Australian Government
National Measurement Institute
Bradfield Road, West Lindfield NSW 2070

Supplementary Certificate of Approval

NMI S505

Issued by the Chief Metrologist under Regulation 60
of the
National Measurement Regulations 1999

This is to certify that an approval for use for trade has been granted in respect of the instruments herein described.

Trimec Model QP/00 Pulse Generator for use in Flowmetering Systems

submitted by Trimec Industries Pty Ltd
now of 1-16 Atkinson Road
Taren Point NSW 2229

NOTE: This Certificate relates to the suitability of the pattern of the instrument for use for trade only in respect of its metrological characteristics. This Certificate does not constitute or imply any guarantee of compliance by the manufacturer or any other person with any requirements regarding safety.

This approval has been granted with reference to document NMI R 117 Measuring Systems for Liquids Other than Water, dated June 2011.

This approval becomes subject to review on **1/04/19**, and then every 5 years thereafter.

DOCUMENT HISTORY

Rev	Reason/Details	Date
0	Pattern & variants 1 & 2 approved – certificate issued	5/03/08
1	Pattern & variants 1 & 2 reviewed & updated – certificate issued	7/03/14

CONDITIONS OF APPROVAL

General

Instruments purporting to comply with this approval shall be marked with pattern approval number ‘NMI S505’ and only by persons authorised by the submittor.

Instruments incorporating a component purporting to comply with this approval shall be marked ‘NMI S505’ in addition to the approval number of the instrument, and only by persons authorised by the submittor.

It is the submittor’s responsibility to ensure that all instruments marked with this approval number are constructed as described in the documentation lodged with the National Measurement Institute (NMI) and with the relevant Certificate of Approval and Technical Schedule. Failure to comply with this Condition may attract penalties under Section 19B of the National Measurement Act and may result in cancellation or withdrawal of the approval, in accordance with document NMI P 106.

Signed by a person authorised by the Chief Metrologist to exercise their powers under Regulation 60 of the *National Measurement Regulations 1999*.

Dr A Rawlinson

TECHNICAL SCHEDULE No S505

1. Description of Pattern approved on 5/03/08

A Trimec model QP/00 pulse generator for use in compatible (#) approved flowmetering systems (Figure 1).

1.1 Field of Operation

- Pulse output — Square wave output proportional to supply voltage
- Maximum pulse frequency — 500 Hz
- Power supply range — 5 to 24 volts DC
- Environmental class — –10°C and 30°C
- Accuracy class — 0.3 (or larger)

1.2 Pulse Generator

The Trimec model QP/00 integral pulse generator has a pulser circuit board with dual Hall Effect sensors to produce dual output signals proportional to volume throughput, when fitted to a compatible (#) approved flowmeter and interfaced with a Enraf Contrec model Trac-40 controller/indicator (as described in approval NMI S367A) or any other compatible (#) approved controller/indicator.

1.3 Installation

When considering the compatibility of the flowmeter and the controller/indicator for use with the pulse generator, the consideration shall include the field of operation of each device.

1.4 Checking Facilities

The pulse generator is configured with an overlapping pulse output which permits the detection of direction and errors on either channel when interfaced to a compatible (#) approved calculator/indicator.

(#) ‘Compatible’ is defined to mean that no additions/changes to hardware/software are required for satisfactory operation of the complete system.

1.5 Verification Provision

Provision is made for the application of a verification mark.

1.6 Sealing Provision

Provision is made for the pulse generator to be sealed (Figure 1) to prevent access to its electronics.

1.7 Descriptive Markings

Each measuring system shall bear the following information, placed together either on the indicating device or on a data plate:

Pattern approval mark	NMI S505
Manufacturer's identification mark or trade mark	…..
Manufacturer's designation (model number)	…..
Serial number of the instrument	…..
Year of manufacture	…..
Environmental class	class C

2. Description of Variant 1 approved on 5/03/08

The dual channel Hall Effect sensors replaced by single or dual Reed switches having a contact rating of 6 VA and a maximum voltage rating of 30 V DC.

3. Description of Variant 2 approved on 5/03/08

The dual channel Hall Effect sensors replaced by a single Reed switch and a single channel Hall Effect sensor output.

TEST PROCEDURE No S505

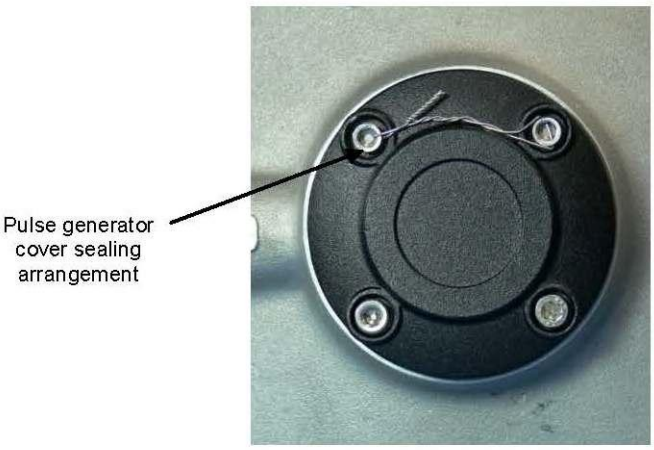
Instruments shall be tested in conjunction with any tests specified in the approval documentation for the instruments to which the pattern is connected, as appropriate, and in accordance with any relevant tests specified in the National Instrument Test Procedures.

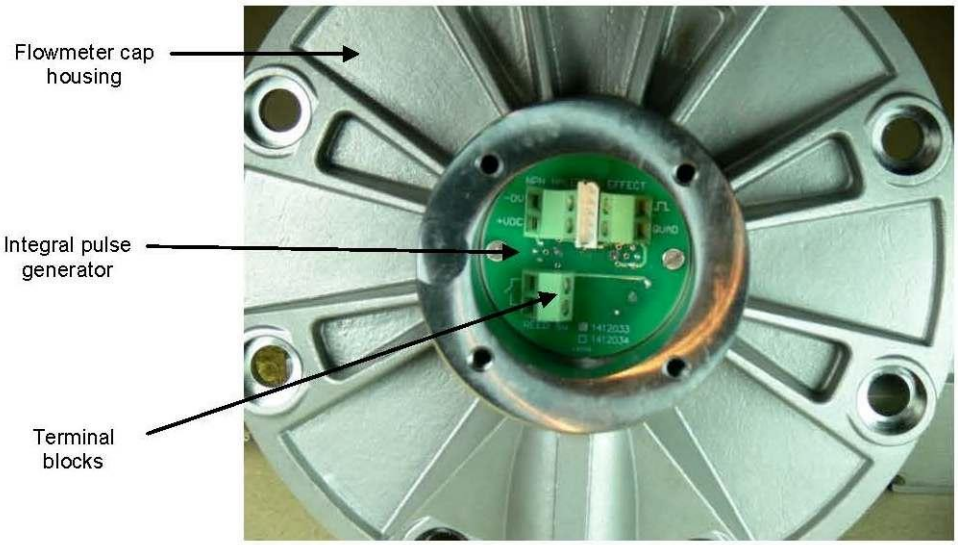
The instrument shall not be adjusted to anything other than as close as practical to zero error, even when these values are within the maximum permissible errors.

Maximum Permissible Errors

The maximum permissible errors applicable are those specified for flowmetering system in which the pattern is included, as stated in the approval documentation for the system.

FIGURE S505 – 1





Trimec Model QP/00 Pulse Generator Including Showing Typical Sealing

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