

OPERATION MANUAL

THE JENCO MODEL 7000H SERIES

JENCO ELECTRONICS, LTD.

MANUFACTURER OF PRECISION INSTRUMENTS

GENERAL INTRODUCTION

The model 7000H series is a high performance, precision hand-held instrument for the measurement of temperature, using the type K, J, T, N, R, S thermocouples, Pt-100 RTD and the YSI 400 series thermistor probes.

The versatile micro-computer based model 7000H series measures temperature both in and . The internal memory of the micro-computer stores the minimum and maximum measured temperature for instant recall via the LCD display. Another feature of the 7000H series is that it is able to accept two temperature sensors to display the temperature of sensor 1, sensor 2 as well as the differential temperature of the two sensors over the entire temperature measurement range.

The model 7000H series operates on a single 9 volt battery. An AC adaptor is provided for 115VAC, 230VAC AC line operations.

INITIAL INSPECTION

Carefully unpack the instrument and accessories. Inspect for damage in shipment. If any damage is found, NOTIFY YOUR JENCO REPRESENTATIVE IMMEDIATELY. All packing material should be saved until satisfactory operation is confirmed.

TEMPERATURE RANGES FOR THE MODELS 7000H SERIES

MODEL	RANGE	RESOLUTION	T/C TYPE
7000KBH	-222 to 1372	1	K
	-341 to 2500	1	
7000KH	-50 to 650.0	0.1	K
	-58 to 999.9	0.2	
7000JH	-50 to 640.0	0.1	J
	-58 to 999.9	0.2	
7000TH	-90 to 400.0	0.1	T
	-130 to 752.0	0.2	
7000NH	-194 to 1300	1	N
	-318 to 2372	1	
7000RH	0 to 1768	1	R
	32 to 3214	1	
7000SH	0 to 1768	1	S
	32 to 3214	1	
MODEL	RANGE	RESOLUTION	SENSOR
7000PTH	-150 to 540.0	0.1	PT-100
	-238 to 999.9	0.2	
7000THH	-40 to 110.0	0.1	THERMISTOR
	-40 to 230.0	0.2	

ACCURACY

Accuracy is specified for operating ambient temperature of 23 °C ± 5 °C.

THERMOCOUPLE MODELS

7000KBH	± 0.05% reading	± 1.0	or 1.8
7000KH	± 0.05% reading	± 0.7	or 1.3
7000JH	± 0.05% reading	± 0.7	or 1.3
7000TH	± 0.05% reading	± 0.7	or 1.3
7000NH	± 0.05% reading	± 1.0	or 1.8
7000RH	± 0.05% reading	± 2.0	or 3.6
7000SH	± 0.05% reading	± 2.0	or 3.6

RTD MODELS

7000PTH	± 0.05% reading	± 0.4	or 0.8
7000THH	± 0.05% reading	± 0.3	or 0.6

COLD JUNCTION ERROR FOR THERMOCOUPLE MODELS

For operating ambient temperature from 0 °C to +18 °C and +28 °C to +50 °C, add an additional error of ± 0.03 °C / °F or 0.03 °C / °F to the accuracy specifications.

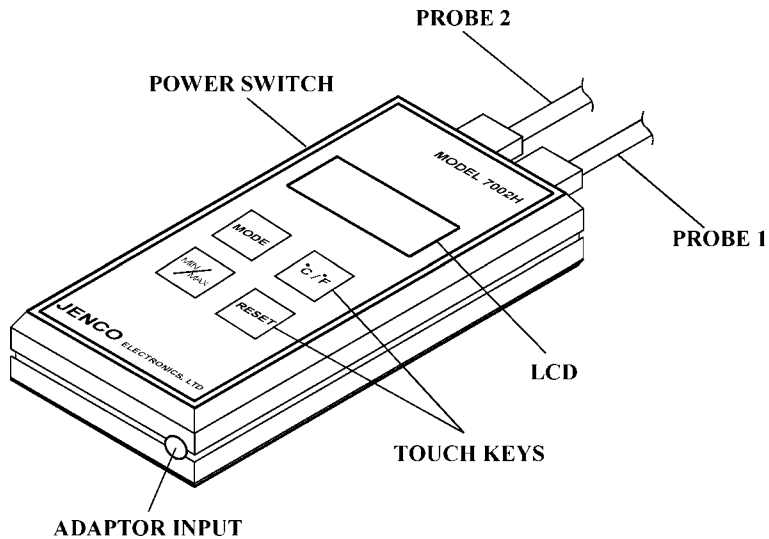


FIGURE 1

TOUCH KEYS FOR THE MODEL 7000H SERIES

(REFER TO FIGURE 1)

1. The C/F key select the readout for °C or °F.
2. The readout will alternately display the maximum and minimum values when the MIN/MAX is pressed. (Models 7001H and 7002H only)
3. The RESET key clears the minimum and maximum values stored in the memory of the micro-computer. (Models 7001H and 7002H only)
4. The MODE key selects the readout to display the temperature of P1, P2 and the differential temperature. (Model 7002H only)

JENCO models

7000H : C/F key only

7001H : C/F, MIN/MAX and RESET keys

7002H : C/F, MIN/MAX, RESET and MODE keys

ERROR CODE FOR THE MODEL 7000H SERIES

Error messages will appear in the LCD window whenever an error condition occurs.

1. HELP : Open sensor indication
2. E---- : Over range indication
3. -E--- : Under range indication

ISOLATION VOLTAGE FOR THE MODEL 7002H

The model 7002H is for dual probe operations. The common mode voltage between the two sensors is ≤ 2.5 volts, ie, the 7002H will not register any measurement errors as long as the input voltage differential between the two sensors is within ≤ 2.5 volts.

For common mode voltage greater than ≤ 2.5 volts, one or both sensors must be of the ungrounded type in order to avoid measurement errors.

OPERATION PROCEDURE

1. Connect the appropriate probe or probes to the model 7000H series.
2. Press the C/F key for $^{\circ}$ C or $^{\circ}$ F readout. The legend on the LCD display will indicate or
3. Press the MODE key for the meter to display the temperature of P1, P2 or both. The legend on the LCD will indicate P1, P2 and Δ T. (Model 7002H only)
4. Press the RESET key to clear the internal memory of the micro-computer. (Models 700H and 7002H only)
5. Press and hold the MIN/MAX key. The display will alternate between the minimum and maximum reading from the time after the instrument is RESET. The legend on the LCD will indicate MIN and MAX with the readings.
6. When only one probe is used with the model 7002H, always connect the probe to the P1 connector.
7. Turn off the instrument with the ON-OFF switch when not in use. Removing power from the AC adaptor does not turn off the instrument as the internal battery will be switched on automatically.

WARRANTY

Jenco Instruments, Ltd. Warrants this product to be free from significant deviations in material and workmanship for a period of 1 year from date of purchase. If repair or adjustment is necessary and has not been the result of abuse or misuse, within the year period, please return-freight-prepaid and the correction of the defect will be made without charge. If you purchased the item from our Jenco distributors and it is under warranty, please contact them to notify us of the situation. Jenco Service Department alone will determine if the product problem is due to deviations or customer misuse.

Out-of-warranty products will be repaired on a charge basis.

RETURN OF ITEMS

Authorization must be obtained from one of our representatives before returning items for any reason. When applying for authorization, please have the model and serial number handy, including data regarding the reason for return. For your protection, items must be carefully packed to prevent damage in shipment and insured against possible damage or loss. Jenco will not be responsible for damage resulting from careless or insufficient packing. A fee will be charged on all unauthorized returns.

NOTE: Jenco Instruments, Inc reserves the right to make improvements in design, construction, and appearance of our products without notice.

JENCO INSTRUMENTS, INC.

7968 Arjons Drive, Suite C
San Diego, CA 92126 USA
TEL: 858-578-2828 FAX: 858-578-2886
E-MAIL: jencoi@ix.netcom.com

JENCO ELECTRONICS, LTD.

PO. BOX LINKOU 117
TAIPEI, TAIWAN
TEL: 02 601-6191 FAX: 02 601-7206
E-MAIL: jencoe@ms2.hinet.net

SHANGHAI JENCO ELECTRONICS, LTD.

18 Wang Dong Zhong Road Sijing Town, Songjiang
SHANGHAI, CHINA
TEL: (86-021)5761-9599 FAX: (86-021)5761-9598
E-MAIL: jenco@public.sta.net.cn
Homepage: <http://www.jenco.com.cn>