

Infrared thermometers TKTL series

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Application

SKF TKTL infrared thermometers are designed for thermal inspection purposes. In technical applications infrared thermometers helps maintenance workers to perceive information on abnormalities in running machines.

To help ensure long bearing service life, it is important to determine the condition of machinery and bearings while in operation. Good predictive maintenance will help reduce machine downtime and decrease overall maintenance costs. SKF Infrared thermometers help analysing critical environmental conditions that have an impact on bearing and machine performance.

Description and operation

SKF Infrared thermometers are fitted with multiple lasers which helps you to easy and more accurate target the object. The TKTL 21, 31 and 40 also offer the option of measuring temperatures via a temperature probe. The TKTL 40 offers the possibility of data logging and allows pictures and videos with all measurement information to be taken.



Technical data



TKTL 11



TKTL 21



TKTL 31



TKTL 40

Designation	TKTL 11	TKTL 21	TKTL 31	TKTL 40
Temperature range using infrared	-60 to +625 °C (-76 to +1 157 °F)	-60 to +760 °C (-76 to +1 400 °F)	-60 to +1600 °C (-76 to +2912 °F)	-50 to +1 000 °C (-58 to +1 832 °F)
Temperature range using probe	-	-64 to +1 400 °C (-83 to +2 552 °F)	-64 to +1400 °C (-83.2 to +2552 °F)	-50 to +1 370 °C (-58 to +2 498 °F)
Probe supplied	-	TMDT 2-30 included max. 900 °C (1650 °F)	TMDT 2-30 included max. 900 °C (1650 °F)	TMDT 2-30 included max. 900 °C (1650 °F)
Distance-to-spot ratio	16:1	30:1	75:1	50:1
Emissivity	0.95	0,1-1,0	0,1-1,0	0,1-1,0
Measurement accuracy	+/-2% of reading or 2°C (4°F) whichever is greater	+/-2% of reading or 2°C (4°F) whichever is greater	+/-1% of reading or 1°C (1.8°F) whichever is greater	±1% of reading or 1 °C (1.8 °F) whichever is greater
Operating temperature	0 to +50 °C (32 to +122 °F) 10 to 95% R.H.	0 to +50 ° C (32 to +122 ° F) 10 to 95% R.H.	0 to +50 ° C (32 to +122 °F) 10 to 95% R.H.	0 to +50 °C (32 to +122 °F) 10 to 95% R.H.
Storage	- 10 to +60 °C (14 to +140 °F) 10 to 95% R.H.	-10 to +60° C (14 to +140 °C) 10 to 95% R.H.	-10 to +60° C (14 to +140 °C) 10 to 95% R.H.	-10 to +60 °C (14 to +150 °F) 10 to 95% R.H.
Response time msec	1000	1000	1000	<300
Displayed resolution	0.1 °C/F (below 999.9); 1 °C/F (above 1000)	0.1 °C/F (below 999.9); 1 °C/F (above 1000)	0.1 °C/F (below 999.9); 1 °C/F (above 1000)	0.1 °C/F (below 999.9); 1 °C/F (above 1000)

Display	Colour backlit LCD	Colour backlit LCD	Black/White backlit LCD	Colour backlit LCD
Spectral response	8-14 µm	8-14 µm	8-14 µm	8-14 µm
Measurement modes	Maximum temperatures	Maximum; Minimum; Average; Difference (between min and max); Probe/IR dual temperature	Maximum; Minimum; Average; Difference (between min and max); Probe/IR dual temperature	Maximum; Minimum; Average; Difference (between min and max); Probe/IR dual temperature
Alarm modes	-	High and low level alarm with warning sound	High and low level alarm with warning sound	High and low level alarm with warning sound
Laser	8x red targeting laser dots, Class 2	8x red targeting laser dots, Class 2	2x red targeting laser dots, Class 2	2x red targeting laser dots, Class 2
Operating time	Min. 9 hours continuous use	Min. 30 hours continuous use without laser	Min. 140 hours continuous use without laser and back light	Min. 4 hours continuous use
Auto switch off	Automatic, 15 seconds after trigger release	Automatic, 60 seconds after trigger release in IR mode and 12 minutes after trigger release in probe mode	Automatic, 60 seconds after trigger release in IR mode (60 minutes can be manually selected) and 12 minutes after trigger release in probe mode	Automatic, user selectable
HVAC functions	-	-	-	Wet bulb; Dew point; Humidity; Air temperature
Photo and video	-	-	-	640x480 px visual camera, images (JPEG) and video (3GP)
Memory	-	-	-	310 MB internal memory; expandable with micro SD card (8 GB max.)
PC connection				Mini USB port, mini USB to USB cable included
Contents	1x IR thermometer (TKTL 11); 2x AAA Alkaline batteries; 1x Instructions for use	1x IR thermometer (TKTL 21); 1x Temperature probe (TMDT 2-30); 2x AAA Alkaline batteries; 1x Instructions for use; 1x Carrying case	1x IR thermometer (TKTL 31); 1x Temperature probe (TMDT 2-30); 2x AAA Alkaline batteries; 1x Instructions for use; 1x Carrying case	1x IR thermometer (TKTL 40); 1x Temperature probe (TMDT 2-30); 1x AC battery charger; 1x Mini USB to USB connection cable 1x Mini tripod 1x Instructions for use; 1x Carrying case
Product dimensions	119.2 x 171.8 x 47.5 mm (4.7 x 6.8 x 1.9 in)	119.2 x 171.8 x 47.5 mm (4.7 x 6.8 x 1.9 in)	203 x 197 x 47 mm (8.0 x 7.7 x 1.8 in)	205 x 155 x 62 mm (8.1 x 6.1 x 2.4 in)
Packing dimensions	253 x 67 x 136 mm (9.96 x 2.64 x 5.35 in)	530 x 85 x 180 mm (20.9 x 3.4 x 7.0 in)	530 x 85 x 180 mm (20.9 x 3.4 x 7.0 in)	530 x 85 x 180 mm (20.9 x 3.4 x 7.0 in)
Product weight (incl. batteries)	255.7 g (0.56 lb)	255.7 g (0.56 lb)	386.1 g (0.85 lb)	600 g (1.3 lb)
Total weight	400 g (0.88 lb)	1 150 g (2.54 lb)	1 300 g (2.87 lb)	1 700 g (3.8 lb)

The TKTL thermometers can be advised and offered for thermal inspection purposes for below mentioned applications and industries.

HVAC:

- Balance room temperatures
- Monitor supply/return registers
- Test ductwork
- Examine stream traps
- Check furnace performance
- Perform energy audits

Food safety:

- Check cold and hot cooking, holding and serving temperatures
- Ensure safe and uniform storage and transportation temperatures
- Maintain freezers, walk-ins, ovens, ranges and dishwashers

Furthermore:

- Roofing, asphalt, and concrete applications
- Commercial printing
- Plastics moulding
- Fire detection/prevention
- Aviation and marine maintenance

