1502A "Tweener" Thermometer

Best performance thermometer in its price range

- PRT readout with accuracy to ± 0.006 °C
- Reads both 100 ohm and 25 ohm probes
- 0.0001 °C resolution across its entire range
- Optional battery pack available for portable operation
- Smallest unit in its class

The Tweener thermometer is one of Hart's best selling products. No other company has a thermometer that comes close to the performance and features of the Tweener for anywhere near its price.
Each 1502A thermometer is easily programmable through front-panel keystrokes, to match a probe's constants for maximum linearity and accuracy.
For convenience, the 1502A reads the IEC-751 or "385" ALPHA RTD without any programming. Temperature is displayed in °C, °F, K or resistance in ohms.
Each thermometer comes complete with an RS-232 interface for automating temperature data collection, calibrations, or process control functions. An optional IEEE-488 interface is also available.
9934 LogWare software lets you use the 1502A for real-time data acquisition. MET/TEMP II software lets you use the 1502A as an automated reference thermometer.

Ordering Information

Models
1502A-256 "Tweener" PRT Thermometer (220 V)

Options & Accessories
2502 DC Power Option
2505 Spare Connector
2506 IEEE Option
2507 Mini-Printer
2508 Serial Cable Kit
9313-256 Battery Pack
9301 Carrying Case, fits Tweener and 30 cm probe
9308 Carrying Case, fits Tweener and 15 cm probe

Software
9934-S LogWare, Single Channel, Single User
9934-M LogWare, Single Channel, Multi-User
9938-25 MET/TEMP II (includes CD-ROM, RS-232 multiplexer, adapter, and PC cable), (220 V)

Probes
See page 9 for optional probes.

Summary specifications 1502A

Function	Range
Temperature Range*	–200 °C to 962 °C
Resistance Range	0 Ω to 400 Ω, auto-ranging
Probe	Nominal RTPW: 25 Ω to 100 Ω RTD, PRT, or SPRT
Characterizations	ITS-90 subranges 4, 6, 7, 8, 9, 10, and 11 IPTS-68: R0, a, d, a4, and c4 Callendar-Van Dusen: R0, a, d, and b
Resistance Accuracy (ppm of reading)	0 Ω to 20 Ω: 0.0005 Ω 20 Ω to 400 Ω: 25 ppm
Temperature Accuracy*, typical (meter only)	± 0.004 °C at –100 °C ± 0.006 °C at 0 °C ± 0.009 °C at 100 °C ± 0.012 °C at 200 °C ± 0.018 °C at 400 °C ± 0.024 °C at 600 °C
Operating Temperature Range	16 °C to 30 °C
Resistance Resolution	0 Ω to 20 Ω: 0.0001 Ω 20 Ω to 400 Ω: 0.001 Ω
Temperature Resolution	0.001 °C
Excitation Current	0.5 and 1 mA, user selectable, 2 Hz
Measurement Period	1 second
Digital Filter	Exponential, 0 to 60 seconds time constant (user selectable)
Probe Connection	4-wire with shield, 5-pin DIN connector
Communications	RS-232 serial standard IEEE-488 (GPIB) optional
Display	8-digit, 7-segment, yellow-green LED; 12.7 mm high characters
Power	230 VAC (± 10 %), 50/60 Hz, 1 A, nominal
Size H x W x D	61 x 143 x 181 mm
Weight	1.0 kg
Calibration	Accredited NIST-traceable calibration provided
Probes from Hart	See page 9

*Temperature ranges and accuracy may be limited by the sensor you use.