# HANDHELD DIGITAL REFRACTOMETER UREA / ADBLUE

## PCE-DRU 1




- **fast and precise results**
- **large LCD (reading and temperature)**
- **waterproof ABS housing IP 65**
- **automatic temperature compensation**
- **small amount of sample**
- **simple calibration with distilled water**
- **stainless steel sample tray with glass prism**
- **easy operation with three buttons**
- **battery control system**
- **automatic shutdown after 1 min. of no-operation**

Digital AdBlue Refractometer PCE-DRU 1

Information about the AdBlue Refractometer
AdBlue, a mixture of distilled water and synthetic urea (Urea), is used in the automotive industry as a diesel additive. It is used to reduce the nitrogen oxide emissions and to comply with the legally prescribed emission standards. The digital AdBlue refractometer from PCE Instruments has been specially designed to perform a precise analysis of the urea solution. In this way, with the help of the AdBlue refractometer, the user can carry out an uncomplicated quality control, check the urea concentration of the diesel additive AdBlue and determine whether the solution meets the requirements of the automotive industry.
The AdBlue refractometer is a precision measuring instrument that is based on the measurement of the refractive index of a liquid and ensures maximum reliability even under complicated measuring conditions. Even when a small amount of sample is available, the user can measure the urea concentration in a liquid with the help of the AdBlue refractometer. To get a meaningful result, it is sufficient to trickle a few drops of the AdBlue into the stainless steel tray of the device. In the sample tray there is a prism enclosed, and thus, by means of the light refraction, the urea content is measured.

## Specification

| Urea | |
|---|---|
| Measuring range | 0 ... 51 % |
| Resolution | 0,1 % |
| Accuracy | ±0.2 % |
| **Refractive index** | |
| Measuring range | 1,333 ... 1,4056 nD |
| Resolution | 0,0001 nD |
| Accuracy | 0.0003 nD |

| General technical data | |
|---|---|
| Temperature compensation | automatic 10 ... 40 °C |
| Display type | LCD |
| Response time | 1 s |
| Automatic power-off | 1 min |
| Housing | ABS (acrylonitrile-butadiene-styrene copolymers) |
| Sample quantity | 4 ... 5 drops |
| Sample tray | Stainless steel ring with glass prism |
| Menu language | English, English (GB) |
| Protection class (device) | IP65 |
| (Rechargeable) battery | 1 x 1,5 V AAA battery , Alkali-manganese |
| Capacity | 1200 mAh |
| Operating conditions | 10 ... 40 °C , 0 ... 80 % RH |
| Storage conditions | -10 ... 50 °C , 0 ... 80 % RH |
| Dimensions ( L x W x H ) | 125 x 62 x 28 mm |
| Weight | 144 g |