PD16SN



## www.prexiso-eu.com



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www.prexiso-eu.com PD16SN-05REV01-2408

#### IMPORTANT: Read before Using



The safety instructions and the user manual should be read through carefully before the product is used for the first time.

#### SAFETY INSTRUCTION

Caution – The use of operating or adjusting equipment or the application or processing methods other than those mentioned herein, can lead to hazardous radiation exposure.



Laser radiation-Do not stare into beam. 1.0mW0g630-670nm EN60825-1:2014/A11:2021 EN50689:2021 IEC 60825-1:2014. Complex with 21 CFR 1040.10 and 1040.11 except for conformance with IEC 60825-1 Ed. 3., as described in Laser Notice No. 56, dated May 8, 2019. Class 2 Laser product



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LASER RADIATION. Do not stare into beam. Class II laser product. Turn the laser beam on only when using this tool.

- 1. Keep the instrument dry.
- 2. Keep the instrument and battery out of reach of infants and children.

3. Never aim the beam at any person or an object other than the work piece.

4. When the symbol " in appears, the batteries are low and should be replaced. Ensure that battery polarity connections are correct when replacing batteries. If you are not using the instrument for a long time, remove the battery.

5. Do not assume there are no LIVE electrical wires in the wall.

6. Do not take actions that could be dangerous if the wall contains a LIVE electrical wire.

7. Always turn off the electrical power, gas, and water supplies before penetrating a surface.

8. Always turn off the power when working near electrical wires.

9. Failure to follow these instructions may result in electrical shock, fire, and/or serious injury or property damage.

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Be careful when pressing the stud button. The sharp needles can cause injury. Do not use the stud button on stone or metal wall or low density plasterboard, but only on wallpaper and wooden surfaces.



#### PROHIBITED USE

- · Using the product without instruction
- · Using outside the stated limits

Deactivation of safety systems and removal of explanatory and hazard labels

- · Opening of the equipment by using tools (screwdrivers, etc.)
- · Carrying out modification or conversion of the product
- · Use of accessories from other manufacturers without express approval

#### LIMITS OF USE

Never attempt to repair the product by yourself. In case of damage, contact a local dealer.

Refer to section "Technical Specification", the device is designed for using in areas which is habitable for humans.

Do not use the product in explosion hazardous areas or in aggressive environments.

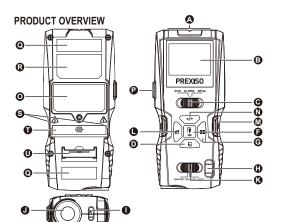
This detector does not always recognize all pipes and power cables. The following conditions can contribute to inaccurate results.

- ceramic floor tile
- carpeting and padding
- lath or low density plasterboard
- glass or any other dense material
- very thick walls
- weak battery
- deeply laid power cables or pipe work
- shielded cables
- thick walls with thin pipes or power cables
- walls paneled with metal sheets
- very moist conditions
- This detector is not suitable for detecting power cables in circuits.
- which are isolated from the mains power supply.
- through which direct current flows.
- which are used for computer or telecommunications systems.

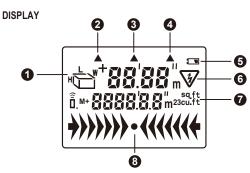
The pipe work made of plastic or similar materials cannot be detected by this instrument, only pipe work made of metal.

## FUNCTION

This Multi Purpose Detector is designed for locating of electrical cables, wood and metal objects, for easy operation of laser marking, and for the ultrasonic measuring of length, areas as well as volumes. The product is not intended for commercial use or for contractors. This product is for indoor use only.



PARTS	DESCRIPTION	
A	Measurement point	
В	LCD display	
С	Material switch (STUD/AC WIRE/METAL)	
D	Button 🔳 - Memory	
E/M	Stud button	
F	Button 🗓 - Measurement	
G	Button T - Shift distance measure function	
Н	Spirit level bubble vial	
Ι	Laser beam exit	
J	Ultrasound sender/ receiver	
K	Function switch (LASER/ DETECTOR/ DISTANCE)	
L	Button 💽 - Read memory	
N	Button +/=	
0	Battery compartment	
Р	Button - Push	
Q	Contact pads for detection	
R	Sensor area	
S	Stud pins for wall application	
Т	Stud pins protector	
U	Plastic flip for laser line position adjustment	



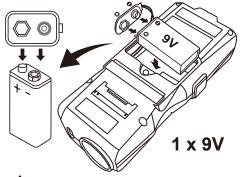
- 1. Distance measure, length, area, volume 2~4. Stud / AC wire/Metal Mode indication
- 5. Low battery indicator
- 6. Warnig of AC wire
- 7. Distance measure unit
- 8. Detecting symbol

#### **OPERATION INSTRUCTION**

#### **1. INSERT THE BATTERY**

Open the battery compartment O on the rear side of the detector and insert a 9V battery. Pay attention to the polarity.





A Change battery when battery symbol is flashing.

## 2. LOCATING CONCEALED OBJECTS

## A Notice:

 This detector is for use on dry interior walls only. Sensing depth and accuracy can vary due to moisture, content of materials, wall texture, and paint.

• Calibration is necessary before detector usage, place it flat against the wall where you wish to search for concealed objects. Press and hold the button PUSH P, the left side upper button, until the arrows on the display disappear and two short beeps are heard, which indicates a successful calibration.

Before using the detector for locating concealed objects, first test it by locating a pipeline or electrical power cable at a known position.

 In case of any doubt, please always ask a qualified building contractor for help.

# Attention!

Please do not move the instrument during calibration.

The calibration may fail if being located on very high density surface or directly on the stud. Should the calibration fail, the LCD display will indicate " **}))))) • ((((((()))))) • (((((()))))) • ((((()))))) • (((())))) • (((())))) • (((())))) • (((())))) • (((())))) • (((())))) • (((())))) • (((()))) • ((()))) • (((()))) • ((()))) • ((()))) • ((())) • ((()))) • ((())) • ((()))) • ((())) • ((()))) • ((())) • ((())) • ((()))) • ((())) • ((()))) • ((())) • ((())) • ((()))) • ((())) • ((())) • ((())) • (())) • ((())) • ((())) • ((())) • ((())) • (())) • ((())) • ((())) • ((())) • ((())) • ((())) • (())) • (((** 

Should the detector find a live wire carrying alternating current, with on the LCD display. It's prohibited to drill on this location at any circumstances. Danger of electric shock!

Three modes are available for locating of concealed objects, and scanning procedures are the same.

Detect Mode	Application	Max. Detecting Depth	Accurancy
STUD	Wood	1 in. (24mm)	5mm (1/5 in.)
METAL	Metal	3/2 in. (38mm)	8mm (1/3 in.)
AC WIRE	Live electric power cables	11/8 in. (35mm)	NA

#### **Scanning Operation**

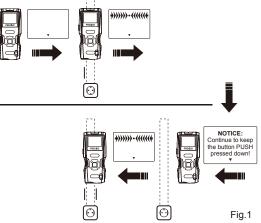
a. Slide the function switch K (III) to "DETECTOR".

b. Slide the material switch  $\underline{\textbf{C}}$  ( ) to STUD, AC WIRE or METAL mode.

c. Don't forget to calibrate the detector before usage, place it flat against the wall where you wish to search for concealed objects. Press and hold the PUSH button  $\underline{P}$ , the left side upper button, until the arrows on the display disappear and two short beeps are heard. The detector has adjusted itself to the wall thickness, continue to keep the button PUSH pressed down.

d. Move slowly along the wall with the detector. As the arrows in the display move closer to the centre of the display, you are getting closer to the concealed object. When the arrows touch and a constant signal tone is heard, mark this position (see Fig. 1).

e. Please repeat the procedure d, but this time approach the object from the other side. As soon as the signal tone sounds, mark this position (see Fig. 1). The concealed object lies between these two positions.



#### Note:

When METAL mode for rebar like, do scanning both in horizontal and vertical directions. Metal sensitivity may increase when metal object is parallel to sensor.

The wires deeper than 11/8 in./35mm from surface might not be detected, always turn off the power when working near electrical wires.

Static charge may spread voltage detection as much as 12inch/30cm laterally from actual wire location.

Should any suspect about wires but not found, please take METAL mode to find if any metal conduit which shielding the wires.

This detector can be used for locating wood objects too.

a. Proceed the detector with the search for wood objects as described in the section "Locating concealed objects".

b. When the detector has found an object, mark it. To be sure that the object is wood, slide the material switch C (

c. Now search in the same position for metal, if the detector did not find anything, the object being detected is wood. If it find something, then the object being detected is metal. In this case, search again at a different position in the mode "STUD" and repeat steps a to c.

#### 3. LASER MARKING

## Attention!

This Multi Detector contains a Class 2 laser. NEVER direct the laser beam at people or animals. NEVER look directly into the laser. The laser can cause serious eye damage.

Always align the spirit level bubble vial in middle position when laser marking.

Be careful when pressing the stud button. The sharp needles can cause injury. Do not use the stud button on stone or metal wall or low density plasterboard, but only on wallpaper and wooden surfaces.

The laser marking can be used for the exactly horizontal positioning of pictures, shelves etc.

a. Place the function switch <u>K</u> (**IIII**) to "LASER". A laser line is projected.

b. Hold the detector horizontally against the wall and align it with the assistance of the spirit level bubble vial, the bubble vial must stand between the two marking lines  $(\Box)$ .

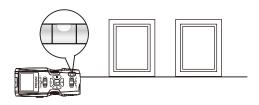
c. Slide the stud pin protector lower  $\underline{T}$  to expose the two holes for the stud pins, and push both of the holding pins  $\underline{E}$  and  $\underline{M}$  buttons firmly downwards. The pins lightly drive themselves into the wall, so that the detector will not drop to the floor. The laser throws a horizontal line onto the wall.

#### Note:

The holding pins do not function on stone, metal walls or any hard surface.

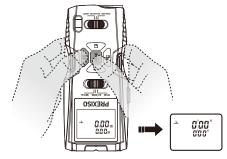
The walls must have a soft upper surface.

After the working finished, make sure to slide the stud pin protector to original position to prevent the pins pushing out accidentally.



#### 4. ULTRASONIC MEASURING DISTANCES

a. Slide the function switch <u>K</u> (**IIII**) to "DISTANCE". The LCD display switches itself on.



 $\triangle$  Note: Measurements start at the measurement point <u>A</u>! The ultrasonic measurement range lies between 2' (0.6m) and 50' (15m), please see Fig. 2.

Should the measurement lie outside the measurement limit range, "Err" or an illogical number appear on the display.

b. Hold the instrument upright towards the wall to which you wish to measure the distance. It's better to hold the ultrasound sender/receiver at a right-angle to the wall.(see Fig. 2).

c. Press the button  $\blacksquare$  to take a measurement with data display on LCD.

When you hold the button I pressed down and slowly move the appliance over the surface to be measured, the instrument continually measures the distances, data will be shown on the LCD display.

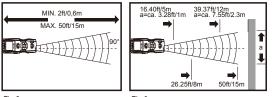
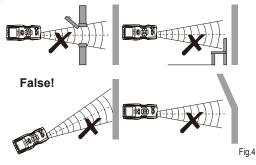


Fig.2



d. The further you are from the wall, the wider is the area that the Instrument must measure by ultrasound (see Fig. 3). Therefore, please take care that the Instrument is always directed at a right angle towards a level surface (see Fig. 2 and 4). Ensure that there are no objects positioned within the measurement area.



e. The display illumination glows during the measurement. If a button is not pressed within 15 seconds, the illumination extinguishes. After a further 15 seconds, the LCD display switches off by itself. Please press the button **1**, to reactivate the display and the illumination.

#### Add distances together

a. Measure the first distance as described.

b. Press the button +/=, "+" appears and the distance measured carries itself over to the lower line on the LCD display.

c. Measure the next distance. The newly measured distance is shown in the upper line.

d. Once again, press the button +/= , the new measurement is added to the old measurement in the lower line.

e. Repeat steps b to d to add further measurements.

f. When you wish to leave the addition mode, press the button **HP**, all values are erased.

#### 5. ULTRASONIC MEASURING AREAS

a. Slide the function switch  $\underline{\mathbf{K}}$  ( ) to "DISTANCE". The LCD display switches itself on.

b. Press the button The once, "L" (Length) will show on the LCD display.

c. Press the button **u**, to measure the length, the upper line refers to the measured length with "W" (Width) starts to flash.

d. Press the button **u** again to measure the width, the upper line refers to the measured width and with the lower line about the result of the area calculation.

#### Adding areas together

a. Measure an area as described in the section "Measuring areas". b. Press the button (), "M+" appears on the LCD display. The area measured data is being saved.

c. Press the button **T**, you can start the second area measurement.

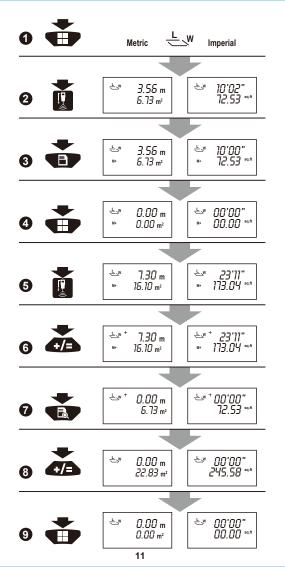
d. Measure the second area.

e. Press the button +/=, "+" appears on the LCD display.

f. Press the button , the lower line shows the result of the first measurement.

g. Press the button +/= again, both two measurements are added together being shown in the lower line.

h. Repeat the steps b to g to add for further measurement values.
i. When you wish to leave the addition mode, press the button , all values are erased.



#### 6. ULTRASONIC MEASURING VOLUMES

a. Slide the function switch **K** (**IIIII**) to "DISTANCE". The LCD display switches itself on.

b. Press the button The twice, "L" (Length) will show on the LCD display.

c. Press the button  $\blacksquare$  , to measure the length, the upper line refers to the measured length with "W" (Width) starts to flash.

d. Press the button 🔽 again , to measure the width, the upper line refers to the measured length with "H" (Height) starts to flash.

e. Press the button again , to measure the height, the upper line refers to the measured height and with the lower line about the result of the volume calculation.

#### Adding volumes together

a. Measure a volume as described in the section "Measuring volumes".

b. Press the button . "M+" appears on the LCD display. The volume measured data is being saved.

c. Press the button , you can start the second volume measurement.

d. Measure the second volume.

e. Press the button +/=, "+" appears on the LCD display.

f. Press the button (), the lower line shows the result of the first measurement.

g. Press the button +/= again, both two measurements are added together being shown in the lower line.

h. Repeat the steps b to g to add for further measurement values.
i. When you wish to leave the addition mode, press the button , all values are erased.

#### TECHNICAL SPECIFICATION

LOCATING CONCEALED OBJECTS					
Detect Mode	Application	Max. Detecting Depth			
STUD	Wood	1 in.(24mm)			
METAL	Metal	3/2 in. (38mm)			
AC WIRE	Live electric power cables	11/8 in. (35mm)			

# LASER MARKING

Class II, maximum power out <1mw

DISTANCE MEASURE			
Measuring distance	2ft-50ft (0.6m – 15m)		
Battery	9V DC, with low battery indicator		
Wavelength	630-670nm		
Optimum operation temperature range	28.4°F to 113°F (-2°C to 45°C)		
Laser class	Class II, maximum power out <1mw		
Auto shut off	30 seconds after last key stroke		
Measurement point	Bottom of the instrument		
Multiple measurements of length, area and volume			
Calculation and storage of measure data			

Operating temperature	32°F to 104°F (0°C to 40°C)
Storage temperature	14°F to 140°F (-10°C to 60°C)
Dimensions (W x H x D)	6.50 x 3.23 x1.77in. (152 x 75 x 45mm)
Net weight (w/o battery)	0.46 lb (207g)

## DISPOSAL

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The batteries must not be disposed with household waste. Care for the environment and take them to the collection points provided in accordance with national or local regulations. The product must not be disposed with household waste. Dispose of the product appropriately in accordance with the national regulations in force in your country. Adhere to the national and country specific regulations.



#### WARRANTY

One-Year Limited Warranty. This product is warranted to the original purchaser from the original purchase date for one year subject to the warranty coverage described herein. Please retain your receipt. This product is warranted to the original user to be free from defects in material and workmanship. If you believe that the product is defective at any time during the specified warranty period, pls contact Prexiso customer service agent by sending email to info@prexiso-eu.com. This warranty does not cover:(1) Part failure due to normal wear or product abuse;(2) Any parts have been altered or modified by anyone other than an authorized Prexiso personnel or failure to install and operate equipment according to the guidelines put forth in the instruction manual.(3)Any products or parts used for rental purposes, damage resulting from shipping (claims must be filed with freighter), accident, abuse, act of God, misuse, or neglect. Prexiso will replace or repair the

defective unit, at its option, subject to verification of the defect.Any implied warranties arising from the sale of a Prexiso product, including but not limited to implied warranties of merchantability and fitness for a particular purpose, are limited to the above. Prexiso shall not be liable for loss of use of the product or other incidental or consequential damages, expenses, or economic loss. This warranty excludes any accessories. This warranty gives you specific legal rights, and you may also have other rights that vary from state.

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#### EC-DECLARATION OF CONFORMITY

Herewith we,

Hangzhou GreatStar Industrial Co., Ltd 35# Jiuhuan Rd, Shangcheng District, Hangzhou, Zhejiang, China

Declare that the following product complies with the appropriate basic safety and health requirements of the EC Directives (see item 4) based on its design and type, as brought into circulation by us.

This declaration relates exclusively to the product in the state in which it was placed on the market, and excludes components which are added and/or operations carried out subsequently by the final user.

1.Product: Multi-function detector 2.Model No.: DV-MD2015L, PD16SL, PD16SN, 3.Serial number: N/A 4.Applicable EC Directives: EMC Directive 2014/30/EU

Used Harmonized Standards: EN 61326-1:2013

5. Responsible for documentation: (Scruffs Workwear Ltd, Boundary Way, Lufton Trading Estate, Yeovil, Somerset, BA22 8HZ, Carol Huang, support@scruffs.com)

 Additional used EC Directives: N/A
Date/place/Name/Authorized signature 2024-5-8/ Hangzhou / Xu Dong Ling

Xu Dong Ling

8. Title of Signatory: Engineer

Distributed by/Vertrieben von/Distribué par/Distribuito da/Distribución por/Распространяется по:

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