



# IECEX Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

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

Certificate No.: **IECEX SEV 18.0042**

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Certificate history:

Status: **Current**

Issue No: 2

Issue 1 (2019-08-26)

Issue 0 (2019-03-26)

Date of Issue: 2019-10-17

Applicant: **Rieker, Inc**  
34 Mt Pleasant Rd  
Aston  
PA 19014  
United States of America

Equipment: **Inclinometer Type H6EX-A1 & H6EX-A2**

Optional accessory:

Type of Protection: **ia**

Marking: Ex ia IIC T4 Ga



Approved for issue on behalf of the IECEX  
Certification Body:

**Martin Plüss**

Position:

**Manager Product Certification**

Signature:  
(for printed version)

Date:

2019-10-17

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 [www.iecex.com](http://www.iecex.com) or use of this QR Code.



Certificate issued by:

**Eurofins Electric & Electronic Product Testing AG**  
Luppenstrasse 3  
CH-8320 FEHRALTORF  
Switzerland



E&E



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Manufacturer: **Rieker, Inc**  
34 Mt Pleasant Rd  
Aston  
PA 19014  
**United States of America**

Additional  
manufacturing  
locations:

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 equipment 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

**IEC 60079-0:2011** Explosive atmospheres - Part 0: General requirements  
Edition:6.0

**IEC 60079-11:2011** Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"  
Edition:6.0

This Certificate **does not** indicate compliance with 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:

[CH/SEV/EXTR18.0055/02](#)

Quality Assessment Report:

[CH/SEV/QAR19.0005/00](#)



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## **EQUIPMENT:**

Equipment and systems covered by this Certificate are as follows:

Inclinometer Type H6EX-A1 & H6EX-A2

### General product information:

#### General Overview

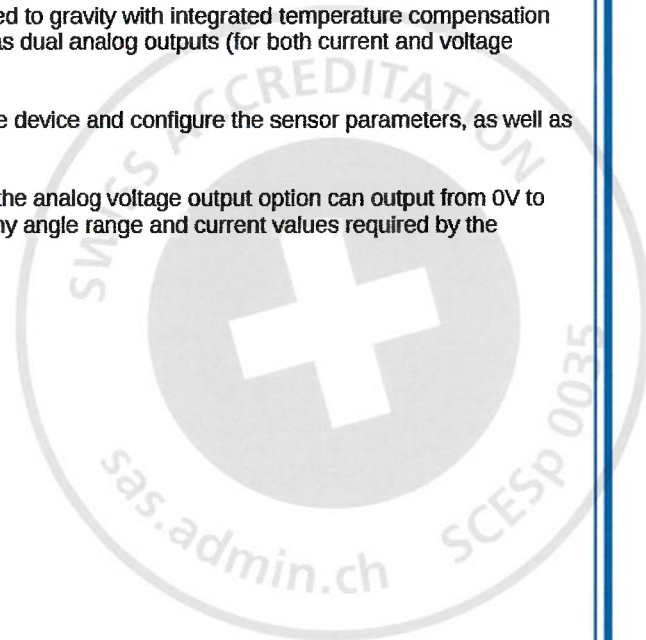
The H6EX is an inclinometer which incorporates a MEMS accelerometer referenced to gravity with integrated temperature compensation over the full industrial operating range of -40° to +85°C for absolute accuracy. It has dual analog outputs (for both current and voltage options), as well as a digital RS485 output for calibration and configuration.

The digital RS485 output uses two-wire, half duplex communication to calibrate the device and configure the sensor parameters, as well as output angles in the hazardous location.

The analog current output option can output from 0mA to 24mA for each axis and the analog voltage output option can output from 0V to 10V for each axis. Both are user or factory configurable via the RS485 to match any angle range and current values required by the customer.

See Annexe for more information

**SPECIFIC CONDITIONS OF USE: NO**





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**DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)**

Update the following Manufacturer's Documents

1. BOM PL\_PCA304 from rev F to G
2. PCB Layout PCB062 from rev D to E

**Annex:**

IECEX SEV 18.0042 Annexe Issue 2\_1.pdf



**Appendix to:** IECEx SEV 18.0042

**Issue No.:** 2

**Applicant Name:** Rieker, Inc

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**Product:** Inclinometer

#### General Overview

The H6EX is an inclinometer which incorporates a MEMS accelerometer referenced to gravity with integrated temperature compensation over the full industrial operating range of -40 °C to +85 °C for absolute accuracy. It has dual analog outputs (for both current and voltage options), as well as a digital RS485 output for calibration and configuration.

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#### Specifications

The configuration considered is called H6EX-A

- IIC, 12Vnom input
- 8 pin connector only

The H6EX-A1 model has an ambient temperature range of -40 °C to 65 °C. This model allows the use of the RS485 in the hazardous location.

The H6EX-A2 model has an ambient temperature range of -40 °C to 85 °C. This model disallows the use of the RS485 in the hazardous location.

The equipment contains a single port for use with an 8 pin male M12 connector. The pins are used as follows:

- Vin 12Vnom
- GndIn
- 2 transmit/receive
- 2 sensor outputs
- 2 unused

A certified barrier is to be used externally prior to the 8 pin connector. No current/power/voltage limiting taking place within the unit.

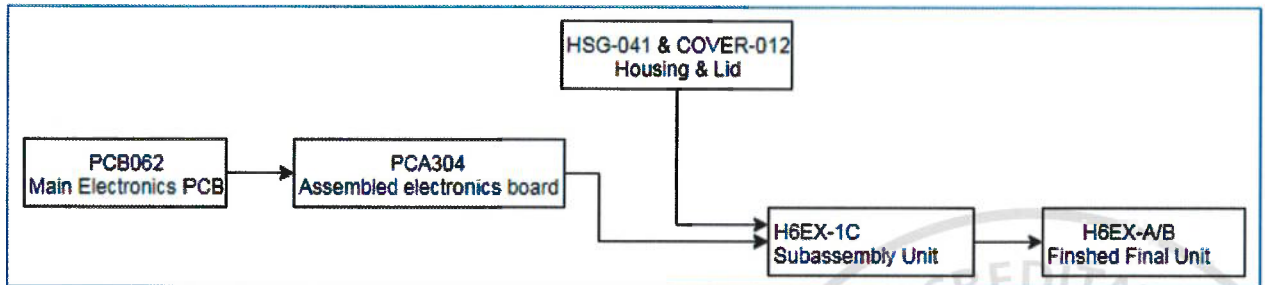
No designed voltage or current boosting within the Equipment.

There is a single printed circuit assembly (PCA) in the device, the main electronics board (PCA304).

Though the interior of the product is fully potted, this is not done for hazardous location compliance.

**Eurofins Electric & Electronic Product Testing AG**  
**Swiss Certification Body**



**Appendix to: IECEx SEV 18.0042**
**Issue No.: 2**  
**page 2 of 2**
**Manufacturing documentation naming diagram**

**Rating:**

<b>Intrinsic safe circuit:</b> Maximum input voltage Maximum input current Maximum input power Inductance Capacitance	Maximum input voltage $U_i = 13 \text{ V}$ Maximum input current $I_i = 270 \text{ mA}$ Maximum input power $P_i = 3.348 \text{ W}$ Inductance $L_i = 0 \text{ mH}$ Capacitance $C_i = 0.977 \text{ }\mu\text{F}$
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**Classification of installation and use:**

Stationary

**Ingress protection:**

N / A

**Rated ambient temperature range (°C):**
**Operating temp:**

H6EX-A1 (-40 °C to +65 °C)

H6EX-A2 (-40 °C to +85 °C)

**Storage temp:** (-45 °C to +90 °C)

**Rated ambient temperature range (°C) for Ex Components:** N / A
