MARTEL
ELECTRONICS

Calibration Technology Starts Here

High Precision Digital Thermometer

The BetaProbe™ TI

A single **BetaProbe TI high precision digital thermometer** can replace many liquid-in-glass (l-i-g) thermometers. It can also serve as a reference standard for other types of digital or analog temperature indicators. Plus, intrinsically safe certification means it can be used virtually anywhere.

The integral 3/16" (5 mm) diameter probe houses a quick response thin film sensor for quickly acquiring highly accurate readings using minimal insertion depth. The integral probe also rotates through 90° for any angle reading of the display.

Speaking of displays, a unique feature of the **BetaProbe TI** is the user configurable trend indicator. With this feature, the user knows at a glance if the reading is stable or trending higher or lower. The display also incorporates a high intensity blue backlight for easy reading in any lighting condition from full sun to pitch dark.

With the use of optional BetaLOG™ TI software, the BetaProbe TI becomes a high performance, easy to use temperature data logger. It allows the user to create a full suite of logging options, download them to the BetaProbe TI, then retrieve, format, display and save the data using Microsoft® Excel spreadsheet files. The BetaProbe's RS-232 serial port can also be used for configuration and recalibration support via Windows™ HyperTerminal.

The **BetaProbe TI** includes many other features including Min/Max storage and recall; selectable sample rate; battery saving auto shutoff and damping. Battery life of 250+ hours of continuous use means the three AAA alkaline batteries will seldom need changing.

General Features
- Low total cost of ownership (TCO) compared to L-I-G thermometers
- High accuracy (± 0.06˚C)
- High resolution (0.001˚C)
- Hazardous area use rating
- Fast response
- Data logging with optional BetaLOG™ TI software
- Temperature trend indicator
- Rugged and reliable
- EFI/RFI standard compliant
- Long battery life
- User configurable features
- Compact and lightweight

BetaProbe TI

Specifications (18°C to 28°C unless noted)

Range
-50 to 160°C (-58 to 320°F)

Accuracy (1 year)
±0.06°C (0.1°F)

Resolution
0.1, 0.01, 0.001 (user selectable)

Sample Rate
0.5/sec, 1/sec, 2/sec (user selectable)

Environmental

Operating Temperature	-10 to 50°C
Operating humidity	0 to 95% RH non-condensing
Storage Temperature	-20 to 60°C
Enclosure	IP50

Environmental Effect
±10 ppm/°C from -10 to 18°C and 28 to 50°C

EMC Compliance
EN 61326:2006 Annex C,
CISPR II, Edition 5.0-2009 Class "B"

Power

Battery	three (3), size AAA alkaline batteries Use only approved batteries to maintain intrinsic safety rating
Battery Life	250+ hours continuous without backlight use

Auto Shutoff
User configurable 1 to 30 minutes or disabled

Size (readout only)
4" x 2" x 1" (10 cm x 5 cm x 3 cm)

Probe
3/16" diameter x 12" length (5 mm x 300 mm)
Other sizes upon request

Weight
6.9 oz (75 g)

Accessories
Includes: manual, NIST traceable calibration certificate, batteries, protective carrying case (shown below)

CE

Ex ib IIB T4 Gb (-10°C ≤ Ta ≤ +50°C)
ITS10ATEX27114X
Ex ib IIB T4 Gb
IECEx ITS10.0049X
II 2 G

BetaLOG TI Data Logging Software

The optional BetaLOG TI software turns the BetaProbe TI into a high performance, easy to use temperature data logger. With the convenience of its integral probe and the small and lighweight nature of the readout head, it fits a wide range of applications.

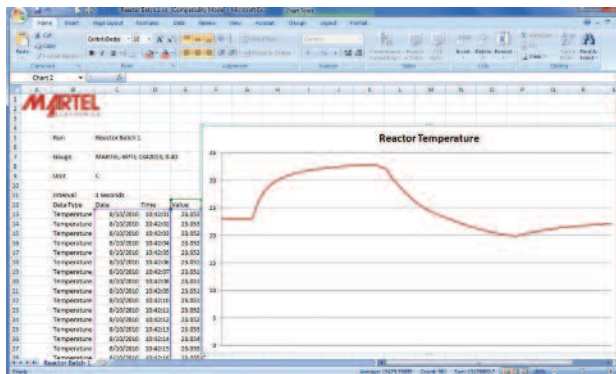When the data logging feature is turned on, the BetaProbe can store up to 10,752 readings.

Configuration options include:
- Interval selections from 1 second to 1 minute
- Runs can range from a few seconds to several days
- Data capture mode types
  - Average/Minimum/Maximum/Interval end
  - Interval end only
- Data storage options
  - ASCII text file (.TXT)
  - Comma delimited (.CSV)
  - Microsoft® Excel (.XLS)
  - Microsoft® Excel with template formats

BetaLOG TI runs quickly on most modern Window™ PCs. Minimum requirements are:
- Pentium CPU, 1.0 GHz
- 512 MB RAM
- 5 MB disk storage plus storage for data
- Windows XP Professional, Vista, Windows 7
- Optional Microsoft Excel

BetaLOG TI is provided with the software on CD-ROM media, RS-232 cable, USB/Serial adapter and complete user guide.