



Professional and compact infrared (IR) thermometers are a solution for problems in every area where specific thermal conditions are required.

The intuitive one-hand operation of the devices and the ergonomically designed gun-type housing allow for trouble-free daily work.



DIT-500



DIT-130

Easy way to quick and accurate temperature measurements

Features

- **Precise non-contact temperature measurement.**
- Type K temperature measurement.
- Ergonomic gun-type housing.
- Resolution 0.1°F (0.1°C).
- Emissivity digitally adjustable from 0.10 to 1.00.
- °C/°F switch.
- Automatic range selection.
- High and low alarm.
- DATA HOLD function for holding measured values.
- Temperature display maximum, minimum, average and difference.
- Trigger lock.
- AUTO-OFF function.
- Backlit LCD.

Special features

DIT-500

- Rapid reaction to temperature changes (below 150 ms).
- Double laser sight (determination of the measurement area).
- Data memory (LOG) for 100 measurements.
- Transmission of current readings to computer via USB cable.
- Backlit display for easy readings even in dark areas.
- Hi and Lo alarms for signalling exceeding the set limits of the measuring range.

DIT-130

- Data memory (LOG) for 20 measurements.
- Hi and Lo alarms for signalling exceeding the set limits of the measuring range.
- A specially designed holster for storing the equipment with the possibility of attaching it to the belt in standard.
- Backlit display for easy readings even in dark areas.



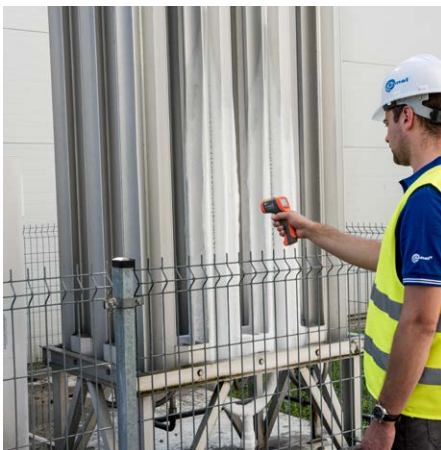
HVACR areas



Electrical areas



Mechanical areas



Industry areas



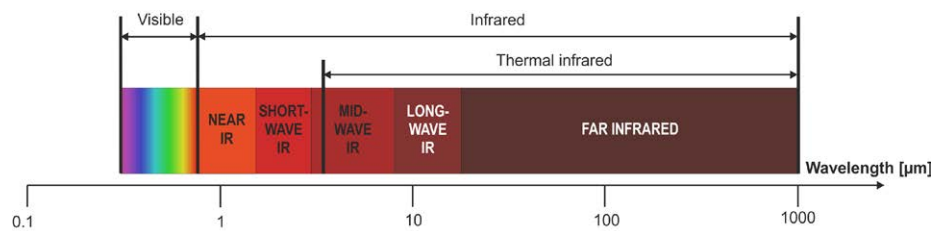
Holster included (DIT-130 only)

Infrared measurements

Infrared temperature meters are used to determine the surface temperature of the tested object. The optical system of the instrument detects the radiation that is emitted, reflected and transmitted, then gathers them and focuses it in the detector. The electronic system converts the optical data into a temperature value. To increase the precision of measurement and facilitate targeting, the device is equipped with a laser pointer.

Infrared radiation

Infrared radiation is generated by the movement of electrons inside the atoms of a given material. It is electromagnetic radiation with a wavelength in the range of 780 nm...1 mm. It is emitted by any material with temperature above 0°K (-273.15°C). The emission increases with increasing temperature, whereas the wavelength decreases.



Emissivity factor

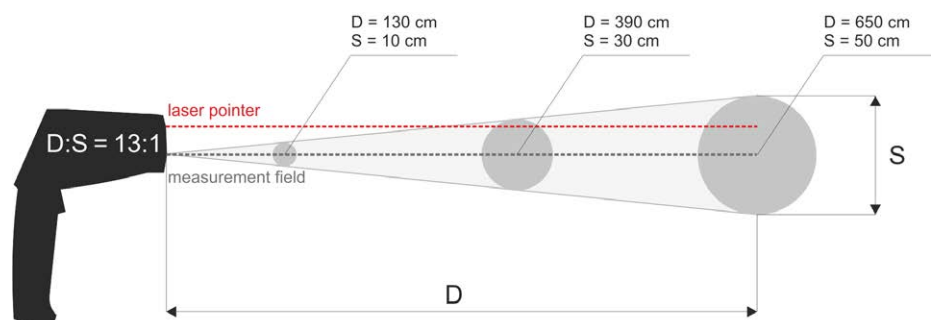
It is a parameter that determines the ability of a material to emit infrared radiation. Its values are in the range 0...1.

- A value equal to 1 is the emissivity of a black body that absorbs all radiation.
- A value equal to 0 is the emissivity of a white body (reflecting 100% of radiation).

Each object has its own emissivity factor, depending on the type of material, surface roughness, viewing angle, wavelength and temperature.

The D:S ratio

The D:S ratio (distance to spot) determines the relationship between **the distance of the pyrometer** from the tested object and **the diameter of its circular field of view**, from where it collects the radiation. The tested area becomes larger as the meter moves away from it, i.e. the share of the tested object's area in this field decreases. Hence, the smaller is the measured target, the smaller should be the distance to it. Therefore, the D:S ratio has a significant influence on the accuracy and precision of the temperature reading.



DIT-500 | Infrared temperature range

| Infrared temperature range | D:S | Resolution | Infrared temperature range | Accuracy ±(% m.v. + digits) |
|----------------------------|------|------------|----------------------------|--------------------------------|
| -50.0...+999.9°C | 50:1 | 0.1°C | -50...+20°C | ±2.5°C |
| -58.0...999.9°F | | 0.1°F | -58...+68°F | ±4.5°F |
| 1000...1600°C | | 1°C | 20...400°C | ±(1.0% m.v. + 1°C) |
| 1000...2912°F | | 1°F | 68...752°F | ±(1.0% m.v. + 1.8°F) |
| | | | 400...800°C | ±(1.5% m.v. + 2°C) |
| | | | 752...1472°F | ±(1.5% m.v. + 3.6°F) |
| | | | 800...1600°C | ±2.5% m.v. |
| | | | 1472...2912°F | |

DIT-130 | Infrared temperature range

| Infrared temperature range | D:S | Resolution | Infrared temperature range | Accuracy ±(% m.v. + digits) |
|--------------------------------------|------|----------------|----------------------------|--------------------------------|
| -32.0...+380.0°C -25.6...+716.0°F | 13:1 | 0.1°C 0.1°F | -32...-20°C | ±5°C |
| | | | -25.6...-4°F | ±9°F |
| | | | -20...+200°C | ±(1.5% m.v. + 2°C) |
| | | | -4...+392°F | ±(1.5% m.v. + 3.6°F) |
| | | | 200...380°C | ±(2.0% m.v. + 2°C) |
| | | | 392...716°F | ±(2.0% m.v. + 3.6°F) |

Temperature range for K probe

| Range | Resolution | Accuracy ±(% m.v. + digits) |
|------------------|------------|--------------------------------|
| -50.0...+999.9°C | 0.1°C | ±(1.5% m.v. + 3°C) |
| -58.0...+999.9°F | 0.1°F | ±(1.5% m.v. + 5°F) |
| 1000...1370°C | 1°C | ±(1.5% m.v. + 2°C) |
| 1000...2498°F | 1°F | ±(1.5% m.v. + 3.6°F) |

Technical specification

| | DIT-500 | DIT-130 |
|------------------------------|---|---|
| LCD display | segmented, with backlight | |
| Spectral sensitivity | 8~14 μm | |
| Emissivity | digitally adjust from 0.10 to 1.00 | |
| Semi-conductor laser diode | output power | <1 mW |
| | wavelength | 630~670 nm |
| | class | class 2 (II) laser |
| Power supply | 9 V alkaline battery NEDA 1604A or IEC 6LR61 | |
| Operating temperature range | 0...50°C | |
| Storage temperature | -20...+60°C | |
| Humidity | 10...90% | |
| Indication of range overflow | the display will read the symbol "----" | the display will read symbols "-0L", "0L" |
| Response time | 150 ms | under 1 second |
| Weight | 350 g | 290 g |
| Dimensions | 230 x 155 x 54 mm | 190 x 111 x 48 mm |

Standard accessories



carrying case
only for DIT-500



mini-USB data
transmission cable
only for DIT-500

WAPRZUSBMNIB5



mini tripod (1/4")
only for DIT-500

WAPOZSTATYW



K-type tempera-
ture probe

WASONTEMK

Optional accessories



K-type temperature
probe (bayonet)

WASONTEMP



Sonda do pomiaru
temperatury
typu K (metalowa)

WASONTEMK2



M-13 carrying case
only for DIT-500

WAFUTM13



S-1 carrying case
only for DIT-130

WAFUTS1

Abbreviation „D:S” used in the specification of measurement means a distance-to-spot ratio.
Abbreviation „m.v.” used in the specification of measurement means a measured value.