

SKF



SKF TKDT 10

Instructions for use

Table of contents

EC Declaration of conformity.....	4
Safety recommendations.....	4
1. Introduction.....	5
2. Technical data	5
3. Features	6
4. Buttons	6
5. Display Elements	7
6. Using the thermocouple(s)	7
7. Setup mode	8
7.1 Setup options.....	8
7.2 Entering or Exiting Setup.....	8
7.3 Changing a Setup Option.....	8
7.4 Offset correction.....	8
7.5 Auto Power Off	8
8. Displaying Temperatures	9
9. Freezing the readings	9
10. Viewing the MAX, MIN, and AVG Readings	9
11. Replacing the Batteries.....	9

Original instructions

EC Declaration of conformity

We,
SKF Maintenance Products
Kelvinbaan 16
3439 MT Nieuwegein
The Netherlands

herewith declare that the following product:

SKF Thermometer TKDT 10

has been designed and manufactured in accordance with:
EMC DIRECTIVE 2004/108/EC as outlined in the harmonized norm
for EN 61326-1:2006, EN 61326-2-1:2006
IEC 61326-1:2005, IEC 61326-2-1:2005

EUROPEAN ROHS DIRECTIVE 2011/65/EU

Nieuwegein, The Netherlands,
November 2013



Sébastien David
Manager Product Development and Quality



Safety recommendations

- Always read and follow the operating instructions for use.
- Do not touch hot measured objects with bare hands.
- Do not apply the contact temperature probe to a moving or rotating surface.
- Do not apply the contact temperature probe on an electrified or energized object.
- All repair work should be taken care of by an SKF repair shop.

1. Introduction

The SKF TKDT 10 is suitable for a wide range of applications and has the facility to allow two SKF temperature probes to be connected. A large back-lit LCD display helps ensure that the temperatures can be easily read in almost all environments.

2. Technical data

General	
Display	Large Backlit LCD
Displayed resolution	0,1° up to 1 000°, otherwise 1°
Backlit display	On/Off
Measurement modes	Min, max, average, differential, dual temperature reading
Measurement Units	°C, °F, K
Auto Switch Off	20 minutes, On/Off

Contact Probe Measurement	
Temperature using probe	-200 °C to +1 372 °C (-328 °F to +2 501 °F)
Accuracy	> -100 °C (> -148 °F): ±0.5% of reading ±1 °C (±1.8 °F)
Probe compatibility	2 × Type-K connectors
Probe supplied	TMDT 2-30, suitable for use up to 900 °C (1 650 °F)
Supplied probe length	130 mm (5.1 in)
Probe response time	2,3 seconds (TMDT 2-30)

Battery and Power	
Battery	3 × AAA Alkaline type IEC LR03
Operation time	18 hours typical use (backlight on)

Size and Weight	
Product Dimensions	160 × 63 × 30 mm (6.3 × 2.5 × 1.2 in)
Product Weight	200 g (0.4 lbs)
Carrying Case dimensions	530 × 180 × 85 mm (20.9 × 7.0 × 3.4 in)
Total weight (incl. case)	1,1 kg (2.4 lbs)

Operating Requirements	
Operating temperature	0 to 50 °C (32 to 120 °F)
Storage temperature	-10 to +60 °C (-4 to +150 °F)
Relative Humidity	10 to 90% RH non-condensing
IP rating	IP 40

Case contents

1 x SKF Thermometer TKDT 10

1 x Contact Probe TMDT 2-30









3 x AAA batteries

1 x printed Instructions for Use

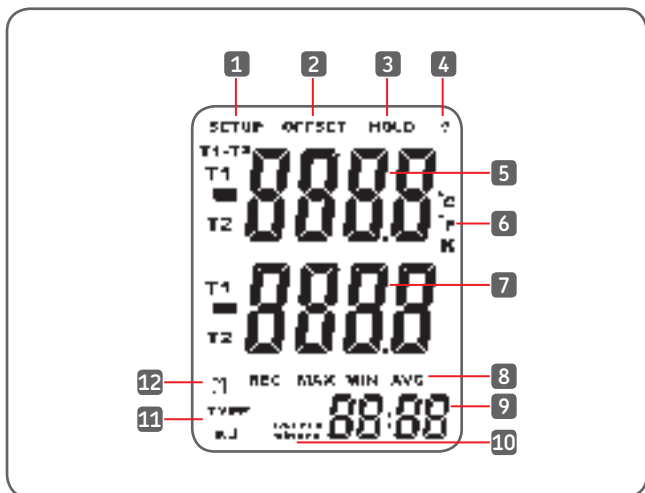
3. Features

- Large backlit display shows any combination of T1, T2, T1-T2, plus MAX, MIN, AVG.
- Relative time clock on MAX MIN and AVG provides a time reference for major events.
- Electronic Offset function allows compensation of thermocouple errors to maximize overall accuracy.
- Work with any K-type or J-type thermocouples.
- Readout in °C, °F, or Kelvin (K).
- Auto Power Off mode increases battery life.

4. Buttons


- Press  to turn the thermometer on or off.
- Press  to toggle showing the T1, T2, and T1-T2 (differential temperature measurement) in the top and bottom display.
- Press  to switch between Celsius (°C), Fahrenheit (°F) and Kelvin (K) temperature units.
- Press  to freeze or unfreeze the displayed readings.
- Press  to toggle through MAX, MIN and AVG (average) readings. To exit the MAX/MIN/AVG mode, press the  button for 3 seconds to return to normal operation.
- Press  button to turn on the backlight. Press it again to turn off the backlight. Press  button for 3 seconds to start or exit the Setup mode.

5. Display Elements



1. Setup Mode	7. Bottom display: MAX, MIN, AVG, T1 or T2 readings
2. Offset correction	8. MAX, MIN, AVG display
3. Frozen readings	9. Time Stamp
4. Auto Power Off enabled	10. Min:sec or hour:min
5. Top display: T1, T2, T1-T2	11. Thermocouple type K
6. Temperature units	12. Low battery symbol

6. Using the thermocouple(s)

1. Plug the thermocouple(s) into the T1 and/or T2 input connector(s).
2. Press  to turn on the thermometer. After 1 second the thermometer displays the first reading.

If no thermocouple is plugged into the selected input or the thermocouple is "open," the display shows " - - - -".


7. Setup mode

Use the Setup Mode to change different parameters.
The thermometer stores the settings in its memory.







7.1 Setup options

Option	Menu item	Settings
Type	TYPE	K
Offset	OFFSET	T1 or T2
Sleep Mode	SLP	On (sleep mode on) or OFF (sleep mode off)

7.2 Entering or Exiting Setup

When the thermometer is in Setup mode, the display shows **SETUP**.
Press  button for 3 seconds to enter or exit Setup mode.

7.3 Changing a Setup Option

1. Press  or  to scroll to the setup option you want to change.
2. Press  to indicate that you want to change this setting.
3. Press  or  until the setting you want to use appears on the display.
4. Press  to store the new setting in memory.

Note:

Setup is disabled in MAX/MIN mode.

7.4 Offset correction






Use the offset option in Setup to adjust the thermometer's readings to compensate for the errors of a specific thermocouple.
The allowable adjustment range is $\pm 5,0$ °C or ± 9.0 °F.


1. Plug the thermocouple into the input connector T1 or T2.
2. Place the thermocouple in a known, stable temperature environment
3. Allow the readings to stabilize.
4. In Setup Mode change the offset until the top reading matches the calibration temperature.

7.5 Auto Power Off

The thermometer will automatically switch off after 20 minutes if no button is pressed during this time.



In Setup mode:

Press  or  to scroll to the "SLP" page. Press  to indicate "On" or "OFF". Press  or  until the setting you want to use appears on the display.

Press  to store the new setting in memory.

On (sleep mode on) or **OFF** (sleep mode off).




8. Displaying Temperatures

1. Press  to select the correct temperature scale.
2. Hold or attach the thermocouple(s) to the measurement location. The temperature reading appears in the primary display.
3. Press  to toggle between showing the T1, T2 and T1-T2 readings in the primary or secondary display.



Note:

The display shows " - - - " when a thermocouple is not connected.
The display shows **OL** (Off Limit) when the temperature being measured is outside the thermocouple's measurement range.

9. Freezing the readings

1. Press  to freeze the readings on the display . The display shows **HOLD**.
2. Press  to toggle showing the T1, T2 or T1-T2 readings in the primary or secondary display.
3. Press  again to turn off the HOLD function.

10. Viewing the MAX, MIN, and AVG Readings

1. Press  to step through the maximum (MAX), minimum (MIN), or the average (AVG) readings. The elapsed time since entering MAX, MIN mode, or the time at which the minimum or maximum occurred appears on the display.
2. Press  button for 3 seconds to exit MAX, MIN and AVG mode.

11. Replacing the Batteries

1. Turn off the thermometer.
2. Remove the screw and open the battery door.
3. Insert 3x new LR03 batteries.
4. Close the battery door and tighten the screw.

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