

### INTERNATIONAL ELECTROTECHNICAL COMMISSION **IEC Certification System for Explosive Atmospheres**

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEx UL 23.0074X** Page 1 of 3 Certificate history:

Issue No: 0 Status: Current

2023-12-13 Date of Issue:

Applicant: TopWorx Inc.

3300 Fern Valley Road Louisville, KY 40213 **United States of America** 

Equipment: Positioner Devices, Model PD100CF\*\*\*\*EN

Optional accessory:

Type of Protection: **Dust Ignition Protection by Enclosure "tb"** 

Marking: Ex tb IIIC T85°C Db

 $-40^{\circ}\text{C} \le \text{T}_{amb} \le +65^{\circ}\text{C}$ 

Approved for issue on behalf of the IECEx Katy A. Holdredge

Certification Body:

Position: Senior Staff Engineer

Signature:

(for printed version)

(for printed version)

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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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Date of issue: 2023-12-13 Issue No: 0

Manufacturer: TopWorx Inc.

3300 Fern Valley Road Louisville, KY 40213 United States of America

Manufacturing locations:

Sense Indústria Eletrônica Ltda. Av Joaquim Moreira Carneiro,

600 - 37540-000

Santa Rita do Sapucaí/MG

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

Edition:2

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/ExTR23.0086/00

**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 PD100 models are enclosed type smart valve positioners. The shaft of the PD100 models is mechanically connected to the external valve actuator. When a control signal is received by the PD100 models, it 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.

### Annex:

Annex to IECEx UL 23.0074X Issue 0.pdf



Annex to Certificate No.: IECEx UL 23.0074X Issue No.: 0

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### TYPE DESIGNATION

### PD100 NOMENCLATURE:

PD100	С	F	N	G	R	00	00	EN
I	П	Ш	IV	V	VI	VII	VIII	IX

I. Basic Series Designation

PD100 - Smart Valve Positioner with basic controls

II. Input & Communication

C – 4-20mA (only for PD100)

III. Feedback Output

F – Isolated position feedback transmitter 4-20mA (only for PD100)

IV. Electric and Pneumatic Connection

N – Single conduit entry ½" NPT / Manifold with ¼" 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

EN – Use in explosive atmospheres



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### PARAMETERS RELATING TO THE SAFETY

Model	I/O Rating
PD100	Input: H+/H-, 35 VDC (12.2VDC drop) at 4-20mA Output: RT+/RT-, 27VDC at 4-20mA

### **MARKING**

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



### 3300 Fern Valley Road,40213 USA

Class I, Division 2, Groups A,B,C,D;T4
Class II, Division 2, Groups F,G; Class III
UL 23 ATEX 3093X; IECEx UL 23.0074X

II 2 D Ex tb IIIC T85°C Db

-40°C ≤ T<sub>amb</sub> ≤ +65°C; Type 4X, IP66

Input: H-/H+, 35VDC (12.2VDC drop) at 4-20mA Output: RT+/RT-, 27VDC at 4-20mA

With:

# Smart Valve Positioner PD100 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