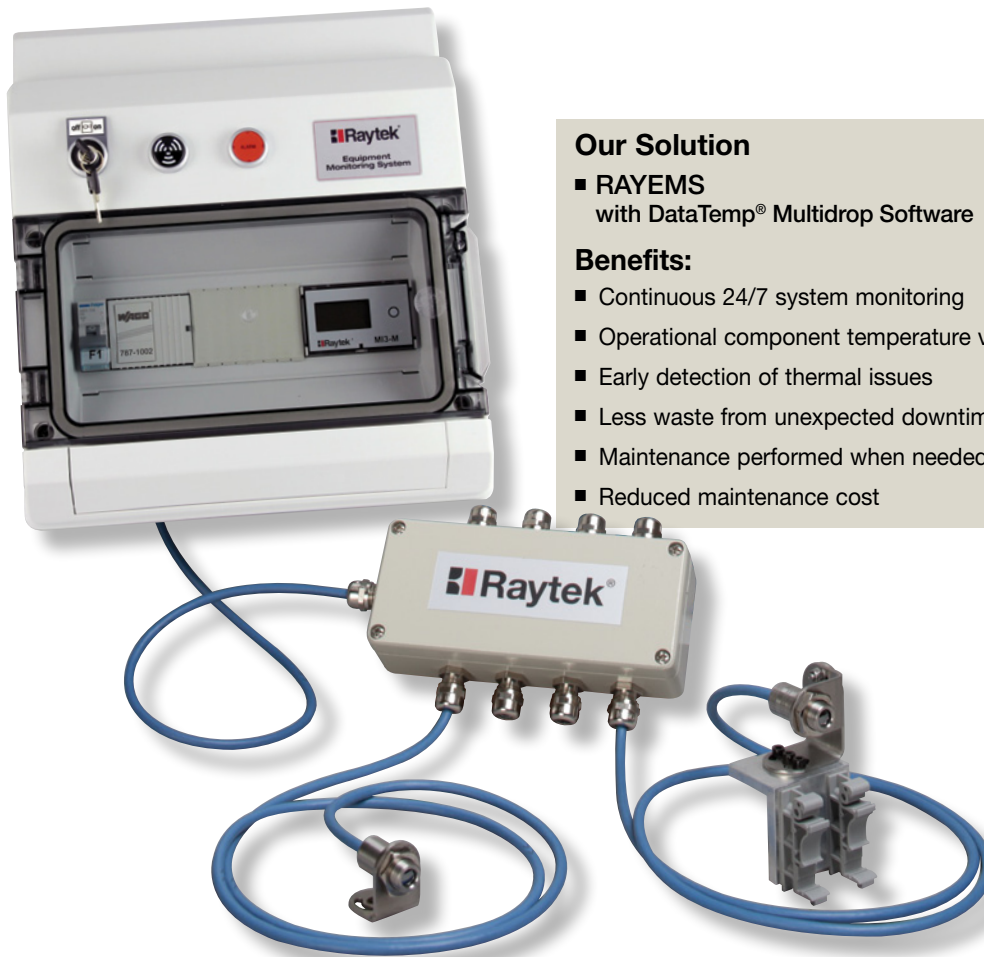


# EQUIPMENT MONITORING SYSTEM



Early Warning Noncontact Temperature Measurement System



## Our Solution

- RAYEMS  
with DataTemp® Multidrop Software

## Benefits:

- Continuous 24/7 system monitoring
- Operational component temperature viewed safely
- Early detection of thermal issues
- Less waste from unexpected downtime
- Maintenance performed when needed not when estimated
- Reduced maintenance cost

## Condition Monitoring

The Raytek® Equipment Monitoring System is an early warning device that provides live temperature data to operators, allowing them to make educated decisions regarding the functionality of their equipment. A temperature rise or spike on the surface of equipment can be a leading indicator that there may be an equipment problem. Being aware of that temperature change means system diagnostics can be done and service planned with no interruption to production - saving money in time and resources.

The Raytek® Equipment Monitoring System is a noncontact infrared monitor that provides a 24/7 temperature measurement of actively powered components or operating machinery. Temperature is displayed on its LCD control module and/or remotely through PC-based Raytek DataTemp® Multidrop software.

The Raytek Equipment Monitoring System is plug and play utilizing the field proven technology of the Raytek Compact Series MI3 sensor. The system is small in size to fit in tight, hard-to-reach or enclosed locations. The system monitors temperature ranges of -40°C to 600°C (-40°F to 1112°F) and all components are IP65 rated to ensure long life in harsh environments.

Users can manually program alarm settings through the integrated push button panel located on the control module or easily communicate remotely from a central location via RS-485 and DataTemp software. For full factory or machine control, an ASCII Protocol will allow the system to communicate with your own internal control network.

### Features:

- **DataTemp® Multidrop Software**  
(Windows® 7 64-bit compatible)
- **RS-485 communication for remote set up**
- **Audible alarm for easy warning notification**
- **IP65 (NEMA 4) rated control box and sensors**
- **Alarm output 48V/300mA**
- **Compact sensor size fits in tight spaces**
- **Adjustable emissivity for different surface types**
- **Adjustable sensor brackets for ease of installation**
- **Plug and Play (automatic head detection)**
- **Each system comes completely wired from the factory for quick and easy installation**

## System Specifications

Object Temperature Range	-40 to 600°C (-40 to 1112°F)
Optical Resolution D:S*	10:1
System Response Time*	130ms
System Accuracy*	± (1% of reading or 1°C), whichever is greater ± 2°C (±4°F) for target temp. < 20°C (68°F)
System Repeatability	± 0.5% of reading or ±0.5°C, whichever is greater
Temperature Coefficient	± 0.05K/K or ± 0.05%/K of reading, whichever is greater
Digital Interface	USB 2.0 and RS485 standard
Alarm Relay	48 VAC, 300mA, optically isolated
Power Supply	100 to 240 VAC, 50/60 Hz, 0.15 A, 6 A internally fused
Environmental Rating	IP65
EMI/EMC/ESD	IEC EN61326-1 1:2006
Safety	IEC EN61010-1

## Sensor Head Specifications

Spectral Response	8 to 14 micron
Ambient Operating Temperature	-10 to 120°C (14 to 248°F)
Storage Temperature	-20 to 120°C (-4 to 248°F)
Relative Humidity	10 to 95%, non-condensing
Construction	Stainless steel
Sensing Head Cable	PUR halogen free, flame retardant insulation, 125°C (257°F) max. temp
Shock	IEC 68-2-27 50g's 11ms, 3 axis
Vibration	11-200Hz, 3g above 25 Hz operating, 3 axis /68-2-6

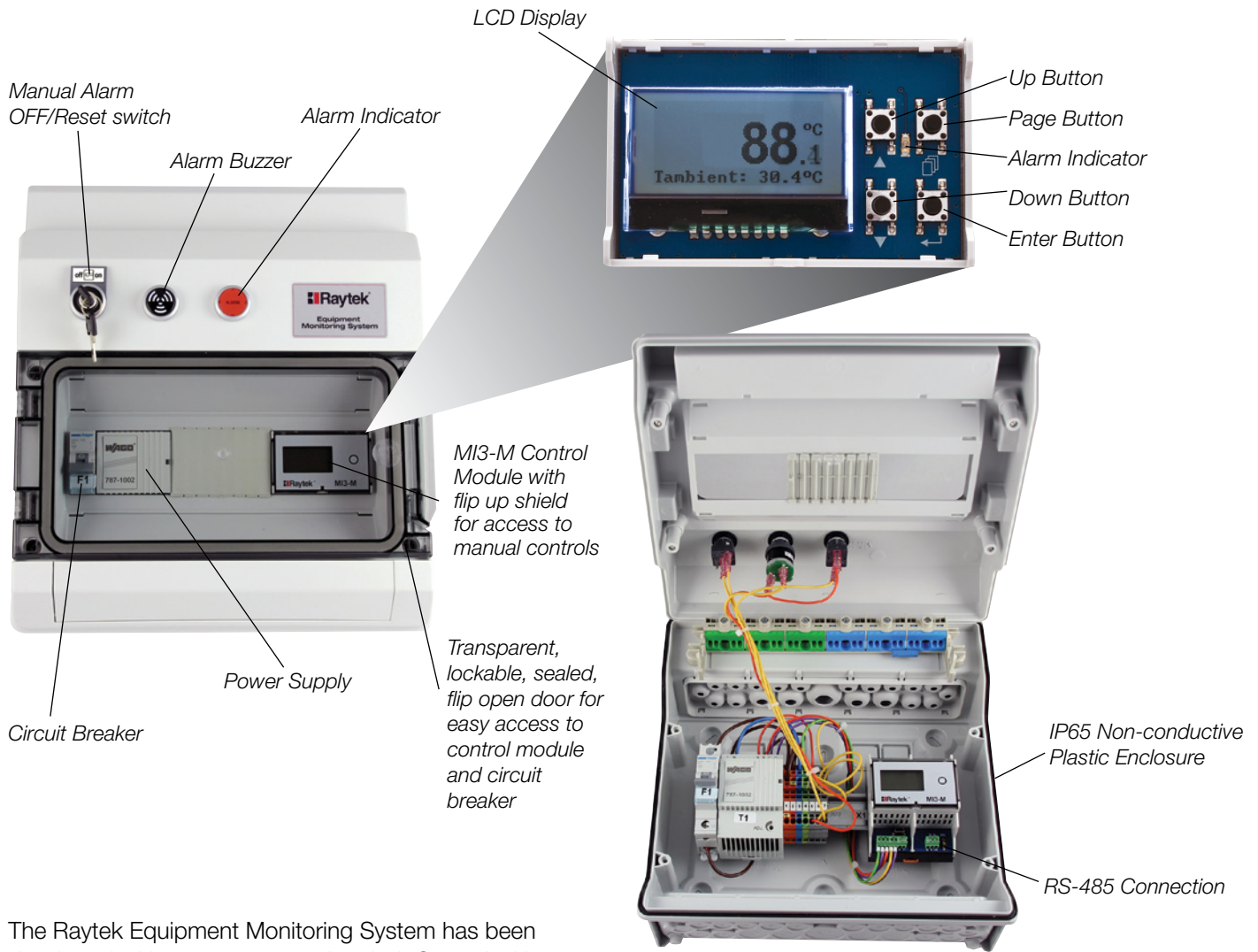
## Control Box Specifications

Ambient Operating Temperature	-25 to 60°C (-13 to 140°F)
Storage Temperature	-25 to 85°C (-13 to 185°F)
Construction	Thermo Plastic-Halogen free, silicone free Class II protection

\* See system manual for further detailed information

### Applications:

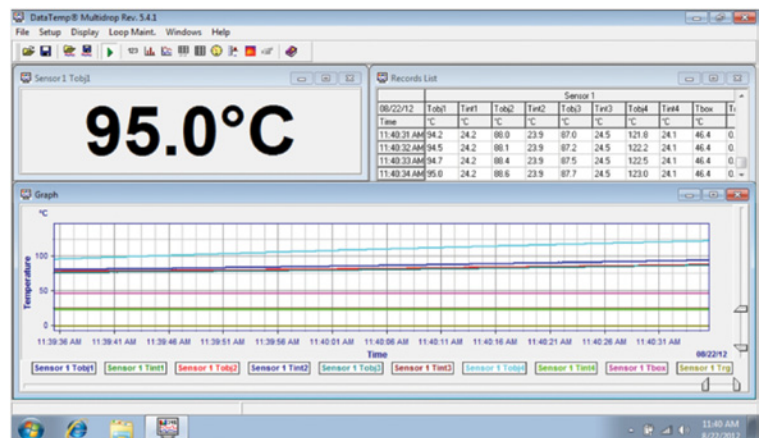
- **Electrical cabinets: bus bar connections, circuit breakers, motor starters**
- **Electrical motors: housing, bearings and gearboxes**
- **Pumps: drive motors, bearings**
- **Furnace controls**
- **Heating elements**



The Raytek Equipment Monitoring System has been developed with operator safety in mind. Offered with 3, 4, 6 or 8 sensors, temperatures can be read by anyone on active systems from a safe location without additional equipment or special training.

The DataTemp Multidrop software provides simultaneous viewing of multiple points and can be set up to monitor up to 32 systems. This provides the ability to see temperature and set early warning alarms on a total of 256 individual monitor points. Early alarms provide the time needed for further investigation or maintenance by qualified personnel.

Software features allow operators to easily record and store data for trend analysis, remotely make sensor parameter adjustments or customize screen views. Additional capabilities allow you to change the sensor from reading object temperature to ambient temperature, change emissivity, and turn on or off filters to scale the range, graph or average.



# Part Numbers

Model	Description
RAYEMS3	3 sensor configuration consisting of MI3 LTS10 sensors with mounting brackets, 1 control box, 1 connection box, 1 power supply with circuit breaker.
RAYEMS4	4 sensor configuration consisting of MI3 LTS10 sensors with mounting brackets, 1 control box, 1 connection box, 1 power supply with circuit breaker.
RAYEMS6	6 sensor configuration consisting of MI3 LTS10 sensors with mounting brackets, 1 control box, 1 connection box, 1 power supply with circuit breaker.
RAYEMS8	8 sensor configuration consisting of MI3 LTS10 sensors with mounting brackets, 1 control box, 1 connection box, 1 power supply with circuit breaker.

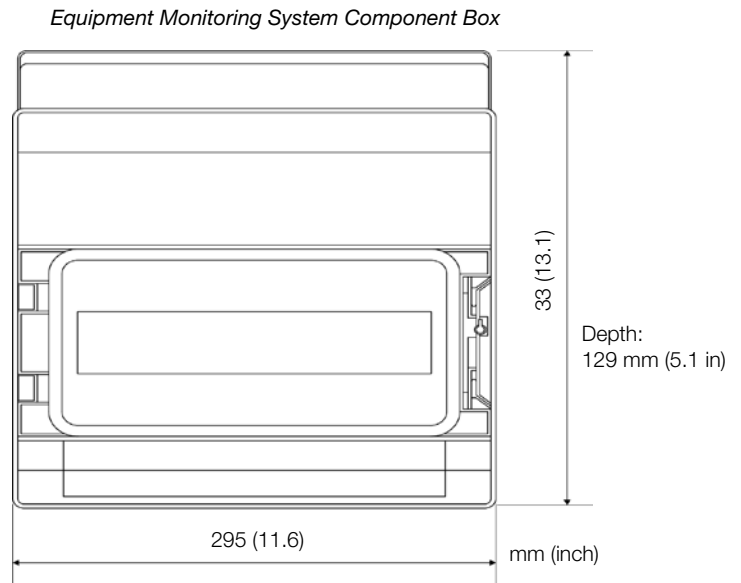
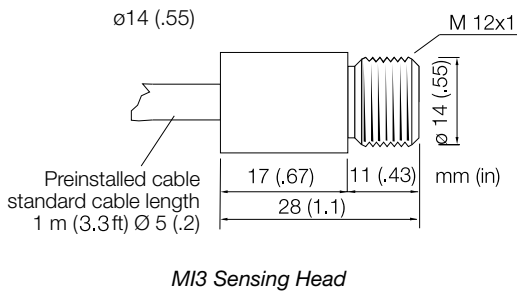
**Note:** Each system comes pre-wired from the factory. The cable from the control box is 15m (49ft) and each sensor cable is 1m (3.3ft).

## Accessories

XXXEMSACAM Sounder Beacon

**Note:** For further MI3 component information please use the MI3 product brochure.

# Physical Dimensions



## The Worldwide Leader in Noncontact Temperature Measurement

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