



## Multifunctional Temperature Calibrator T-650PH

- Generates temperatures from ambient to 650 °C.
- Dry Block and Black Body Inserts.
- Horizontal mounting, facilitates infrared thermometer calibration.

Technical Specification		T-650PH
<b>Operating Range</b> ambient temperature: 23°C		from ambient to 650 °C
<b>Accuracy</b>	Internal reference	± (0.1 °C + 0.1% of reading)
	with external thermometer	± 0.05 °C
<b>Resolution:</b>		± 0.01 °C
<b>Stability:</b>		± 0.05 °C
<b>Heating Time:</b>		20 min (50 °C to 650 °C)
<b>Cooling Time:</b>		21 min (650 °C to 200 °C)
<b>Temperature Uniformity:</b>		± 0.05 °C

<b>Weight:</b>	9.2 kg
<b>Power Supply:</b>	110 or 220 Vac, 50/60Hz
<b>Electric Power:</b>	1000 W
<b>Units / Temperature Scales:</b>	°C or °F / IPTS-68 or ITS-90, user selectable
<b>Display:</b>	Graphic vacuum fluorescent with contrast adjustment
<b>Well Diameter / Depth:</b>	Ø 32 mm x 125 mm
<b>Dimensions: (HxWxD)</b>	215 x 390 x 310 mm
<b>Warranty:</b>	1 year, except for rechargeable battery

### Electrical Input Specifications

Input Ranges	Resolution	Accuracy
<b>millivolt</b>	-150 to 150 mV	0.001 mV
	-500 to -150 mV	0.01 mV
	150 to 2450 mV	0.01 mV
<b>mA</b>	-5 to 24.5 mA	0.0001 mA
<b>resistance</b>	0 to 400 Ω	0.01 Ω
	400 to 2500 Ω	0.01 Ω
<b>Pt-100</b>	-200 to 850 °C	0.01 °C
<b>Pt-1000</b>	-200 to 400 °C	0.1 °C
<b>Cu-10</b>	-200 to 260 °C	0.1 °C
<b>Ni-100</b>	-60 to 250 °C	0.1 °C
<b>TC-J</b>	-210 to 1200 °C	0.1 °C

Input Ranges	Resolution	Accuracy
<b>TC-K</b>	-270 to -150 °C	0.1 °C
	-150 to 1370 °C	0.1 °C
<b>TC-T</b>	-260 to -200 °C	0.1 °C
	-200 to -75 °C	0.1 °C
	-75 to 400 °C	0.1 °C
<b>TC-E</b>	-270 to -150 °C	0.1 °C
	-150 to 1000 °C	0.1 °C
<b>TC-N</b>	-260 to -200 °C	0.1 °C
	-200 to -20 °C	0.1 °C
	-20 to 1300 °C	0.1 °C
<b>TC-L</b>	-200 to 900 °C	0.1 °C

Accuracy values are valid within one year and temperature range from 20 to 26 °C. Outside these limits add 0.001 % FS / °C, taking 23 °C as the reference temperature. For thermocouples with internal cold junction compensation, add a cold junction compensation error of ± 0.2 °C or ± 0.4 °F.

### Order Code

T-650PH - [ ] - IN [ ] [ ] - [ ] [ ]

#### Power Supply

1 - 110 Vac - 2 - 220 Vac

#### Included Insert

Choose between the inserts listed below. Unless specified, the accompanying insert is IN06.

#### Black Body Insert

BB - Black Body Insert

#### Accessories:

Inserts:	Holes
IN01	1x 3/4"
IN02	1x 1/2"
IN03	1x 6.0 mm and 3x 1/4"
IN04	3x 6.0 mm and 1x 1/4"
IN05	4x 6.0 mm
IN06	2x 6.0 mm and 2x 1/4"
IN07	1x 6.0 mm, 1x 8.0 mm and 1x 3/8"
IN08	1x 6.0 mm, 1x 3.0 mm and 2x 1/4"
IN09	Without hole, to be drilled by the client
IN10	Others, under ordering

#### Order Code

T-650PH
06.04.0096-00
06.04.0097-00
06.04.0098-00
06.04.0099-00
06.04.0100-00
06.04.0101-00
06.04.0102-00
06.04.0103-00
06.04.0104-00
06.04.0105-00

**Serial Communication:** Modbus® RTU Protocol (RS-232/ RS-485).

**Included Items:** carrying case, straps, insert (selectable), insert extractor tool, test leads, manual and power cord.

#### Optional Accessories:

Black Body Insert - Order Code: 06.09.0031-00.  
Type «N» Thermocouple for black body- Order Code: 01.22.0062-21.  
Communication Interface - Order Code: 06.02.0002-00.