ValProbe Series Specifications

CTR-40

Temperature Range
-40°C to 150°C

Ambient Operating Range
15°C to 25°

Set-Point Accuracy
0.5°C

Temperature Stability
- ±0.005°C at -40°C
- ±0.005°C at -25°C
- ±0.005°C at -150°C

Temperature Uniformity
±0.01°C

Typical Cool-Down Time
25°C to -40°C, 110 minutes

Access Opening
94 mm x 172 mm with positions for IRTD and up to eight ValProbe data loggers with immersion basket

Display
LED with 0.01°C resolution

Computer Interface
RS232

Off Cart Dimensions (h x w x d)
584 mm x 305 mm x 622 mm

On Cart Dimensions (h x w x d)
819 mm x 305 mm x 622 mm

Volume
9 liters

Recommended Bath Fluids
- -40°C to 130°C, Silicone oil type 200 (five centistoke viscosity)
- -30°C to 150°C, Silicone oil type 200 (10 centistoke viscosity)

Weight
32 kg

Power
115 VAC 60 Hz, 16 A or 230 VAC 50 Hz, 8 A 1700 W

Fault Protection
- Oven temperature limits (user can set)
- Low voltage cutout
- Automatic refrigeration turn off
- Electrical fuse

CTR-80

Temperature Range
-80°C to 100°C

Ambient Operating Range
15°C to 25°

Set-Point Accuracy
0.5°C

Temperature Stability
±0.01°C

Temperature Uniformity
±0.012°C

Typical Cool-Down Time
25°C to -80°C, 20 minutes

Access Opening
86 mm x 114 mm with positions for (two) IRTDs and (three) 11 mm diameter x 203 mm deep calibration wells

Display
LED with 0.01°C resolution

Computer Interface
RS232

Dimensions (h x w x d)
762 mm x 305 mm x 610 mm

Weight
57 kg

Power
115 VAC 60 Hz, 16 A or 230 VAC 50 Hz, 8 A 1700 W

Fault Protection
- Oven temperature limits (user can set)
- Low voltage cutout
- Automatic refrigeration turn off
- Electrical fuse

ValProbe Series Specifications

IRTD-400

Temperature Range
-195°C to 420°C

Accuracy Over Range
0.025°C
Accurate for one year, 0°C to 60°C ambient. Includes calibration certificate with traceability to NIST.

Resolution
0.001°C

Sensor Element
200 Ω platinum RTD sensor

Sheath Material
Inconel 600

Immersion Depth (Minimum)
101.6 mm

Calibration
±0.01°C
Kaye provides a re-certification service for calibrating the temperature standard.

Power Probe
- Unregulated DC, 10 to 25 V
- 850 mW at 15 V for first probe
- 550 mW for each additional probe

Power Supply
115 VAC US-style adaptor or 230 VAC VDE-approved adaptor
Power supply is not required for use with the ValProbe system.

Measurement Rate
One reading per second

Environmental
- Ambient temperature range 0°C to 60°C
- Humidity 0 to 95% non-condensing

Overall Dimension Length
603 mm

Grip
89 mm x 32 mm

Sensor Sheath
457 mm x 6.35 mm

	HTR 400	LTR –25/140	LTR –40/140
Temperature Range	25°C above ambient to 400°C	–25°C to 140°C	–40°C to 140°C
Ambient Operating Range	5°C to 50°C	5°C to 50°C	5°C to 50°C
Set-Point Accuracy	0.2°C to 300°C	0.2°C	0.2°C
	0.3°C to 400°C		
Temperature Stability	0.02°C to 300°C	0.02°C	0.02°C
	0.05°C to 400°C		
Transfer Calibration Accuracy*	50°C to 150°C: ±0.1°C	–25°C to 80°C: ±0.1°C	–40°C to –25°C: ±0.15°C
IRTD Standard to Thermocouples	50°C to 250°C: ±0.2°C	80°C to 130°C: ±0.15°C	–25°C to 80°C: ±0.1°C
	250°C to 350°C: ±0.3°C	130°C to 140°C: ±0.18°C	80°C to 130°C: ±0.15°C
	350°C to 400°C: ±0.4°C		130°C to 140°C: ±0.18°C
Typical Heat-Up Time	Ambient to 90°C: 5 minutes	Ambient to 80°C: 6 minutes	Ambient to 80°C: 6 minutes
	90°C to 125°C: 3 minutes	Ambient to 140°C: 14 minutes	Ambient to 140°C: 14 minutes
	350°C: 25 minutes		
Well Configuration	Reference wells (2): 6.7 mm diameter x 127 mm deep	Reference wells (2): 6.7 mm diameter x 155 mm deep	Reference wells (2): 6.7 mm diameter x 155 mm deep
	Calibration wells (8): 9 mm diameter x 155 mm) deep	Calibration wells (6): 9 mm diameter x 155 mm) deep	Calibration wells (6): 9 mm diameter x 155 mm) deep
Display	LED w/0.01°C resolution	LED w/0.01°C resolution	LED w/0.01°C resolution
Computer Interface	RS232	RS232	RS232
Dimensions	343 mm x 198 mm x 317.5 mm	343 mm x 198 mm x 317.5 mm	343 mm x 198 mm x 317.5 mm
Weight	8.2 kg	13.6 kg	13.6 kg
Power	115 VAC 60 Hz, 6 A or 230 VAC 50 Hz, 3 A 700 watts	115 VAC 60 Hz, 3 A or 230 VAC 50 Hz, 1.5 A 350 watts	115 VAC 60 Hz, 3 A or 230 VAC 50 Hz, 1.5 A 350 watts
Fault Protection	Sensor burnout protection, over temperature thermal cutout, electrical fuse	Sensor burnout protection, over temperature thermal cutout, electrical fuse	Sensor burnout protection, over temperature thermal cutout, electrical fuse

* Transfer calibration accuracy is the difference between the thermocouple tip and the sensor of the IRTD temperature standard. This accuracy includes well to well uniformity.

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