

# CERTIFICATE OF CONFORMITY

1. **HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT PER US REQUIREMENTS**
2. **Certificate No:** FM19US0003
3. **Equipment:** PS2-IS-BARRIER  
**(Type Reference and Name)** Shunt Diode Barrier
4. **Name of Listing Company:** iKey, Ltd.
5. **Address of Listing Company:** 2621 Ridgepoint Drive, Ste. 235  
Austin, Texas 78754  
USA
6. The examination and test results are recorded in confidential report number:  
  
PR451725 dated 19<sup>th</sup> February 2019
7. FM Approvals LLC, certifies that the equipment described has been found to comply with the following Approval standards and other documents:  
  
FM Class 3600:2018, FM Class 3610:2018, FM Class 3810:2018, ANSI/ISA 60079-0:2013,  
ANSI/ISA 60079-11:2014, ANSI/ISA 61010-1:2012
8. If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to specific conditions of use specified in the schedule to this certificate.
9. This certificate relates to the design, examination and testing of the products specified herein. The FM Approvals surveillance audit program has further determined that the manufacturing processes and quality control procedures in place are satisfactory to manufacture the product as examined, tested and Approved.
10. **Equipment Ratings:**  
  
Associated intrinsically safe apparatus (entity) for connection to Class I, II, III, Division 1, Groups ABCDEFG hazardous (classified) indoor locations, with an ambient temperature rating of -40 °C to +75 °C

## Certificate issued by:



J.E. Marquedant  
VP, Manager - Electrical Systems

19 February 2019  
Date

To verify the availability of the Approved product, please refer to [www.approvalguide.com](http://www.approvalguide.com)

**THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE**

FM Approvals LLC, 1151 Boston-Providence Turnpike, Norwood, MA 02062 USA  
T: +1 (1) 781 762 4300 F: +1 (1) 781 762 9375 E-mail: [information@fmapprovals.com](mailto:information@fmapprovals.com) [www.fmapprovals.com](http://www.fmapprovals.com)

# SCHEDULE



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11. The marking of the equipment shall include:

Intrinsically Safe (Entity) Connections for Class I,II,III, Div 1, Groups ABCDEFG  
when installed in accordance with Drawing No. HL0079  
Ambient Ta = -40°C to +75°C

12. **Description of Equipment:**

**General** – PS2-IS-BARRIER shunt diode barrier is non-isolating associated apparatus (entity) providing three intrinsically safe linear outputs. The outputs are not separate intrinsically safe circuits.

**Construction** - The associated apparatus is housed in a Flame Retardant ABS UL94V-0 enclosure.

Current-carrying wiring is terminated at 7-pin Mini DIN plugs mounted fitted to PCB-mounted sockets accessible through openings within the enclosure. The associated apparatus safety earth wire is provided on the side of the enclosure.

**Ratings** - The barrier is rated for operation over a temperature range of -40°C to 75°C and is suitable for connection, under normal conditions, to supply voltages of up to 5 V dc and under fault conditions, to a Um of up to 250 V rms.

**Model type designation** – The associated apparatus is identified as the PS2-IS-BARRIER. There are no optional variations or accessories

**Interconnection (entity) parameters** - Interconnection (entity) parameters are as follows:

Uo (V)	Io (mA)	Po (mW)	Groups	Co (uF)	Lo (uH)	Lo/Ro (uH/Ω)
7.71	790.0	1124	A, B	9.8	57	27.6
			C, E, F, G	145	228	110.6
			D	1000	456	221.2

The above Io, Po, Lo and Lo/Ro parameters reflect parallel connection of all three output channels.

13. **Specific Conditions of Use:**

None

14. **Test and Assessment Procedure and Conditions:**

This Certificate has been issued in accordance with FM Approvals US Certification Requirements.

15. **Schedule Drawings**

A copy of the technical documentation has been kept by FM Approvals.

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## 16. Certificate History

Details of the supplements to this certificate are described below:

Date	Description
19 <sup>th</sup> February 2019	Original Issue.

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