

NexPTG – lacquer coating thickness gauge

Device designed and manufactured in POLAND

USER MANUAL



Supported systems: **Android, iOS**

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CAREFULLY READ THE INSTRUCTION MANUAL BEFORE YOU BEGIN WORKING WITH THE DEVICE!



Failure to follow the instructions contained in this manual may result in a risk to the user's health and damage/destruction of the device.

1. SAFETY OF WORK AND MEASUREMENTS



WARNING!

The product is not a toy and should be kept out of the reach of children. Any other use of the device contrary to its intended use will lead to product damage. **The information in the operating instructions and safety rules must be strictly observed. The manufacturer is not responsible for use of the gauge inconsistent with the above instructions and for damage resulting from this. It is prohibited to interfere with the NexPTG gauge, making modifications or alterations to the device or its components.**

The device should not be shaken during measurements.



DANGER

- Do not expose the device to high humidity or water condensation, this may cause operation that does not comply with the specification or damage the device.
- The device is not waterproof.
- Do not expose the device to caustic substances (acids, esters, alkalis).
- It is prohibited to run the instrument on hot surfaces (>80 °C).
- It is prohibited to open and take apart the device for other purposes except for replacing the battery (photo of the cover).
- Do not leave the device near hot objects (>70 °C), this may result in damage to the housing.
- Do not use the gauge if it is damaged, the housing is removed or internal components are removed .
- Do not leave the device unattended - keep away from children.



Battery replacement



Service



Do not expose to low temperatures



Refer to the instructions



Do not expose to rain



Do not expose to high temperatures



Calibration



Do not expose to snow



Warning



Information



Keep away from children



Disposal/
Environmental Protection



2. GENERAL INFORMATION

2.1 EQUIPMENT SET

NexPTG device

Instruction manual/declaration of conformity (https://www.nexdiag.com/Declaration_of_Conformity)

Alkaline batteries LR6 (AA) – 2 pcs (installed in the device)

Calibration set – two plates:

- ✓ steel 1 pc (blue)
- ✓ aluminum 1 pc (white)¹

2.2 WORKING CHARACTERISTICS

The NexPTG device has been specially designed for measuring the thickness of lacquer coat layers on car bodywork. It is intended for testing steel, galvanized steel and aluminum¹ surfaces. It has the function of automatic identification of the tested substrate. The device performs a lacquer coating analysis and transmits data wirelessly to a dedicated mobile application (installed on an external device), where it is interpreted.

- ✓ Allows examination and comparison of individual car bodywork for the thickness of the lacquer coat.
- ✓ Detects possible interference with the coating in the wider automotive industry (auto detailing / sheet metal works / lacquering / mechanical).
- ✓ Dedicated to appraisers / claims adjusters / employees of the insurance industry for private use

2.3 TECHNICAL SPECIFICATIONS

General characteristics of the device NexPTG

Power consumption	Standby mode: ~ 0.45µA Operating mode: 31mA
Power supply	2x1.5 V LR6 (AA)
Battery life	Operating mode: to 100 h
Wireless communication	Bluetooth 4.0 LE
Battery consumption indicator	Displayed in % age in the lower left corner of the main application menu
Working temperature	From -20°C to +40°C
Storage temperature	From -20°C to +40°C
Temperature of the test surface	<50°C
Automatic device shutdown	After 5 min (in the absence of a wireless connection)
Dimensions of the device	108x50x28mm – Economic, Standard and Advanced model 112x50x28mm – Economic Plus, StandardPlus and Professional model
Weight of the device	57 grams (without battery) – Economic, Standard and Advanced models 58 grams (without battery) – Economic Plus, Standard Plus and Professional models
Size of the report	From 80B to 60kB – text (single measurement) From 400kB to 800kB – graphics and text
Multilingual menu	PL, EN, DE, FR, IT, ES, RU, FA, CZ, HE, NL, NO, TR SA, JP

¹ does not apply to Economic and Economic Plus models

Electrical / measurement specification of the device NexPTG

Measurement method	Magnetic induction / eddy current method (steel, galvanized steel / aluminum ¹)
Thickness scale	μm / mils
Sampling	10 / s
Range of measurement	0 - 1000 μm (0 – 39.37 mils) Economic, Economic Plus, Standard and Standard Plus models 0 - 2200 μm (0 – 86.61 mils) Advanced model 0 - 2500 μm (0 – 98.43 mils) Professional model
Accuracy of measurement	2% - device accuracy 5% - accuracy of the calibration set
Measurement resolution	10 μm (0.4 mils) Economic, Economic Plus, Standard and Standard Plus models 1 μm (0.04 mils) Advanced and Professional models
Minimum diameter of measurement area	20mm

Minimum system and hardware requirements for the NexPTG mobile application

Android: telephone, tablet	Android 5.0 or higher, Bluetooth with Bluetooth Low Energy support
iOS: telephone, tablet	System iOS 11 or higher, iPhone 5s or higher

¹ does not apply to Economic and Economic Plus models

NexPTG Economic

Range of measurement	0 - 1000 μm (0 – 39.37 mils)
Measurement resolution	10 μm (0.4 mils)
Sampling	10/s
Type of probe / Probe ending	Traditional/ Flat
Probe housing	Flat
Curve measurement	No
Measurement memory	Up to 100*
Time of continuous work on alkaline batteries	Up to 100 h
Ambient temperature of the meter's work	From -20 to + 40 °C
Unit of measurement	μm or mils
Recognition of the substrate	Steel, galvanized steel**
Testing of the substrate	Steel, galvanized steel**
Communication with the application	Bluetooth 4.0 LE
Application update	Free
Message indication	Text, graphics, audio
Housing color	Green
Weight without batteries	57 grams
Size/Dimensions	108x50x28mm
Availability on systems	Android, iOS
Supported batteries	2xAA
Measurement modes	Continuous
Test relative to the reference point	No
Automatic shutdown of device during period of inactivity	Yes
Measurement statistics	No
Lacquer coatings Analysis System	Basic
Multilingual menu	Yes (PL,EN,DE,FR,IT,ES,RU,FA,CZ,HE,NL,NO,TR,SA,JP)
Enrichment with new features	No
Suggested measurement points	No
Buyer's guide	No
Export of measurement history	No
Creation of reports	No
API communication	No
Dedicated API (additional paid)	No

* after 100 measurements, the next ones will be saved in the place of the oldest saved results

** recognition of galvanized steel - beta version, recognition in the range of 0-600 μm

NexPTG Economic Plus

Range of measurement	0 - 1000 μm (0 – 39.37 mils)
Measurement resolution	10 μm (0.4 mils)
Sampling	10/s
Type of probe / Probe ending	Movable / Spherical
Probe housing	Profiled
Curve measurement	Yes
Measurement memory	Up to 100*
Time of continuous work on alkaline batteries	Up to 100 h
Ambient temperature of the meter's work	From -20 to + 40 °C
Unit of measurement	μm or mils
Recognition of the substrate	Steel, galvanized steel **
Testing of the substrate	Steel, galvanized steel **
Communication with the application	Bluetooth 4.0 LE
Application update	Free
Message indication	Text, graphics, audio
Housing color	Green
Weight without batteries	58 grams
Size/Dimensions	112x50x28 mm
Availability on systems	Android, iOS
Supported batteries	2xAA
Measurement modes	Continuous
Test relative to the reference point	No
Automatic shutdown of device during period of inactivity	Yes
Measurement statistics	No
Lacquer coatings Analysis System	Basic
Multilingual menu	Yes (PL,EN,DE,FR,IT,ES,RU,FA,CZ,HE,NL,NO,TR,SA,JP)
Enrichment with new features	No
Suggested measurement points	No
Buyer's guide	No
Export of measurement history	No
Creation of reports	No
API communication	No
Dedicated API (additional paid)	No

* after 100 measurements, the next ones will be saved in the place of the oldest saved results

** recognition of galvanized steel - beta version, recognition in the range of 0-600 μm

NexPTG Standard

Range of measurement	0 - 1000 μm (0 – 39.37 mils)
Measurement resolution	10 μm (0.4 mils)
Sampling	10/s
Type of probe / Probe ending	Traditional/ Flat
Probe housing	Flat
Curve measurement	No
Measurement memory	Up to 300*
Time of continuous work on alkaline batteries	Up to 100 h
Ambient temperature of the meter's work	From -20 to + 40 °C
Unit of measurement	μm or mils
Recognition of the substrate	Steel, galvanized steel **, aluminum
Testing of the substrate	Steel, galvanized steel **, aluminum
Communication with the application	Bluetooth 4.0 LE
Application update	Free
Message indication	Text, graphics, audio
Housing color	Grey
Weight without batteries	57 grams
Size/Dimensions	108x50x28mm
Availability on systems	Android, iOS
Supported batteries	2xAA
Measurement modes	Continuous, single
Test relative to the reference point	Yes
Automatic shutdown of device during period of inactivity	Yes
Measurement statistics	Yes
Lacquer coatings Analysis System	Basic
Multilingual menu	Yes (PL,EN,DE,FR,IT,ES,RU,FA,CZ,HE,NL,NO,TR,SA,JP)
Enrichment with new features	No
Suggested measurement points	No
Buyer's guide	No
Export of measurement history	No
Creation of reports	No
API communication	No
Dedicated API (additional paid)	No

* after 300 measurements, the next ones will be saved in the place of the oldest saved results

** recognition of galvanized steel - beta version, recognition in the range of 0-600 μm

NexPTG Standard Plus

Range of measurement	0 - 1000 μm (0 – 39.37 mils)
Measurement resolution	10 μm (0.4 mils)
Sampling	10/s
Type of probe / Probe ending	Movable / Spherical
Probe housing	Profiled
Curve measurement	Yes
Measurement memory	Up to 300*
Time of continuous work on alkaline batteries	Up to 100 h
Ambient temperature of the meter's work	From -20 to + 40 °C
Unit of measurement	μm or mils
Recognition of the substrate	Steel, galvanized steel **, aluminum
Testing of the substrate	Steel, galvanized steel **, aluminum
Communication with the application	Bluetooth 4.0 LE
Application update	Free
Message indication	Text, graphics, audio
Housing color	Grey
Weight without batteries	58 grams
Size/Dimensions	112x50x28mm
Availability on systems	Android, iOS
Supported batteries	2xAA
Measurement modes	Continuous, single
Test relative to the reference point	Yes
Automatic shutdown of device during period of inactivity	Yes
Measurement statistics	Yes
Lacquer coatings Analysis System	Basic
Multilingual menu	Yes (PL,EN,DE,FR,IT,ES,RU,FA,CZ,HE,NL,NO,TR,SA,JP)
Enrichment with new features	No
Suggested measurement points	No
Buyer's guide	No
Export of measurement history	No
Creation of reports	No
API communication	No
Dedicated API (additional paid)	No

* after 300 measurements, the next ones will be saved in the place of the oldest saved results

** recognition of galvanized steel - beta version, recognition in the range of 0-600 μm

NexPTG Advanced

Range of measurement	0 - 2200 μm (0 – 86.61 mils)
Measurement resolution	1 μm (0.04 mils)
Sampling	10/s
Type of probe / Probe ending	Traditional/ Flat
Probe housing	Flat
Curve measurement	No
Measurement memory	Up to 2000*
Time of continuous work on alkaline batteries	Up to 100 h
Ambient temperature of the meter's work	From -20 to + 40 °C
Unit of measurement	μm lub mils
Recognition of the substrate	Steel, galvanized steel **, aluminum
Testing of the substrate	Steel, galvanized steel **, aluminum
Communication with the application	Bluetooth 4.0 LE
Application update	Free
Message indication	Text, graphics, audio
Housing color	Black
Weight without batteries	57 grams
Size/Dimensions	108x50x28mm
Availability on systems	Android, iOS
Supported batteries	2xAA
Measurement modes	Continuous, single
Test relative to the reference point	Yes
Automatic shutdown of device during period of inactivity	Yes
Measurement statistics	Yes
Lacquer coatings Analysis System	Expanded
Multilingual menu	Yes (PL,EN,DE,FR,IT,ES,RU,FA,CZ,HE,NL,NO,TR,SA,JP)
Enrichment with new features	Yes
Suggested measurement points	Yes
Buyer's guide	Yes
Export of measurement history	Yes
Creation of reports	Yes
API communication	No
Dedicated API (additional paid)	No

* after 2000 measurements, the next ones will be saved in the place of the oldest saved results

** recognition of galvanized steel - beta version, recognition in the range of 0-600 μm

NexPTG Professional

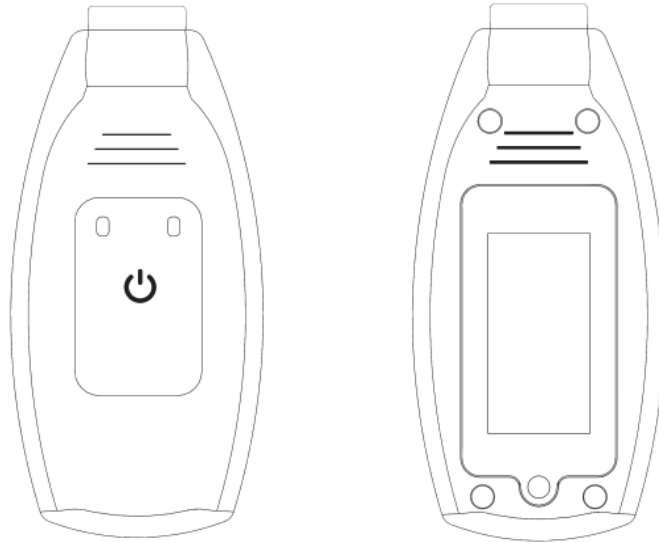
Range of measurement	0 - 2500 μm (0 – 98.43 mils)
Measurement resolution	1 μm (0.04 mils)
Sampling	10/s
Type of probe / Probe ending	Movable / Spherical
Probe housing	Profiled
Curve measurement	Yes
Measurement memory	Up to 4000*
Time of continuous work on alkaline batteries	Up to 100 h
Ambient temperature of the meter's work	From -20 to + 40 °C
Unit of measurement	μm lub mils
Recognition of the substrate	Steel, galvanized steel **, aluminum
Testing of the substrate	Steel, galvanized steel **, aluminum
Communication with the application	Bluetooth 4.0 LE
Application update	Free
Message indication	Text, graphics, audio
Housing color	Blue
Weight without batteries	58 grams
Size/Dimensions	112x50x28mm
Availability on systems	Android, iOS
Supported batteries	2xAA
Measurement modes	Continuous, single
Test relative to the reference point	Yes
Automatic shutdown of device during period of inactivity	Yes
Measurement statistics	Yes
Lacquer coatings Analysis System	Expanded
Multilingual menu	Yes (PL,EN,DE,FR,IT,ES,RU,FA,CZ,HE,NL,NO,TR,SA,JP)
Enrichment with new features	Yes
Suggested measurement points	Yes
Buyer's guide	Yes
Export of measurement history	Yes
Creation of reports	Yes
API communication	Yes
Dedicated API (additional paid)	Yes

* after 4000 measurements, the next ones will be saved in the place of the oldest saved results


** recognition of galvanized steel - beta version, recognition in the range of 0-800 μm

2.4 CONSTRUCTION OF THE DEVICE

The gauge consists of two panels: the front panel (with diodes indicating power supply and connection, and a multifunction key – switch on, switch off, save measurement) and the rear panel with the battery cover. The electronics assembly is terminated with a probe with a measuring sensor.



3. OPERATION OF THE NexPTG GAUGE

Turn the device on or off by **pressing the  button and holding it down for 3 seconds**, until the red diode on the front panel lights up. Pressing this button once briefly saves the measurement in the application.

The NexPTG application can be downloaded from: **Google Play and App Store.**

3.1 FIRST START-UP



In order to start the NexPTG gauge the button **③ should be held down for three seconds** until the power diode lights up on the panel **②**. Next, start the NexPTG application on the mobile device (external). Correct communication will be signaled by the lighting up of the blue diode **①**.

WARNING: The first start of the gauge requires access to the Internet.


If there is no communication, the device (telephone, tablet, smartphone) should be restarted and the NexPTG mobile application should be restarted.



3.2 CALIBRATION OF THE GAUGE

The gauge is calibrated at the factory. Calibration is performed after prolonged non-use of the gauge. Both devices should communicate with each other via a wireless connection. Correct communication is signaled by switching on the blue diode. We carry out calibration after starting the NexPTG gauge and application. The red diode indicates that the device is properly turned on.

Spread the calibration plates from the kit on a hard, stable and flat surface with color upwards (steel - blue and aluminum¹ - white). When calibrating the gauge, the plates should lie on a non-metallic surface, so as not to disturb the calibration process and should be clean. Do not hold the plates in your hands during calibration. The gauge should be pressed against the plates so that the probe adheres firmly with its entire surface. The device must not stand on them loosely.

In the main menu of the NexPTG application, find the calibration icon  and clicking on it follow the messages that appear. The calibration process consists of two steps:

- 1 To calibrate, apply the gauge to the supplied steel plate, colored blue.
NOTE: the gauge should be placed in the center of the calibration plate
- 2 Next, apply the gauge to the supplied aluminum plate, colored white.¹
NOTE: the gauge should be placed in the center of the calibration plate.

Its correct implementation should end with a text message with the text "**Calibration completed successfully**". A correctly calibrated gauge should indicate **90 µm / 3,56 mils** plates (accuracy according to the table).

If this is not the case, start the device and application again or contact the distributor.

3.3 PERFORMING MEASUREMENTS

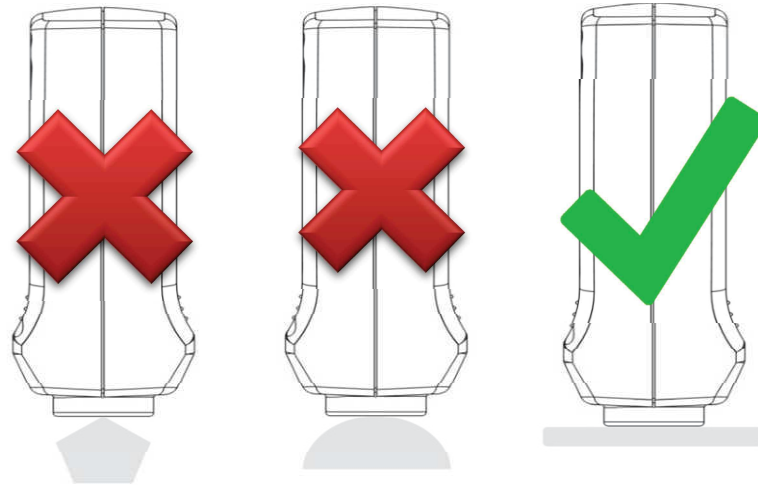
FOR NEXPTG ECONOMIC, NEXPTG STANDARD AND NEXPTG ADVANCED METERS

Before starting measurement, make sure that:

- ✓ all radios are switched off (radio, CB radio). If there is a CB antenna on the vehicle – remove it from the car for the duration of the measurement;
- ✓ there are no devices nearby that generate strong electromagnetic radiation and there is no close presence of static electric charges, as they may cause erroneous measurements;
- ✓ no measurement is made in conditions such as: significant presence of dust, sediments, air bubbles, high moisture, high humidity, rain, snow;
- ✓ the tested surface is clean.

The device is designed to test magnetic metal (**steel, galvanized steel**) and non-magnetic (**aluminum**)¹ surfaces of car bodywork. The types of surface tested are detected automatically. Attention should be paid to the correct use of the device so that the probe does not slip or move from the test surface. It should be applied so that it adheres firmly to the bodywork of the tested vehicle with all its diameter (20 mm) (see below).

¹ does not apply to Economic and Economic Plus models



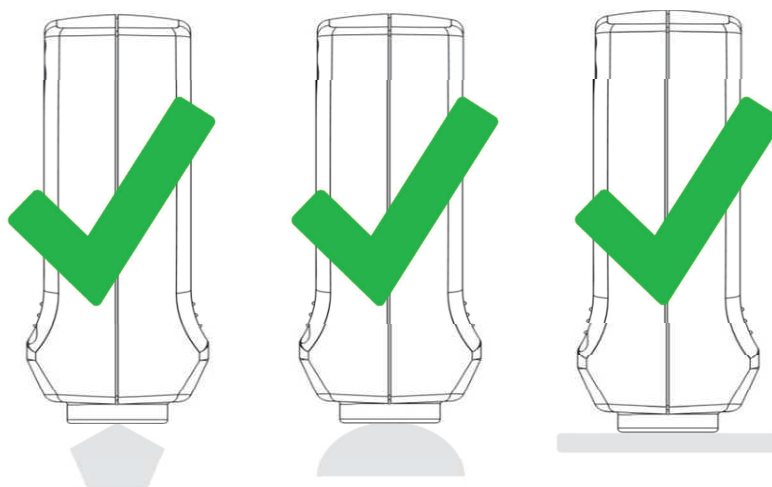
Then wait for the measured value to appear on the screen of the external device.

FOR NEXPTG ECONOMIC PLUS, NEXPTG STANDARD PLUS AND NEXPTG PROFESSIONAL METERS

Before starting measurement, make sure that:

- ✓ all radios are switched off (radio, CB radio). If there is a CB antenna on the vehicle – remove it from the car for the duration of the measurement;
- ✓ there are no devices nearby that generate strong electromagnetic radiation and there is no close presence of static electric charges, as they may cause erroneous measurements;
- ✓ no measurement is made in conditions such as: presence of dust, sediments, air bubbles, high moisture, high humidity, rain, snow;
- ✓ the tested surface is not dirty.

The device is designed to test magnetic metal (**steel, galvanized steel**) and non-magnetic (**aluminum**)¹ surfaces of car bodywork. The types of surface tested are detected automatically. Attention should be paid to the correct use of the device (see below).



Then wait for the measured value to appear on the screen of the external device.

¹ does not apply to Economic and Economic Plus models

3.4 OPERATION OF THE NexPTG APPLICATION

The application has been designed and written specifically for the NexPTG gauge and is an inseparable part of it that allows the proper functioning of the device. The measurements are displayed in the main application view and the MEASUREMENT tab.

SETTINGS → **measurement mode** → **unit of measure** → **other functions**

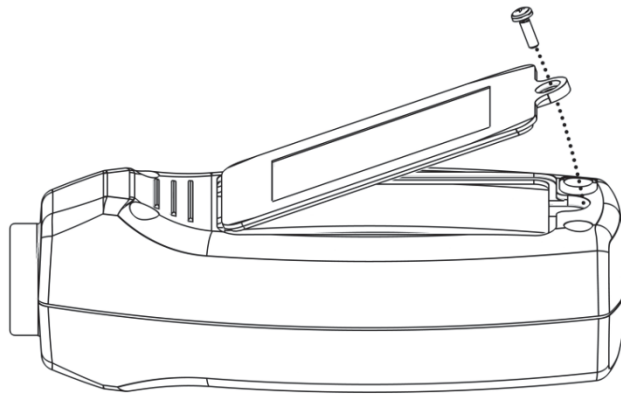
The full NexPTG application manual is available on the manufacturer's website at www.nexdiag.com and in the main application menu in the HELP tab. *All copyrights and licenses relating to the NexPTG application are the property of the manufacturer. It is prohibited to use the application in any other way than the author has assumed.*

4. MAINTENANCE

It is recommended to periodically clean the device with a cloth. Remember to keep the probe clean. Its soiling can cause differences in measurements.

4.1 BATTERY REPLACEMENT

To replace the battery, unscrew the screw that secures the battery cover to the housing, raise it as shown in the picture below. Then replace the batteries with new ones and screw on the cover.



The gauge is powered with 1.5 V LR6 (AA) alkaline batteries – 2 pcs. The low battery indicator displayed on the screen of the mobile device (external) indicates the need to replace the batteries with new ones. Their discharge status is displayed as a percentage in the lower left corner of the main menu of the NexPTG application.



IMPORTANT!

- Pay attention to the polarity of the battery.
- Incorrect operation of the gauge may be caused by battery depletion.
- Alkaline batteries should be used.

5. SERVICE

Repairs to the device are carried out only by qualified personnel at the manufacturer's premises.



Contact details:

Nexdiag Ltd., 1 Przy Torze St., 35-205 Rzeszow, NIP PL 5170378987

The manufacturer is obliged to repair a faulty device under warranty or replace it with one free from defects within 14 days. The gauge may not be qualified for the service procedure. The manufacturer may refrain from replacing or repairing a damaged device if the conditions contained in the above instructions in sections 1, 2 and 6 are broken.

NOTE! Use according to the purpose! The manufacturer is not responsible for situations arising from the use of the gauge inconsistent

6. WARRANTY

The manufacturer provides a **24-month warranty** for the device. The warranty ensures that the product remains free from material defects and manufacturing defects for a period of 24 months from the date of purchase, subject to the following conditions:

1. The warranty does not cover mechanical damage resulting from operations or events beyond the normal use of the NexPTG gauge. (see point 2)
2. Any attempt by the User to repair the device releases the Manufacturer from the warranty.
3. All mechanical damage (spills, moisture, cracks, breakage, scratches, etc.) may also constitute grounds for release of the Manufacturer from the warranty.
4. Other external interference in the device releases the Manufacturer from the warranty.
5. The warranty period is extended by the time from the date of acceptance of the gauge to the service until the date of its release to the User.
6. Time to repair – 14 days.

NOTE! After the warranty period for the NexPTG device has elapsed, it is possible to take advantage of the post-warranty service provided by the manufacturer.

7. ENVIRONMENTAL PROTECTION

The sign on the product or in the texts referring to it indicates that the product should not be disposed of with other household waste at the end of its useful life. To avoid harmful effects on the environment and human health due to uncontrolled waste disposal, please separate the product from other types of waste and responsibly recycle to promote the re-use of material resources as a permanent practice.



For information on the place and method of environmentally safe recycling of this product, domestic users should contact the retail outlet where they purchased it or their local authority. Business users should contact their supplier and check the terms of the purchase contract. The product should not be disposed of with other commercial wastes.

7.1 DISPOSAL OF THE DEVICE AND BATTERIES



NOTE: do not throw used batteries into unsorted municipal waste! The batteries should be separated from the device. After the end of the useful life of the batteries with which the gauge was equipped they cannot be disposed of together with other household waste. If the batteries are not properly disposed of, hazardous substances may cause a danger to human health and the environment. To protect natural resources and to promote the re-use of materials, separate the batteries from other types of waste and dispose of them through a local, free battery return system. The batteries should be disposed of in accordance with the rules for the disposal of hazardous electronic waste.

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