



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

Certificate No.: IECEx DEK 13.0060X Issue No: 0 Certificate history:
Issue No. 0 (2014-01-14)

Status: **Current** Page 1 of 3

Date of Issue: **2014-01-14**

Applicant: **Klay Instruments B.V.**
Nijverheidsweg 5
7991 CZ Dwingeloo
The Netherlands

Electrical Apparatus: **The Pressure and Level Transmitters Series 8000, Series 8000-SAN,
Series CER-8000, Series 8000-Cable, Series 8000-SAN-Cable, Hydrobar-
EXTD, Hydrobar-Cable and Hydrobar-Cable-FR**

Optional accessory:

Type of Protection: **Ex i**

Marking: **Ex ia IIC T4 Ga**


Approved for issue on behalf of the IECEx
Certification Body:

R. Schuller

Position:

Certification Manager

Signature:
(for printed version)



2014-01-14

Date:

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:

DEKRA Certification B.V.
Meander 1051,
6825 MJ Arnhem
The Netherlands





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Manufacturer: **Klay Instruments B.V.**
Nijverheidsweg 5
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The Netherlands

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:

IEC 60079-0 : 2011 Edition:6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-11 : 2011 Edition:6.0	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
IEC 60079-26 : 2006 Edition:2	Explosive atmospheres - Part 26: Equipment with equipment protection level (EPL) Ga

*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:

[NL/DEK/ExTR13.0062/00](#)

Quality Assessment Report:

[NL/DEK/QAR12.0013/01](#)



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The Pressure and Level Transmitters Series 8000, Series 8000-SAN, Series CER-8000, Series 8000-Cable, Series 8000-SAN-Cable, Hydrobar-EXTD, Hydrobar-Cable and Hydrobar-Cable-FR convert the pressure measured with a bridge resistive sensor into a 4 - 20 mA signal.

The Pressure and Level Transmitters Type Hydrobar-CABLE, Series 8000-SAN-cable and Series 8000-cable have an extension cable between sensor and amplifier with a maximum length of 32 m. The Pressure Transmitters Type Hydrobar-FR have a permanently connected cable, with a maximum length of 100 m.

Ambient temperature range:

Hydrobar-EXTD, Hydrobar-CABLE and Hydrobar-Cable-FR: -20 °C to +70 °C;

Series 8000, Series 8000-SAN, Series CER-8000, Series 8000-Cable and Series 8000-SAN-Cable:

-30 °C to +70 °C

Electrical data

Refer to Annex 1

CONDITIONS OF CERTIFICATION: YES as shown below:

As equipment with EPL Ga may be applied directly in the process, electrostatic charging of the cable and the protection cap of Models Hydrobar-FR and Hydrobar-CABLE by the flow of non-conductive media (e.g. in stirring vessels or pipes) shall be avoided.

Annex:

[Annex 1 to ExTR_DEK13.0062.00 and IECExDEK13.0060X, iss 0.pdf](#)

Annex 1 to Certificate of Conformity IECEx DEK 13.0060X, issue 0
Annex 1 to KEMA 03ATEX1219 X, issue 5
Annex 1 to NL/DEK/ExTR/13.0062/00

General product information

The Pressure and Level Transmitters Series 8000, Series 8000-SAN, Series CER-8000, Series 8000-Cable, Series 8000-SAN-Cable, Hydrobar-EXTD, Hydrobar-Cable and Hydrobar-Cable-FR convert the pressure measured with a bridge resistive sensor into a 4 - 20 mA signal.

The Pressure and Level Transmitters Type Hydrobar-CABLE, Series 8000-SAN-cable and Series 8000-cable have an extension cable between sensor and amplifier with a maximum length of 32 m. The Pressure Transmitters Type Hydrobar-FR have a permanently connected cable, with a maximum length of 100 m.

Ambient temperature range:

Hydrobar-EXTD, Hydrobar-CABLE and Hydrobar-Cable-FR: -20 °C to +70 °C;

Series 8000, Series 8000-SAN, Series CER-8000, Series 8000-Cable and Series 8000-SAN-Cable: -30 °C to +70 °C

Electrical data

Supply/output circuit, in type of protection intrinsic safety Ex ia IIC, only for connection to a certified intrinsically safe circuit, with the following maximum values:

For Series CER-8000, Series 8000, Series 8000-SAN and Hydrobar-EXTD, Hydrobar-CABLE between terminals 3(-) and 4(+):

$U_i = 26.5$ Vdc, $I_i = 110$ mA, $P_i = 0.9$ W, $L_i = 1.2$ mH, $C_i = 1$ nF

between terminals 3(-), 4(+) and ground, $C_i = 21$ nF;

From safety point of view the equipment is connected to earth.

Optionally a certified indicator may be connected to terminals 1(-) and 2(+).

For Series Hydrobar-Cable-FR:

In combination with a 2-wire cable with a maximum length of 100m, connected to F1(-) and F2(+): $U_i = 26.5$ Vdc, $I_i = 110$ mA, $P_i = 0.9$ W, $L_i = 1.2$ mH, $C_i = 85$ nF,

between terminals F1(-), F2(+) and ground shield, $C_i = 28$ nF;

From safety point of view the equipment is connected to earth.

Installation instructions

The instructions provided with the equipment shall be followed in detail to assure safe operation.