

**RS Calibration**

Calibration and Repair Service

Serial No: 578952

Cert No: 1840099

Cal Date: 13 Dec 2023

Recal Due:

0310

DPN 175 Lammas Road, Corby, Northants, NN17 9RS

Calibration Certificate

Do Not Destroy

Calibration Certificate Attached: 1840099

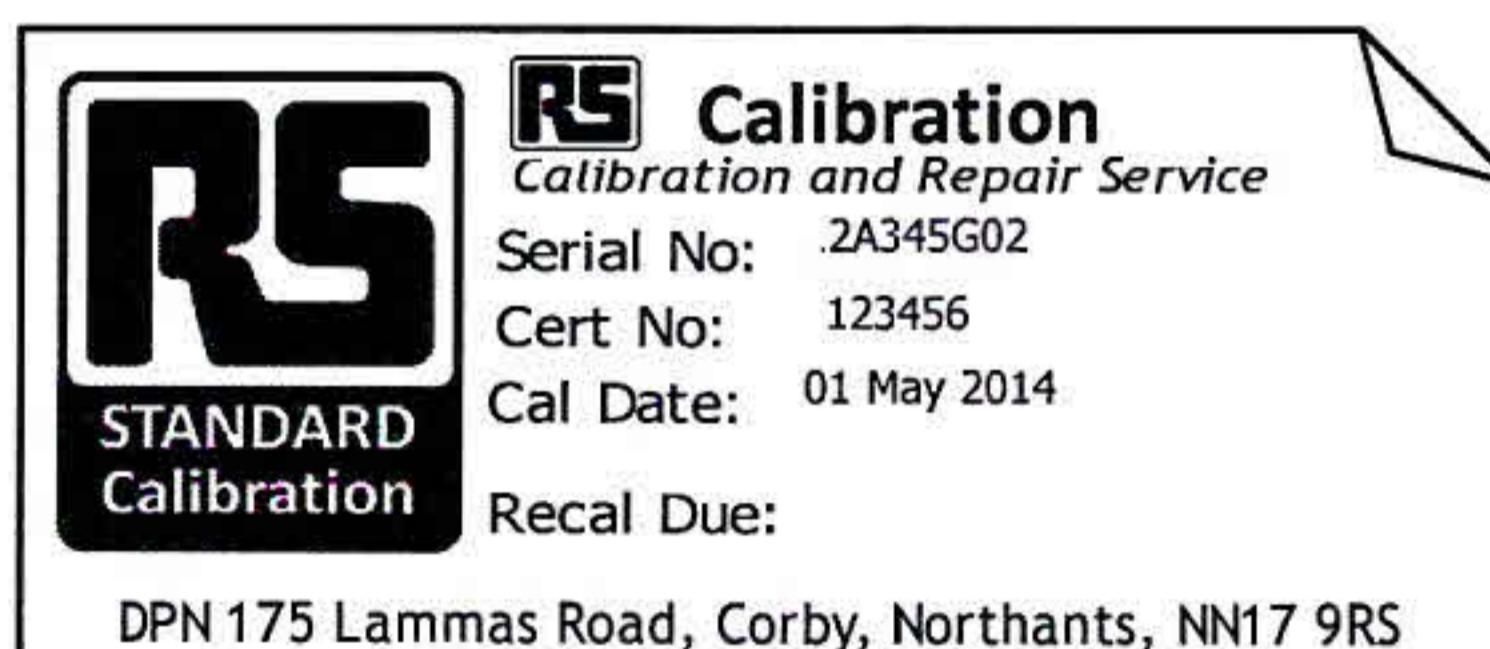
OD ref: 1228584568

Thurlby Thandar TF930 Frequency Counter

first

IMPORTANT INFORMATION

Simply detach the label in the top right hand corner of the new front sheet and apply to your instrument as required.



For Re-Calibration of your unit please email:

calibration.uk@rs-components.com

or call us on 01536 405545 to arrange free collection. Please quote serial number when returning.



Calibration

CERTIFICATE OF CALIBRATION

Issued by: RS Components Ltd

Date Issued: 13 Dec 2023

Certificate No. 1840099



RS Calibration

Calibration and Repair Service

DPN 175, Lammas Rd,
Weldon Industrial Est
Corby, Northants, NN17 9RS

Tel: 01536 405545
Fax: 01536 401590

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A handwritten signature in black ink.

Sharleen Forde

Client VIAMED LTD
KEIGHLEY
WEST YORKSHIRE
BD20 7DT

Instrument Thurlby Thandar TF930 Frequency Counter

Serial No. 578952

Client Reference N/A

Procedure ID. 665_4919_MultiCal Rev P6

Date of Calibration 13 Dec 2023

Remarks

This calibration is of a new instrument.

Uncertainties

The reported expanded uncertainties are based on a standard uncertainty multiplied by a coverage factor $k = 2$, providing a level of confidence of approximately 95%. The uncertainty evaluation has been carried out in accordance with UKAS requirements.

The following calibration results relate only to the items defined above.

This certificate is issued in accordance with the laboratory accreditation requirements of the United Kingdom Accreditation Service. It provides traceability of measurement to the SI system of units and/or to units of measurement realised at the National Physical Laboratory or other recognised national metrology institutes

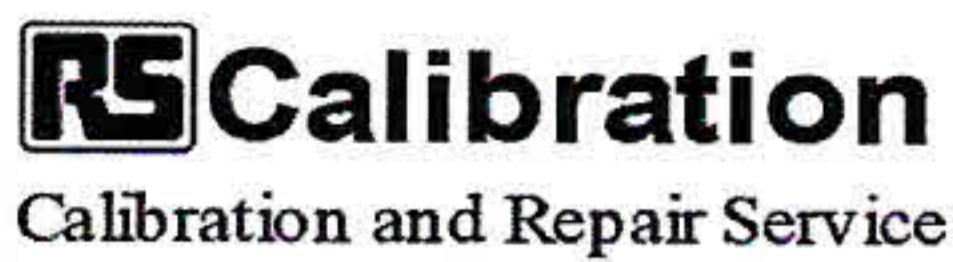
This certificate may not be reproduced other than in full, except with the prior written approval of the issuing laboratory.

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UKAS Accredited Calibration Laboratory No. 0310

Certificate No.

1840099



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Environment

The ambient temperature and relative humidity throughout the calibration were $(20 \pm 2)^\circ\text{C}$ and $(40 \pm 20)\%$ RH respectively.

Method

Prior to the calibration the instrument was held within the laboratory for a period of not less than 1 hour.

The instrument readings are recorded in the table below and are those with the instrument set for an appropriate gate time.

| | Applied Value | Gate Time | Nominal Amplitude | Unit Reading |
|----------------|------------------|--------------|----------------------|-----------------|
| Input A | 50 Hz | 1 s | 42 mV | 49.999999 Hz |
| | 100 Hz | 1 s | 42 mV | 100.00000 Hz |
| | 100 Hz | 10 s | 42 mV | 99.999997 Hz |
| | 110 Hz | 1 s | 42 mV | 110.00000 Hz |
| | 110 Hz | 10 s | 42 mV | 109.999997 Hz |
| | 1 kHz | 1 s | 42 mV | 1.0000000 kHz |
| | 1 kHz | 10 s | 42 mV | 0.99999997 kHz |
| | 1.1 kHz | 1 s | 42 mV | 1.1000000 kHz |
| | 1.1 kHz | 10 s | 42 mV | 1.09999997 kHz |
| | 11 kHz | 0.3 s | 42 mV | 11.000000 kHz |
| | 11 kHz | 1 s | 42 mV | 11.000000 kHz |
| | 11 kHz | 10 s | 42 mV | 10.9999997 kHz |
| | 110 kHz | 1 s | 42 mV | 110.00000 kHz |
| | 1.1 MHz | 1 s | 42 mV | 1.100000 MHz |
| | 10 MHz | 1 s | 42 mV | 10.000000 MHz |
| | 10 MHz | 10 s | 42 mV | 9.9999997 MHz |
| | 11 MHz | 1 s | 42 mV | 11.000000 MHz |
| | 11 MHz | 10 s | 42 mV | 10.9999997 MHz |
| | 110 MHz | 1 s | 42 mV | 110.00000 MHz |
| Period | 2 MHz | 1 s | 42 mV | 500.00002 ns |

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| | Applied Value | Gate Time | Nominal Amplitude | Unit Reading |
|----------------|--------------------------|----------------------|------------------------------|-------------------------|
| Input B | 110 MHz | 0.3 s | 70 mV | 110.00000 MHz |
| | 110 MHz | 1 s | 70 mV | 110.00000 MHz |
| | 110 MHz | 10 s | 70 mV | 109.999997 MHz |
| | 2 GHz | 1 s | 70 mV | 2.000000 GHz |
| | * 3 GHz | 1 s | 70 mV | 3.000000 GHz |

The above value annotated with * are not currently covered by UKAS accreditation but are included for completeness

Measurement Uncertainties

| | |
|----------------|--|
| 10Hz to 100kHz | $\pm (3 \text{ in } 10^{-9} + 1 \text{ L.S.D})$ |
| 100kHz to 1MHz | $\pm (2 \text{ in } 10^{-10} + 1 \text{ L.S.D})$ |
| 1MHz to 2GHz | $\pm (5 \text{ in } 10^{-10} + 1 \text{ L.S.D})$ |

CALIBRATED BY :- CJS

Reported values

The uncertainties quoted refer to the applied values, which include any identified contribution of the instrument under test and not to the ability of the instrument to maintain it's calibration.

When in use due allowance should be made for the stability of the reading as found in the 'UUT L.S.D. Stability' column.

The L.S.D component of the above measurement uncertainties refers to the display resolution of the unit.
END OF CALIBRATION