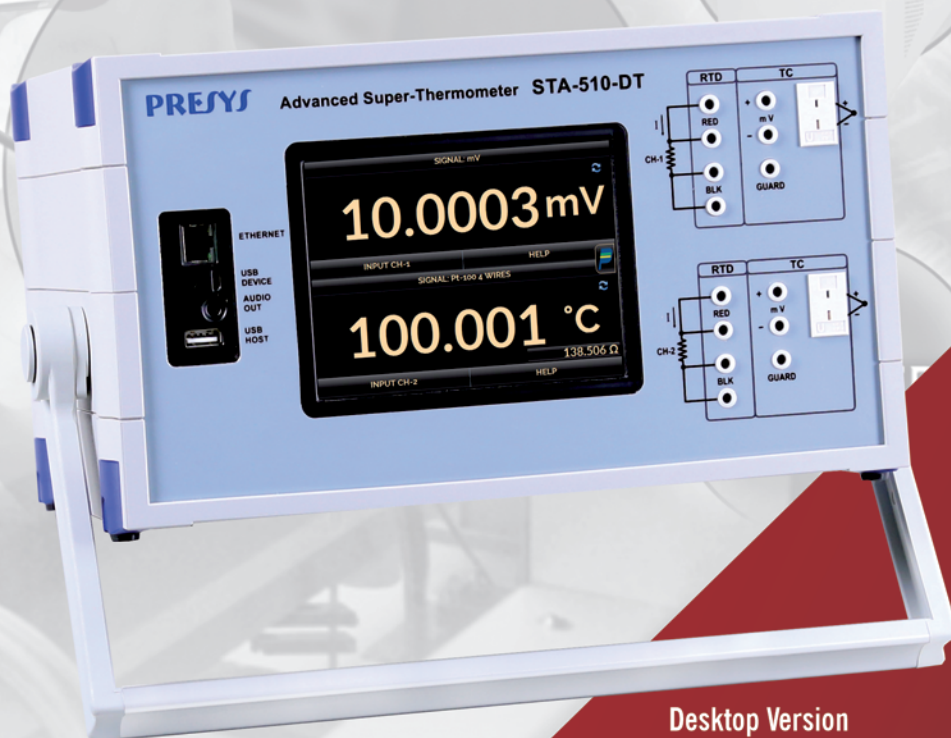


PRESYS®

Dry Block
Temperature
Calibrators

Universal
Process
Calibrators

Automatic
Pressure
Calibrators



Desktop Version

Ready for Metrology 4.0



Rack Mounting Version
For use in 19" rack

Advanced Super-Thermometer STA-510-DT / RM

www.presys.com.br

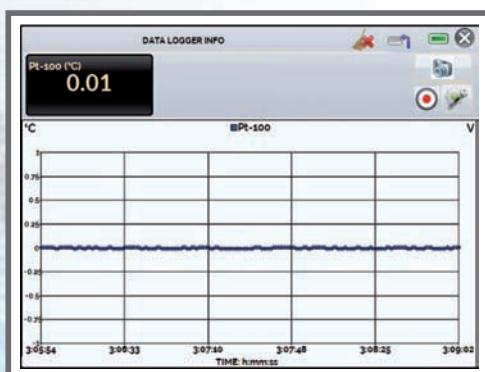
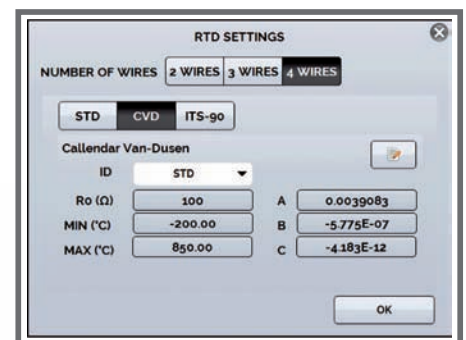
Advanced Super-Thermometer STA-510

- ✓ PRT reference thermometer, resolution of 0.001 °C.
- ✓ Replace precision glass thermometers.
- ✓ Fully electronic, without mechanical parts.
- ✓ Registration of different types of thermometers.



- ✓ Touch Screen display provides easy-to-read data and showing 2 simultaneous variables.
- ✓ Intuitive menu navigation helps in identifying calibrator information for any operational mode.

- ✓ Accepts PRT sensors or standard thermocouples (including TC-Au/Pt).
- ✓ Accepts CVD, IPTS-68 and ITS-90 coefficients.



- ✓ Data Logger function for data acquisition, graphical visualization of the fixed point freezing and melting plateaus shape.
- ✓ Statistical functions (2 Sigma, Mean, Max-Min).
- ✓ Ethernet, Wi-Fi, Pen drive, USB connection Host / Device.

Technical Specifications - STA-510-DT / RM

Specifications - Inputs

Inputs Ranges		Resolution	Accuracy	Remarks
millivolt	0 to 70 mV	0.0001 mV	± 0.005 % FS*	R _{input} > 10 MΩ
resistance	0 to 100 Ω	0.0001 Ω	± 0.001 Ω	Excitation current 1.0 mA
	100 to 500 Ω	0.001 Ω	± 0.004 Ω	
Pt-100	-200 to 850 °C / -328 to 1562 °F	0.001 °C / 0.001 °F	± 0.01 °C / ± 0.02 °F	Excitation current 1.0 mA
Pt-25	-200 to 850 °C / -328 to 1562 °F	0.001 °C / 0.001 °F	± 0.01 °C / ± 0.02 °F	Excitation current 1.0 mA
TC-J	-210 to 1200 °C / -346 to 2192 °F	0.01 °C / 0.01 °F	± 0.10 °C / ± 0.20 °F	IEC-60584
TC-K	-270 to -150 °C / -454 to -238 °F	0.01 °C / 0.01 °F	± 0.25 °C / ± 0.50 °F	IEC-60584
	-150 to 1370 °C / -238 to 2498 °F	0.01 °C / 0.01 °F	± 0.10 °C / ± 0.20 °F	
TC-T	-260 to -200 °C / -436 to -328 °F	0.01 °C / 0.01 °F	± 0.30 °C / ± 0.60 °F	IEC-60584
	-200 to -75 °C / -328 to -103 °F	0.01 °C / 0.01 °F	± 0.20 °C / ± 0.40 °F	
	-75 to 400 °C / -103 to 752 °F	0.01 °C / 0.01 °F	± 0.10 °C / ± 0.20 °F	
TC-B	50 to 250 °C / 122 to 482 °F	0.01 °C / 0.01 °F	± 1.25 °C / ± 2.50 °F	IEC-60584
	250 to 500 °C / 482 to 932 °F	0.01 °C / 0.01 °F	± 0.75 °C / ± 1.50 °F	
	500 to 1200 °C / 932 to 2192 °F	0.01 °C / 0.01 °F	± 0.50 °C / ± 1.00 °F	
	1200 to 1820 °C / 2192 to 3308 °F	0.01 °C / 0.01 °F	± 0.35 °C / ± 0.70 °F	
TC-R	-50 to 300 °C / -58 to 572 °F	0.01 °C / 0.01 °F	± 0.50 °C / ± 1.00 °F	IEC-60584
	300 to 1760 °C / 572 to 3200 °F	0.01 °C / 0.01 °F	± 0.35 °C / ± 0.70 °F	
TC-S	-50 to 300 °C / -58 to 572 °F	0.01 °C / 0.01 °F	± 0.50 °C / ± 1.00 °F	IEC-60584
	300 to 1760 °C / 572 to 3200 °F	0.01 °C / 0.01 °F	± 0.35 °C / ± 0.70 °F	
TC-E	-270 to -150 °C / -454 to -238 °F	0.01 °C / 0.01 °F	± 0.15 °C / ± 0.30 °F	IEC-60584
	-150 to 1000 °C / -238 to 1832 °F	0.01 °C / 0.01 °F	± 0.05 °C / ± 0.10 °F	
TC-N	-260 to -200 °C / -436 to -328 °F	0.01 °C / 0.01 °F	± 0.50 °C / ± 1.00 °F	IEC-60584
	-200 to -20 °C / -328 to -4 °F	0.01 °C / 0.01 °F	± 0.20 °C / ± 0.40 °F	
	-20 to 1300 °C / -4 to 2372 °F	0.01 °C / 0.01 °F	± 0.10 °C / ± 0.20 °F	
TC-L	-200 to 900 °C / -328 to 1652 °F	0.01 °C / 0.01 °F	± 0.10 °C / ± 0.20 °F	DIN-43710
TC-C	0 to 1500 °C / 32 to 2732 °F	0.01 °C / 0.01 °F	± 0.25 °C / ± 0.50 °F	W5Re / W26Re
	1500 to 2320 °C / 2732 to 4208 °F	0.01 °C / 0.01 °F	± 0.35 °C / ± 0.70 °F	

(*) FS = Full Scale.

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 ± 0.1 °C or ± 0.2 °F.

Engineering units: Temperature: °C, °F, K.

Operating ambient: 0 to 50 °C and 90 % maximum relative humidity.

Dimensions: Desktop: 132 mm x 308 mm x 275 mm (HxWxD) / Rack Mounting: 132 mm x 483 mm x 250 mm (HxWxD).

Weight: Desktop: 3.5 kg approx / Rack Mounting: 4.0 kg approx.

Warranty: 1 year.

Included accessories:

- Technical manual;
- Set of test leads.

Order Code

STA-510 -

Mounting Version

DT - Desktop Version (for Workbench use)

RM - Rack Mounting Version (Fixed in a 19" Rack or Workbench)

- 1 - One set of inputs.
2 - Two sets of inputs.

Accessories:

Temperature Sensors

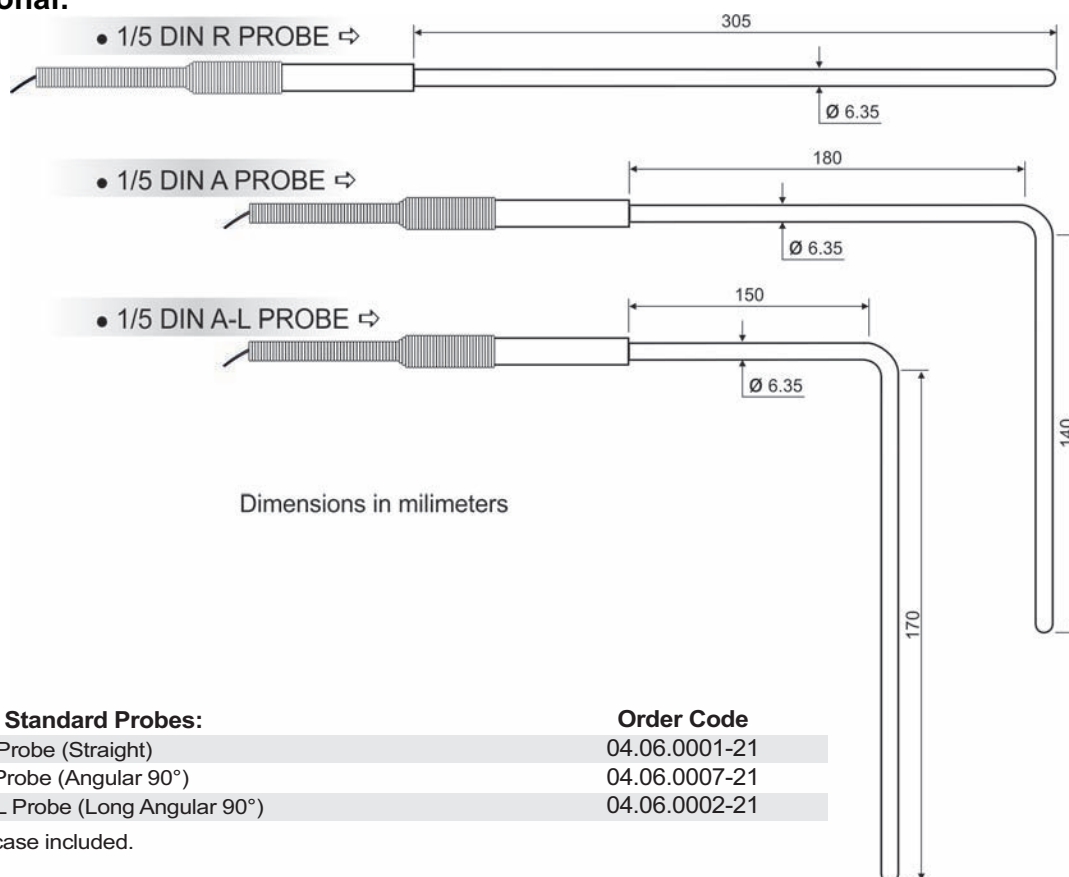
Description	Order Code	Range	Usage Drift	Accuracy	Dimensions
Industrial RTD Pt-100 straight	04.06.0001-21	-200 to 420 °C	0.035 °C	0.030 °C at 420 °C	305 mm x Ø 6.35 mm
Industrial RTD Pt-100 90° bend	04.06.0007-21	-200 to 420 °C	0.035 °C	0.030 °C at 420 °C	140 mm x Ø 6.35 mm
Industrial RTD Pt-100 90° bend	04.06.0002-21	-200 to 420 °C	0.035 °C	0.030 °C at 420 °C	170 mm x Ø 6.35 mm
Secondary Standard RTD Pt-100	04.06.0004-00	-200 to 480 °C	0.01 °C	0.023 °C at 420 °C	12" x Ø1/4"
Secondary Standard RTD Pt-100	04.06.0003-00	-200 to 660 °C	0.03 °C	0.014 °C at 660 °C	15" x Ø1/4"

Due to our program of continual development and improvement, we reserve the right to amend or alter characteristics and design without prior notice.

Industrial Standard Probes

Resistance:	100 Ω @ 0 °C (nominal).	
Temperature Resistance Coefficient:	0.00385 Ω / Ω / °C (nominal).	
Usage Range:	-200 to 420 °C maximum handle temperature of 150 °C.	
Sheath material:	Compacted mineral insulation of high purity sheath in 316 stainless steel.	
Mounting:	4 output wires with 22 AWG nickel plated copper.	
Insulation Resistance:	> 100 M Ω @ 50 Vdc @ 23 °C ambient temperature.	
Long-term drift:	$\pm$ 0.035 °C @ 0 °C after 100 h of continuous use in 420 °C.	
Self-Heating:	50 mW / °C in an ice bath in 0 °C.	
Minimal Immersion:	At least 100 mm.	
Dimensional:	305 mm x $\varnothing$ 6.35 mm (1/5 DIN-R) 140 mm from the edge to the bend x $\varnothing$ 6.35 mm (1/5 DIN-A) 170 mm from the edge to the bend x $\varnothing$ 6.35 mm (1/5 DIN-A-L)	
Typical Accuracy ITS-90 coefficients:	Straight Model $\pm$ 0.030 °C @ -38.0 °C. $\pm$ 0.020 °C @ 0.0 °C. $\pm$ 0.020 °C @ 232.0 °C. $\pm$ 0.030 °C @ 420.0 °C.	Angular Models $\pm$ 0.030 °C @ -30.0 °C. $\pm$ 0.020 °C @ 0.0 °C. $\pm$ 0.020 °C @ 180.0 °C.
1/5 DIN Accuracy:	$\pm$ 0.02 °C @ -38.0 °C. $\pm$ 0.06 °C @ 0.0 °C. $\pm$ 0.29 °C @ 232.0 °C. $\pm$ 0.48 °C @ 420.0 °C.	

Dimensional:



Industrial Standard Probes:

1/5 DIN R Probe (Straight)

1/5 DIN A Probe (Angular 90°)

1/5 DIN A-L Probe (Long Angular 90°)

Order Code

04.06.0001-21

04.06.0007-21

04.06.0002-21

*Carrying case included.

