



Ex Certificate of Conformity

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

Certificate No.: NCC 15.0272 X Issue: 0

Issue date: 10-15-2015 Page 1 of 4

Expiration date: 10-15-2018

Certificate history:

Issue No. 0 (10-15-2015)

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

Electrical apparatus: **Valve position indicator, models TXP and TXS**

Main type of protection: **d, t**
Non-solenoid valve position indicator
Ex d IIC T4 Gb
Ex tb IIIC T135°C
(- 60°C ≤ T_{amb} ≤ + 80°C)

Labeling:
Solenoid valve position indicator
Ex d IIB T4 Gb
Ex tb IIIC T135°C
(- 60°C ≤ T_{amb} ≤ + 80°C)

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

SERGIO TOSHIO
YOCHIY:11159173826

Digitally signed
by SERGIO TOSHIO
YOCHIY:11159173826
Date: 2015.15.10
16:55:32 -0300

Position:

Sergio Toshio Yochiy
President

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





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

Additional manufacturing locations: **Emerson Machinery Equipment (Shenzhen) Co. LTD - Fisher Control Division**
Bao Heng Technology Industry Park, Liu Xian 1st Road
District 68, Bao'an District, Shenzhen 518101
China

Emerson Process Management Magyarország Kft.
8000 Székesfehérvár
Holland Fasor 6
Hungary

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 60079-1:2009** Explosive Atmospheres – Part 1: Equipment protected with explosion proof "ex d" enclosure.
Version corrected in 2011
- 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 listed equipment 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: 230225
Process: 29490/14.1

Test report(s):

GB/SIR/ExTR06.0034/00 (SIRA – 03/2006) GB/SIR/ExTR09.0146/00 (SIRA – 10/2009) GB/SIR/ExTR12.0318/00 (SIRA – 12/2012)

Auditing report / Quality Evaluation Report:

NCC: 07/24/2015 (China) NCC: 06/30/2015 (USA) NCC: 07/30/2015 (Hungary)



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EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The valve position indicator (TXP and TXS models) consists of a rectangular base and a coating, both made of cast (TXP) or stainless steel (TXS). At the base and in the coating there is a hole for inserting the stainless steel shaft and a bronze bushing that guarantees there will be no friction with the parts made of aluminum. Magnetic cams are attached to the shaft and these cams activate the magnetic sensors inside the enclosure in accordance with the position of the valve. The enclosure is supplied with a flanged joint between the coating and the base for application to the IIB groups of gases for indicators that have a solenoid and IIC for indicators that do not have solenoids. The enclosure is attached to the base with 4 screws M5 x 20 class 6g.

Technical characteristics:

$U_m = 250 \text{ V}_{AC}$
 $I_m = 10 \text{ A}$
 $P_m = 2500 \text{ VA}$

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 user shall comply with item 10.1 of Inmetro Ordinance no. 179 of May 18, 2010, and the manufacturer is responsible for complying with item 7 of the latter ordinance.

Warning label:

CAUTION - DO NOT OPEN WHEN ENERGIZED

Specific usage conditions:

Due to risk of electrostatic charges, the polycarbonate cover should be cleaned only with a moist cloth.



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

Issue 0:

Initial issue.

"This certificate refers to certifiante NCC 6274/10 X, including their revisions; Revision 0 – First issue 03/19/2010; Revision 1 - Inclusion of manufacturing unit 04/30/2010; Revision 2 – Including voluntary certification text for dust 11/18/2010; 3 – Recertification 04/04/2012; Revision 4 – Including labelling for protection against fuel dust 11/14/2012; Revision 5 – Inclusion of manufacturing unit 02/04/2014; Revision 6 – Change of certification applicant and updating of the product description 05/10/2014."

CONTROLLED DESCRIPTIVE DOCUMENTS OF THE EQUIPMENT (CONFIDENTIAL):

Table 1

Number	Revision	Number	Revision	Number	Revision
TS 008/02/02	20/02/2002	CERT-ES-01114-1	3	TS 011/02/02	29/05/2002
TS 009/02/02	20/02/2002	CERT-ES-01455-1	2	TS-013/10/02	29/10/2003
021/02/03	26/11/2003	CERT-ES-01456-1	2	TS 010/02/02	20/02/2002
TS-46/11/03	03/11/2003	CERT-ES-01457-1	3	CERT-ES-01498-1	2
TS-44/10/03	06/11/2003	CERT-ES-01495-1	1	CERT-S-S01-0037	A
TS-42/10/03	06/11/2003	CERT-ES-01498-1	2	CERT-ES-00321-1	1
TS-43/10/03	06/11/2003	CERT-ES-01523-1	2	CERT-ES-01113-1	5
TS-48/11/03	26/11/2003	CERT-ES-01530-1	C	ES-01642-1	1
TS-47/11/03	09/12/2003	ES-01604-1	1	ES-01757-1	1
TS-029/07/03	20/07/2003	ES-01605-1	1	ES-01831-1	1
TS-46/11/03	26/11/2003	ES-01606-1	1	TS 023/02/03	14/02/2003
TS 022/02/03	14/02/2003	ES-01607-1	1	CERT-ES-02107-1	6
TS 008/02/02	10/10/2003	ES-01608-1	1	CERT-ES-02108-1	6
TS 009/02/02	10/10/2003	ES-01609-1	1	ES-01856-1B	3
CERT-ES-02477-1	1	CERT-ES-02738-1	2	ES-01506-1	3
ES-01525-1	3	ES-02476-1	6	ES-02478-1	3
CERT-ES-01775-1	3	ES-02480-1	4	ES-02482-1	2