

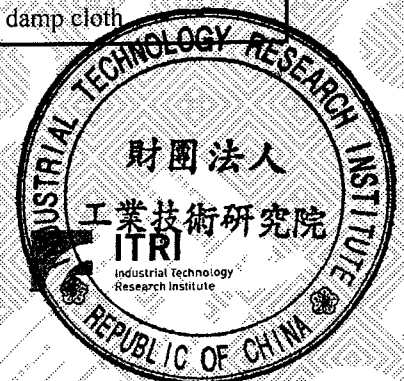
# Electrical Equipment for Explosive Atmospheres

## Certificate of Type Verification

<b>Applicant</b>	TopWorx Inc.		
<b>Applicant address</b>	3300 Fern Valley Road Louisville, Kentucky 40213 United States of America	TEL	+1-502-969-8000
<b>Manufacturer</b>	1. TopWorx Inc. 2. Emerson Machinery Equipment (Shenzhen) Co. Ltd. 3. Emerson Automation Fluid Control & Pneumatics Poland Sp. z o. o. (Emerson AFCP Poland Sp. z o.o.)		
<b>Manufacturer address</b>	1. 3300 Fern Valley Road Louisville, Kentucky 40213 United States of America 2. 101 Building 2, COFCO Park, Honglang North 2nd Road, Xin'an Street Bao'an District, Shenzhen 51801 China 3. Kurczaki 132 Lodz 93-331 Poland	TEL	
<b>Name of product Type</b>	Switchboxes TV-series		
<b>Ex marking</b>	Ex nA nC IIC T6..T3 Gc Ex nA IIC T4 Gc Ex tc IIC T*°C Dc The exact type protection, temperature class and maximum surface temperature depend on the electrical device fitted in the Switchbox. Refer to Annex.		
<b>Certificate No.</b>	(ITRI)2021-07-00252X		
<b>Date of first issue</b>	December 21, 2021		
<b>Date of Renewal</b>			
<b>Valid period</b>	December 21, 2021 to December 20, 2024		
<b>Standards:</b>	CNS 3376-0 : 2014 / IEC 60079-0 : 2011 IEC 60079-15 : 2010 IEC 60079-31 : 2013		
<b>Ratings:</b>	Up to 120 V, 4 A		
<b>Ambient temperature:</b>	The ambient temperature depends on the electrical devices fitted in the Switchboxes. Refer to Annex.		
<b>Main components:</b>	Base, lid, switch, shaft, O-ring, w/o Indicator Dome assembly.		
<b>Type variants:</b>	Refer to Annex.		
<b>Specific conditions of use:</b>	When fitted with an indicator dome, the non-metallic parts incorporated in the enclosure of this equipment may generate an ignition-capable level of electrostatic charge. Therefore, the equipment shall only be cleaned with a damp cloth		

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<b>Applicant</b>	TopWorx Inc.																																			
<b>Routine tests:</b>	<p>When the supply to the Series 36 and 36SD GO Switches do not exceed 60 Vac / 85Vdc, the supply shall be protected such that transients are limited to a maximum of 119 V. If the supply is above 60 Vac / 85 Vdc. but not exceeding 120 Vac, the supply shall be protected such that the transients are limited to a maximum of 238 V. The supply values, when option S LED board is fitted, are <math>U_{max}=24</math> V, <math>I_{max}=250</math> mA and <math>P_{max}=1.2</math> W.</p> <p>When the equipment incorporates a 4-20 mA Transmitter Module, the manufacturer shall supply a copy of certificate IECEx SIR 12.0076U with each unit or batch of units. Additionally, the supply shall be <math>U_n=9-32</math> Vdc and the output at J1 to potentiometer is non-incentive.</p> <p>Cable glands or blanking plugs for enclosure entries are not provided with the equipment. For safe use, certified cable glands or blanking plugs with proper type of protections shall be correctly fitted to maintain the integrity of specified protections.</p>																																			
<b>Approval reference:</b>	<p>The assessment of the above equipment is based on the review of IECEx Certificate of Conformity (IECEX SIR 12.0089X Issue No : 10) issued by CSA Group Testing UK Ltd (CSAE), UK and the associate test reports (GB/SIR/ExTR12.0208/00, GB/SIR/ExTR12.0259/00, GB/SIR/ExTR13.0061/00, GB/SIR/ExTR13.0168/00, GB/SIR/ExTR13.0263/00, GB/SIR/ExTR14.0290/00, GB/SIR/ExTR17.0210/00, GB/SIR/ExTR18.0057/00, GB/SIR/ExTR19.0054/00, GB/SIR/ExTR20.0142/00, GB/SIR/ExTR21.0088/00).</p>																																			
<b>Certificate history:</b>	Issue 1 (B202100341) (2021-12-21)																																			
<b>Annex:</b>	<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td>(1)</td><td>(2)</td><td>(3)</td><td>(4)</td><td>(5)</td><td>(6)</td><td>(7)</td><td>(8)</td><td>(9)</td><td>(10)</td> </tr> <tr> <td>TV</td><td>L</td><td>-</td><td>D</td><td>2</td><td>2</td><td>G</td><td>N</td><td>P</td><td>M</td><td>0</td> </tr> </table> <p>(1)Series : TV                  (2)Enclosure material : L : aluminum alloy, H : stainless steel                  (3)(4)Bus/sensor                  Code of column (3) : 0, AS, DN, PB, P, R, Q, G, D, S                  Code of column (4) : blank (available with code AS, DN, PB in column (3)) ; 2/4 (only available with code P, Q, R, G, S, D in column (3)) ; X(only available with code 0, P, R in column (3)) ; S (only available with code Q, P, R in column (3))                  (5)Area class : 2 : Ex nA nC/Ex nA : Ex tc                  (9)O-ring : M : silicone                  (10)Pilot : 0/blank : not installed                  Column (6), (7), (8) are not related to Ex protection.</p> <p>The permitted internal devices are as following :</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 80%;">Device</th> <th style="width: 20%;">Type variant</th> </tr> </thead> <tbody> <tr> <td>Two reed switches (nC) type HSR-634W only</td> <td>P2</td> </tr> <tr> <td>Two or four reed switches (nC) type LV ELE145 only</td> <td>R2,R4</td> </tr> <tr> <td>ASI module ( nA) plus two reed switches (nC)</td> <td>AS</td> </tr> <tr> <td>DeviceNet module (nA) plus two reed switches (nC)</td> <td>DN</td> </tr> <tr> <td>Profibus module (nA) plus two reed switches (nC)</td> <td>PB</td> </tr> <tr> <td>Two reed switches (nC) plus TopWorx 4-20 mA transmitter module (nA) and associated potentiometer</td> <td>PX, RX</td> </tr> </tbody> </table>	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	TV	L	-	D	2	2	G	N	P	M	0	Device	Type variant	Two reed switches (nC) type HSR-634W only	P2	Two or four reed switches (nC) type LV ELE145 only	R2,R4	ASI module ( nA) plus two reed switches (nC)	AS	DeviceNet module (nA) plus two reed switches (nC)	DN	Profibus module (nA) plus two reed switches (nC)	PB	Two reed switches (nC) plus TopWorx 4-20 mA transmitter module (nA) and associated potentiometer	PX, RX
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# Electrical Equipment for Explosive Atmospheres

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Certificate No.: (ITRI)2021-07-00252X

<b>Applicant</b>	TopWorx Inc.		
<b>Device</b>			<b>Type variant</b>
TopWorx 4-20 mA transmitter module (nA) and associated potentiometer only			0X
Two or four Series 36 GO switches (nC), 120 Vac/4 A, 24 Vdc/3 A			G2/G4
Two or four Series 36 GO switches (nC), 120 Vac/2 A, 24 Vdc/1 A			Q2/Q4
LED board with Q, P, R switch options			S
Series 36SD GO switch module, 120 Vac/4 A, 24 Vdc/3 A			S2, S4
Series 36SD GO switch module, 120 Vac/2 A, 24 Vdc/1 A			D2, D4
<b>Ex marking and ambient temperature range :</b>			
<b>Type variant</b>	<b>Ex marking (gas)</b>	<b>Ex marking (dust)</b>	<b>Ambient temperature range</b>
P2	Ex nA nC IIC T6 Gc Ex nA nC IIC T4 Gc	Ex tc IIC T85 °C Dc Ex tc IIC T115 °C Dc	-40 °C ~ +55 °C -40 °C ~ +80 °C
R2, R4	Ex nA nC IIC T3 Gc	Ex tc IIC T85 °C Dc Ex tc IIC T115 °C Dc	-40 °C ~ +60 °C -40 °C ~ +95 °C
0X	Ex nA IIC T4 Gc	Ex tc IIC T70 °C Dc	-40 °C ~ +55 °C
PX, RX	Ex nA nC IIC T4 Gc	Ex tc IIC T115 °C Dc	-40 °C ~ +55 °C
Q2, Q4 G2, G4	Ex nA nC IIC T6 Gc Ex nA nC IIC T4 Gc	Ex tc IIC T85 °C Dc Ex tc IIC T115 °C Dc	-40 °C ~ +55 °C -40 °C ~ +80 °C
AS, DN, PB	Ex nA nC IIC T4 Gc	Ex tc IIC T115 °C Dc	-40 °C ~ +85 °C
S	Ex nA nC IIC T4 Gc	Not applicable	-40 °C ~ +60 °C
D2, D4 S2, S4	Ex nA nC IIC T6 Gc Ex nA nC IIC T4 Gc	Ex tc IIC T85 °C Dc Ex tc IIC T115 °C Dc	-40 °C ~ +55 °C -40 °C ~ +80 °C

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