MX™

Raytek MX Series Infrared Thermometer

Noncontact Temperature Measurement

When the job demands precision and accuracy.

Broad temperature range, superior optics and the True Dimension™ double-bright circular laser sighting system make the MX series thermometers the most advanced portable thermometers in the industry. The MX series thermometers featuring True Dimension coaxial laser sighting are the only thermometers designed with precise infrared beam tracking, resulting in more accurate measurement.

TRUE DIMENSION™ PRECISION

FM APPROVED

MX4+NI only

Raytek®

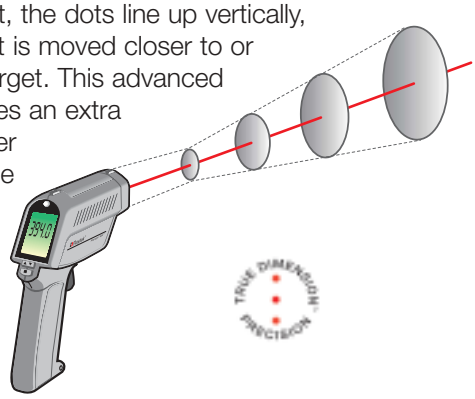
MX4+NI Nonincendive Model

When safety is a concern and data logging and downloading are required, the new Raytek MX4+ Nonincendive (NI) model thermometer is the product to choose. It has the same great features as the standard MX4+ thermometers with the extra confidence of an approval needed for use in hazardous environments. The MX4+NI thermometer, Factory Mutual approved as a Class I, Division 2 nonincendive device, does not release enough electrical or thermal energy to ignite flammable gases or vapors under normal operational and environmental conditions.

FM APPROVED

True Dimension Sighting

True Dimension is a coaxial three-dot laser sighting system indicating the true diameter of a measurement spot (90% energy). The target is highlighted at all distances with a center measurement dot and two accompanying diameter markers. At the focal point, where the measurement spot size is the smallest, the dots line up vertically, rotating as the unit is moved closer to or further from the target. This advanced coaxial system uses an extra bright* 635nm laser (tested to the same safety and power standards as less bright laser sights) to clearly highlight the targeted area.



** perceived to be twice as bright as lasers with the same power by the human eye.*

Advanced Display

- 100 temperature data logging capability
- 30 pre-set common material emissivity values
- Adjustable emissivity values (.01 increments)
- Customized log names, alarms, and emissivity

MX Series Accessories and Options

All models include a user guide and a hardshell carrying case.
The MX4+ and MX4+NI thermometers additionally include:

- **DataTemp MX software**
- **RS232 computer cable**
- **Plug-in power supply (110 or 220 volt)**

(*Power supply and cable not approved by FM for use in hazardous locations*)

- **Thermocouple K probe**

MX2 Options

- Close Focus
- Sub Zero
- NIST Calibration Certification
- Padded Pouch w/Belt Clip

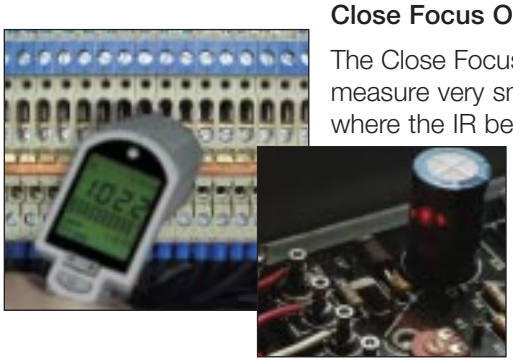
MX4+/MX4+NI Options

- Close Focus*
- Sub Zero*
- NIST Calibration Certification
- Thermistor (NTC probe)
- Portable thermal printer
- Thermal printer paper (5 rolls)
- mV/degree output cable
- Padded Pouch w/Belt Clip

** Not available with MX4+NI*

Sub Zero Option

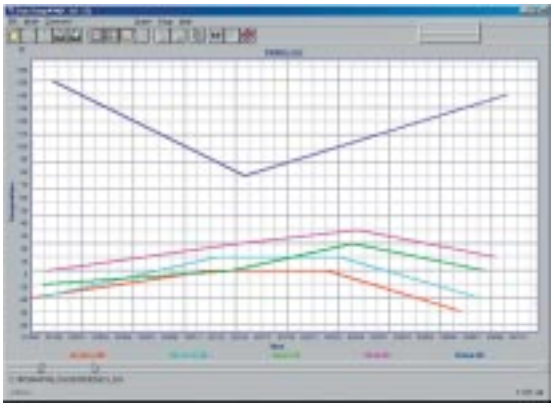
The Sub Zero (SZ) model option is designed for measuring lower temperatures. The SZ model uses an IR sensor specially calibrated to measure freezing temperatures from –50ºC (-58ºF) through 500ºC (932ºF).



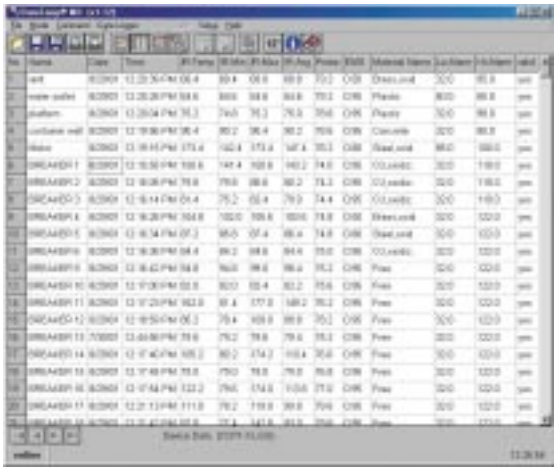
Close Focus Option

The Close Focus (CF) option lets you accurately measure very small areas at the Focus Point– where the IR beam narrows. Paired with the True Dimension coaxial laser sighting system, extremely small objects 6 mm (.24 in) at 300mm (11.4") can be easily measured. Ideal for electrical maintenance and refrigeration trouble-shooting.

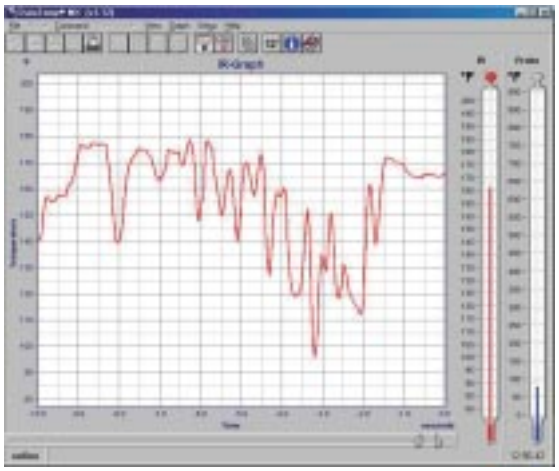
DataTemp® MX Software for Condition Monitoring and Process Control



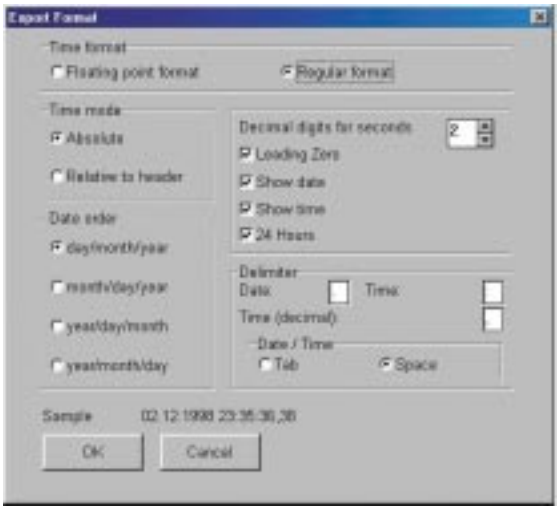
Easily see temperature trends and potential equipment problems by graphing data accumulated with the MX's data logging feature.



The DataTemp MX software makes it easy to error-proof inspection routes by giving names, alarm points and emissivities to locations.



The MX4+ can be used to monitor, graph, and record real-time temperature changes with the DataTemp software.



The DataTemp MX software provides a convenient way to export temperature data files in a format that can be used by programs such as Access®, Excel®, and condition monitoring programs.

Visualize, systematically maintain and analyze temperature data using Windows compatible Raytek DataTemp MX software

Graph

- Visually find and review trends instantly through graphs
- Simultaneously graph results while continuously monitoring temperatures
- Quickly compare temperatures of up to 5 log locations for trends or anomalies
- Display infrared and/or probe temperature trends over time
- View infrared and probe values continuously on thermometer sidebar

Data Log

- Create recognizable names for inspection locations
- Track both infrared and probe temperature trends
- Tailor high/low alarms per individual inspection location
- View min, max, and average infrared and probe temperatures
- Create and customize emissivity tables for each inspection location
- Store up to 10,000 data points in a file

Report View/Print

- Customize report views and printing formats
- Generate time and date-stamp printouts for accurate records
- Export data as text files for integration with Maintenance, Reliability, Operations (MRO) systems and other database programs

Specifications and Features	MX2	MX4+	MX4+NI
Temperature Range	-30°C to 900°C (-25°F to 1600°F)		
Temperature Range with SZ option	-50°C to 500°C (-58°F to 932°F)		—
Accuracy (Assumes ambient operating temperature of 23°C (73°F))	±0.75% of reading or ±1°C (±2°F) whichever is greater		
Repeatability	≤ ±0.5 of reading or ≤ ±1°C (±2°F), whichever is greater		
Response Time	250 mSec (95% of reading)		
Spectral Response	8 to 14µm, thermopile detector		
Adjustable Emissivity* (from 0.1 to 1.0 by 0.01)	✔	✔	✔
Ambient Operating Temp.	0°C to 50°C (32°F to 122°F)		
Relative Humidity	10-90% at 30°C (86°F) non-condensing		
Storage Temperature	-20°C to 50°C (-25°F to 122°F)		
Weight	480g (1 lb. 6 oz.)		
Power	2 AA Batteries	2 AA Batt./AC adapter	2 AA Batt./AC adapter
Power Supply (110 or 220V), PS232 Computer Cable, 1.5 m (60 in), K thermocouple probe	—	✔	✔
Laser Class II	3-dot laser sighting (Meets IEC Class 2 & FDA Class II requirements)		
Single Laser Class III	Option (U.S. only)	—	—
Distance to Spot (D:S)	60:1 (50:1 with Close Focus Option)		60:1
Minimum Measurement Diameter	19mm (0.76") (6mm (0.24") with Close Focus Option)		19mm (0.76")
Maximum and Minimum Temperature	✔	✔	✔
Audible/Visible High/Low Alarm	✔	✔	✔
Differential and Average Temperature	—	✔	✔
Bar Graph Display	✔	✔	✔
100 Points Data Logging	—	✔	✔
Display Hold	✔	✔	✔
LCD Backlit	✔	✔	✔
Temperature Display	°C or °F selectable		
Display Resolution	0.1°C of reading up to 900°C (0.2°F up to 999.8°F)		
Data Graphing Software (Windows compatible)	—	✔	✔
Data Output: RS232 or 1mV per degree (°C or °F)	—	✔	✔
Hard Carrying Case	✔	✔	✔
Tripod Mount	1/4-20 UNC		
Nonincendive (Factory Mutual Research Nonincendive Rated, Class I, Division 2, Groups A, B, C, D; Class I, Zone 2 IIC; T4 Ta=50°C when used with 1.5V alkaline batteries. WARNING: Battery changes non-hazardous locations only. Only Raytek temp probes part XXXMXTP or XXXMXTCK2 can be connected)	—	—	✔
Close Focus	Option	Option	—
Subzero	Option	Option	—
NIST DKD Calibration Certificate	Option	Option	Option
Warranty 1 Year**	✔	✔	✔

**For more details, visit www.raytek.com/emissivity.htm ** US only. Warranty duration may vary by country.*

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Raytek is an ISO 9001 certified company