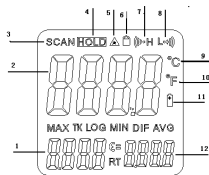
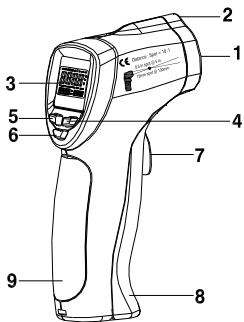




**Bedienungsanleitung
Users' Manual
Mode d'emploi**

**IR-Thermometer
Pocket Thermomètre digital
FIRT 800-Pocket**





FRONT PANEL

- 1) IR-Sensor
- 2) Laser pointer
- 3) LCD display
- 4) ▼ button / illumination
- 5) ▲ button / laser pointer
- 6) MODE button
- 7) Measuring trigger
- 8) Battery compartment cover
- 9) Handle

DISPLAY

- 1) MAX/MIN indication
- 2) Measured temperature
- 3) SCAN icon = measuring mode
- 4) HOLD icon
- 5) Icon „Laser on“
- 6) LOCK icon
- 7) Icon High alarm
- 8) Icon Low alarm
- 9) °C icon
- 10) °F icon
- 11) Battery status indication
- 12) Emissivity

KEYPAD

- 10) ▼ button (for EMS, HAL, LAL)
- 11) MODE button (for menu navigation)
- 12) ▲ button (for EMS, HAL, LAL)

INTENDED USE OF INSTRUMENT

IR-Thermometer FIRT 800-Pocket is suitable for non-contact measurements with laser dot. Quick measurements of surfaces that are difficult to reach, that are moving or rotating, that are electrified or that are hot. The energy reflected from the surface measured is transferred into a temperature reading.

The instrument is not suitable for measuring surface temperature of shiny or polished surfaces (see **emissivity**). The instrument cannot measure through glass or other transparent materials. It will measure the temperature of the glass instead. Steam, dust and smoke can prevent from exact measurement as they would obstruct the instrument's optic.

APPLICATION

Food industry safety and fire inspectors, moulding industry, road building, screen printing, dryer temperature, fleet maintenance.

SUPPLIED WITH

Infrared-Thermometer FIRT 800-Pocket, battery, case, manual.

FEATURES

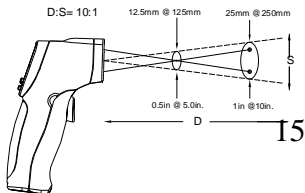
- Fast temperature detection
- Precise non-contact measurements
- Dual laser sighting
- Automatic HOLD function
- °C / F° switch
- Emissivity adjustable from 0,10 to 1,00
- Display of minimum / maximum value
- LCD display with illumination

- Selection of high / low alarm
- Permanent measurements

TECHNICAL DATA

Distance : Spot Size (D:S)	10 : 1
Measuring range	-35°C - +800°C
Icon "Out of measuring range"	"—"
Temperature display	(-) Minus () Plus
Resolution display	0,1°C
Accuracy targets	+18 °C to + 28°C
	80 % RH
	± 2,5°C
	± 1,0 %
	± 1,5 %
Response time	0,3 sec
Spectral response	8-14 µm
Emissivity adjustable	0,10 to 1,0
Laser diode	< 1mW
Wave length	630 – 670 nm
Laser class	2
Operating temperature	0°C to + 50°C
Storage temperature	-10°C to -60°C
Rel. humidity operation	10 % to 90 %
Rel. humidity storage	< 80 %
Power supply	9V battery
Dimensions	160 x 42 x 82 mm
Automatic power off	7 sec
Weight	176 g

Distance (D) : Spot Size (S)



The distance:spot ratio is important for evaluation of the area measured. The larger the distance from the object the larger the area measured. Switch on the laser pointer for increasing target accuracy.

Note:

The target must be larger than the instrument's spot size. The smaller the target the shorter the distance should be.

OPERATION

Switch instrument on/off

Pull the measuring trigger to switch instrument on. After 7 seconds it automatically switches off if no other key has been used. There is no special key to switch off the instrument.

Carrying out measurements

Hold the instrument by its handle and point towards the area to be measured. Pull and hold the trigger to turn the instrument on and carry out measuring process. Release the trigger and HOLD will be displayed indicating that reading is held for about 7 seconds. If no other button is used instrument will automatically switch off after 7 seconds.

Laser pointer

For exact targeting the area to be measured switch on laser pointer with ▲ button during HOLD mode. The laser icon will be displayed. Please take care to the explanations given regarding **Distance: Spot-Ratio**.

Illumination

In bad light conditions the illumination can be switched on with ▼ button during HOLD mode.

Emissivity

The emissivity is a term used to describe the energy-emitting characteristics of a material. Most (90 % of typical applications) organic materials and painted or oxidized surfaces have an emissivity of ,95 (pre-set in the unit). Inaccurate reading will result from measuring shiny or polished metal surfaces. To compensate, cover the surface to be measured with masking tape. Press MODE button (5) and „E“ starts blinking. The required emissivity can be set with ▼ / ▲ buttons.

EMISSIVITY VALUES

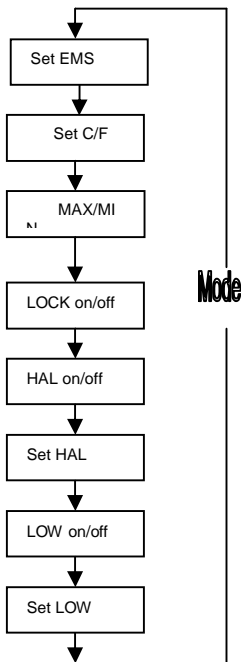
<u>Material</u>	<u>Emissivity-</u>	<u>Material</u>	<u>Emissivity</u>
Asphalt	0,90 – 0,98	Cloth (black)	0,98
Concrete	0,94	Human skin	0,98
Cement	0,96	Lather	0,75 – 0,80
Sand	0,90	Charcoal	0,96
Earth	0,92 – 0,96	Lacquer	0,80 – 0,95
Water	0,92 – 0,96	Lacquer	0,97
Ice	0,96 – 0,98	Rubber (black)	0,94
Snow	0,83	Plastic	0,85 – 0,95
Glass	0,90 – 0,94	Timber	0,90
ceramic	0,90 – 0,94	Paper	0,70 – 0,94
Marble	0,94	Chromium ox.	0,81
Plaster	0,80 – 0,90	Copper ox.	0,78
Mortar	0,89 – 0,91	Iron ox.	0,78 – 0,82
Brick	0,93 – 0,96	Textiles	0,90

Note:

In case of large fluctuation of temperature (if instrument has been stored in cold area and is to be used in warm area – or the other way round) wait some minutes before carrying out measurements.

MODE BUTTON

Menu navigation with the MODE button:



Press MODE button 1 x

Set emissivity with ▼/ ▲ buttons.

Press MODE button 2 x

Set temperature units with °C / °F with ▼/ ▲ buttons.

Press MODE button 3 x

Set minimum or maximum values with ▼/ ▲ buttons [(indication: small number displayed (1))].

Press MODE button 4 x

Switch LOCK on/off with ▼/ ▲ buttons. If LOCK is switched on a permanent measurement will be carried out. Pull trigger to switch LOCK off.

Press MODE button 5 x


Enter high alarm mode with ▼/ ▲ buttons. Press MODE again to set values.

Press MODE button 7 x

Enter low alarm mode with ▼/ ▲ buttons. Press MMODE again to set values.

CARE AND CLEANING

CHANGE OF BATTERY

If symbol  is displayed battery must be replaced. Open battery cover, take off exhausted battery, put in new 9V battery (take care to polarity) and close battery cover.



Clean with soft cloth only. Do not use detergents.

SAFETY INSTRUCTIONS

- Please follow up instructions given in operators' manual.
- Carefully read users' manual before operation.
- Do not stare into laser beam. Laser beam can lead to eye injury. A direct look into the beam (even from greater distance) can cause damage to your eyes.
- Do not aim laser beam at animals or persons.
- Laser plane should be set up above eye level of persons.
- Do not open instrument housing. Repairs should be carried out by authorized workshops only. Please contact your local dealer.
- Use the instrument for measuring surface temperature only.
- Do not remove warning labels or safety instructions.
- Keep instrument away from children.

- Do not use instrument in explosive environment.
- It cannot be completely excluded that this instrument will disturb other instruments or will be disturbed by other instruments.

WARRANTY

- This product is warranted by the manufacturer to the original purchaser to be free from defects in material and workmanship under normal use for a period of two (2) years from the date of purchase.
- During the warranty period, and upon proof of purchase, the product will be repaired or replaced (with the same or similar model at manufacturers option), without charge for either parts or labour.
- In case of a defect please contact the dealer where you originally purchased this product.
- The warranty will not apply to this product if it has been misused, abused or altered.
- Without limiting the foregoing, leakage of the battery, bending or dropping the unit are presumed to be defects resulting from misuse or abuse.

EXCEPTIONS FROM RESPONSIBILITY

- The user of this product is expected to follow the instructions given in operators' manual. Although all instruments left our warehouse in perfect condition and adjustment the user is expected to carry out periodic checks of the product's accuracy and general performance.
- The manufacturer, or its representatives, assumes no responsibility of results of a faulty or intentional usage or misuse

including any direct, indirect, consequential damage, and loss of profits.

- The manufacturer, or its representatives, assumes no responsibility for consequential damage, and loss of profits by any disaster (earthquake, storm, flood etc.), fire, accident, or an act of a third party and/or a usage in other than usual conditions.
- The manufacturer, or its representatives, assumes no responsibility for any damage, and loss of profits due to a change of data, loss of data and interruption of business etc., caused by using the product or an unusable product.
- The manufacturer, or its representatives, assumes no responsibility for any damage, and loss of profits caused by usage other than explained in the users' manual.
- The manufacturer, or its representatives, assumes no responsibility for damage caused by wrong movement or action due to connecting with other products.