



# 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 UL 23.0075X** Page 1 of 3 [Certificate history:](#)

Status: **Current** Issue No: 0

Date of Issue: 2023-12-19

Applicant: **TopWorx Inc.**  
3300 Fern Valley Road  
Louisville, KY 40213  
**United States of America**

Equipment: **Smart Valve Positioner, PD200\*\*\*\*\* Series**

Optional accessory:

Type of Protection: **Intrinsic Safety "ia"**

Marking: Ex ia IIC T4 Ga  
Ex ia IIIC T135°C Db  
-40°C to +65°C

Approved for issue on behalf of the IECEx  
Certification Body:

**Katy A. Holdredge**

Position:

**Senior Staff Engineer**

Signature:  
(for printed version)

Date:  
(for printed version)

2023-12-19

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Certificate issued by:

**UL Solutions (US)**  
333 Pfingsten Road  
Northbrook IL 60062-2096  
**United States of America**





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Manufacturer: **TopWorx Inc.**  
3300 Fern Valley Road  
Louisville, KY 40213  
**United States of America**

Manufacturing locations: **Sense Electronica Ltda.**  
Av. Joaquim Moreira Carneiro,  
600 – 37540-000  
Santa Rita do Sapucaí  
Minas Gerais  
**Brazil**

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:

[US/UL/ExTR23.0087/00](#)

Quality Assessment Reports:

[BR/ULBR/QAR23.0001/00](#)

[GB/SIR/QAR07.0025/11](#)



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## **EQUIPMENT:**

Equipment and systems covered by this Certificate are as follows:

The PD200 Series Smart Valve Positioners are intrinsically safe enclosed-type smart valve positioners intended to be powered by associated apparatus. The shaft is mechanically connected to the external valve actuator. When a control signal is received, the PD200 changes the position of the valve from anywhere between 0% and 100% of the full opening position, then sends a signal back to the control system confirming that the valve is in the new desired position.

**Please see Annex for additional information.**

## **SPECIFIC CONDITIONS OF USE: YES as shown below:**

- Clean with a damp cloth before touching or servicing to avoid electrostatic discharge. See installation instructions for further guidance.
- Equipment has only been evaluated for low risk of mechanical impact. Equipment shall only be installed in areas where the risk for mechanical impact is low.
- External parts of the device contain aluminum. Care shall be taken to avoid sparking hazards due to impact.

## **Annex:**

[Annex to IECEx UL 23.0075 Issue 0.pdf](#)



# IECEX Certificate of Conformity

Annex to Certificate No.:

IECEX UL 23.0075X

Issue No.: 0

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## TYPE DESIGNATION

PD200	H	S	N	G	RN	00	00	ES
I	II	III	IV	V	VI	VII	VIII	IX

### I. Basic Series Designation

PD200 – Smart Valve Positioner with enhanced controls

### II. Input & Communication

H – 4-20mA with HART

### III. Feedback Output

S – Mechanical switches plus isolated position feedback transmitter 4-20mA

### IV. Electric and Pneumatic Connection

N – Single conduit entry 1/2" NPT / Manifold with 1/4" NPT

M – Single conduit entry M20 / Manifold with 1/4" NPT

### V. Manifold

0 – Pneumatic manifold with gauges not included

G – Pneumatic manifold with two pressure gauges included

### VI. Type of Actuator

00 – No actuator adaptor

RN – Rotary NAMUR adapter

K1 - Linear lever with feedback 12 to 30mm stroke

K2 - Linear lever with feedback 12 to 60mm stroke

K3 - Linear lever with feedback 12 to 120mm stroke

K4 - Linear lever with feedback 80 to 200mm stroke

### VII. Actuator Mounting Bracket

00 – Without mounting bracket

### VIII. Options

00 – Without any additional options

### IX. Hazardous Area Classification

ES – Intrinsically Safe



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## PARAMETERS RELATING TO THE SAFETY

Intrinsically safe specifications:

Analog Control/HART Input 4-20mA

(H+, H-):

$U_o$  : 28 V

$I_o$  : 93 mA

$P_o$  : 0,651 W

$L_o$  : 0  $\mu$ H

$C_o$  : 22 nF

Analog Feedback Output 4-20mA

(RT+, RT-):

$U_o$  : 28 V

$I_o$  : 93 mA

$P_o$  : 0,651 W

$L_o$  : 0  $\mu$ H

$C_o$  : 0 nF

Alarm 1 (Switch 1):

$U_o$  : 28 V

$I_o$  : 93 mA

$P_o$  : 0,651 W

$L_o$  : 0  $\mu$ H

$C_o$  : 0 nF

Alarm 2 (Switch 2):

$U_o$  : 28 V

$I_o$  : 93 mA

$P_o$  : 0,651 W

$L_o$  : 0  $\mu$ H

$C_o$  : 0 nF

## MARKING

Marking has to be readable and indelible; it has to include the following indications:

**TOPWORX**™ "Intrinsically Safe/Sécurité Intrinsèque"  
"Install per Control Dwg. 04-415618"

3300 Fern Valley Road, 40213 USA  
Class I, Division 1, Groups A, B, C, D; T4  
Class II, Division 1, Groups E, F and G  
UL 23 ATEX 3095X; IECEx UL 23.0075X  
II 1 G Ex ia IIC T4 Ga  
II 2 D Ex ia IIC T135°C Db  
-40°C ≤ T<sub>amb</sub> ≤ +65°C ; Type 4X, IP66

ANALOG INPUT:  
U<sub>i</sub>=28V, I<sub>i</sub>=93mA, P<sub>i</sub>=651mW, C<sub>i</sub>=22nF, L<sub>i</sub>=0 $\mu$ H  
ANALOG OUTPUT:  
U<sub>i</sub>=28V, I<sub>i</sub>=93mA, P<sub>i</sub>=651mW, C<sub>i</sub>=0nF, L<sub>i</sub>=0 $\mu$ H  
ALARM 1 AND ALARM 2:  
U<sub>i</sub>=28V, I<sub>i</sub>=93mA, P<sub>i</sub>=2W, C<sub>i</sub>=0nF, L<sub>i</sub>=0 $\mu$ H

**Smart Valve Positioner PD200**

Model No.

Serial No.

Input signal : 4 to 20 mADC  
Ambient Temp. : -40 to 65°C  
Supply Air Pressure : 2.7 to 8.0 bar  
Protection Class : Type 4X, IP66

Pat. Pending

WARNING - ELECTROSTATIC CHARGING HAZARD. SEE INSTRUCTIONS  
WARNING - DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE IS PRESENT  
\*AVERTISSEMENT: RISQUE DE CHARGE ÉLECTROSTATIQUE. VOIR INSTRUCTIONS.\*  
\*AVERTISSEMENT: NE PAS OUVRIR EN PRÉSENCE D'UNE ATMOSPHÈRE EXPLOSIVE.\*