Digital Thermometer
Battery Powered

DTB-1

- **Battery powered**
- **100mm stainless steel case (IP65)**
- **Direct mount, panel mount, or surface mount**
- **Clear 6 digit alphanumeric LCD display**
- **Configured °C or °F**
- **High accuracy**
- **MAX / MIN**
- **Dual Alarm relays**
- **1 Relay can be applied for Low Battery warning**
- **On board data log function**
- **USB Interface**
- **NFC Interface for reading log, sync clock/start new log**
- **Android app for transmission of data via email**
- **6x 32 character messages from message library**
- **Standard Pt100, Class A, Sensors**
  For process and analytical applications

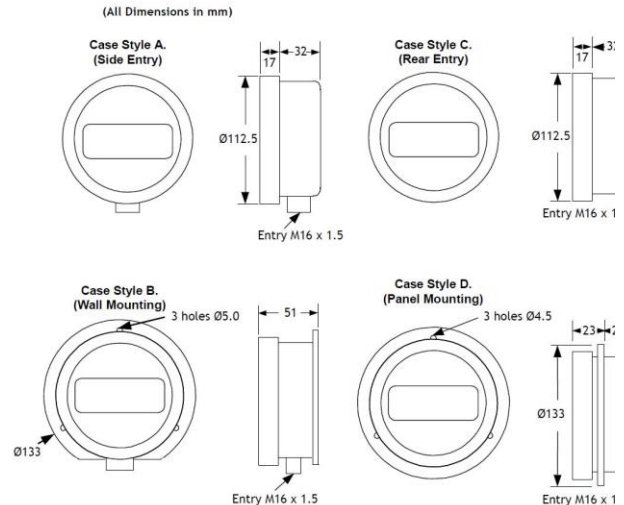**Digital Thermometer Model** DTB-1

Description

The Kobold DTB-1 is a battery powered LCD digital thermometer designed for use in a wide range of industrial and process applications. Similar to our standard DTB instrument, this latest development provides extra operational features such as MAX/MIN with recorded time and date, messaging feature, two alarm relays, and data logging.

The rugged IP65 rated housings and all stainless steel design offers protection from moisture and dust.

The DTB-1 also offers a range of mounting options such as direct mount, surface mount, and panel mount.

With our range of sensing probes and process connections this makes the DTB-1 an ideal replacement for traditional mechanical instruments such as liquid bulb and bi-metal gauges where power is not available or practical.

The larger LCD display, now 20mm high, can also be set to units of °C or °F, and with 0.1°resolution, the DTB-1 not only eliminates the guesswork out of reading dials and mercury columns, it also provides a much higher degree of accuracy. Low battery indication is via the display however, one of the two alarm relays can also be utilized.
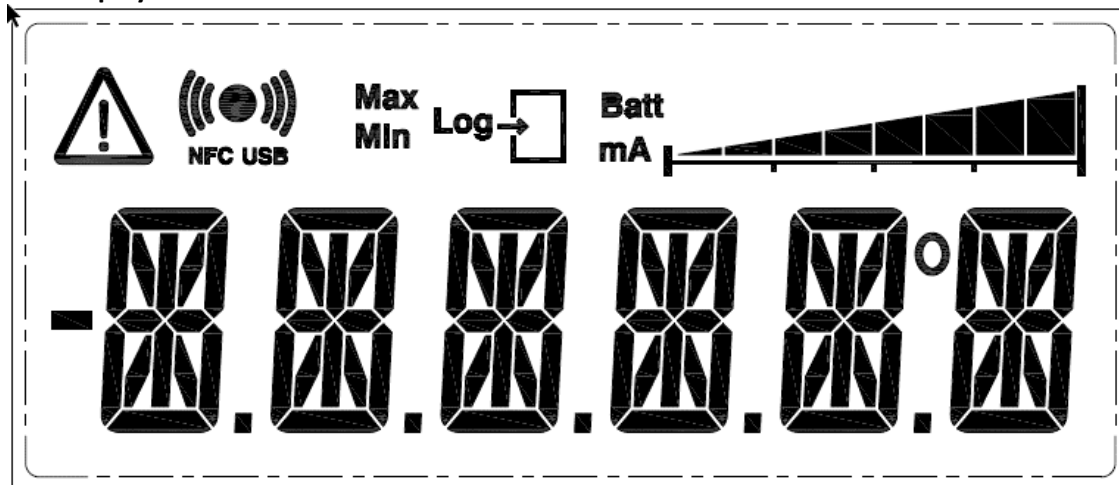
Note. The use of mercury as a measuring medium is no longer permissible, so for mercury-in-glass thermometers or mercury in steel gauges, the DTB-1 is an ideal instrument alternative offering high accuracy, and a large easy to read digital display.

Technical Data

Case diameter:	100mm
Sensing element:	RTD, Type Pt100, Class A (others on request)
Measuring Units:	Can be configured and displayed in °C or °F
Measuring range:	-50 …250°C
Accuracy @ 20°C:	± 0.2°C ± 0.1 % of reading
Temperature stability:	± 0.015% full range / °C
Refresh rate:	2 seconds
Display:	Clear 6-digit LCD alphanumeric display, 20mm High
Communication	USB,
	NFC interface available for reading log, sync clock and start new log.
	Android app allows log data to be transmitted via email etc.
MAX / MIN:	Readings are stored together with a rolling average taken from the data logging function. The max min and average values are read by pressing a front panel button. Two modes of operation are provided, the first displays temperature only, the second provides additional time date stamp.

Alarm relays:	2x low voltage with 6x different actions plus latching
	Latched relays set by USB or front panel push button
	Programmable Set point, dead band and high low band values are provided, set up using the USB interface
Display messaging:	Time and date of MAX / MIN readings + 6x user set messages (32 Character)
Data Logging	On board data log function with real time date stamp, offers 281 log points with user set log intervals between 10 seconds and 2 Hours. Bar graph indicates Log volume.
Ambient temperature range:	-40 …85°C
Storage temperature range:	-20 …70°C
Maximum pressure:	34 BAR.g (on probe)
Housing material:	304 Stainless Steel
Probe material:	316 Stainless Steel
Pocket material:	316 Stainless Steel
Compression Fitting material:	316 Stainless Steel
Protection:	IP65
Power:	TBC
Battery Life:	> 1 year (depends on function operations)

LCD Display

Remote Reading Type with Cable
Order Details (example) DTB-1-B-A-60-C-150-2000-C

Model	Case Style	Sensor Type	Probe Diameter	Lead	Probe Length	Lead Length	Calibration Certificate
DTB-1	B = Surface Mount D = Panel Mount	A = Pt100	30 = 3.0 mm 40 = 4.0 mm 50 = 5.0 mm 60 = 6.0 mm 80 = 8.0 mm 100 = 10.0 mm 120 = 12.0 mm 150 = 15.0 mm	A = PVC B = Silicone C = PTFE D = GF+SSOB	Length L1 in mm	Length L1 in mm	C = with 0 = without

Note! For hygienic versions please contact our sales office

Direct Mount Stem Type
Order Details (example) DTB-1-A-A-60-C-150-C

Model	Case Style	Sensor Type	Probe Diameter	Probe Length	Calibration Certificate
DTB-1	A = Side Entry B = Surface Mount C = Back Entry D = Panel Mount	A = Pt100	30 = 3.0 mm 40 = 4.0 mm 50 = 5.0 mm 60 = 6.0 mm 80 = 8.0 mm 100 = 10.0 mm 120 = 12.0 mm 150 = 15.0 mm	Length L1 In mm	C = with 0 = without

Direct Mount Hygienic Type
Order Details (example) DTB-1-A-A-60-75-B-T-50-C

Model	Case Style	Sensor Type	Probe Diameter	Probe Length	Pipe Size	Connection Type	Extension Length	Calibration Certificate
DTB-1	A = Side Entry C = Back Entry	A = Pt100	30 = 3.0 mm 40 = 4.0 mm 50 = 5.0 mm 60 = 6.0 mm 80 = 8.0 mm 100 = 10.0 mm 120 = 12.0 mm 150 = 15.0 mm	Length L1 In mm	A = ½" / ¾" B = 1" / 1 ½" C = 2" D = 2 ½" E = 3" F = 4"	T = Tri-clamp R = RJT I = IDF X = Other	Length L2 In mm	C = with 0 = without

Fabricated stainless steel (316) Thermo Pockets
Order Details (example) TWL-0-50-TW-60-T-60

Model	Probe Diameter	Immersion Length	Thread Size
TWL-0-50-TW	30 = 3.0 mm 40 = 4.0 mm 50 = 5.0 mm 60 = 6.0 mm 80 = 8.0 mm 100 = 10.0 mm 120 = 12.0 mm 150 = 15.0 mm	Length L1 In mm	A = ¼" BSP B = ½" BSP C = ¾" BSP D = 1" BSP E = ¼" BSPT F = ½" BSPT G = ¾" BSPT H = 1" BSPT I = ½" NPT J = ¾" NPT

Note! For none standard specifications please contact our sales office

Stainless steel (316) sliding Compression Fittings
Order Details (example) FS-12-T-60

Model	Thread Size	Thread	Probe Diameter
FS	14 = ¼" 12 = ½" 34 = ¾" 1 = 1"	P = BSP T = BSPT NT = NPT	30 = 3.0 mm 40 = 4.0 mm 50 = 5.0 mm 60 = 6.0 mm 80 = 8.0 mm

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- Display message library contains 6 user set messages plus the following options. The message selected is entered into the box provided for each band.

- Dual relays are provided offering a low voltage contact change over. The relays offer six different actions plus latching capability. Latched relays may be reset via the USB interface or by a front panel button. The button also allows the user to display the relays state. Two modes of operation are provided for the button; the first displays temperature only, the second provides additional time date stamp. If the button is pressed and held for more than 5 second the alert led will light continuously. If the button is not released within a further second period any latched relay will be reset. Programmable Set point, dead band, and high/low band values are provided, set-up using the USB interface.