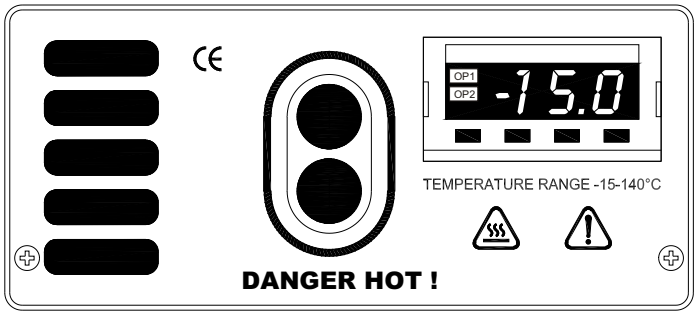
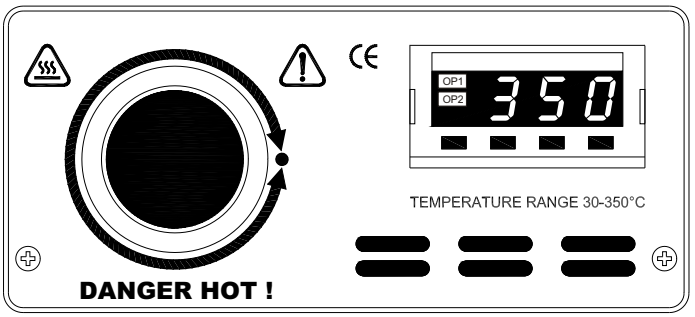
Quick-CAL Range



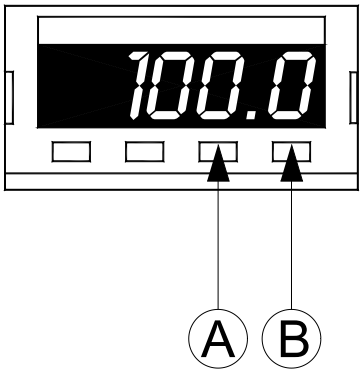


The Quick-Cal range are designed to be fast, simple to use and above all truly portable. Ideal for the simple testing of temperature sensors.

OPERATION

Altering the Block Temperature, (Setpoint)

1. Switch the unit on. The power switch is located on the rear panel.
2. The controller will briefly show its software version before displaying an indication of the block temperature.



A 'DOWN' Key

B 'UP' Key

3. Momentarily press either the UP or DOWN key once to display the setpoint (desired temperature).
4. To alter the value press and hold the UP key to raise the value or the DOWN key to lower the value.
5. The display will return to show the nominal block temperature when no key is pressed for 0.5 second.

Altering the Ramp Rate

The ramp rate or set point rate limit provides a means of limiting the rate at which the temperature of the heat source will increase or decrease.

Normally it is desirable to allow the unit to heat and cool at the maximum rate possible, which is achieved by setting the ramp rate to OFF. This is the Factory set default value.

For some applications, e.g. testing temperature cut out switches it can be useful to be able to program the temperature ramp rate.

To alter the ramp rate:

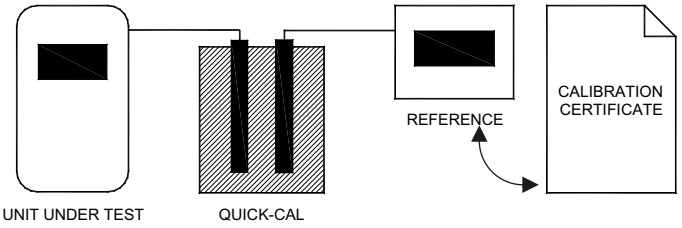
1) Press the SCROLL key until Sprr is displayed.
2) The parameter can be changed from OFF to the desired value with the UP and DOWN keys.
3) Press the SCROLL key to return to the normal display.

The units are °C per minute.

The other controller functions are hidden from the operator. The values are pre-set and should not be changed.

Getting Better Accuracy

For accurate calibration of sensors it is good practice to include a calibrated reference probe in the block, then the units under test are compared to this reference probe.



Safe Use

Do not use in wet or damp environments.

Care should be taken to avoid handling the calibration area when hot - Risk of Burns - Keep flammable items away.

Cool before placing in carry case.

No liquids should be used.

Read this instruction leaflet before use.

No user Serviceable parts, do not dismantle.

Not for use in Hazardous Areas.

Disconnecting device: The Quick-Cal can be isolated by removing the power cable.

Cautionary Note

Failure to follow these instructions could result in fatal injury or cause damage to the product.

Isotech products are intended for use by technically trained and competent personnel familiar with good measurement practices.

It is expected that personnel using this equipment will be competent with the management of apparatus which may be powered or under extremes of temperature, and are able to appreciate the hazards which may be associated with, and the precautions to be taken with, such equipment.

Unpacking and Initial Inspection

Our packing department uses custom designed packaging to send out your unit, after unpacking the unit, to inspect it for any sign of shipping damage, and confirm that your delivery is in accordance with the packing note. If you find any damage or that part of the delivery is missing please notify us or our agent, and the carrier immediately. If the unit is damaged you should keep the packaging for possible insurance assessment.

Electrical Supply

Before connecting to the electricity supply please familiarize yourself with the parts of this handbook relevant to your model.

Your unit's supply voltage requirement is specified on a plate on the instrument along with the serial number. All instruments will work on an electricity supply frequency of 50Hz or 60Hz.

The Quick-Cal low is powered from a 15V D.C. Switch Mode power supply, or a 12V, 7Ah Battery.

Read ALL Handbooks supplied with Electrical Accessories before use.

Trouble Shooting

Quick-Cal Low will not reach -15°C . . .

Check ambient temperature - Quick-Cal Low is rated for -15°C in an ambient of 20°C.

Quick-Cal High will not control at 30°C . . .

Check ambient temperature - Quick-Cal High is rated for use at 30°C in an ambient of 20°C.

Quick-Cal does not power up . . .

Check the switch position

Check the power supply

Check the connecting lead

Check fuse - the Quick-Cal high has a fuse in each supply line. Fuses are accessed by removing the front cover of the power entry module and locate in the removable red draw.

The temperature controller includes diagnostic alarms that warn if an internal error occurs in the controller.

Alarm	What It Means	What to Do
S.br	Internal Sensor Fail	Return for Repair
Err1	Internal ROM Self Test Failure	Return for Repair
Err2	Internal RAM Self Test Failure	Return for Repair
Err3	Watchdog Failure	Return for Repair
Err4	Keyboard Failure	Switch the Power off and then on without touching any of the controller buttons. If the fault persists return for repair.

Quick-CAL Blackbody

The Quick-CAL Blackbody is ideal for the rapid and portable testing of infra red thermometers. The cavity has dimensions of 25 x 115mm with an end cone. The emissivity is >0.99. The surface coating has an emissivity of 0.98 and the cavity gives an overall emissivity better than 0.99. No insert is used with this model - the cavity is used as the target for the infra red thermometer.

Quick Cal Low Temperature	*Specification* Model	Quick Cal High Temperature
-12°C to +140°C**	**Temperature Range***	+30°C to +350°C
0.1°C over range	**Set Point Resolution**	0.1°C over range
±0.4°C to ±0.1°C using Comparison Techniques	**Accuracy**	±0.4°C to ±0.1°C using Comparison Techniques
±0.05°C	**Stability**	±0.05°C
9 minutes from 0°C to 100°C	**Time to Set Point**	9 minutes from Ambient to 350°C
Typically 5 minutes	**Additional Time for best stability**	Typically 5 minutes
2 x 13mm diameter by 120mm deep	**Well dimensions**	1 x 25 mm diameter by 120mm deep
12V DC or 100V - 240V 50/60Hz	**Power**	100-130V or 200-250V AC 50/60Hz
5A Anti-surge (T) 5 x 20mm	**Fuse Rating**	1.6A Quick Acting (F) 5 x 20mm
65 x 152 x 175mm	**Size**	65 x 152 x 175mm
1.5 kg (3.3lbs)	**Weight**	1.5 kg (3.3lbs)
Traceable Certification included NAMAS Certification available	**Certification**	Traceable Certification included NAMAS Certification available

* In an ambient of 20°C.
The Quick Cal Low's minimum operating temperature is ambient dependant.
** Upper Temperature range is decreased when powered by a 12V D.C. Battery.

The apparatus Quick-Cal High and Quick-Cal Low's optional power supply are provided with an approved power cord. If the plug is not suitable for your location then the plug should be removed and replaced with an appropriate plug.

Take care to ensure the old plug is disposed safely. The cable is colour coded as follows:

COLOUR	FUNCTION
Green / Yellow	Earth (Ground)
Brown	Live (Line)
Blue	Neutral

Please ensure that your unit is correctly connected to the electricity supply.

THE APPARATUS MUST BE CORRECTLY EARTHED (GROUNDED).

The units on/off switch is located on the rear panel. Take care NOT to switch the unit off when it is hot - allow to cool first.

Accessories

Item	High	Low
Carry Case	931-22-52	931-22-52
Power Supply	n/a	935-42-20
Battery & Charger	n/a	935-42-14
Inserts		
Blank Inserts	550-02-04A	560-02-08
Custom Drilled	Consult Factory	Consult Factory

The company is always willing to give technical advice and assistance where appropriate. Equally, because of the programme of continual development and improvement we reserve the right to amend or alter characteristics and design without prior notice. This publication is for information only.

CE

EMC INFORMATION

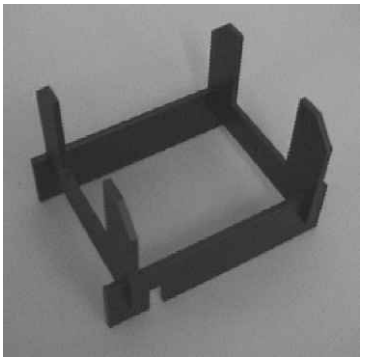
This product meets the requirements of the European Directive on Electromagnetic Compatibility (EMC) 89/336/EEC as amended by EC Directive 92/31/EEC and the European Low Voltage Directive 73/25/EEC, amended by 93/68/EEC.

The product meets the susceptibility requirements of EN 50082-1, criterion B.

System Identification	Publication	Description
	ISO3864	Caution (Refer to this leaflet)
	IEC 417	Caution Hot Surface

The Quick Cal may be operated in any orientation or as a handheld device. For convenience a stand is provided to allow for vertical operation.

The photo on the right shows the correct position of the Quick-Cal stand.



The photo on the right shows the correct assembly of the Quick-Cal stand.

Please note : The above stand is for the high temperature Quick-Cal only. The stand for the low temperature Quick-Cal includes an additional upright as the unit does not require a power entry cable.

Electrical Safety

This equipment must be correctly earthed.

This equipment is a Class 1 Appliance. A protective earth is used to ensure the conductive parts can not become live in the event of a failure of the insulation.

The protective conductor of the flexible mains cable which is coloured green / yellow MUST be connected to a suitable earth.

The Blue conductor should be connected to Neutral and the Brown conductor to Live (Line).

Warning: Internal Mains Voltage Hazard.

Do not remove the panels.

There are no user serviceable parts inside. Contact your nearest Isotech agent for repair.

Voltage transients on the supply must not exceed 2.5kV.

Conductive pollution, eg Carbon dust, must be excluded from the apparatus. EN61010 pollution degree 2.

Environmental Ratings

Operating Temperature	5 - 35°C
Relative Humidity	5 - 95%, non condensing

GUARANTEE

This instrument has been manufactured to exacting standards and is guaranteed for twelve months against electrical break-down or mechanical failure caused through defective material or workmanship, provided the failure is not the result of misuse. In the event of failure covered by this guarantee, the instrument must be returned, carriage paid, to the supplier for examination and will be replaced or repaired at our option.

FRAGILE CERAMIC AND/OR GLASS PARTS ARE NOT COVERED BY THIS GUARANTEE.

INTERFERENCE WITH, OR FAILURE TO PROPERLY MAINTAIN THIS INSTRUMENT MAY INVALIDATE THIS GUARANTEE.

RECOMMENDATION

The life of your **ISOTECH** Instrument will be prolonged if it is kept clean and free from general dust and debris.

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