

# EasyCal Calibration Software



The comprehensive solution to calibration work and management



# **About EasyCal**

EasyCal is a complete software package with features covering all aspects of calibration work and management. It is designed to reduce workload, improve efficiency, and provide the essential platform for companies looking to create and sustain an effective calibration program.

The comprehensive features simplify the administration process from reminder reports through to despatch. With a familiar and intuitive user interface all operators can quickly learn and navigate through the applications. This allows fast, straightforward implementation and integration of the software.

# **Communication and Control**

EasyCal automates calibration runs by allowing the user to remotely control and communicate with test instruments such as calibrators and multimeters. User friendly features and controls aid the process to decrease calibration times and increase throughput. EasyCal driven calibration can be performed with compatible Time Electronics process instruments including dry block calibrators, temperature baths, digital pressure gauges, pressure controllers, and process calibrators. EasyCal is also utilised on CalBench systems where integrated modules communicate with a central control centre for a unified solution.

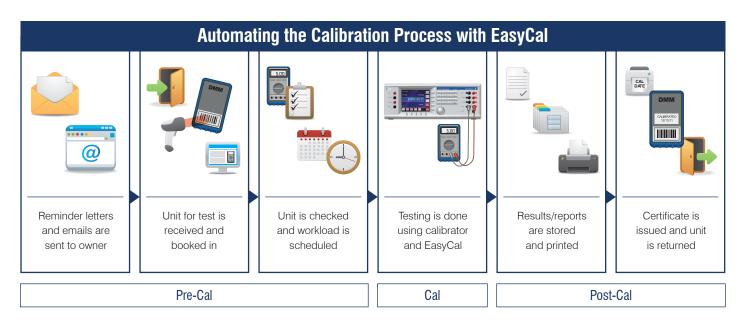
# For Multiple Industries and Disciplines

EasyCal is a versatile solution to multi-device calibration with the comprehensive functionality that is required across industries. It is globally used as the principal software in both calibration businesses and companies with on-site test facilities.

EasyCal is also designed for universal testing applications and can cover a wide range of disciplines. Users can calibrate and verify various instruments and devices: electrical and electronic; level, pressure, and flow; temperature and loop; mechanical and dimensional.

#### **Features**

- Communicate with calibrators, multimeters, CalBench modules
- Communicate with pressure and temperatures instruments
- · Automated planning and scheduling
- For use with multiple devices and instruments
- Print/email/store certificates and reports
- · Network compatible
- Produce calibration labels
- Quickly generate procedures using templates and wizards
- 1200+ pre-written test procedures included
- Calibration due reminder system
- E-mail reminder letters and lists
- Customise reports and certificates
- Create PDF reports and certificates (PDF engine)
- Print and read bar codes
- Universal instrument control
- HART and Foundation Fieldbus communication
- Secure user log in and electronic signatures
- Create uncertainty tables for laboratory & site
- WebCert feature for online certificates



# **EasyCal: For the Calibration Process**

Automating the calibration process brings important benefits and provides increased speed of calibration and consistency of results.

#### **Pre-Calibration**

The calibration management features of EasyCal make the planning and organization of instrumentation calibration simple. A recall/reminder system informs the user of upcoming jobs, and search functions allow the user to quickly identify a unit for test.

#### Calibration

EasyCal controlled calibration significantly decreases testing times, meaning less instrument downtime and faster turnaround. This improves throughput meaning greater return on investment. EasyCal optimises the process by allowing the user to create procedures quickly and easily with the help of the included design wizards and pre-written templates.

# Post Calibration

Produce traceable calibration certificates and test reports for quality standards. These can be printed, stored, or emailed as PDFs. EasyCal has a selection of pre-formatted certificate templates suitable for displaying typical calibration results.



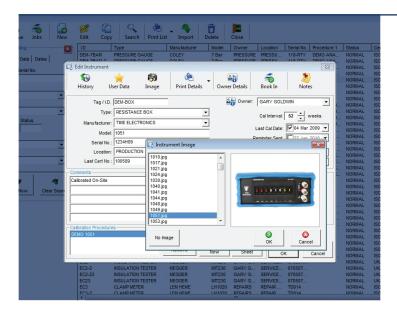
# The Core Benefits of using EasyCal

# Achieve compliance with quality standards

- Automated document control ensures conformity and quality
- Establish procedures to maintain repeatability and monitor quality
- Schedule and maintain calibration intervals.
- · Evidence of traceability to national standards
- Record calibration environmental conditions
- Produce calibration labels, maintain calibration history
- Reduce possibilities for errors or omissions
- Electronic record retention ensures integrity for successful audits

# Create an efficient control and management system

- Reduce testing times
- Eliminate continual outsourcing calibration costs
- Full control over the calibration process
- Improve turnaround
- Quick and easy solution to instrument analysis when needed
- Internal scheduling for calibrations. No external factors
- Centralised document management
- On demand networked review of certificates and reports



# **Inventory, Reminders, and Jobs**

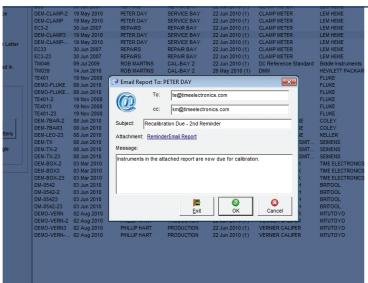
A comprehensive inventory database can be created and customised to company requirements. For internal calibration and quality management, departments and users can be specified. Alternatively EasyCal can be used as the controlling system for a calibration business based around customers and owners.

#### Search

A powerful search feature enables the user to enter specific criteria to quickly find the required data. When adding details the user is aided by drop-down lists, which automatically update when new information is added.

#### Input Fields

Used to add details such as ID and serial number, manufacturer and model, instrument status and service notes. In addition custom fields can be created to integrate with a company system. Images can be uploaded to provide further reference.

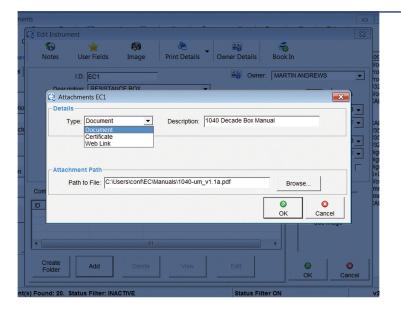


#### Instrument Recall and Reminder System

Instruments which are due for calibration are listed on screen. Reminder letters and lists can be printed or emailed directly to the customer or department. An advanced notice period can be set to bring forward the recall date allowing for response time.

#### Job Management

When a unit for test is booked in the job process starts. Specific information about the job is entered; such as 'service required', 'sub contracted' and 'accessories supplied'. A job sheet and label can be produced at this stage to accompany the instrument. As the job is put through the system these parameters can be updated, for example 'quote price', 'job status' and 'invoiced'.



# **Document Links and Attachments**

Create links to technical files, specifications, web pages, word documents, videos, and more. These can be set to automatically display prior to the calibration run.

#### Devices and Standards used for Calibration

Traceability information for instruments and standards that perform the calibration work is stored and maintained by EasyCal.

#### **Uncertainties**

Uncertainty tables for laboratory and site can be created for each calibrating instrument. These are then automatically processed and applied to certificates as required.

# **Procedure Writing and Editing**

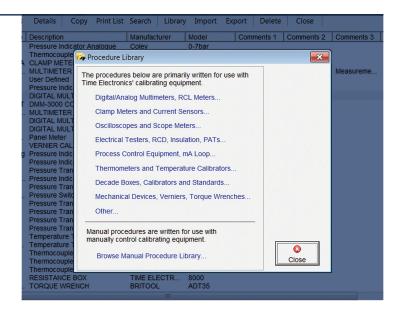
Creating and editing test procedures is made simple with an intuitive, user-friendly interface. Editing test information can be done by adding, inserting, or copy and pasting. EasyCal keeps track of each time a procedure is edited.

#### **Procedure Library**

A calibration library comprising of over 1200 procedures covering a wide variety of instruments and devices is included as standard.

#### **Procedure Templates**

Procedure templates for multimeters, clamp meters, decade boxes, insulation testers, and more can be used for creating any new procedures as required.



## Fast Procedure Creation and Editing

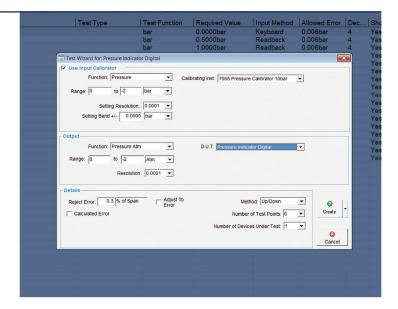
Copy and paste multiple tests. Globally edit a group of tests. Colour coded listing helps sort and identify different test types.

#### **Test Wizards**

EasyCal features intuitive wizards for calibrating typical process devices such as transmitters, sensors, and pressure gauges. They provide users with a fast method to create procedures. Basic criteria about a device is entered, then the wizard creates a set of tests based on this information.

#### **Procedure Simulation**

The Calibration Run Simulator enables a procedure to be tested without the need for a controlling instrument. To further assist with development of procedures a test can also be edited during the actual calibration run.



## Format Certificates

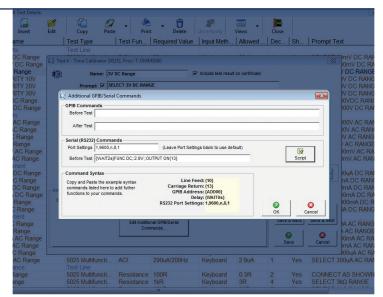
Colour code and add borders to test group titles. Add column headers where a change of layout is required. A preview feature allows the user to check the certificate layout to determine if formatting is correct.

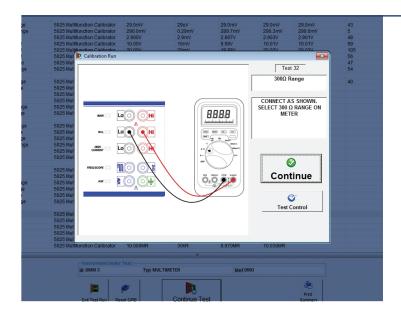
#### **Conversion Tables**

Conversion tables for thermocouples, RTDs, current transformers, and clamp meter adaptors are included. Alternatively user-defined tables can be created.

#### **Remote Commands**

For more complex instrument control, commands can be sent on a test-by-test basis or run as a script. Closed loop calibration is also achievable using the universal readback feature. This allows EasyCal to control third party calibration equipment and communicate with devices under test.





#### **Instrument and Device Calibration**

Automated calibration run provides fast and accurate collection of data, whether using direct instrument control or manual entry. EasyCal guides the operator through the procedure using graphical test screens and user prompts.

#### Search

Selection of the device under test is quick and easy. With the use of a barcode scanner this selection becomes automatic.

#### **Calibration Prompts**

Text and graphical prompts aid the user with instrument range selection and connection. So even the most complex calibrations can be performed with relative ease.

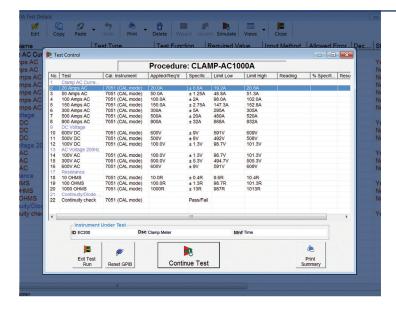


#### **Graphical Test Screen**

The calibration run is made simple and efficient by a graphical user-interface, which increases speed of data entry. The colour coded indication bar displays the test limits. This allows the operator to easily identify out of tolerance results.

#### **Test Control**

At any stage during the calibration run a summary can be displayed, this includes both completed and remaining tests. Colour coding indicates tests passed or failed. The operator is able to move forward or backward through the procedure as required.



# **End of Calibration Run**

Data for every test is stored, including a snap shot of the procedure used. If required calibration comments and service history can be updated. The operator is able to print the certificate, produce a calibration label and/or store the results to be issued as required.

#### Recovery Mode

If for any reason a calibration run is interrupted, EasyCal's recovery mode feature allows the user resume the test run from the point of termination.

#### **Calibration Test Forms**

Alternatively 'calibration test forms' for hand written results are available. This data is then entered manually into EasyCal at a later date.

# **Certificates/Reports/Data Management**

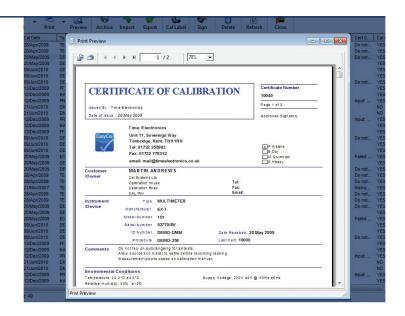
Produce, print, and store calibration certificates, reports, and labels. Simple search facilities enable the user to locate any data on demand. Keeping track of instrument history and servicing is made easy.

#### **Certificate Templates**

A range of pre-formatted templates are available for immediate use. A company logo can be added without the need for 3rd party software.

#### **Electronic Signatures**

Password protected electronic signatures allow management to approve certificates. In addition a scanned image of the signature can automatically be inserted, eliminating the need to print certificates.



## **Built-in PDF Engine**

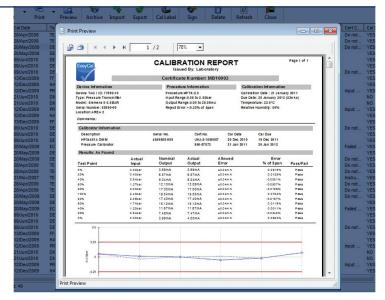
Generate PDF reports and certificates ready for emailing and universal review.

#### Calibration Reports

Documented traceability provides a recorded audit trail. Reports showing calibration duration times can assist with costing and assessments.

#### Archive

The results database can be streamlined by using the archive feature. This improves data organisation and management. Archives are quickly retrieved, giving instant access to historical certificate data.

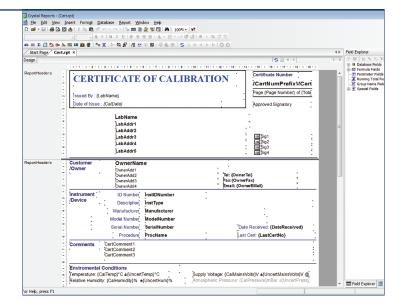


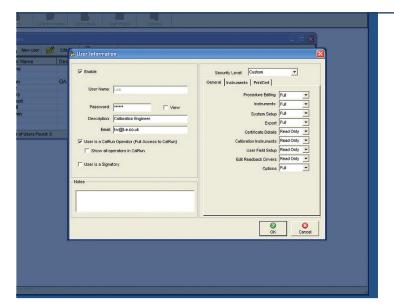
## Import and Export

Exchange data from one system to another using the import/export feature. This method is ideal for site and field calibration work, where data is recorded externally then uploaded to the main database upon return.

#### Customise

Crystal Reports (optional) allows full modification of certificate, label, and report layouts. Design custom reports using queries, formulas, and running totals.





# **EasyAdmin**

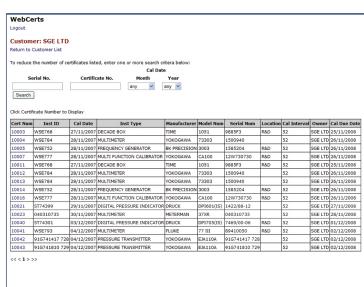
EasyAdmin is an add-on that provides increased security for EasyCal and it's users.

User Rights: A master user sets the user rights for the relative staff and defines log in criteria.

Access Levels: Setting access levels within EasyCal to limit secondary users can be done, safe guarding sensitive information.

Administration: EasyAdmin provides an administration point for calibration instruments, certificate information and user fields.

Predefined Pick-Up Lists: For instrument manufacturers, sub-contractors, customer details and additional information. These can be created to make EasyCal data entry quick, easy and



# WebCerts

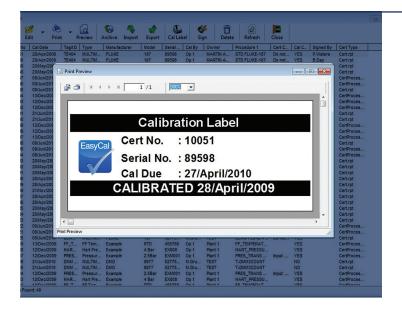
WebCerts is a web based application that enables EasyCal users to upload and retrieve certificates and reports online.

Simple Upload/Download: Uploading is incorporated into EasyCal by allowing the user to quickly and directly upload to their WebCert folders via FTP.

Secure User Log In: A security feature that allows users to access private folders with their relevant documentation. Ideal for companies with different sites or locations.

Search and Filter: Users can easily locate required data by using the filter tabs or the straightforward search fields.

Hosted Package: Time Electronics also offer a hosted WebCerts package where data is uploaded and stored on one of our designated WebCert servers. Retrieval and viewing of certificates is via the web based interface.



#### EasyCal Accessories

To complement and further optimise the calibration process Time Electronics offer a range of external options.

Printer and Connectivity Kit: Inkjet printer for calibration certificates and reports. Also includes a 4 port USB hub, numeric key pad and USB memory stick.

Calibration and ID Label Printer: For printing labels to be placed on calibrated units. EasyCal has different layouts for required information to be shown.

Job and Address Label Printer: For printing information that accompanies a unit under test through the calibration process. Also for user tagging instruments.

Bar Code Reader: Enables fast identification of devices in the precalibration stage.

EasyCal to PC Communication Options: Interface cables and adaptors providing PC connectivity to Time Electronics calibrators or external instruments.



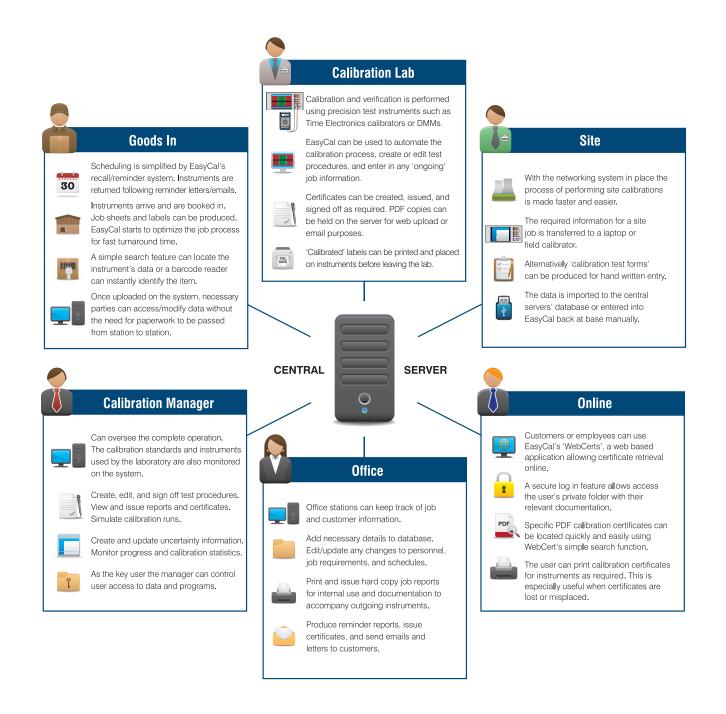
# **Networking with EasyCal**

For multi-user systems EasyCal can be implemented as the universal software for administration, management, and control. With designated features for use in different workstations, EasyCal can provide a solution to calibration businesses with customers as well calibration departments within industrial plants.

Data can be shared and accessed on a central server, creating an organised and efficient networking set-up. EasyCal's pre-calibration features enable automated scheduling and also speed up the booking in process with quick instrument identification.

Calibration runs can be automated by using a compatible Time Electronics calibrator with EasyCal. Once calibration has been performed the data can be made available on the server to the necessary parties. Hard copy certificates and reports can be issued by authorised staff.

Enhanced security features can be added for increased protection, allowing a master user to control access rights to data and applications. Also available is an online application enabling users to upload and retrieve certificates.



CERTIFICATE OF CALIBRATION			ON	Certificate Number DM10005	
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Owner (	Cal House Unit 34 Lock Driv Sevenoaks Kent	we	Tel: 01732 35555 Fax: Email: mail@t-e.		
Instrument	Туре	Process Calibrator			
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# **CERTIFICATE OF CALIBRATION**

**Certificate Number** DM10005

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Issued By : Time Electronics Date of Issue: 20 May 2019

Test Name	Rqd Value	Actual Value	Allowed Error	% of Spec	Pass/Fail
UPPER DISPLAY					
Voltage Measure					
0V DC 15V DC 20V DC 30V DC	0.000V 15.000V 20.000V 30.000V	0.000V 14.997V 19.997V 29.997V	±0.002V ±0.005V ±0.006V ±0.008V	0% -60% -50% -38%	Pass Pass Pass Pass
mA Measure					
4mA 12mA 24mA	4.000mA 12.000mA 24.000mA	4.000mA 11.999mA 23.994mA	±0.003mA ±0.005mA ±0.007mA	0% -20% -86%	Pass Pass Pass
LOWER DISPLAY					
mV/TC Measure					
0mV DC 45mV DC 90mV DC	0.00mV 45.00mV 90.00mV	0.01mV 45.00mV 89.99mV	±0.02mV ±0.03mV ±0.04mV	50% 0% -25%	Pass Pass Pass
Voltage Measure					
0V DC 10V DC 20V DC	0.000V 10.000V 20.000V	0.000V 9.999V 19.998V	±0.002V ±0.004V ±0.006V	0% -25% -33%	Pass Pass Pass
Freqency Measure					
10kHz	10.00kHz	10.00kHz	±0.02kHz	0%	Pass
mA Measure					
4mA 12mA 24mA	4.000mA 12.000mA 24.000mA	4.000mA 12.000mA 23.997mA	±0.003mA ±0.005mA ±0.007mA	0% 0% -43%	Pass Pass Pass
Thermocouple Meas	sure				
CJC Value 0°C	25.00°C 0.00°C	23.40°C -0.20°C	±5°C ±0.7°C	-32% -29%	Pass Pass
Resistance 4 Wire N	leasure				
15Ω 350Ω 500Ω 1500Ω 3200Ω	15.00Ω 350.00Ω 500.0Ω 1500.0Ω 3200.0Ω	15.00Ω 349.90Ω 500.0Ω 1499.8Ω 3198.7Ω	±0.1Ω ±0.1Ω ±0.5Ω ±0.5Ω ±1Ω	0% -100% 0% -40% -130%	Pass Marginal Pass Pass Fail
Resistance/RTD 3 W	/ire Measure				
350Ω	350.00Ω	350.02Ω	±0.1Ω	20%	Pass

Cert.rpt v8.1

This certificate has been produced by EasyCal Calibration Software from Time Electronics Ltd

# **CERTIFICATE OF CALIBRATION**

**Certificate Number** DM10005

Page 3 of 3

Issued By: Time Electronics Date of Issue: 20 May 2019

Test Name	Rqd Value	Actual Value	Allowed Error	% of Spec	Pass/Fai
Voltage Source					
0V	0.0000V	0.0000V	±0.002V	1%	Pass
5V	5.0000V	5.0001V	±0.003V	5%	Pass
10V	10.0000V	10.0005V	±0.004V	12%	Pass
mV Source					
0mV	0.000mV	0.002mV	±0.02mV	10%	Pass
45mV	45.000mV	44.996mV	±0.03mV	-14%	Pass
100mV	100.000mV	99.997mV	±0.04mV	-8%	Pass
Frequency Source					
10kHz	10.0000kHz	10.0000kHz	±0.025kHz	0%	Pass
mA Source					
4mA	4.0000mA	4.0004mA	±0.0028mA	13%	Pass
12mA	12.0000mA	11.9996mA	±0.0044mA	-9%	Pass
24mA	24.0000mA	23.9989mA	±0.0068mA	-16%	Pass
Ohms Source					
15Ω	15.0Ω	15.0Ω	±0.1Ω	15%	Pass
360Ω	360.0Ω	360.0Ω	±0.1Ω	23%	Pass
500Ω	500.0Ω	500.2Ω	±0.5Ω	30%	Pass
Thermocouple Source					
Cold Junction Value	-25.00°C	-23.83°C	±5°C	-23%	Pass
0°C	0.00°C	0.12°C	±0.7°C	17%	Pass
180°C	180.00°C	180.19°C	±0.7°C	28%	Pass
-180°C	-180.00°C	-179.46°C	±0.7°C	-77%	Pass

Comments

Cert.rpt v8.1

This certificate has been produced by EasyCal Calibration Software from Time Electronics Ltd



# **CALIBRATION REPORT**

Page 1 of 1

Issued By: Laboratory

Certificate Number: 10060

#### **Device Information**

Device TAG / ID: TMP\_TX
Type: Temperature Transmitter
Model: Example 0-150°C 4-20mA
Serial Number: 09091789
Location:AREA 996

#### Procedure Information

Procedure:TMP-TX Input Range:0.00 to 150.00°C Output Range:4.00 to 20.00mA Reject Error >:0.50% of Range

#### **Calibration Information**

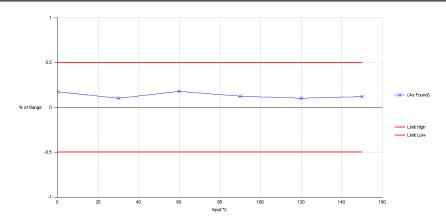
Calibration Date : 08 May 2019 Due Date: 06 May 2020 (52wks) Temperature: 22.0°C Relative Humidity: 50%

#### Comments:

Cambrator information						
Description	Serial No.	Cert No.	Cal Date	Cal Due		
5051+ (DMM mode)	1039C11	0313989	12 Apr 2018	10 Apr 2019		
Temperature Standard	EX10888	0455423	12 Apr 2019	09 Apr 2020		

# Results:

	Input	Nominal Output	Actual Output	Allowed Error	% of Range		
Test Point	Temperature				Pas	ss/Fail	
0%	0.00°C	4.00mA	4.03mA	±0.1mA	0.1725% Pa	ISS	
20%	30.00°C	7.20mA	7.22mA	±0.1mA	0.1035% Pa	iss	
40%	60.00°C	10.40mA	10.44mA	±0.1mA	0.1800% Pa	iss	
60%	90.00°C	13.60mA	13.62mA	±0.1mA	0.1242% Pa	ISS	
80%	120.00°C	16.80mA	16.82mA	±0.1mA	0.1031% Pa	ISS	
100%	150.00°C	20.00mA	20.02mA	±0.1mA	0.1205% Pa	iss	
End Of Results							



#### Comments:

Calibrated by: Op 1 Aprroved By:Sig 3 Signed:

Aprroved Date:16-May-2019

DeviceCert.rpt v1.5

This certificate has been produced by EasyCal Calibration Software from Time Electronics Ltd





# Job No. EC2/131107

Ident: EC2

Status: WAITING INFO

Date Recieved: 13-Nov-07

Type: Multimeter

Model: 87

Ser No.: 12345

Service Ra'd: RE-CALIBRATION

MARTIN ANDREWS

Cal Systems Ltd

Returned with

Packing

Battery





ID: 2599 Serial: 77460532



# DO NOT REMOVE

# Laboratory



Cert No. : 10001

Serial No. : 52775/8V

Cal Due : 10/June/2010

CALIBRATED 11/June/2009

ID: TE401

S/N: 52//5/8V



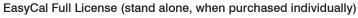
DO NOT REMOVE

# **Primary licenses**









Full CalStation and Work Station license with 1 year support.

Order Code: ECFL







#### EasyCal Full License (when purchased with compatible calibrator/DMM)

Discounted Full CalStation and Work Station license with 1 year support.

Order Code: ECFLA

# Extra user license options







# EasyCal Additional Full License (secondary user)

Discounted Full Licence for additional users.

Order Code: EC2FL





#### Additional EasyCal Work Station License

Allows Job Management, Cal Due Instrument Attachments / Cert History, Batch Instrument Edit and

 $\label{thm:condition} \mbox{Procedure Wizards. Suitable for users not requiring CalRun (ie front office)}.$ 

Order Code: EC2WL

# Add-ons



x5

#### EasyAdmin - 5 Users

Security add-on that enables setting of user rights, access levels, and more.

For installations of 5 users or less. Order Code: EAD5



x10

# EasyAdmin - 10 Users

Security add-on that enables setting of user rights, access levels, and more.

For installations of 10 users or less. Order Code:  $\ensuremath{\textbf{EAD10}}$ 



x10 +

#### EasyAdmin - 10+ Users

Security add-on that enables setting of user rights, access levels, and more.

For installations of over 10 users. Order Code: EAD10+







Online application enabling upload and retrieval of certificates and reports

Order Code: EWC







# WebCerts - Hosted by Time Electronics

Online application enabling upload and retrieval of certificates and reports.

Order Code: EWCTE

# Hardware options, additional software and support packages

9777	Bar Code Reader
9778	Cal and ID Label Printer
9779	Job and Address Label Printer
9743	PCI to GPIB Interface card
9794	USB to GPIB Interface Adaptor
9597	GPIB Cable
9588	RS-232 Cable
9765	RS-232 to USB Interface Adaptor
CREP	Crystal Reports Sofware: Edit and format certificate styles
ESP1	EasyCal Support Package 1: 1 year email & telephone support. Minor Upgrades
ESP2	EasyCal Support Package 2: 2 year email & telephone support. Minor Upgrades
FOT1	EasyCal Online Training (Via Remote Desktop)





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