IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

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

Certificate No.: IECEx SIR 08.0130X issue No.:2

Certificate history:
Issue No. 2* (2014-3-31)
Issue No. 1 (2010-3-26)
Issue No. 0 (2009-3-2)

Status: **Draft**

Date of Issue: **2014-03-31** Page 1 of 5

Applicant: **Fairchild Industrial Products Company**
3920 West Point Boulevard
Winston-Salem
North Carolina
27103
United States of America

Electrical Apparatus: **I/P Transducer**
Optional accessory:

Type of Protection: **Intrinsic Safety and Dust**

Marking:

TAEI7800, TDEI7800 & Z21450
Ex ia IIB T4 Ga
Ex ia IIIC T90 °C Da
Ta = -40°C to +80°C

TTEI7800 &TREI7800
Ex ia IIB T4 Ga
Ta = -40°C to +80°C

Approved for issue on behalf of the IECEx Certification Body: C Ellaby

Position: Deputy Certification Manager

Signature:
(for printed version)

Date:

1. This certificate and schedule may only be reproduced in full
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

SIRA Certification Service
Rake Lane
Eccleston
Chester
CH4 9JN
United Kingdom

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Manufacturer: **Fairchild Industrial Products Company**
3920 West Point Boulevard
Winston-Salem
North Carolina
27103
United States of America

Additional Manufacturing location(s):

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 electrical apparatus 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 : 2004 Edition: 4.0	Electrical apparatus for explosive gas atmospheres - Part 0: General requirements
IEC 60079-0 : 2007-10 Edition: 5	Explosive atmospheres - Part 0:Equipment - General requirements
IEC 60079-11 : 2006 Edition: 5	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i'
IEC 61241-0 : 2004 Edition: 1	Electrical apparatus for use in the presence of combustible dust - Part 0: General requirements
IEC 61241-11 : 2005 Edition: 1	Electrical apparatus for use in the presence of combustible dusts - Part 11: Protection by intrinsic safety 'iD'

*This Certificate **does not** indicate compliance with electrical 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:
GB/SIR/ExTR09.0025/00 GB/SIR/ExTR10.0060/00 GB/SIR/ExTR14.0084/00

Quality Assessment Report:

GB/SIR/QAR09.0003/00 GB/SIR/QAR09.0003/01 GB/SIR/QAR09.0003/02
GB/SIR/QAR09.0003/03

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Schedule

EQUIPMENT:
Equipment and systems covered by this certificate are as follows:

The T*EI780x and Z21450-Series I/P Transducers are process control devices that convert a direct current input to a pressure output. The transducers consist of two sections, the Primary Converting Section and the Relay Section. The Primary Converting Section consists of the feedback/control electronics, electronic feedback sensor and nozzle. The Relay Section consists of the piezo-electric flapper, upper diaphragm and lower control diaphragm. The Relay Section is connected to a common supply that regulates the output pressure. The electronic circuits are mounted on two printed circuit boards which are interconnected via connection pins. The only devices approved for intrinsic safety are 2 wire 4-20 mA versions

The T*EI780xx and Z21450-Series is certified for use with flammable and non-flammable process fluids. It is not certified for use when the process fluid is a fuel/air mixture within the flammable range

The T*EI7800 and Z21450-Series have the following safety description

Ui = 28 V Pi =0.7 W Li =0 Ii = 100 mA Ci = 12 nF

See Equipment (continued) for model numbers

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CONDITIONS OF CERTIFICATION: YES as shown below:

1. Under certain extreme circumstances, the non-metallic parts incorporated in the enclosure of devices TDEI780x,TAEI780x and Z21450 series may generate an ignition-capable level of electrostatic charge. Therefore the equipment shall not be installed in a location where the external conditions are conducive to the build-up of electrostatic charge on such surfaces. This is particularly important if the equipment is installed in a zone 0 location. In addition, the equipment shall only be cleaned with a damp cloth. This is particularly important if the equipment is installed in a zone 0 location.
2. The enclosure of the devices TDEI780*and Z21450 series contains nor-metallic materials that shall be protected from UV light (for example, daylight or light from luminaries) when installed.
3. The enclosure of devices TDEI780x,TAEI780x and Z21450 series are manufactured from aluminium alloy. In rare cases, ignition sources due to impact and friction sparks could occur. This shall be considered during installation, particularly if the equipment is installed in a EPL of Ga.
4. The enclosure of devices TDEI780x,TAEI780x and Z21450 series are capable of withstanding only low level (4J) of mechanical impact and hence additional protection shall be provided to ensure equipment cannot be subjected to higher level mechanical impact
5. The DIN socket connected to TDEI780X and Z21450 series shall comply with IP65 requirements.
6. The conduits connected to the enclosure of TAEI780x shall maintain the IP65 requirements of the enclosure
7. TTEI780X and TR780X have exposed external connection. These devices shall be installed in an enclosure that maintains an ingress protection rating of at least IP20 and meets the enclosure requirements of IEC 60079-0 for Group II equipment's.

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EQUIPMENT(continued):

Model number	Electrical connection type	Intended locations
TAEI7800	cable entry via conduit	Indoor or outdoor, flammable gases & dusts
TDEI7800 & Z21450	cable entry via a DIN-connector	Indoor or outdoor, flammable gases & dusts
TTEI7800	terminal block mounted externally	Indoor, flammable gases only
TREI7800	terminal block mounted externally, 180°C orientation compared to the TTEI7800	Indoor, flammable gases only

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Issue 1 – this Issue introduced the following changes:	
1.	To allow the T*E17801 and TEX17801 Series I/P Transducers to be now be called the Z21450-Series I/P Transducers.
Issue 2 – this Issue introduced the following changes	
1.	Following appropriate assessment to demonstrate compliance with the latest technical knowledge, the documents previously listed, IEC 60079-0:2004 Ed 4, IEC 60079-0:2007 Ed 5, IEC 60079-11:2006 Ed 5, IEC 61241-0:2004 Ed 1 and IEC 61241-11:2005 Ed 1, were replaced by those currently listed, the markings were updated accordingly and the conditions of certification were amended to recognise the new standards.
2.	Reassessment of the T*EI780x and Z21450 Series I/P Transducers to meet the requirements for EPL Ga and Da for gas and dust. As a result of this assessment, conditions of certification have been introduced and therefore an 'X' suffix was added to the certificate number.
3.	The upper ambient temperature was raised to 80°C
4.	The power supply board was modified.
5.	Minor drawing were recognised, these do not affect the explosion safety aspects of the product
6.	The previously certified drawings were reviewed and a number were removed

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