



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

Certificate No.: **IECEX TSA 05.0035X** Issue No.: **0**

Status: **Current**

Date of Issue: **2006-03-16** Page **1** of **4**

Applicant: **Trimec Industries Pty Ltd**  
1/19 Northumberland Road  
Caringbah 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)*

*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





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Manufacturer: **Trimec Industries Pty Ltd**  
1/19 Northumberland Road  
Caringbah NSW 2229  
**Australia**

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 manufacture'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:

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

*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:

**AU/TS/05.068B, AU/TS/05.069B**

**TestSafe QAR 05.019**

File Reference:

**2005/052445**



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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:**

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 $\mu$ 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 $\mu$ 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.



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**Additional information:**

For drawing list, please check the attached annex.

**Annexe:** [Drawing list IECEx TSA 05\\_0035X.pdf](#)