

SKF TKSU 10



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EC Declaration of conformity

We, SKF Maintenance Products, Kelvinbaan 16, 3439 MT Nieuwegein, The Netherlands herewith declare that the products described in these instructions for use, are in accordance with the conditions of the following directive:

EUROPEAN ROHS DIRECTIVE 2011/65/EU

LOW VOLTAGE DIRECTIVE 2014/35/EU

EMC DIRECTIVE 2014/30/EU

and are in conformity with the following standards:

EN 61010-1:2010

Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 1: General requirements.

EN 61000-4-2:1995

Electromagnetic compatibility (EMC) –

Part 4-2: Electrostatic discharge immunity test.

EN 61000-4-3:2002

Electromagnetic compatibility (EMC) –

Part 4-3: Radiated, radio frequency, electromagnetic field immunity test.

EN 61326:2013

Electrical equipment for measurement, control and laboratory use, EMC requirements - Part 1: General requirements

Safety recommendations

- Do not expose the equipment to rough handling or heavy impacts.
- Always read and follow the operating instructions.
- Opening the housing of the instrument may result in hazardous mishandling and voids warranty.
- The equipment should not be used in areas where there is a risk for explosion.
- Do not expose the equipment to high humidity or direct contact with water.
- All repair work should be performed by an SKF repair shop.
- Using any other headset than the one supplied with the instrument can cause internal damage to the detector.

Nieuwegein, The Netherlands, June 2018



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1. Introduction

The SKF Ultrasonic Leak Detector TKSU 10 is designed to detect leaks in compressed air systems, pneumatic brake systems, vacuum systems, pressurized gas storage, and steam traps.

1.1 Intended use

It can be used to verify the integrity of compressed air systems, and the tightness of containers, trucks, buses, cars, storage systems, building envelopes, containment walls, tanks, recreational vehicles, and more....

1.2 Principle of operation

The principle of operation of the TKSU 10 can be compared to a special microphone, sensitive only to high frequency ultrasounds. A sensitive piezoelectric crystal is used as a sensor element. Minute sound waves excite the crystal, creating an electrical pulse that is amplified and then "heterodyned" or translated into an audible frequency that the user can hear through a pair of noise reduction headphones.

2. Operating



- Open the battery compartment using a Philips screwdriver. Correctly insert (+/-) two AA alkaline or rechargeable batteries. The remaining battery level is displayed here (→ 1).
- The device can be powered through its USB port (→ 2) with an external battery pack or connected to a 5V USB power adapter. It turns off automatically when the battery power is insufficient to ensure proper operation, or after 10 minutes of inactivity.
- Connect the supplied headset here (→ 3).
- The ON/OFF button is here (→ 4).
- Adjust amplification by using the up and down arrows (→ 5) and following the amplification guidance icons (→ 5).
 - When the RMS measurement (→ 6) is displayed in **green**, the amplification is correctly set.
 - When **red**, the amplification is too high.
 - When “-.-” is displayed, the amplification is too low.
- The current amplification setting is displayed here (→ 7).
- Adjust the audio volume by pressing the left and right arrows (→ 5) until the sound level is comfortable.
- The current volume setting is displayed (→ 8) only when a headset is connected.
- To replace a damaged sensor (→ 9), unscrew it and replace it with a new one.

→ 5 ▲: increase
 ☺: correct
 ▼: decrease

→ 6 **Red**: too high
Green: correct
 “-.-”: too low

3. Technical data

General	
Designation	SKF TKSU 10
Description	Ultrasound leak detector
Measurement channel	1 channel via a 7 pole LEMO connector
Display	Color OLED
Keyboard	5 function keys
Measuring range	-6 to 99,9 dB μ V (<i>reference 0 dB = 1 μV</i>)
Resolution	0,1 dB μ V
Measurement Bandwidth	35 to 42 kHz
Signal amplification	+30 to +102 by step of 6 dB
Audio	
Amplification	5 adjustable positions in steps of 6 dB
Maximum output	+83 dB SPL with supplied headset
Headset	25 dB NRR Peltor HQ headset
Headset connector	Stereo jack connector of 6,35 mm (<i>1/4 in</i>)
Power	
Battery	2 AA batteries
Battery life	4 hours
Environmental	
Operating temperature	From -10 °C to +50 °C (<i>14 °F to 122 °F</i>)
IP rating	IP42
Mechanical	
Housing material	ABS
Dimensions instrument	158 × 59 × 38,5 mm (<i>6.22 × 2.32 × 1.51 in</i>)
Flexible rod length	445 mm (<i>17.51 in</i>)
Weight instrument	164 g (<i>5.78 oz</i>)
Carrying case dimensions	530 × 110 × 360 mm (<i>20.9 × 4.3 × 14.2 in</i>)
Total weight (incl. case)	3 kg (<i>6.6 lbs</i>)

4. Spare parts

Designation	Description
TKSU 10-HEADS	Neckband headset for TKSU 10
TKSU 10-PROBE	Spare airborne sensor for TKSU 10
TKSU 10-CC	Toolcase with inlay for TKSU 10



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