



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 TSA 05.0035X** issue No.:1

Status: **Current**

Certificate history:
Issue No. 1 (2013-12-5)
Issue No. 0 (2006-3-16)

Date of Issue: **2013-12-05** Page 1 of 4

Applicant: **Trimec Industries Pty Ltd**
1/16 Atkinson Road
Taren Point NSW 2229
Australia

Electrical Apparatus: **Flow instruments: BT10/BT11 Totaliser; RT11/RT12 Rate Totaliser**
Optional accessory:

Type of Protection: **Ex ia**

Marking: Trimec Industries Pty Ltd
Model (BT10, BT11, RT11, or RT12)
Ex ia IIB T4 (Tamb=60 °C) IP66/IP67
IEC Ex TSA 05.0035X
Serial Number


Approved for issue on behalf of the IECEx
Certification Body:

Ujen Singh

Position:

Quality & Certification Manager

Signature:
(for printed version)



05 DECEMBER 2013

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](http://www.iecex.com).

Certificate issued by:

TestSafe Australia
919 Londonderry Road
Londonderry NSW 2753
Australia





IECEX Certificate of Conformity

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Manufacturer: **Trimec Industries Pty Ltd**
1/16 Atkinson Road
Taren Point NSW 2229
Australia

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 : 2000 Electrical apparatus for explosive gas atmospheres - Part 0: General requirements
Edition: 3.1
IEC 60079-11 : 1999 Electrical apparatus for explosive gas atmospheres - Part 11: Intrinsic safety 'i'
Edition: 4

*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

IECEX ATR:	File Reference:
AU/TS/05.068B, AU/TS/05.069B	2005/052445, 2013/014894
AU/TSA/QAR06.0006/04	



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

BT10/BT11 Totaliser: The flow instrument is designed for computing, displaying and transmitting totalised flow from flow measuring transducers with pulse or frequency outputs.

This instrument displays Resettable Total and an Accumulated Total. It can be directly mounted on a variety of flow measuring transducers or as a stand-alone instrument. The instrument can be self powered or may be powered by an external dc supply. While it can be connected to a number of types of flow measuring transducers, and therefore has a number of terminals (1 to 6), only a single flow measuring transducer and a single supply loop shall be connected at one time.

The BT10 is a totaliser, battery or dc powered with pulse repeater (frequency) output, while the BT11 additionally allows scaling of the pulse output.

The enclosure is made of plastic and polycarbonate material, and measures 85 mm diameter and 50 mm height. A number of terminals are accessible during installation by removing the screws retaining the electronics and the front display panel assembly to the enclosure. Cable entry is provided by drilling the enclosure and fitting a cable gland at the required position on the enclosure.

The BT series instruments contain a single lithium battery that has been provided with diode protection against reverse charging.

RT11/RT12 Rate Totaliser: The flow instruments are designed for computing, displaying and transmitting totals and flowrates, from flow measurement transducers with pulse or frequency outputs.

It displays Flow Rate, Resettable Total and an Accumulated Total. It can be directly mounted on a variety of flow measurement transducers or as a stand alone instrument. The instrument can be self powered or may be powered by an external dc supply or two wire loop powered. While it can be connected to a number of types of flow measurement transducers, and therefore has a number of terminals (1 to 14), only a single supply loop shall be connected at one time. Any other output from the flow instrument shall be powered from the flow instrument only.

The RT11 is a Rate Totaliser, battery or DC powered, with scaled pulse or frequency output available, while the RT12 additionally accepts dual flow inputs, and allows a 4-20 mA loop powered signal output and alarm output.

The enclosure is made of plastic and polycarbonate material, and measures 110 mm diameter and 60 mm height. It contains two electronic circuit boards. A number of terminals are accessible during installation by removing the screws retaining the electronics including the front display panel to the enclosure. Cable entry is provided by puncturing out the required plastic blank and fitting a cable gland at any of the three available cable entry positions.

The RT series instruments contain a single lithium battery that has been provided with diode protection against reverse charging.

CONDITIONS OF CERTIFICATION: YES as shown below:

Refer to Annexe of this certificate.



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

Applicant and manufacturer address was changed. Refer to Annexe of this certificate for details.



IECEX Certificate of Conformity Annexe

Annexe for Certificate No.:	IECEX TSA 05.0035X	Issue No.:	1
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Drawing list pertaining to Issue 0 of this Certificate:

Document No.	Sheets	Document Title	Issue	Date (yyyy/mm/dd)
BT10/BT11: Totaliser				
1412028-EX	3	1412028 Ex ia Battery Assembly.asm	03	2005/08/29
BATT01	1	Trimec Battery Diode Board	2	2005/08/29
TI04PS09a	1	Low Cost Flowmeter Power Board BT11 <i>(schematic)</i>	-	2005/07/27
TI04PS09.PCB	4	BT11 Flow Meter Power Board <i>(layouts)</i>	09	2005/10/11
BOM271 V17	1	Cover Page Revision Control Status	17	2005/10/26
BOM271 V17	2	BT11 – Totaliser Control Board <i>(Bill of Material)</i>	17	2005/10/26
BOM271 V17	3	BT11 – Totaliser Power Board <i>(Bill of Material)</i>	17	2005/10/26
BOM271 V17	1	BT11 – Locally Fitted Parts <i>(Bill of Material)</i>	17	2005/10/26
TI04MC04a	1	Low Cost Flowmeter Main Board <i>(schematic)</i>	6507	2004/06/02
TI04MC04.PCB	4	BT11 Flow Meter Main Board <i>(layouts)</i>	04	2005/09/06
0007010001	1	BT Ex ia BOM Assembly	03	2006/02/09
1315050-EX	1	Trimec BT Ex – ia Label	Orig	2006/02/13
1302033	1	BT Base – Field Mount	04	2005/11/21
1306015	1	BT Cover	01	2003/02/25
1306016	1	BT Faceplate	03	2003/02/21
1315012	1	BT Round Facia Label	01	2005/12/21
0007010002	1	BT IP Rating Assembly	02	2005/06/16
RT11/RT12: Rate Totaliser				
1412028-EX	3	1412028 Ex ia Battery Assembly.asm	03	2005/08/29
BATT01	1	Trimec Battery Diode Board	0	2005/08/29
TI07MC04b	1	Trimec_RT12 Flowmeter Version 3 Main Board <i>(First design) (schematic)</i>	6624	2005/09/27
TI07MC04	4	<i>(Layouts of the Main Board – First Design)</i>	Orig.	2005/08/17
BOM294 V17-RT12 I.S..xls	13	Production Bill of Material TI07 – Trimec I.S. Flowmeter RT12 <i>(First design)</i>	17	2005/09/27
TI07MC05a	1	Trimec_RT12 Flowmeter Version 3 Main Board <i>(Second Design) (schematic)</i>	6624	2005/09/27
TI07MC05.pcb	4	RT12 Flow Meter Main Board <i>(Second design) (Layouts)</i>	05	2005/09/27
BOM294 V18 – RT12 I.S..xls	13	Production Bill of Material TI07 – Trimec I.S. Flowmeter RT12 <i>(Second design)</i>	18	2005/09/27
TI07IF04b	1	Trimec_RT12 Flowmeter Version3 Interface PCB <i>(schematic)</i>	-	2005/07/13
TI07IF04.pcb	4	RT12 Flow Meter Interface Board <i>(Layouts)</i>	04	2005/08/19
BOM294 V16 – RT12 I.S..xls	13	Production Bill of Material TI07 – Trimec I.S. Flowmeter RT12 <i>(Interface PCB)</i>	16	2005/08/17
0004011001	1	RT/EB Ex ia Register Assembly	02	2005/11/24
1315033-EX	1	Trimec RT Ex-ia LABEL	04	2006/02/09

Certificate issued by:

	<p>TestSafe Australia 919 Londonderry Road Londonderry NSW 2753 Australia</p>
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Annexe for Certificate No.:	IECEX TSA 05.0035X	Issue No.:	1
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1302022	1	RT/EB Base M20 Conduit Entry Field Mount	03	2005/11/21
1302023	1	RT/EB Base 1/2" NPT Conduit Entry Field Mount	02	2006/02/09
1302024	1	RT/EB Base Meter Mount M20 Conduit Entry	01	2005/12/06
1302025	1	RT/EB Base Meter Mount 1/2" NPT Conduit Entry	02	2006/02/09
1306013	1	RT-EB Faceplate	02	2002/10/10
1306014	1	RT-EB Cover	01	2002/10/10
1315009	1	RT Round Facia Label	02	2005/11/09
0004011002	1	RT/EB Series Register Assembly IP Testing Assembly	03	2005/12/07

Conditions of Certification pertaining to Issue 0 of this Certificate:

1. It is a condition of certification that the following parameters shall be taken into account during installation:

BT10/BT11 Totaliser:

Parameters Connectors ST1, ST2

Ui 28 V

Ii 0.1 A

Pi 0.7 W

Ci 0 μ F

Li 0 mH

RT11/RT12 Rate Totaliser:

Parameters Connections 1 to 14

Ui 28 V

Ii 0.1 A

Pi 0.7 W

Ci 0.335 μ F

Li 0 mH

2. Where powered sensors are being used, they must be wired using the same associated equipment supply as is being used by the power/signal loop connections of this equipment.

Variations permitted by Issue 1 of this certificate:

Applicant and manufacturer address was changed from 1/19 Northumberland Road, Caringbah NSW 2229 Australia to 1/16 Atkinson Road, Taren Point NSW 2229 Australia

Conditions of use pertaining to Issue 1 of this certificate:

The conditions are unchanged from Issue 0 of the certificate.

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