Liability for Material Defects

All components of the device have been checked and tested for functionality at the factory. However, if defects occur despite our careful quality control, MICRO-EPSILON or your dealer must be notified immediately.

The liability for material defects is 12 months from delivery.

Within this period, defective parts, except for wearing parts, will be repaired or replaced free of charge, if the device is returned to MICRO-EPSILON with shipping costs prepaid. Any damage that is caused by improper handling, the use of force or by repairs or modifications by third parties is not covered by the liability for material defects. Repairs are carried out exclusively by MICRO-EPSILON.

Further claims can not be made. Claims arising from the purchase contract remain unaffected. In particular, MICRO-EPSILON shall not be liable for any consequential, special, indirect or incidental damage. In the interest of further development, MICRO-EPSILON reserves the right to make design changes without notification.

For translations into other languages, the German version shall prevail.

You can download a PDF of detailed operating instructions from our website:
https://www.micro-epsilon.com/tim8

MICRO-EPSILON MESSTECHNIK GmbH & Co. KG
Königbacher Straße 15
94496 Ortenburg / Germany
Tel. +49 8542 / 168-0 / Fax +49 8542 / 168-90
e-mail info@micro-epsilon.de
www.micro-epsilon.com

X9771390-B021069HDR

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Software (Optional)

Installation

➡ Insert the installation CD into the according drive on your computer or use the following link to download the software:
www.micro-epsilon.de/tim8

If the `autorun option` is activated the installation wizard will start automatically.

➡ Otherwise start `setup.exe` from the CD-ROM. Follow the instructions of the wizard until the installation is finished.

The installation wizard places a launch icon on the desktop and in the start menu: `Start > Programs > MICRO-EPSILON GmbH > TIM Connect`.

If you want to uninstall the software, please use `Unistall` in the `Start` menu.

A detailed description is provided in the software manual on the software CD.

Connecting the Camera

➡ Connect the camera to the computer using the USB cable.

ℹ Be sure to connect the USB cable to the TIM camera first and then connect to the PC.

➡ Proceed in reverse order to disconnect the camera from the PC.

Process interface (PIF)

USB or Ethernet interface
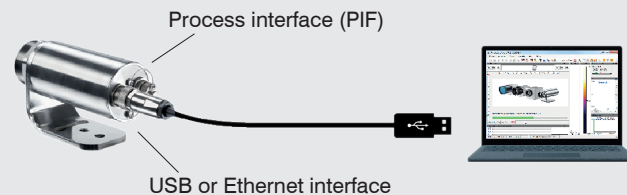
Minimum System Requirements

- Windows Vista, Windows 7, Windows 8, Windows 10
- USB interface
- Hard disc with at least 30 MByte of free space
- At least 128 MByte RAM
- CD-ROM drive

Starting the Software

ℹ All drivers are booted via Windows operating system automatically. A driver installation is not necessary.

ℹ To change the language setting, go to the `Tools > Language` menu.

➡ Start the software.

At the initial start the software asks for the calibrations files which are available via internet or on the CD (only for TIM 40). With the TIM 8, the calibration files are already included in the device.

After the calibration files have been installed the live image from the camera is shown inside a window on your PC screen.

➡ Load the layout <TIM8_TIM40 camera> in the menu under `Tools > Layout > <Layout...>`.

The TIM camera has a motorized focus, which can be adjusted in the software via menu `View > Windows > Distance`.
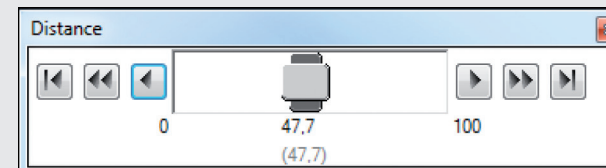
Fig. 1 Motorized focus settings in TIM Connect software

Assembly Instructions

thermoMETER TIM 8
thermoIMAGER TIM 40

Functions

The thermoMETER TIM 8 and the thermoIMAGER TIM 40 calculates the surface temperature based on the emitted infrared energy of objects. The two-dimensional detector (FPA - focal plain array) allows a measurement of an area and will be shown as thermographic image using standardized palettes. The radiometric processing of the picture data enables the user to do a comfortable detailed analysis with the software TIM Connect.

Warnings

Connect the power supply and the display/output device according to the safety regulations for electrical equipment.

> Risk of injury

> Damage to or destruction of the camera

Avoid the alignment of the camera to intensive energy sources (e.g. devices which emit laser radiation or reflections of such equipment). This is also valid if the camera is switched off.

> Effect on the accuracy of the measurement

> Irreparable defect of the infrared detector

Avoid static electricity, arc welders, and induction heaters. Keep away from very strong EMF (electromagnetic fields).

> Damage to or destruction of the camera

Avoid shocks, impacts and vibration to the camera.

> Damage to or destruction of the camera

The power supply must not exceed the specified limits.

> Damage to or destruction of the camera

No solvent-based cleaning agents should be allowed to affect on the camera (neither for the optics nor the housing).

> Damage to or destruction of the camera

Avoid abrupt changes of the ambient temperature.

> Incorrect display of the device

Protect the USB cable against damage.

> Failure of the camera

Notes on CE Marking

The following apply to the thermoMETER TIM 8 / thermoIMAGER TIM 40:
- EU Directive 2014/30/EU
- EU Directive 2011/65/EU, "RoHS"

The measuring system is designed for use in industrial and laboratory environments and meets the requirements.

Unpacking, Included in Delivery

- 1 thermoMETER TIM 8 or thermoIMAGER TIM 40
- 1 USB cable (1 m)
- 1 Mounting nut and mounting bracket (adjustable in one axis, tripod thread)
- 1 Process interface cable inclusive terminal block (1 m)
- 1 Software package TIM Connect
- 1 Assembly Instructions

Mechanical Installation

The thermoMETER TIM 8 and the thermoIMAGER TIM 40 are equipped with a tripod thread and can be installed either directly via the sensor thread or with help of the supplied mounting nut (standard) and adjustable mounting bracket (standard) to a mounting device available.
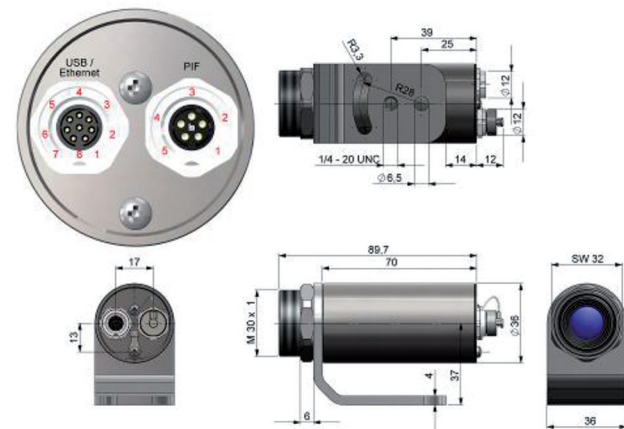

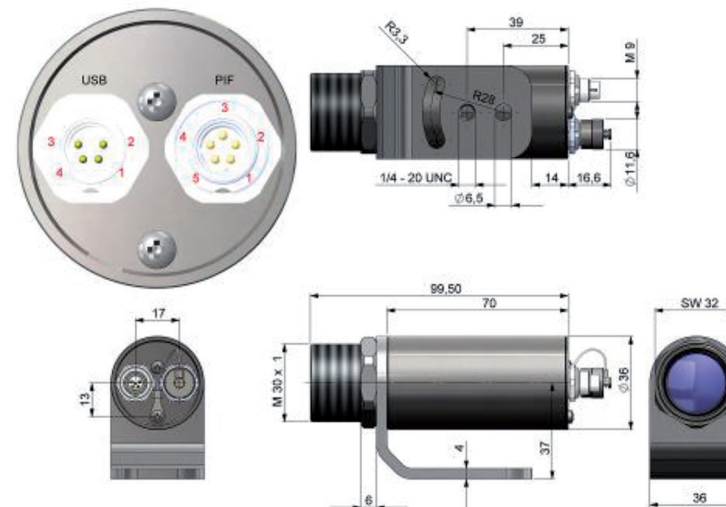Fig. 2 Dimensional drawing thermoMETER TIM 8

Fig. 3 Dimensional drawing thermoIMAGER TIM 40
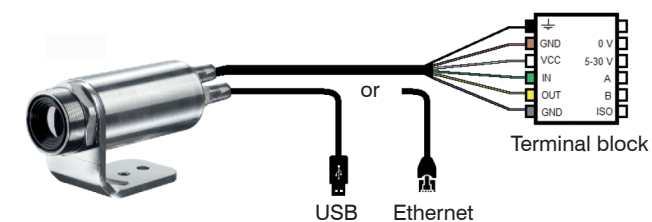
Pin Assignments

Fig. 4 Pin assignment thermoMETER TIM 8

Designation		Description	Color
⏚		Shield	Black
GND	0 V	Ground	Brown
VCC	12 - 28 V	Power supply [1]	White
IN	A	Analog/digital input or RS485 (A)	Green
OUT	B	Analog output or RS485 (B)	Yellow
GND	ISO	Insolated ground for IN and OUT	Gray

Fig. 5 Pin assignment thermoMETER TIM 8

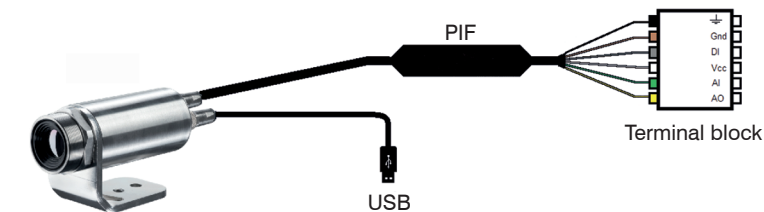[1] Power supply only necessary when using the Ethernet connection (without PoE) or self-sufficient operation

Fig. 6 Pin assignment thermoIMAGER TIM 40

Designation	Description	Color
⏚	Shield	Black
GND	Ground	Brown
DI	Digital input	Gray
VCC	Power supply, 5 ... 24 VDC	White
AI	Analog input	Green
AO	Analog output	Yellow

Fig. 7 Pin assignment thermoIMAGER TIM 40