

Operation manual 9 / 2014

Trace the leakage with

LEAK DETECT

leakage detecting device with long distances parabolic sensor

LEAK DETECT is a specialised development from Hilger u. Kern Industrial Electronics. This device is able to detect even smallest leaks in compressed air – and vacuum-systems.



(pict. 1 Parabolic dish Psp)

Caution ! : The Psp has an integrated laserpointer. Laser radiation is harmful to the eyes ! Do not point the laser beam at any ones eyes ! The Psp may only be used in applications specified herein. Any other than those specified herein may result in hazardous radiation exposure !

LEAK DETECT detects leaks of air or gas, disappearing out of a pressure system .
Anywhere : in tubes, couplings, valves , sealings, packings, housings etc.

How does it work ?

The flow characteristics of leaking gases are a typical source of non-audible ultrasonic sound. LEAK-DETECT converts this sound into an audible signal in the headset and displays the signal levels as an LED bar.

The common noise in workshops does not have any influence in the LEAK DETECT operation. When zones to be controlled are inaccessible or too far away (> 4 m) the new parabola is the best suited sensor. Typical locations are objects in high ceilings of workshops (see picture next side). The inbuilt laser makes it possible to locate the remote leaks precisely. It can be switched on and off at the dishgrip with a push-button. The parabolic dish concentrates direct beam ultrasound waves which makes this sensor more directionally. The dish is transparent for easy visualisation objects while measuring. It minimizes background noises and concentrates on distant leaks.

Application

assembling : Check the goods immediately after unpacking if there are any transport damages. Plug-in carefully the transparent dish at the 9 pole plug of the electronic device (SUB-D plug) . After that fix the plug with the 2 spindle screws.

switch on : Push the middle key of the front folio for „Power On“. The green LED will indicate that the battery is full. Push the orange colored switch at the grip for the laser pointer. Keep the dish on the bottom : the link is O.K. when a red laser point is visible at the bottom.

Caution ! The Psp has no own battery ! Don't lay the dish on the head of the laser pointer ! The alignment of the laser can be damaged ! No warranty !

Trace the leakage with the parabolic dish Psp.

Plug in the headset and pull it over your head. Adjust the gain while you press the + key until you can hear some hissing. Now point the Psp to the suspected object with your extended arm and push on the push button. (CAUTION ! ... make sure that there are no persons or animals around the object). Move the red laser point close to the suspected location. A leakage is found when the sound level in the headphones increases.

Calibration service :

Hilger u. Kern offers a calibration service. The time interval has to be timed by your quality management following ISO 9001 (it is common to calibrate it once a year). Calibration service means calibration of the measurement sound level, a total check of all functions, the battery condition, and the alignment of the laser beam. A certificate and a data report will be provided.



(pict.3 Utilisation of Psp)

Technical data of the parabolic sensor device:
parabol diam .: 38 cm, 15 inch
parabol length .: 13 cm, 5 inch
central frequency : 40 kHz
laser data : 1 mW , 650 nm, class 2, activated by push button
operating temp. : + 10 degr.C. to + 40 degr. C.
weight : 0,8 kg, 28,2 oz

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