDs on the LED module that are considered as non-array divergent LEDs and these LEDs are to be excluded from scope based on Clause 1 of the standard EN 60079-28:2015.

(16) Report Number: 17/0052/3

(17) Specific Conditions of Use:

1. Ambient temperature range: see Annex.
2. The type luminaire without installed off-load switch must be labelled "Do not open when energized".
3. The luminaire is intended for fixed installation and must be labelled "Warning - potential danger of electrostatic charging" - see Technical conditions for mounting.
4. The Technical conditions for mounting must be complied.
5. The luminaire shall be used only with Ex equipment cable glands and Ex equipment blanking elements with Ex protection Ex eb and Ex tb with IP 66/IP68.
6. The luminaire shall be installed to avoid a risk from propagating brush discharges for application in explosive dust atmosphere.

Ing. Lukáš Martinák
Representative of Notified Body No. 1026

PHYSICAL-TECHNICAL TESTING INSTITUTE FYZIKÁLNĚ TECHNICKÝ ZKUŠEBNÍ ÚSTAV FTZÚ Ex NB 1026

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(13) **Schedule**

(14) # Supplementary EU - Type Examination Certificate No. 3 to FTZÚ 17 ATEX 0052X

(18) Essential Health and Safety Requirements:

Compliance with the Essential Health and Safety Requirements is covered by standards mentioned in clause (9) of this supplementary certificate and standard EN IEC 60079-31:2024.

(19) Drawings and Documents (only revided documents):

Number	Revision	Sheets	Date	Description
--	02	5	18.05.2026	Technical description
MNO326	0	7	29.05.2026	Technical conditions for mounting luminaire AQUA-70-Ex1/21

Dipl. Ing. Lukáš Martinák
Representative of Notified Body No. 1026

PHYSICAL-TECHNICAL TESTING INSTITUTE FTZÚ NB 1026

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Physical-Technical Testing Institute
Ostrava - Radvanice

ANNEX

to Supplementary EU - Type Examination Certificate No. 3 to FTZÚ 17 ATEX 0052X

Ambient temperature range:

Type of luminaire	Ambient temperature range Ta	Ambient temperature range Ta for 110V	*Power W	Temperature class	Max. surface temperature
AQUA-70-EX1/21-I-L11-γγγ-2200-0ND/D2-ζζ-PG	-20°C to +55°C		16	T4	T85°C
AQUA-70-EX1/21-I-L11-γγγ-2750-0ND/D2-ζζ-PG	-20°C to +55°C		19		
AQUA-70-EX1/21-I-L11-γγγ-4000-0ND/D2-ζζ-PG	-20°C to +55°C		26		
AQUA-70-EX1/21-I-L17-γγγ-4500-0ND/D2-ζζ-PG	-20°C to +50°C	-20°C to +45°C	27		
AQUA-70-EX1/21-I-L17-γγγ-5500-0ND/D2-ζζ-PG	-20°C to +50°C	-20°C to +45°C	34		
AQUA-70-EX1/21-I-L17-γγγ-8000-0ND/D2-ζζ-PG	-20°C to +50°C	-20°C to +45°C	50		

* maximum power of luminaire

Type coding:

AQUA-70-EX1/21-I-L ββ -γγγ-δδδ00-εεεε-ζζ-PG

- **AQUA-70** – name of the luminaire
- **EX1/21** – luminaire certified for zone 1/21
- **I** – internal marking
- **Lββ** – length of the luminaire
- **γγγ** – CRI/CCT
- **δδδ00** – designation of the luminous flux of the LED source
- **εεεε** – type of the connection
- **ζζ** – internal designation
- **PG** – PC cover + LED module diffuser

PHYSICAL-TECHNICAL TESTING INSTITUTE FTZÚ TECHNICKÝ ZKUŠEBNÍ ÚSTAV FYZIKÁLNÍ NB 1026

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ANNEX

to Supplementary EU - Type Examination Certificate No. 3 to FTZÚ 17 ATEX 0052X

Additional parameters:

L ββ – Length of the luminaire	YYY – CRI/CCT	εεεε – Type of the connection	ζζ – Internal designation
L11 - 1149 mm	830 – CRI80/ 3000K	0ND – ON/OFF driver	23 - without off-load switch
L17 – 1709 mm	840 – CRI80/ 4000K	0D2 – DALI2 driver	24 -1x off-load switch
	850 – CRI80/ 5000K		
	857 – CRI80/ 5700K		
	865 – CRI80/ 6500K		
	930 – CRI90/ 3000K		
	940 – CRI90/ 4000K		
	950 – CRI90/ 5000K		
	957 – CRI90/ 5700K		
	965 – CRI90/ 6500K		

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