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

Certificate No.:	**IECEx SEV 18.0042**	Page 1 of 5	Certificate history:
Status:	**Current**	Issue No: 4	Issue 3 (2020-01-09) Issue 2 (2019-10-17) Issue 1 (2019-08-26) Issue 0 (2019-03-26)
Date of Issue:	2021-09-03		

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

Equipment: **Inclinometer Type H6EX-A1 & H6EX-A2 (Zone 0), H6EX-B (Zone 2)**

Optional accessory: ---

Type of Protection: **"e", "i", "t"**

Marking:
For zone 0: Ex ia IIC T4 Ga
Ex ta IIIC T200°C Da
For zone 2: Ex ec IIC T4 Gc
Ex tc IIIC T135°C Dc

Approved for issue on behalf of the IECEx Certification Body: **Patrick Gutensohn**

Position: **Manager Product Certification**

Signature: (for printed version)

Date: 2021-09-03

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 or use of this QR Code.

Certificate issued by:

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

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Certificate No.: **IECEx SEV 18.0042**

Date of issue: 2021-09-03

Issue No: 4

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 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

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

IEC 60079-31:2013 Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
Edition:2

IEC 60079-7:2017 Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:5.1

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/ExTR18.0055/04

Quality Assessment Report:

CH/SEV/QAR19.0005/01

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EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

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.

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 0 V to 10 V for each axis. Both are user or factory configurable via the RS485 to match any angle range and current values required by the customer.

Specifications

H6EX-A

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 keyed 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.

H6EX-B

Nominal Input: 24V 90mA; -40°C ≤ Tamb ≤ 85°C

Additional notes

- 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.
- Note that the IS version of this product, assessed for EPL Ga using 60079-11 is energy limited using entity parameters and requires a barrier.
  The EPL Gc version has no such limitation and is not considered IS.

See Annexe for manufacturing documentation naming diagram.

SPECIFIC CONDITIONS OF USE: NO

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Equipment (continued):

Ratings:

Intrinsic safe circuit:	Maximum input voltage	Ui = 13 V
	Maximum input current	Ii = 270 mA
	Maximum input power	Pi = 3.348 W
	Inductance	Li = 0 mH
	Capacitance	Ci = 0.977 µF

Classification of installation and use:	Stationary
Ingress protection:	IP 54
Rated ambient temperature range (°C):	Operating temp: H6EX-A1 (-40°C to +65°C) H6EX-A2 (-40°C to +85°C) H6EX-B (-40 °C to +85 °C) Storage temp: (-45°C to +90°C)

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
Issue 4:

- Addition of zone 2 and zone 22 model for gas and dust environments using 60079-7 and 60079-31.
- Update from 60079-0 edition 6 to edition 7.
- Update Technical documents for zone 0 model.
- Addition of zone 2 and zone 22 model for gas and dust environments using 60079-7 and 60079-31

Issue 3:

- Update the following Manufacturer's Document
  1. DD_PCB062

Issue 2:

- Update the following Manufacturer's Documents
  1. BOM PL_PCA304 from rev F to G
  2. PCB Layout PCB062 from rev D to E

Issue 1:

1. The sensor devices are now on the main board instead of on a daughter card.
    - The following Manufacturer's Documents specifying the daughter cards are no longer relevant due to this change, and have been removed from Manufacturer's Documents table below:
        - DD_PCB060
        - PCB060
        - PL_PCA302
2. Update to the BOM due to change of several components
3. Board layout change to accommodate new components

Annex:

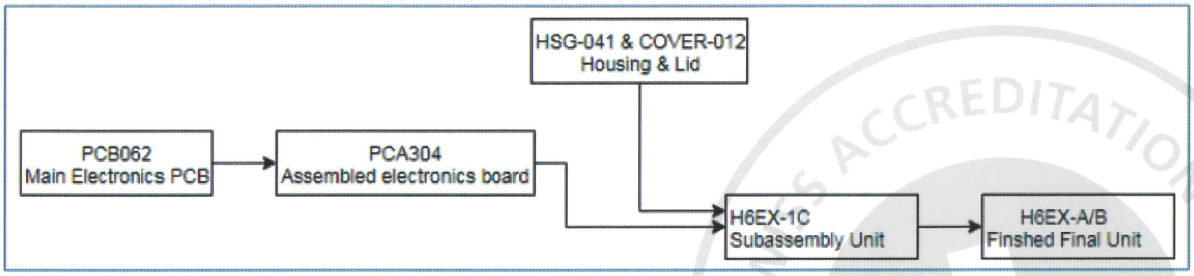
IECEx SEV 18.0042 Annexe issue 4.pdf

Annexe to: **IECEx SEV 18.0042** **Issue No.: 4**

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

Electrical Apparatus: **Inclinometer Type H6EX-A1 & H6EX-A2 (Zone 0), H6EX-B (Zone 2)**

Manufacturing documentation naming diagram:



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