Series Metis M3

Non-contact Temperature Measurement in the Third Generation

New!
Series Metis M3

Digital High-End Pyrometer for Non-Contact Temperature measurement

13 Reasons for a new Metis M3

- ■ **All in one device, no other equipment required**
- ■ **Available as 2-color or single wavelength pyrometer**
- ■ **Immediately ready after connecting**
- ■ **Highly configurable, also replaces older pyrometer models or third-party devices**
- ■ **Versatile applicable due to configurable inputs / outputs**
- ■ **Many optics options for different application requirements**
- ■ **High-precision sightings for exact detection of the measurement object**
- ■ **Latest electronics components**
- ■ **Use in even higher ambient temperatures up to 80°C**
- ■ **Best Ambient temperature compensation**
- ■ **Includes new and extensive PC software for graphical illustration of measured values, measured value recording or device configuration**
- ■ **Extremely long-term stability**
- ■ **Highly suitable for industrial applications**

Metis M3 – Digital Pyrometry Reinvented
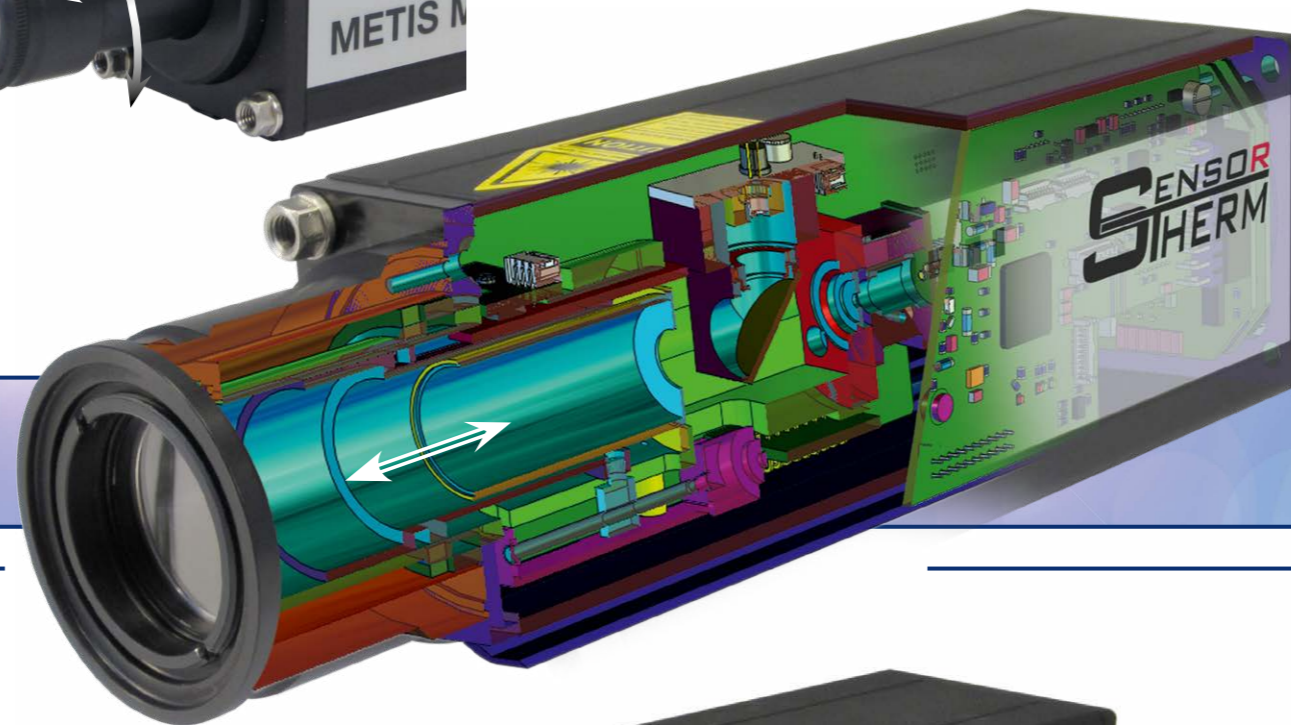
Precise Optics

New optical concept with smallest measuring fields and minimal axial deviations between mechanical retainer and optical axis:

New!

- **Fixed optics** with best distance ratios reach very small spot sizes.

- **Manually focusable lenses** have a continuous adjustment of the focal distance with easy and fast one-hand adjustment.

- **Motor focus lenses** show the distance information on display or PC.
  - scratch-resistant, high temperature resistant sapphire shield.
  - Optics hermetically sealed.

- Small **focusable optical fiber optics** for use in ambient temperatures up to 250°C. With the miniature objective difficult to access mounting positions can be realized.

Universal Connections

- Fast, **selectable digital interface** RS232/RS485.

- **2 high-resolution analog outputs**, adjustable and configurable for the exact output of measured values.

- **3 configurable inputs / outputs:**
  - Externally switching of laser aiming light
  - External delete of maximum value storage (peak picker)
  - PID control start (optional)
  - Limit switch (if temperature is exceeded)
  - Material detection (exceeding beginning of measuring range)
  - Equipment ready (after self-test ready and error-free)
  - Controller is active (when equipped with PID controller)
  - Device temperature exceeded
  - External emissivity setting
  - External setpoint adjustment for limit switch

- **Fieldbus interfaces** (optional)**:** Profinet, Profibus, Ethernet.

- **Integrated PID controller** (optional).

Precise Alignment

- Pinpoint **laser aiming light** for target marking with a red laser dot. The focus of the lens, the laser dot is the smallest, so that the distance for the smallest spot size can be easily determined.

- Clear thru-lens view finder for sighting of the object. With target circle showing the measurement field and brightness adjustment for measuring of glowing objects.

- **Highly dynamic color camera module** for alignment and monitoring on a monitor. The automatic picture brightness adjustment adapts extremely quickly to changing brightness of the measured objects..

New!

Single wavelength pyrometer

2-color pyrometer

Digital signal processing

for highest accuracy

Suitable for Industrial Applications

- **Immune** to electromagnetic fields

- **Protected connection:** against reverse polarity, wrong connection, over voltage.

- Up to **80 degrees ambient temperature** at the M3 housing, Fiber optic types up to 250°C at the optical head.

250°C 482°F

120°C 248°F

80°C 176°F

Ease of Use

- Fast **measurement distance adjustment** at motor focus optics

- Integrated **dirty window monitoring** and switch-off level (for 2-color pyrometers: pollution control of viewing windows and sight glasses).

- Bright **10-digit matrix display** for temperature or parameter display.

- **LEDs** to indicate **active outputs**.
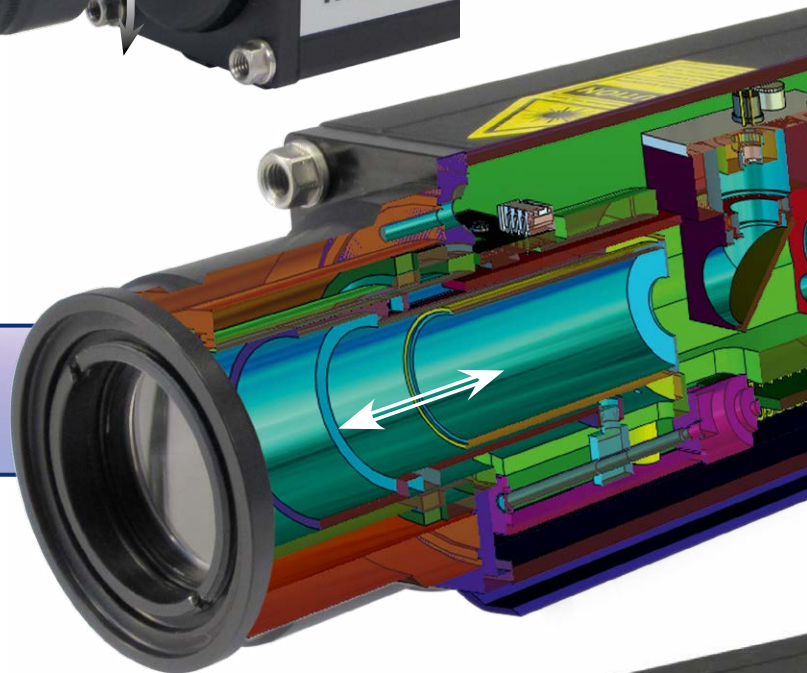
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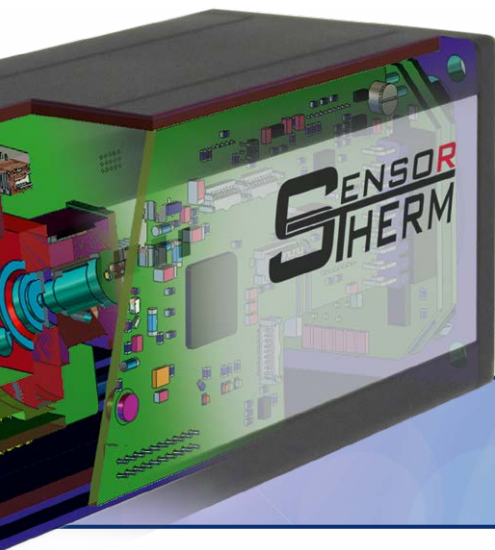
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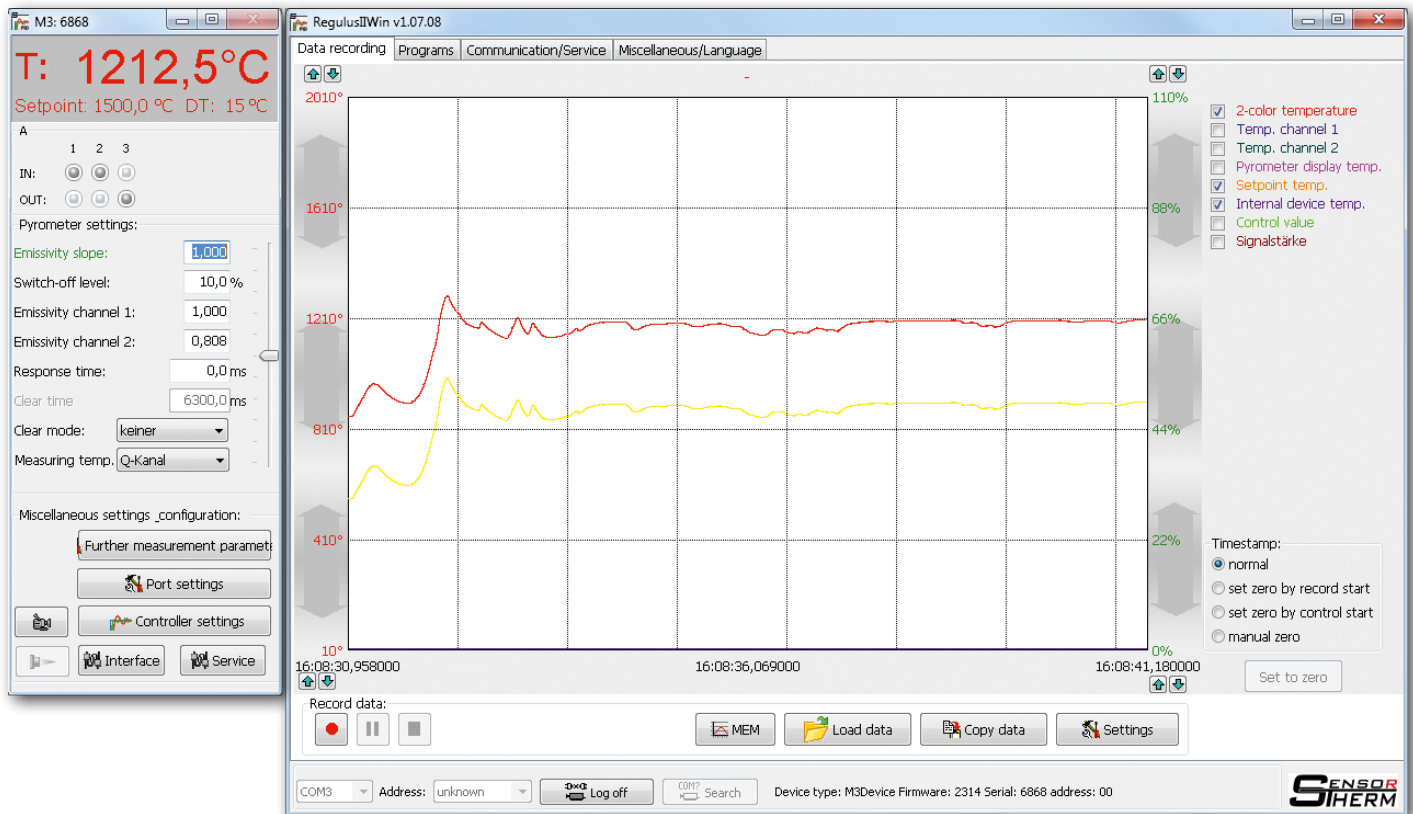## Digital signal processing
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Innumerable Possibilities on a PC

- Measured values
  - visualize
  - compare
  - record
  - evaluate
- Change pyrometer parameters
- Assign functions for inputs and outputs of the pyrometer
- Testing the functionality of the outputs
- Simulate the functionality of the analog outputs
- Activate keypad lock
- Laser targeting light switching on and off
- Configuring the TV display
- Export measured values in csv files
- Create a service file with settings for remote diagnosis
- Customize record mode to computer power
- Recording intervals from 50 µs
- Setting the interval at which the program stores measured values
- Play currently recorded readings or representation of a playback file
- External start and stop of measured values recording (via control input on the pyrometer)
- Retroactive recording of measured values after control pulse
- Extend the recording at the recording stop

At 2-color pyrometers:

- Display simultaneously ratio temperature and temperature of both channels to check if the emissivity levels in both wavelength ranges run uniform to ensure a correct and emissivity independent measurement can be done.

Sensortherm reserves the right to make changes in scope of technical progress or further developments.

Sensortherm-Datasheet_Metis_M3-Series (Oct. 08, 2014)

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