



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 TUN 18.0002X Issue No: 0 Certificate history:
Status: Current Issue No. 0 (2018-07-27)
Date of Issue: 2018-07-27 Page 1 of 3
Applicant: ACS CONTROL SYSTEM GmbH
Lauterbachstraße 57
84307 Eggenfelden
Germany
Equipment: Pressure transmitter
Optional accessory:
Type of Protection: Intrinsic Safety "ia" and "ib"
Marking: See attachment

Approved for issue on behalf of the IECEx
Certification Body:

Frank Hiller

Position:

Deputy Head of the Certification Body

Signature:
(for printed version)

Date:

2018-07-27

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:

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





IECEX Certificate of Conformity

Certificate No: IECEx TUN 18.0002X Issue No: 0
Date of Issue: 2018-07-27 Page 2 of 3
Manufacturer: ACS CONTROL SYSTEM GmbH
Lauterbachstraße 57
84307 Eggenfelden
Germany

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 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 Explosive atmospheres - Part 0: General requirements
Edition:6.0
IEC 60079-11 : 2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety ""
Edition:6.0

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:

[DE/TUN/ExTR18.0005/00](#)

Quality Assessment Report:

[DE/BVS/QAR17.0010/00](#)



IECEx Certificate of Conformity

Certificate No: IECEx TUN 18.0002X

Issue No: 0

Date of Issue: 2018-07-27

Page 3 of 3

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

Subject and Type: Pressure transmitter type Precont PU4 ***** resp. type Precont PK4 *****

Description: The pressure transmitter type Precont PU4 ***** resp. type Precont PK4 ***** consists of transmitter type PU4 resp. Type PK4 and a pressure sensor and is used for monitoring, control and continuous measurement of pressures in gases, vapours, liquids and dusts.

For all other data refer to the attachment.

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. The pressure transmitter types Precont PU4***** and Precont PK4 ***** may be operated in hazardous areas in which equipment of EPL Ga and EPL Da are required only if atmospheric conditions exist (Temperatures: See tables above, pressure from 0.8 bar to 1.1 bar).
2. A reverse heat flow from the process exceeding the permissible ambient temperature of the transmitter is not allowed and shall be avoided by a suitable thermal insulation or a suitable temperature decoupler.
3. The ambient temperature range depending on temperature class resp. surface temperature is to be taken from the operating instructions.
4. For applications that require devices of EPL Ga and EPL Db the pressure transmitter with connected cable (PK4LFX****) has to be protected from prolific charge generating mechanisms.

Annex:

Attachment IECEx TUN 18.0002X-issue 00.pdf

General product information:

Subject and Type:

Pressure transmitter type Precont PU4 ***** resp. type Precont PK4 *****

Description:

The pressure transmitter type Precont PU4 ***** resp. type Precont PK4 ***** consists of a transmitter type PU4 resp. type PK4 and a pressure sensor and is used for monitoring, control and continuous measurement of pressures in gases, vapours, liquids and dusts.

Type code:

Precont PU4 ***** resp. Precont PK4 *****

Refer to the operating instructions for detailed type codes.

Technical Data:

Electrical Data:

Supply and signal circuit
(Plug connection
Pins L+ and -L)

only for connection to an intrinsically safe circuit in
type of protection intrinsic safety Ex ia IIC/IIB/IIIC/IIIB with the
following maximum values:

$U_i = 30 \text{ V}$
 $I_i = 300 \text{ mA}$
 $P_i = 900 \text{ mW}$
 $C_i = 3 \text{ nF}$
 $L_i = 5 \text{ } \mu\text{H}$

For the version with permanently connected cable PK4LFX**** the following applies:

Effective internal capacitance: $C_i = 3 \text{ nF} + \text{capacitance of the permanently connected cable}$
Effective internal inductance: $L_i = 5 \text{ } \mu\text{H} + \text{inductance of the permanently connected cable}$

$C_{c,wire/wire} = 200 \text{ pF/m}$
 $C_{c,wire/screen} = 400 \text{ pF/m}$
 $L_c = 1 \text{ } \mu\text{H/m}$

The supply and signal circuit are galvanically connected to each other.

Thermal data

For applications that require EPL Ga or Gb equipment, the following values apply:

Marking	Ambient temperature range at the electronic enclosure	Maximum surface temperature at the sensor T_{max}
Ex ia IIC T6 Ga Ex ib IIC T6 Gb	-40 °C+42 °C	T_M (Medium temperature) + self-heating (s.table below). The special conditions must be observed.
Ex ia IIC T5 Ga Ex ib IIC T5 Gb	-40 °C+57 °C	
Ex ia IIC T4 Ga Ex ib IIC T4 Gb	-40 °C+92 °C	
Ex ia IIC T3...T1 Ga Ex ib IIC T3...T1 Gb	-40 °C+97 °C	

Electronic enclosure / Pressure sensor Type	Self-heating
Electronic enclosure PU4	38 K
Electronic enclosure PK4	24 K
Pressure sensor P*4*E	9 K
Pressure sensor P*4*K	11 K
Pressure sensor P*4*C	19 K
Pressure sensor P*4*M / P*4*H / P*4*F	8 K

For applications that require EPL Da or Db equipment, the following values apply:

Marking	Ambient temperature range at the electronic enclosure	Maximum surface temperature at the sensor T_{max}
Ex ia IIIC T80°C Da Ex ib IIIC T80°C Db	-40 °C+42 °C	T _M (Medium temperature) + self-heating (s.table below). The special conditions must be observed.
Ex ia IIIC T95°C Da Ex ib IIIC T95°C Db	-40 °C+57 °C	
Ex ia IIIC T130°C Da Ex ib IIIC T130°C Db	-40 °C+92 °C	
Ex ia IIIC T195°C Da Ex ib IIIC T195°C Db	-40 °C+97 °C	

Electronic enclosure / Pressure sensor Type	Self-heating
Electronic enclosure PU4	38 K
Electronic enclosure PK4	24 K
Pressure sensor P*4*E	9 K
Pressure sensor P*4*K	11 K
Pressure sensor P*4*C	19 K
Pressure sensor P*4*M / P*4*H / P*4*F	8 K

Special Conditions for Safe Use:

1. The pressure transmitter types Precont PU4***** and Precont PK4 ***** may be operated in hazardous areas in which equipment of EPL Ga and EPL Da are required only if atmospheric pressure exist.
(Temperatures: See tables above, pressure from 0.8 bar to 1.1 bar).
2. A reverse heat flow from the process exceeding the permissible ambient temperature of the transmitter is not allowed and shall be avoided by a suitable thermal insulation or a suitable temperature decoupler.
3. The ambient temperature range depending on temperature class resp. surface temperature is to be taken from the operating instructions.
4. For applications that require devices of EPL Da and EPL Db the pressure transmitter with connected cable (PK4LFX****) has to be protected from prolific charge generating mechanisms.