



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 TUN 16.0001X**

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Certificate history:

Status: **Current**

Issue No: 4

[Issue 3 \(2026-02-25\)](#)

[Issue 2 \(2025-04-03\)](#)

[Issue 1 \(2017-01-26\)](#)

[Issue 0 \(2016-11-07\)](#)

Date of Issue: 2026-05-29

Applicant: **HB Products A/S**
Bøgekildevej 21
8361 Hasselager
Denmark

Equipment: **Long stroke transmitter SA96DX-I/Ex and short stroke transmitter SLCD-M1/25/Ex**

Optional accessory:

Type of Protection: **Intrinsic safety "ib"**

Marking: Ex ib IIC T5 Gb or
Ex ib IIC T6 Gb
The temperature class depends on the maximum ambient temperature

Approved for issue on behalf of the IECEx
Certification Body:

Andreas Meyer

Position:

Deputy Head of the IECEx Certification Body

Signature:
(for printed version)

Date:
(for printed version)

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:

TÜV NORD CERT GmbH
Hanover Office
Am TÜV 1, 30519 Hannover
Germany

TÜVNORD



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Manufacturer: **HB Products A/S**
Bøgekildevej 21
8361 Hasselager
Denmark

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

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:

[DE/TUN/ExTR16.0024/03](#)

Quality Assessment Report:

[GB/ITS/QAR25.0001/01](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

Description:

The long stroke transmitter SA96DX-I/Ex and the short stroke transmitter SLCD-M1/25/Ex are designed for analogue linear measurement on industrial refrigeration compressors in connection with capacity control.

The sensor is available in respectively a Long (LS) and Short Stroke (SS).

The product is built into an aluminium enclosure and the PCB is embedded in casting compound.

The output signal is a 4 to 20mA signal and corresponds to 0 to 100% capacity (display). The measuring range can be changed via new calibration (built-in push button and 2 LED).

The only difference between a long stroke and a short stroke transmitter is the measuring range and the location of the sensor coil. The long stroke transmitter has the sensor coil arranged in a coil tube outside the electronic top part with a measuring length of 100 to 1000mm and the short stroke transmitter has the coil arranged inside the electronic part with a measuring length of 5 to 100mm. The product is suitable for the harsh conditions of a refrigeration system and can deal with vibrations and high pressures up to 100 bar.

Electrical and thermal data:

Refer to the Attachment to IECEx TUN 16.0001X issue No.4

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. The device is not marked with the temperature range on the type label, hence a specific condition for safe use has to be stated.
2. The device has to be used with a standardised solenoid valve connector.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

See Attachment to IECEx TUN 16.0001X issue No.4

Annex:

[Attachment to IECEx TUN 16.0001X issue No.4.pdf](#)

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Description of product:

The long stroke transmitter SA96DX-I/Ex and the short stroke transmitter SLCD-M1/25/Ex are designed for analogue linear measurement on industrial refrigeration compressors in connection with capacity control. The sensor is available in respectively a Long (LS) and Short Stroke (SS).

The product is built into an aluminium enclosure and the PCB is embedded in casting compound.

The output signal is a 4 to 20mA signal and corresponds to 0 to 100% capacity (display). The measuring range can be changed via new calibration (built-in push button and 2 LED).

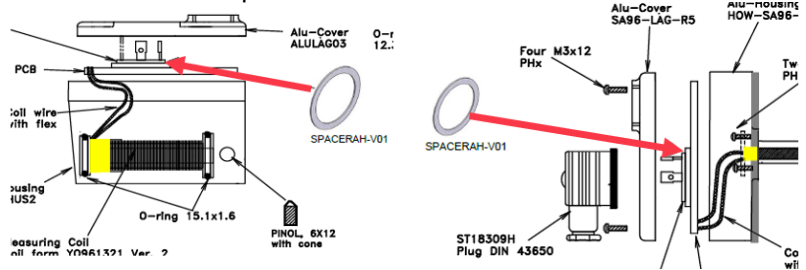
The only difference between a long stroke and a short stroke transmitter is the measuring range and the location of the sensor coil. The long stroke transmitter has the sensor coil arranged in a coil tube outside the electronic top part with a measuring length of 100 to 1000mm and the short stroke transmitter has the coil arranged inside the electronic part with a measuring length of 5 to 100mm. The product is suitable for the harsh conditions of a refrigeration system and can deal with vibrations and high pressures up to 100 bar.

Details of Change:

In order to implement the following changes, issue No.4 of IECEx TUN 16.0001X has been issued:

Change valid for products	Long stroke transmitter SA96DX-I/Ex Short stroke transmitter SLCD-M1/25/Ex
Change 1 request:	Plug PG9:  Material before change: Nickel-plated brass Material after change: CW724R + nickel plated Material datasheet: Datasheet for Cw724R.pdf
Part number	PMPROP2-V01
Drawing name	PMPROP2-R3
Reason for change	Wish to specify material more precisely to supplier.
Interpretation	Non-significant and does not impair the type of protection.

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Change 2 request:	Part is added to the products.  Position of component shown in the following files: SA96EX-B014 assembly drw. SLCDAS02 Shortstroke-R1.pdf SA96EX-B024 assembly drw. SA96AS02 Longstroke-R1.pdf Material: AlMgSi 1 (AW-6082) Material datasheet/file name: AW6082-rods-and-bars materiale certifikat.pdf
Part number	SPACERAH-V01
Drawing name	GEASW25-SPA AH-R4
Reason for change	When mounting a connector on the products and tightening the screw in the connector, it can cause mechanical stress on the product due to a small gap. The SPACERAH-V01 prevents this.
Interpretation	Non-significant and does not impair the type of protection.

Change 3 request:

Assembly drawings:

- SA96EX-B014 assembly drw. SLCDAS02 Shortstroke-R1.pdf
- SA96EX-B024 assembly drw. SA96AS02 Longstroke-R1.pdf

Updated to show updated material of PMPROP2-V01 (plug PG9) and added SPACERAH-V01

Change 4 request:

Minor reduction of redundant text in sections Repairs and Service as well Maintenance in the instructions manual.

Type code:

Following versions available:

- Long Stroke version (SA96DX-I/Ex) has a measuring stroke of max 50-2000 mm, can be calibrated to measure the minimum stroke of 50-80 mm.
- Short Stroke version (SLCD-M1/25/Ex) has a measuring stroke of max 0-25 mm, can be calibrated to measure the minimum stroke of 0-5 mm.

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Electrical data:

Supply and Signal circuit
(Solenoid valve connector
1=SUPPLY +
2=COMMON -
3=OUT 4...20mA)

In type of protection intrinsic safety Ex ib IIC
Only for connection to a certified intrinsic safe circuit.
Maximum values:

$U_i = 28 \text{ V}$
 $I_i = 116 \text{ mA}$
 $P_i = 585 \text{ mW}$
The effective internal capacitances $C_i = 22 \text{ nF}$
The effective internal inductances $L_i = 1 \text{ mH}$

Thermal data:

Permissible ambient temperature range depending on the temperature class:

T5	T6
-20°C < Ta < +80°C	-20°C < Ta < +70°C

Specific Conditions of Use:

1. The device is not marked with the temperature range on the type label, hence a specific condition for safe use has to be stated.
2. The device has to be used with a standardised solenoid valve connector.