Product Features

- *Large 4-digit LCD display*
- *Battery powered, 2 AA 3.6 Vdc, life 5 years minimum*
- *High accuracy Microprocessor Based*
- *Utilizes Pt-1000 Ohm RTD Class A element for temperature sensing*
- *Optional RTD output, 2, 3 or 4-wire*
- *Resolution 1/10 of a degree*
- *IP 67 / NEMA 4X (Waterproof)*
- *All stainless steel 316 construction*
- *Display in degree C or F*
- *Programming and calibration option available*
- *Meets CFIA design requirements for Digital Thermometers*
- *Self diagnostic circuitry with error indication*

Description

Intempco DTG Series battery powered LCD Digital Temperature Gauges, is a step above all competition, providing accurate and reliable electronic temperature indication. Because of the robust IP67 housing all stainless design, they offer protection against moisture and dust penetration. The DTG can be used as a direct replacement for Bi-Metal, Liquid Bulb and Glass Thermometers where no power is available.

All models are factory calibrated for maximum accuracy. The DTG's 4-digit 1/2" (12.7 mm) LCD display can be factory set in units of ºC or ºF. With resolution to a tenth of a degree, the DTG takes the guesswork out of reading dials and mercury columns. Models with the programming option can be re-calibrated by performing a one-point or two-point calibration using known temperature standards with Intempco's DTG programming kit . This is where the DTG leaves the competition behind. Calibration, display resolution and other features are all programmable. Powered by two high performance 3.6 V "AA" batteries, this thermometer will provide a minimum of five years continous operation before batteries require replacement.

DTGs may be ordered as panel mounting with either three-hole front flange or back flange, or as direct mounting thermometer with rigid stem The rigid probe is either of 1/4" or 3/8" diameter as standard but other diameters and materials are available. Probes with flexible extensions are also available. The DTG wetted parts are all fabricated from stainless steel 316L. The RTD element used is Pt-1000 standard accuracy to DIN IEC 60751 Class A. DTG can be made available with an additional RTD output. This feature allows a single process connection to be used for indication of temperature and for remote indication, recording, or controlling. The electrical connector, a flexible cable or a Micro-DC male plug, are made available from the stainless housing for the optional RTD output. Each DTG has the part number, range and serial number marked on the thermometer housing.

DTG's can be returned to the factory or an authorized service center for verification and calibration. NIST tracable calibration certificates are an available option.

If you require an accurate, stable and dependable battery powered digital thermometer, look no further. Model DTG is your solution. For additional information please visit us on the web at www.intempco.com or contact your local Authorized Intempco Distributor.
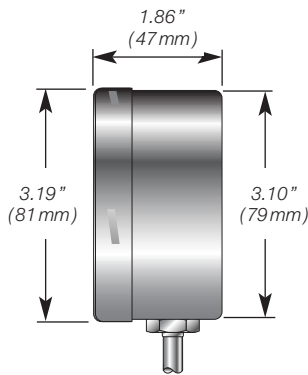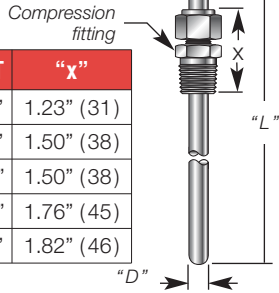
Application / Process Notes

- *Replacement for Bi-Metal, Liquid Bulb and Glass Thermometers*
- *Pharmaceutical*
- *Food Preparation*
- *Utilities and Municipal*
- *Refineries*
- *Chemical and Petrochemical Plants*
- *Paper Mills*
- *Hydraulics*

Custom Builder

MODEL	1	2	3	4	5	6
DTG53	– __ __	– **0**	– __ __	– __ __ __	– __	– __ __

BOX1 CODE	Temperature Range
CL	Low Temperature, display °C -50 to 200°C
FL	Low Temperature, display °F -58/392°F

Note :

DTGs are factory calibrated to an accuracy of
$\pm(0.2 + 0.002 \times |T|)\ °C$
$\pm(0.36 + 0.002 \times |T-32|)\ °F$

BOX2 CODE	Output
0	None

BOX3 CODE	Probe Dia. "D" & Material
4S	1/4" (6.3mm), Stainless steel 316
6S	3/8" (9.5mm), Stainless steel 316
8S	1/2"(12.7mm), Stainless steel 316
PS	6.0mm (0.236"), Stainless steel 316
RS	8.0mm (0.315"), Stainless steel 316

BOX4 CODE	Probe Length "L"
– – –	In 0.1" increments Ex.: **065** = 6.5" long , **120** = 12" long
M _ _ _	In millimeters Ex.: **M230** = 230 mm long

BOX5 CODE	Fitting Type
0	None
D	1/4" NPT (max. probe .312" dia.)
F	3/8" NPT (max. probe .375" dia.)
H	1/2" NPT
L	3/4" NPT

Note: *Fitting material is stainless steel SS316*

BOX6 CODE	Options
N	None
C1	Calibration certificate, NIST tracable, 1 point, 0°C (32°F)
C2	Calibration certificate, NIST tracable, 2 points, 0.0°C (32.0°F) & 100.0°C (212.0°F)
C3	Calibration certificate, NIST tracable, specify 3-points

Compression fitting

NPT	"x"
1/8"	1.23" (31)
1/4"	1.50" (38)
3/8"	1.50" (38)
1/2"	1.76" (45)
3/4"	1.82" (46)

"L"
"D"

1.86" (47mm)

3.19" (81mm)   3.10" (79mm)

Stock Items

- DTG53 w/LCD display, "CL" or "FL" range
- Factory calibrated to accuracy of $\pm(0.2 + 0.002 \times |T|)\ °C$ $\pm(0.36 + 0.002 \times |T-32|)\ °F$
- Operating temperature range of -50 to 200°C (-58 to 392°F)
- Probe 1/4" diameter stainless 316
- Adjustable compression fitting not included, order separately
- Probe lenghts available are 4", 6", 8", 11" and 14"

Ordering Information

Part Number	Description
DTG53-CL-0-4S-040-0-N	Low temperature, display °C (-50 to 200°C), 4" probe length
DTG53-FL-0-4S-040-0-N	Low temperature, display °F (-58/392°F), 4" probe length
DTG53-CL-0-4S-060-0-N	Low temperature, display °C (-50 to 200°C), 6" probe length
DTG53-FL-0-4S-060-0-N	Low temperature, display °F (-58/392°F), 6" probe length
DTG53-CL-0-4S-080-0-N	Low temperature, display °C (-50 to 200°C), 8" probe length
DTG53-FL-0-4S-080-0-N	Low temperature, display °F (-58/392°F), 8" probe length
DTG53-CL-0-4S-110-0-N	Low temperature, display °C (-50 to 200°C), 11" probe length
DTG53-FL-0-4S-110-0-N	Low temperature, display °F (-58/392°F), 11" probe length
DTG53-CL-0-4S-140-0-N	Low temperature, display °C (-50 to 200°C), 14" probe length
DTG53-FL-0-4S-140-0-N	Low temperature, display °F (-58/392°F), 14" probe length

Technical Specifications

Sensing Element :	RTD, Type Pt1000 Ohm, Class A
Measuring Temperature Ranges :	–50°C to 200°C (–58°C to 392°F) or –200°C to 600°C (–328°F to 1112°F) depending model.
Accuracy :	±(0.2 + 0.002 x |T|) °C, factory, ±(0.36 + 0.002 x |T-32|) °F, factory, ±(0.2 + 0.001 x |T|) °C, option, ±(0.36 + 0.001 x |T-32|) °F, option
Refresh Rate :	3 seconds
Display :	4-digit LCD, 1/2" high (12.7 mm), decimal point selectable by software
Display Resolution :	See table 1
RFI effect :	1 % or less typical
Temp. Effect :	<0.01 % FS/°C
Ambient Temp. Range :	0°C to 50°C (32°F to 122°F)
Storage Temp. Range :	-20°C to 70°C (-4°F to 158°F)
Max. Pressure :	500 PSIG (on probe)
Housing Material :	Stainless steel 316
Probe Material :	Stainless steel 316 standard
Cable Materials :	PVC, Teflon®, Silicone, SS armored Teflon® (with RTD output only)
Weight :	350 grams (12 ounces)
Environmental Protection :	NEMA 4X / IP 67
Power :	2 x 3.6 V "AA Cells"
Battery Life :	5 years min. in continous mode
Electrical Connection :	Micro-DC male plug or cable only (with RTD output only)
RTD Output Option:	RTD, Type Pt100 or Pt1000 Ohm, 2, 3, 4-wire, Class A DIN IEC 60715
Communication Option:	Communication option allows qualified users to calibrate, change measuring units and resolution. DTGLCD-PKIT required, order separately.
Shipping Volume :	Imperial Volume = 3.5" W X 3" H X (4.7" + L "of probe) Metric Volume = 9.0 cm W X 8 cm H X (12 cm + L cm of probe)

Table 1: Display Resolution

Model Range	Factory Settings		Optional Settings			
	Setting	Viewable Range	Setting	Viewable Range	Setting	Viewable Range
-50°C to 200°C (-58°F to 392°F)	0.1	-58.0 to 392.0	0.01	-58.00 to 99.99	1	-58 to 392
-200°C to 600°C (-328°F to 1112°F)	1	-328 to 1112	0.01	-99.99 to 99.99	1	-200 to 600

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Installation Considerations

Installation requirements of the DTG are similar to those of the temperature sensor assemblies with a head mounted hockey puck transmitter and display. If the temperature of the electronics in the housing exceeds 50°C, permanent damage to the DTG will occur. In all applications, especially when they exceed 200°C, careful attention must be placed on correct installation. For these applications, a remote probe wall mount unit or remote probe panel mount unit, may be a better choice. It is the installer's, customer's and/or end user's responsibility to make sure that this over exposure to temperature does not occur due to improper installation.