



Ex Certificate of Conformity

Standard Form for Evaluation of the Quality Management System used in the Production Process and Product Testing

Certificate No.: **NCC 13.1809 X** Issue: 0

Issue date: **08-27-2015** Page 1 of 5

Expiration date: **27-08-2018**

Certificate history:

Issue No. 0 (08-27-2015)

Applicant: **TopWorx**
3300 Fern Valley Road
Louisville, Kentucky 40213
United States

Electrical apparatus: **Valve controllers, TV series***

Main type of protection: **n, t**

Labeling: Ex nA nC IIC T4...T3 Gc
Ex tc IIIC T70°C...T115°C Dc IP66/IP68

Approved for issue in conformity with the rules and applicable standards
Certification body:

Digitally signed
AC FENACON
Certisign
WILSON MONTEIRO BONATO
JUNIOR:04281008903
CREA/SP: 123392/D
2015.27.08 14:33:01

Position:

Wilson Bonato
Technical Manager

Certificate issued in accordance with the requirements for conformity assessment of electrical equipment for explosive atmospheres, set out in Inmetro Ordinance No. 179 of May 18, 2010

1. This certificate may only be reproduced with all of its pages.
2. This certificate is not transferrable and is the property of the issuing body.
3. The status and authenticity of this certificate can be verified on the official Inmetro website.
4. This certificate of conformity was issued by a certification body accredited by CGCRE - General Accreditation Coordination.

Certificate issued by:

NCC Certificações do Brasil Ltda.
CGRE Accreditation no. 0034
(10/16/2003) www.ncc.com.br





Ex Certificate of Conformity

Standard Form for Evaluation of the Quality Management System used in the Production Process and Product Testing

Certificate No.: NCC 13.1809 X Issue: 0

Issue date: 08-27-2015 Page 2 of 5

Manufacturer: TopWorx
3300 Fern Valley Road
Louisville, Kentucky 40213
United States

Additional manufacturing locations: Emerson Process Management
Magyarország Kft. – Fisher
Controls International LLC
8000 Székesfehérvár
Holland Fásor 6
Hungary

Emerson Machinery Equipment
(Shenzhen) Co. Ltd. – Fisher
Controls Division.
Bao Heng Technology Industry Park
Liu Xian 1 Road,
District 68, Bao'an District
Shenzhen 518101
China

This certificate is issued as verification that samples, representative of production, were assessed and tested and found to comply with the standards listed 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 requirements of the Inmetro Rules. This certificate is granted subject to the conditions stipulated in the Inmetro Rules.

STANDARDS:

The electrical apparatus and any acceptable variations specified in the report of this certificate and mentioned documents were found to comply with the following standards:

ABNT NBR IEC 60079-0:2013 Explosive Atmospheres – Part 0: Equipment – General requirements.

ABNT NBR IEC 60079-15:2012 Explosive Atmospheres – Part 15: "n" type protection equipment.

ABNT NBR IEC 60079-31:2011 Explosive Atmospheres – Part 31: Protection of equipment against dust ignition by "t" casings.

This certificate **does not** indicate conformity with any safety and electrical performance requirements other than those expressly included in the standards listed above.

TEST AND ASSESSMENT REPORTS:

Samples of the equipment listed have successfully met the examination and test requirements as recorded in;

Technical conformity assessment report (presents the verification of the documents used for analysis and conclusions for the recommendation of certification):

BPM: 211951

Process: 21265/13.1

Test report(s):

GB/SIR/ExTR12.0208/00 (SIRA – 07/2012)

GB/SIR/ExTR12.0259/00 (SIRA - 10/2012)

GB/SIR/ExTR13.0061/00 (SIRA - 03/2013)

GB/SIR/ExTR13.0168/00 (SIRA - 05/2013)

GB/SIR/ExTR13.0263/00 (SIRA – 09/2013)

Auditing report / Quality Evaluation Report:

QAR: GB/SIR/QAR07.0025/06 (03/06/2015)

QAR: 5026 (10/24/2014)

QAR: GB/BAS/QAR13.0005/01 (05/30/2014)



Ex Certificate of Conformity

Standard Form for Evaluation of the Quality Management System used in the Production Process and Product Testing

Certificate No.: NCC 13.1809 X Issue: 0
 Issue date: **08-27-2015** Page 3 of 5

EQUIPMENT:

Below, the equipment and systems covered by this certificate:

TV series* switch boxes have a casing (approximately 145 mm x 100 mm x 80 mm, without a dome), made up of two parts, namely a lower part (base) and a cover. The casing can be made of aluminum alloy or stainless steel, with or without the Lexan dome, depending on the application.

The cover is equipped with an inner seal and 4 screws for attaching the base. There are two types of cover, one of which is flat and the other is smooth with a dome and plug. The plug version allows a shaft to be installed for a position indicator under the Lexan dome (cover). The lower part (base) allows cable entry through threaded input orifices, which can accommodate cable fittings.

Internally, a rotating chamber can activate the keys. The approved internal devices are listed in table 01:

Table 1

Device	Model
Two reed switches ("nC" magnetic key) type HSR-634W only	P2
Two or four reed switches ("nC" magnetic key) type LV ELE145 only	R2, R4
"nA" ASI Module plus two reed switches ("nC" magnetic key)	AS
DeviceNet Board ("nA") plus two reed switches ("nC" magnetic key)	DN
Profibus Board ("nA") plus two reed switches ("nC" magnetic key)	PB

Models ambient temperature range:

Table 2

Model	Labeling	Ambient temperature ranges
P2	Ex nA nC IIC T4 Gc Ex tc IIIC T115°C Dc IP66/68	- 40°C ≤ Tamb ≤ + 55°C
R2, R4	Ex nA nC IIC T3 Gc Ex tc IIIC T115°C Dc IP66/68	- 40°C ≤ Tamb ≤ + 95°C
AS, DN, PB	Ex nA nC IIC T4 Gc Ex tc IIIC T115°C Dc IP66/68	- 40°C ≤ Tamb ≤ + 85°C



Ex Certificate of Conformity

Standard Form for Evaluation of the Quality Management System used in the Production Process and Product Testing

Certificate No.:

NCC 13.1809 X

Issue: 0

Issue date:

08-27-2015

Page 4 of 5

TV series*:

Casing:

L = Aluminum

H = Stainless steel 316

Sensor:

P = Reed switch (magnetic key)

R = Reed switch (magnetic key)

AS = ASi Board

DN = DeviceNet Board

PB = Profibus Board

Area classification:

2 = Zone 2 / Zone 22

Display:

Any number or letter

Shaft:

Any number or letter

Conduit inputs:

Any number or letter

O-rings (sealing):

M = Silicone

Pilot / Coil not available

TV	1	2	3	4	5	6	7	0000
----	---	---	---	---	---	---	---	------

CONDITIONS OF CERTIFICATION:

This certificate is valid only for equipment of a model identical to that of the equipment actually tested. All changes to the design and usage of components and/or materials that are different from those defined by the descriptive documentation of the equipment without prior authorization from NCC, shall invalidate this certificate.

The end user is responsible for ensuring that the product will be installed/used according to the manufacturer's instructions and relevant standards regarding electrical installations in potentially explosive atmospheres.

Installation, inspection, maintenance, repair, revision and recovery of equipment are the responsibility of end users and must be performed in accordance with the requirements of current technical standards and the manufacturer's recommendations.

Because this involves a certification process in which the applicant is not legally established in Brazil, the latter has a legal representative in this country who is responsible for complying with items 7 and 10.1 of Inmetro Ordinance no. 179 of May 18, 2010.

Legal representative(s): **Emerson Process Management**
 Av. Hollingworth, 325 – Iporanga.
 Sorocaba, SP
 POSTAL CODE: 18087-105 / CNPJ: 43.213.776/0001-00
Brazil



Ex Certificate of Conformity

Standard Form for Evaluation of the Quality Management System used in the Production Process and Product Testing

Certificate No.: NCC 13.1809 X Issue: 0
 Issue date: **08-27-2015** Page 5 of 5

Manufacturing conditions:

All manufactured equipment shall pass routine tests pursuant to item 6.5 of ABNT NBR IEC 60079-15.

Warning label:

- CAUTION - INPUT CABLES CAN REACH A TEMPERATURE 15°C GREATER THAN AMBIENT TEMPERATURE.
- CAUTION - DO NOT OPEN IN AN EXPLOSIVE ATMOSPHERE.
- CAUTION - CLEAN ONLY WITH A MOIST CLOTH – POTENTIAL RISK OF ELECTROSTATIC CHARGE

Specific usage conditions:

When equipped with the Lexan dome, care should be taken to ensure that upon installation, operation and maintenance of the equipment, risk of ignition due to electrostatic discharge is minimized.
 IP68 – Immersion at 1 meter for 24 hours.

DETAILS OF CERTIFICATE ISSUES (for issues 0 and above):

Issue 0:

Initial issue.

CONTROLLED DESCRIPTIVE DOCUMENTS OF THE EQUIPMENT (CONFIDENTIAL):

Table 4

Number	Revision	Number	Revision	Number	Revision
CERT-ES-01901-1	6	ES-01596-1	5	CERT-ES-02889-1	1
CERT-ES-02265-1	5	ES-01598-1	3	CERT-ES-02890-1	2
CERT-ES-02266-1	4	PS-00094-1	3	CERT-ES-02967-1	7
CERT-ES-02280-1	5	PS-00125-1	2	CERT-ES-03260-1	7
CERT-ES-02768-1	1	S-S01-0037	3	CERT-ES-02867-1	1
CERT-ES-02772-1	1	CERT-ES-02883-1	3	CERT-ES-02866-1	1
ES-00403-1	6	CERT-ES-02884-1	2	CERT-ES-02868-1	1
ES-00530-1	8	CERT-ES-02888-1	1	CERT-ES-03779-1	4
ES-01775-1	3	ES-02254-1	2	ES-03781-1	1
CERT-ES-03781-1B	1	-	-	-	-