Trescal

Certificate of Calibration

Date of Issue 15 April 2025

Certificate No. 4594500001

UKAS CALIBRATION 0013

Issued by
Trescal Ltd
Park Gate Close, Bredbury Park Way
Bredbury, Stockport
SK6 2SL, UK
Tel: +44 (0)161 4067878

APPROVED SIGNATORY
William Merryman (262)
(Signed electronically)

Customer:
PPT Group UK Ltd t/a Mecmesin, Newton House, Spring Copse Business Park
Slinfold, Horsham, West Sussex, RH13 0SZ

Location of calibration:
Trescal Ltd, Park Gate Close, Bredbury Park Way
Bredbury, Stockport, SK6 2SL, UK

Equipment Details:

Description:	Speed Verification Tool		
Manufacturer:	ELV	Customer Ref:	TM0433
Type No:	LSU 100	Date of Receipt:	21 Mar 2025
		Order No:	PO136759-1
Serial No:	SEQ2878992	Our Reference:	72943974
Calibrated By:	Panagiotis Pylarinos	Date of Calibration:	11 Apr 2025

Calibration Summary
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.
Assessment of conformance has been undertaken in accordance with the agreed decision rule detailed within this certificate.

Status on Receipt: Measured Values Only
No assessment of conformance has been undertaken.

Status on Despatch: Measured Values Only
No assessment of conformance has been undertaken.

Action(s) Taken: Full Calibration

Ambient Conditions: Temperature: 20 ±2 °C Humidity: 35 ±20 %rh

Customer requested calibration due date:

The results given within this certificate only relate to the item calibrated. The expanded uncertainties quoted refer to the measured values only, with no account being taken of the instruments ability to maintain its calibration. The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k = 2, which for a normal distribution corresponds to a coverage probability of approximately 95%. The uncertainty evaluation has been carried out in accordance with UKAS requirements.

Agreed and applied Decision Rule used to determine conformance:

It has been stipulated by the customer that assessment of conformance is not required. (Trescal Rule 0)
Reference: Trescal document TRE/DEC/0004 Issue 1

Calibration Equipment Used

Asset No	Due Date	Asset No	Due Date
120518	30/11/2026	E492	30/09/2025
FC224	30/04/2025	FC332a	28/02/2026
FC477	30/04/2025	FC571	30/04/2025

The following information and any identified symbols are used by Trescal in determining the conformance of the device at each measurement point, which is then evaluated in line with the requested decision rule. Where this decision rule is of a "Binary Rule" type then the "Conditional Pass & Fail" statuses are treated as specified by the chosen decision rule. The overall conformance statement determined is given on page one of this certificate.

Key to results annotations, where applicable

* The measurements marked thus have been determined to be outside the specification, due allowance having been made for the expanded uncertainty.
! The measurements marked thus are within the specification by a margin less than the expanded uncertainty.
^ The measurements marked thus are outside the specification by a margin less than the expanded uncertainty.
@ The expanded uncertainty is significant in relation to the unit specification and it is therefore not possible to demonstrate conformance unambiguously.
$ The measurements marked thus do not lie within the scope of the Laboratory's prevailing UKAS accreditation but are reported herein for completeness.

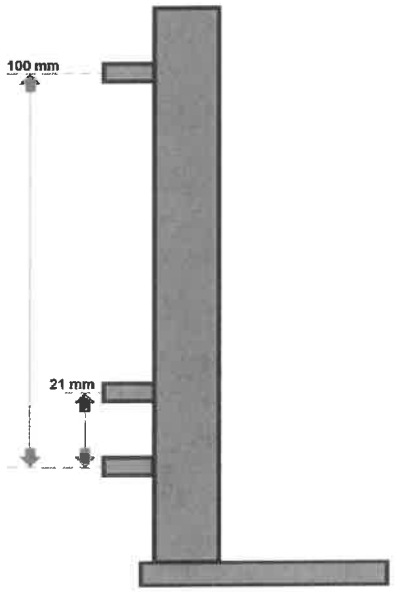
Basis of Test: Measured Results.

This speed verification instrument has been measured using laboratory standards for the distance between the laser sensors operating the stopwatch, with the datum laser being at the bottom of the column. Laser beam was crossed with suitable obstruction piece and height point of the light switch off noted for each laser sensor. Differential measurement was performed for each sensor in both directions, coming up and going down. Repeat readings were taken to determine the accuracy and the measured results reported in the following tables:

Reading Ref	Nominal Length (mm)	Measured Length (mm)
1	21.00	21.144
2	21.00	21.055
3	21.00	21.000
4	21.00	21.095
5	21.00	21.066
Mean	21.00	21.072
Maximum variation	21.00	0.144

Reading Ref	Nominal Length (mm)	Measured Length (mm)
1	100.00	100.130
2	100.00	100.061
3	100.00	100.072
4	100.00	100.030
5	100.00	100.058
Mean	100.00	100.070
Maximum variation	100.00	0.100

Figure 1



The dovetail bracket was measured for the distance between faces with the following results:

Feature	Position	Nominal Distance (mm)	Measured Results (mm)	Mean Value (mm)	Parallelism (mm)
Upwards Distance	1	20	20.026	20.025	0.011
	2		20.018		
	3		20.025		
	4		20.026		
	5		20.029		

Feature	Position	Nominal Distance (mm)	Measured Results (mm)	Mean Value (mm)	Parallelism (mm)
Downwards Distance	1	20	19.950	19.938	0.043
	2		19.951		
	3		19.931		
	4		19.951		
	5		19.908		

Figure 2

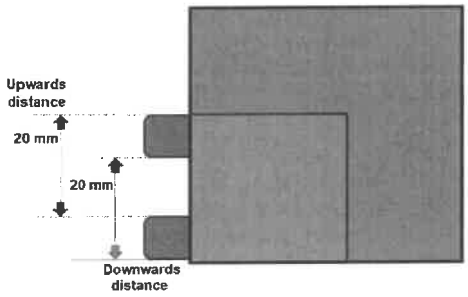
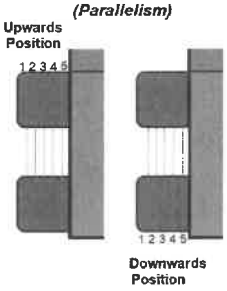


Figure 3

(Parallelism)



Uncertainty of measurement : ±0.010 mm

Calibration Procedure : QCD/CALP/18
Our Reference : AFD459450

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UKAS Accredited Calibration Laboratory No. 0013

Calibration Procedure: The instrument was placed in the laboratory for 24 hours prior to calibration for stabilisation purposes. Tests were made by comparison with a standard counter at the given indications. The equipment was calibrated in a controlled environment using devices having known and traceable values. The uncertainties reported refer to the measured values only with no account being taken of the instrument ability to maintain its calibration.

Time Checks

UUT Indication	Standard Indication	Standard Equivalent
00 hr 00 min 05243 sec	5.202 sec	0 min 05.202 sec
00 hr 00 min 10208 sec	10.166 sec	0 min 10.166 sec
00 hr 01 min 30212 sec	30.174 sec	0 min 30.174 sec
00 hr 01 min 00075 sec	60.017 sec	1 min 00.017 sec
00 hr 05 min 00396 sec	300.316 sec	5 min 00.316 sec
00 hr 10 min 00424 sec	600.325 sec	10 min 00.325 sec

The overall uncertainty in the measurement was:

± (0.07) seconds of indication

Specification taken from:

Measured results only no specifications available.

End of Results