# CERTIFICATE OF CALIBRATION

Issued by: RS Components Ltd

Date Issued: 24 Jun 2019 Certificate No. 1585453

0310

## RS Calibration

Calibration and Repair Service

DPN 175, Lammas Rd,
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Sharleen Forde

| | |
|---|---|
| Client | VIAMED LTD<br>KEIGHLEY<br>WEST YORKSHIRE<br>BD20 7DT |
| Instrument | Thurlby Thandar TF930 Frequency Counter |
| Serial No. | 425571 |
| Client Reference | N/A |
| Procedure ID. | 665_4919_TF930 Rev P10 |
| Date of Calibration | 24 Jun 2019 |

**Remarks**

This certificate reports recorded values for the instrument 'As Received'.

**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.

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UKAS Accredited Calibration Laboratory No. 0310

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## Environment

The ambient temperature and relative humidity throughout the calibration were (20 ± 2) °C and (40 ± 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 Amplitutde | Unit Reading |
|---|---|---|---|---|
| Input A | 50 Hz | 1 s | 42 mV | 50.000039 Hz |
| | 110 Hz | 1 s | 42 mV | 110.00009 Hz |
| | 110 Hz | 10 s | 42 mV | 110.000087 Hz |
| | 1.1 kHz | 1 s | 42 mV | 1.1000009 kHz |
| | 1.1 kHz | 10 s | 42 mV | 1.10000087 kHz |
| | 11 kHz | 0.3 s | 42 mV | 11.000009 kHz |
| | 11 kHz | 1 s | 42 mV | 11.000009 kHz |
| | 11 kHz | 10 s | 42 mV | 11.0000087 kHz |
| | 110 kHz | 1 s | 42 mV | 110.00009 kHz |
| | 1100 kHz | 1 s | 42 mV | 1100.0009 kHz |
| | 11 MHz | 1 s | 42 mV | 11.000009 MHz |
| | 11 MHz | 10 s | 42 mV | 11.0000087 MHz |
| | 110 MHz | 1 s | 42 mV | 110.00009 MHz |
| Input B | 110 MHz | 0.3 s | 70 mV | 110.00009 MHz |
| | 110 MHz | 1 s | 70 mV | 110.00009 MHz |
| | 110 MHz | 10 s | 70 mV | 110.000086 MHz |
| | 2000 MHz | 1 s | 70 mV | 2000.0010 MHz |
| Period | 2 MHz | 1 s | 42 mV | 500.00085 us |

## Measurement Uncertainties

| | |
|---|---|
| 10 Hz to 100 kHz | $\pm (1 \text{ in } 10^6 + 1\ L.S.D)$ |
| 100 kHz to 1 MHz | $\pm (1 \text{ in } 10^7 + 1\ L.S.D)$ |
| 1 MHz to 2 000 MHz | $\pm (5 \text{ in } 10^8 + 1\ L.S.D)$ |

**END OF CALIBRATION** **CALIBRATED BY :- SFO**

## 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.