

Introducing the

DBC-A series

Advanced Dry Block Temperature Calibrators



DBC-A series portable Dry Block Temperature Calibrator (Dry Well Furnace/ Bath) is a portable temperature source made of solid heat conduction and temperature uniformity of solid metal blocks. This equipment has advanced temperature control technology and multiple safety elements.

The protective measures are characterized by small size, light weight, fast temperature rise and fall, etc., which are very suitable for industrial field and laboratory use.

Key Features

- Various types of insertion tubes can meet the test and calibration of sensors of different sizes and quantities. It can also be customised according to user requirements
- Excellent horizontal and vertical temperature fields
- Industry leading deep insertions degrees
- 5.7-inch TFT colour LCD display, full touch operation, using intuitive and eye-catching display
- Multi-language interface
- Quick cooling, convenient setting, good stability of temperature control
- The soaking block can be replaced
- Protective functions such as short circuit with load, load circuit breaking, sensor protection, etc.
- Small sized, light-weight, easy to carry

www.gpslimited.com/DBCAseries
For all enquiries, Tel: +44 (0) 203 093 0914
Email: info@gpslimited.com

TEMPERATURE CALIBRATOR

Technical Specifications

Model Name	Low Temperature			Medium Temperature	High Temperature	
	DBC-A150A	DBC-A150B	DBC-A150C	DBC-A650	DBC-A1200A	DBC-A1200B
Temperature Range	-20°C to 150°C	-30°C to 150°C	-45°C to 150°C	50°C to 650°C	300°C to 1200°C	100°C to 1210°C
Heating Speed/Cooling Speed	30~100:20min 30~150:40min			30~300:7min 30~400:12min 30~650:25min	30~1200:75min	
Display Accuracy	≤±0.1°C			≤400°C : ≤±0.35°C 400-650°C : ≤±0.5°C	≤±1.2°C	
Inserted depth	160mm			150mm	135mm	
Diameter of Heating Block	36mm		32mm	32mm	39mm	
Temperature Stability	≤±0.02°C			≤±0.05°C	≤±0.2°C	
Horizontal Temp Field	≤±0.05°C			≤±0.05°C	≤±0.25°C	
Vertical Horizontal Field	Less than 1 °C within 30mm from bottom of soaking block					
Temp Unit	°C or °F					
Temp Control Precision	0.10%					
Resolution Rate	0.1°C / 0.01°C / 0.001°C					
Communication port	USB Device, USB Host					

Further Specifications

	DBC-A150A/B/C	DBC-A650	DBC-A1200A/B
Channels and Signal types	5 electric measurement channels, 2 standard channels (standard RTD*1, standard thermocouple*1), 3 multifunctional measurement channels		6 electric measurement channels, 2 standard channels (standard RTD*1, standard thermocouple*1), 2 multifunctional measurement channels, 2 detected thermocouple + current measurement
Multifunctional measurement channel functions	mA/mV/V/Ω [2,3,4 wires] measurement, DC24V output, HART transmitter (*), switch measurement, etc		mA/mV/V/Ω [2, 3, 4 wires] RTD/ TC measurement, DC24V output, HART transmitter (*), switch measurement, etc
Standard TC channel parameters	TC types: S, R, B Measurement range: -18~18mV, temp measurement accuracy: ± [0.005%rdg + 2uV] temp coefficient: 5PPM.FS/°C		

Further Specifications (cont.)

Standard RTD channel parameters	Measurement types: 4-wires RTD constant current commutator true ohm measurement; RTD types: ITS-90, CVD, IEC-751; Resistance measurement range: (0~400 Ω) Accuracy: ±0.002 Ω @ (0~50 Ω), ±40ppm reading @ (50~400 Ω); resolution rate : 1m Ω; temperature coefficient: ±1ppmreading/°C (0~8°C or 38~50°C)
Built-in cold junction index	Measurement range : 0~50°C, accuracy : ±0.2°C, sensor type : PT100
Detected channel mV/TC index	TC type : MINI-TC interface, S/R/K/B/N/E/J/T/C/D/G/L/U (total 13 types) signal range: [-75~75]; mV; accuracy: ± [0.01%rdg + 8uV]; resolution rate: 1 V temperature coefficient: ±5ppm reading/°C (0°C~8°C or 38°C~50°C) Cold junction measurement range and accuracy: ±0.35°C @ (0~50) °C
Detected channel Ω /RTD index	Measurement types: 2 wires /3 wires/4 wires RTD constant current commutator true ohm measurement RTD types: PT10, PT25, PT50, PT100, PT200, PT500, PT1000, CU10, CU50, CU100, NI100, NI120, etc; Resistance measurement range: (0~400) Ω, (0~4000) Ω; Accuracy: ±0.002 Ω @ (0~25) Ω, ±80ppm reading @ (25~4000) Ω; 2 wires measurement adds 50 m Ω; measurement resolution rate: 1m Ω (400 Ω), 10m Ω (4000 Ω); temperature coefficient: ±1ppm reading/°C (0~8°C or 38~50°C)
Detected channel mA index	Measurement range: -30~30mA, measurement accuracy: ± [0.01%rdg + 2uA], input impedance: < 10Ω, temperature coefficient: 5ppm.FS/°C
Detected channel V index	Measurement range: -30~30V, -12~12V (auto range), measurement accuracy: ± [0.01%rdg + 0.6mV], input impedance: > 1MΩ, temperature coefficient: 5ppm.FS/°C
Detected channel (other index)	Temperature switch: supports mechanical and electronic switches; temperature transmitter: support current, voltage and HART transmitter [*] Loop power: DC24V±0.5V, max load current 60mA
Working temperature range (to ensure its index)	23±5°C

Power Supply
220VAC±10%, 45~60Hz

Max Power
Low Temp : 300W, Medium Temp : 1200W, High Temp : 3000W

General Specifications

Mass
Net: Low Temp : 13kg, Medium Temp : 11kg, High Temp : 11kg
Gross: Low Temp : 23kg, Medium Temp : 18kg, High Temp : 18kg

Dimension
Low Temp : 310*190*340mm,
Medium Temp/High Temp : 250*150*310mm

Operating
0 ~ 50 °C, relative humidity <95%
(no condensation)

Packing
Packed in an aluminium and carton box

Services
1-year warranty (subject to product registration with GPS Ltd)

Please contact for more information.

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