# RAT-2

## RAT-2
## Leak detector for remote monitoring
## of district heating network.
Leak detection by insulation and loop resistance measurements.

| General information: | Leak detection in impulse and resistance networks |
|---|---|
| Application: | District heating |

| Technical specification: Main functions: | Type of measurement | Specification |
|---|---|---|
| | Insulation resistance | 0 - 200 MΩ |
| | Loop resistance | 0 - 100 kΩ |
| | Galvanic voltage | 0 - 2000 mV |
| | Continuous loop control | Triggering of detector by breaking of loop |
| | Control of connection to the pipe | Resistance measurement between supply and return pipe |

| Insulation resistance measurement: | | |
|---|---|---|
| | Test range | 0 - 200 MΩ |
| | Test voltage | 24 V |
| | Test current | max. 100 mA |
| | Accuracy up to 1 MΩ | +/- (2% of m. + 8 digits) |
| | Accuracy over 1 MΩ | +/- (5% of m. + 8 digits) |
| | *Measurement in both polarities* | |

| Loop resistance measurement: | | |
|---|---|---|
| | Test range | 0 - 100 kΩ |
| | Test voltage | 24 V |
| | Test current | max. 100 mA |
| | Accuracy | +/- (2% of m. + 8 digits) |
| | *Measurement in both polarities* | |

| Galvanic voltage: | Test range | 0 - 2000 mV |
| | Accuracy | +/- 5% |

| Communication: | 2g/CAT-M/NB-IoT/LAN/MODBUS (RS485)/MODBUS TCP/IP (LAN)/RELAY |
| Number of channels: | 2 or 4 |
| Power supply: | 12 V DC / 120 - 240 V AC |
| Housing: | IP65 |
| Dimensions: | 200 x 150 x 75 mm |
| Weight: | 0,64 kg |

## Software:
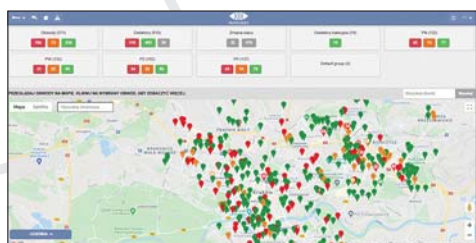


**RATMON** - *web application for remote data aquisition and analysis of test results as well as configuration and operation of detectors.*

**RATMON MOBILE** - *Android and iOS application for reviewing of pipe loops state.*
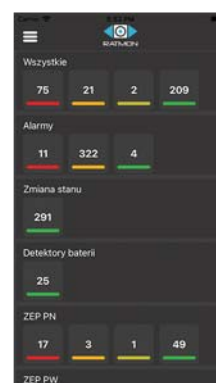
**RAT MANAGER** - *PC software for configuraton and operation of detectors.*

## Scope of delivery:

RAT-2 device with DIN mounting bracket

12 V AC/DC power adapter

GSM antenna (for devices with GSM module)

## Optional accessories:

| DESCRIPTION | INDEX |
| --- | --- |
| Battery module | **BAT-1** |
| External GSM antenna | **ANT-1** |
| Basic connection box, two loops | **BOX-1** |
| Constant impedance connection box, one loop | **BOX-3** |
| Five-core wire connetion box, two loops | **BOX-4** |
| BNC/UHF connection box, two loops | **BOX-5** |
| Hermetic power adapter | **ZH-1** |
| Grounding bracket | **GND-1** |
| External cabinet with NEMA certificate | **SK-1** |