



# IECEX Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit [www.iecex.com](http://www.iecex.com)

Certificate No **IECEX SIR 15.0068X** issue No.:0 Certificate history:

Status: **Current**

Date of Issue: **2015-07-22** Page 1 of 4

Applicant: **Maxon Corporation**  
A Honeywell Company  
201 E. 18th Street  
Muncie  
Indiana 47302  
**United States of America**

Electrical Apparatus **U2-S series Flame Monitoring Viewing Head and Signal Processor**  
Optional accessory:

Type of Protection: **Flameproof, Type nA and Dust Protection by Enclosure**

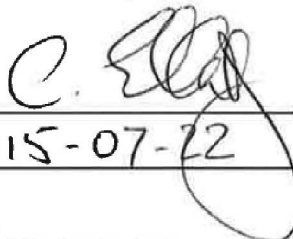
Marking: **U2-101\*S-PF series** **U2-101\*S series**  
Ex d IIC T6 Gb Ex nA nC IIC T5 Gc  
Ex tb IIIC T85°C Db Ex tb IIIC T85°C Db  
IP66 P66  
Ta = -40 °C to +70 °C Ta = -40 °C to +70 °C

Approved for issue on behalf of the IECEx Certification Body: C Ellaby

Position: Deputy Certification Manager

Signature:  
(for printed version)

Date:

  
2015-07-22

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the [Official IECEx Website](http://www.iecex.com).

Certificate issued by:

**SIRA Certification Service**  
CSA Group  
Unit 6, Hawarden Industrial Park  
Hawarden  
Deeside  
CH5 3US  
United Kingdom

**sira**  
CERTIFICATION





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Manufacturer: **Maxon Corporation**  
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Muncie  
Indiana 47302  
**United States of America**

Additional Manufacturing location  
(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

#### STANDARDS:

The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

<b>IEC 60079-0 : 2011</b> Edition: 6.0	Explosive atmospheres - Part 0: General requirements
<b>IEC 60079-1 : 2014-06</b> Edition: 7.0	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
<b>IEC 60079-15 : 2010</b> Edition: 4	Explosive atmospheres - Part 15: Equipment protection by type of protection "n"
<b>IEC 60079-31 : 2013</b> Edition: 2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

#### TEST & ASSESSMENT REPORTS:

*A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in*

Test Report:  
[GB/SIR/ExTR15.0198/00](#)

Quality Assessment Report:  
[GB/FME/QAR11.0013/02](#)



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## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

The U2-S series Flame Monitoring Viewing Head and Signal Processor is assessed as (a) U2-101\*S-PF model series for flameproof "d" and dust ignition "t" enclosure, and (b) U2-101\*S model series for type "n" method of protection and dust ignition "t" enclosure.

The U2-101\*S-PF and U2-101\*S model series are identical in construction, differing only by the type of sensors and external connection method. The asterisk (\*) shown above may be replaced by digits: 0, 2, 6 or 8 corresponding to the type of sensor(s) employed. The U2-101\*S-PF may be followed by a hyphen and a two to four digit number: 00 to 1000 indicating the length of provided cable in feet.

The U2-S series is part of a flame monitoring or burner control system which senses the presence of ignition via Ultraviolet (UV) photo detector and/or Infrared (IR) solid state sensor and/or UV solid state sensor. The permanently mounted single-compartment cylindrical enclosure includes a threaded cover, two cemented window joints, and either one 3/4 NPT conduit nipple / strain relief with flying lead conductors (U2-101\*S-PF models) or one 12-pin threaded circular receptacle (U2-101\*S models). The internal circuitry consists of the UV and/or IR sensors, the signal processor which can communicate externally via 2-wire Modbus, two sealed output relays, and a touch-sensitive touchwheel control with numeric display.

The overall physical dimensions of the U2-S series enclosure are 11.7 cm x 15.5 cm (Ø x L) cylindrical. The mass is approximately 2.8 kg.

### CONDITIONS OF CERTIFICATION: YES as shown below:

1. Under certain extreme circumstances, the non-metallic parts incorporated in the enclosure of this equipment may generate an ignition-capable level of electrostatic charge. Therefore the equipment shall not be installed in a location where the external conditions are conducive to the build-up of electrostatic charge on such surfaces. In addition, the equipment shall only be cleaned with a damp cloth.
2. The flameproof U2-101\*S-PF model series is provided with flying lead conductors exiting the 3/4 NPT conduit nipple / strain relief. A suitably certified Ex d conduit seal or cable gland shall be provided in the end installation within 50 mm of the enclosure.
3. The apparatus is not capable of withstanding the 500 Vrms insulation test required by IEC 60079-15:2010 clauses 23.2.1 and 6.5.1. This must be taken into account when installing the equipment.



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## EQUIPMENT(continued):

### Conditions of manufacture

The Manufacturer shall comply with the following:

1. Routine tests on production for Flameproof enclosure "d" equipment:  
In accordance with IEC 60079-1:2014 clause 16, each U2-101\*S-PF model series enclosure shall be subjected to an Overpressure Test using a test pressure of 210 PSI (1448 kPa) for a minimum duration of 10 seconds. The test may be conducted at normal ambient temperatures. Individual parts of the flameproof enclosure may be tested separately. There shall be no permanent deformation of the joints or damage to the enclosure.