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EU - Type Examination Certificate

(1)

(2) Equipment and protective systems intended for use in potentially explosive atmospheres – **Directive 2014/34/EU**

(3) EU - Type Examination Certificate Number

EPS 18 ATEX 1 249 X

Revision 2

(4) Equipment: Camera Cube 800

(5) Manufacturer: Librestream Technologies Inc

(6) Address: 895 Waverley Street, Suite 110
Winnipeg MB R3T 5P4
Canada

(7) This equipment and any acceptable variation thereto are specified in the annex to this certificate and the documentation therein referred to.

(8) Bureau Veritas Consumer Products Services Germany GmbH, notified body No. 2004 in accordance with Article 21 given in the Directive 2014/34/EU of the European Parliament and of the Council of 26 February 2014, certifies that this equipment has been found to comply with the essential health and safety requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres, given in Annex II of the Directive. The examination and test results are recorded in the confidential documentation under the reference number 17TH0367.

(9) Compliance with the essential health and safety requirements has been assured by compliance with:

EN IEC 60079-0:2018

EN 60079-11:2012

EN 60079-28:2015

(10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the annex to this certificate.

(11) This EU - Type Examination Certificate relates only to the design and examination of the specified equipment in accordance with Directive 2014/34/EU. Further requirements of this Directive apply to the manufacture of this equipment and its placing on the market. Those requirements are not covered by this certificate.

(12) The marking of the equipment shall include the following:



II 2G Ex ib op is IIC T4 Gb IP64

II 2D Ex ib op is IIIC T135°C Db IP64

Certification department of explosion protection

Hamburg, 2020-08-03



H. Schaffer

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(13)

Annex

(14) **EU - Type Examination Certificate EPS 18 ATEX 1 249 X**

Revision 2

(15) Description of equipment:

The Cube is an intrinsically safe camera with dual cameras, HD optics and thermal imaging. The device captures live video, HD pictures and thermal imaging for remote collaboration. The multi-purpose design of the Cube allows hands-free, handheld and monopod use. The magnetic auto-latch mount provides an easy and secure way to attach the Cube to hardhat mount and climbing helmet mount accessories.

Ambient temperature $-20^{\circ}\text{C} \leq T_a \leq +55^{\circ}\text{C}$

Permitted accessories:

- Monopod
- Hard hat mount, Ex
- Climbing helmet mount, Ex

Subject of the revision 1 are the following tiny modifications:

1. usage of an alternative loudspeaker
2. Accessory Monopod with an optional D-Ring and a lanyard
3. Optional lanyard is a restraining device for the Cube 800

The kind of protection "intrinsic safety" is not affected by these modifications. The "Electrical Data" as well as the "Special conditions for safe use" remain unchanged and are valid further on.

Subject of the revision 2 are the following tiny modifications:

Removal of the capacitance value (≤ 10 pF) under the specific conditions of use due to the additional finish on the surface of the camera heatsink and the frame heatsink.

The kind of protection "intrinsic safety" is not affected by these modifications. The "Electrical Data" remain unchanged. The "Special conditions for safe use" are listed below for revision 2.

Electrical data:

Power supply: via internal rechargeable Li-Ion Battery
Nominal capacity 2200 mAh, output: $U_o = 3,7$ V (nominal) and $U_o = 4,2$ V (free wheeling)
The battery pack is built in the device and is not accessible and replaceable by the user. Charging of the device is only allowed outside the hazardous area.

WLAN/Bluetooth: WLAN: 18 dBm = 63 mW, BT: 11.7 dBm = 15 mW

USB-Interface: type of protection intrinsic safety Ex ib IIC
maximum values:

$U_o = 4,2$ V
 $I_o = 3,75$ A
linear characteristic
or Ex ib IIIC

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$$\begin{aligned}U_o &= 4,2 \text{ V} \\I_o &= 170 \text{ mA} \\P_o &= 646 \text{ mW}\end{aligned}$$

The USB interface is used for charging and data transfer to and from the device.
This is allowed in ordinary (non-hazardous) locations only
Maximum r.m.s. a.c. or d.c. voltage $U_m = 6 \text{ V}$

(16) Reference number: 17TH0367

(17) Special conditions for safe use revision 1:

1. Do not charge the device inside the Ex-area.
2. Do not open the device inside the Ex-area.
3. It must be ensured that the maximum input voltage (U_m) for the device from the charger is 6 V.
4. The device must be protected against strong impacts.
5. The device must be protected against high electrostatic charge generating processes.
The capacitance of the device is $\leq 10\text{pF}$. The device must be provided with an electrically dissipative connection to earth during operation in IIC gas environments. This can be achieved by using the device handheld, or by mounting the device in the approved accessories. An alternate dissipative connection to earth must be provided when operating the device in IIC gas environments without any contact to the user or accessories.

Special conditions for safe use revision 2:

1. Do not charge the device inside the Ex-area.
2. Do not open the device inside the Ex-area.
3. It must be ensured that the maximum input voltage (U_m) for the device from the charger is 6 V.
4. The device must be protected against strong impacts.
5. The device must be protected against high electrostatic charge generating processes.
The device must be connected to earth via an electrostatically dissipative connection. This can also be achieved by direct contact with the user via the associated accessories. Another suitable method must be used if the device does not have any direct or indirect (via the accessories) contact with the user.

(18) Essential health and safety requirements:

Met by compliance with standards.

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