

Figure 1. Replacement of battery

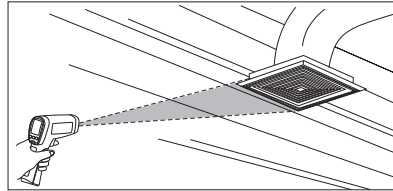


Figure 2. Locating Hot or Cold Spot

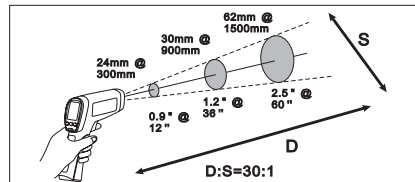


Figure 3. Distance and Spot Size

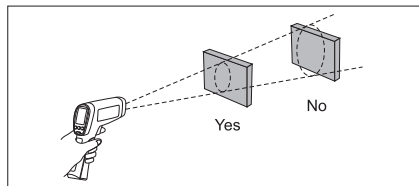


Figure 4. Field of View

Surface Emissivity

Measure Surface	Switch Setting
METALS	
Aluminum	
Oxidized	0.2-0.4
Alloy A3003	
Oxidized	0.3
Roughened	0.1-0.3
Brass	
Burnished	0.3
Oxidized	0.5
Copper	
Oxidized	0.4-0.8
Electrical Terminal Blocks	0.6
Haynes	
Alloy	0.3-0.8
Inconel	
Oxidized	0.7-0.95
Sandblasted	0.3-0.6
Electropolished	0.15

Measure Surface	Switch Setting
METALS	
Iron Cast	
Oxidized	0.6-0.95
Unoxidized	0.2
Molten	0.2-0.3
Iron Wrought	
Dull	0.9
Lead	
Rough	0.4
Oxidized	0.2-0.6
Molybdenum	
Oxidized	0.2-0.6
Nickel	
Oxidized	0.2-0.5
Platinum	
Black	0.9
Steel	
Cold-Rolled	0.7-0.9

Measure Surface	Switch Setting
METALS	
Iron	
Oxidized	0.5-0.9
Rusted	0.5-0.7
NON-METALS	
Asbestos	0.95
Asphalt	0.95
Basalt	0.7
Carbon	
Unoxidized	0.8-0.9
Graphite	0.7-0.8
Carborundum	0.9
Ceramic	0.95
Clay	0.95
Concrete	0.95
Cloth	0.95

Measure Surface	Switch Setting
METALS	
Ground Sheet	0.4-0.6
Polished Sheet	0.1
Zinc	
Oxidized	0.1
NON-METALS	
Glass	
Plate	0.85
Gravel	0.95
Gypsum	0.8-0.95
Ice	0.98
Limestone	0.98
Paper (any colour)	0.95
Plastic	
Opaque	0.95
Soil	0.9-0.98
Water	0.93
Wood, (natural)	0.9-0.95

English.....	2
Svenska.....	3
Norsk.....	4
Dansk.....	5
Suomi.....	6
Deutsch.....	7
Netherlands.....	9
Français.....	10
Italiano.....	11
Español.....	12
Português.....	13
Ελληνικά.....	14
Polski.....	15
Eesti.....	17
Lietuviškai.....	18
Latviski.....	20
Русский.....	21

Manual IR Thermometer Limit 92 and 93

General information

Non contact IR thermometer for measuring temperature on most kind of surfaces. Quick response time and high accuracy. Laser sight shows centre of spot area. Registration of max-min-difference-average value. Adjustable emissivity. Scanning function for continuous measuring. Thread 1/4" for assembling on camera tripod. Automatic off after 8 seconds. Display backlight. Switchable between °C and °F. Warning of low battery capacity.

<u>Specification</u>	92	93
Temperature range	-18...550 °C	-32...1050 °C
Spot area : Distance	1 : 12	1 : 30
Resolution		0,1 °C
Accuracy		± 1,8 °C eller ± 1,8%
Repeatability		± 0,5 °C eller ± 0,5%
Emissivity		Adjustable 0.1-100%
Operation temp.		0...50°C
Storage temp.		-20...65°C
Battery type		9V 6F22

Safety information

Laser warning. Do not point laser beam at eye.

This instrument complies with standards

EN61326-1 Electrical equipment for measurement, control and laboratory use.

EN60825-1 Safety

IEC61000-4-2 Electrostatic discharge immunity test

IEC61000-4-3 Radio frequency, electromagnetic field immunity test

IEC61000-4-8 Power frequency magneticfield immunity test.

Display

MODE Toggle between max-min-differens-average.

SET 1. Adjust emissivity. Adjust with ▼▲ buttons.

2. HOLD or SCANNING. Select with ▼▲ buttons.

Hold position measuring as long the trigger is pushed. Automatic off.

Scanning position is the triggle freezed. Manual Off.

3. Select °C or °F. Select with ▼▲ buttons.

☼ On / Off Display backlight.

✳ On / Off Laser sight.

Operation

Point the unit at the target to be measured. Press the trigger and read the value on the display. Scan is showed on display when trigger is pressed. Hold is showed on the display 8 sec after the trigger is realised. Use the scanning function when locating hot or cold spots or for long time measurement

Be sure the target area is inside the angle of vision of the instrument.

Avoid to measure on bright reflection metallic surfaces which can give incorrect value. See the emissivity table for different materials.

Keep the lens clean and avoid condensation etc on the lens.

Chance to new battery when battery symbol is shown on the display. See fig.