

BENEFITS IN PRACTICE:

Fully radiometric IR camera made in the EU

Real-time measurement and real-time image display guarantee clear, high-quality thermal images

Precise temperature measurement over the whole image

High thermal sensitivity

High geometric resolution

Digital camera for real images

Ergonomic and robust (IP 54)

Maintenance-free operation due to uncooled microbolometer technology

Pivotable 3.5" LCD colour monitor

Image recording with a refresh rate of up to 50/60 Hz

DuoVision function for picture-in-picture display

Integrated laser pointer

Large memory

A variety of measuring functions

Data transmission via USB

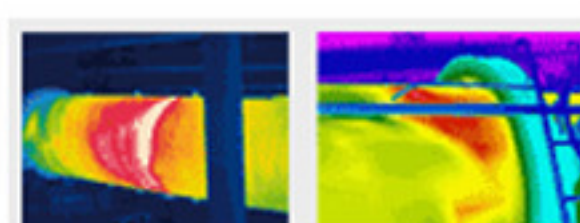
Easy handling

Intelligent power management

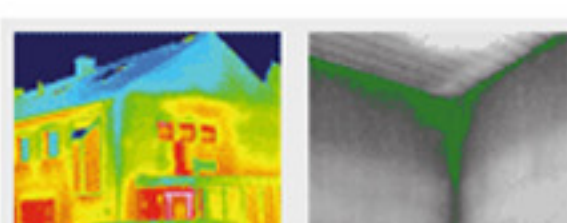
Highly-sophisticated analysis software included in the scope of delivery

IR cameras in the IC Series

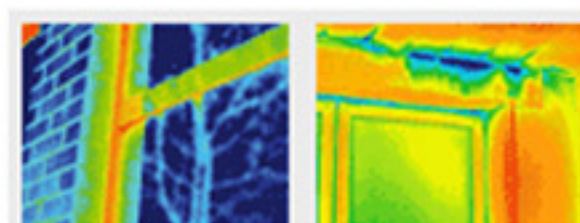
The compact MultiMeasure infrared cameras in the Trotec IC Series deliver a convincing performance with precise thermographic measurements in real-time, an expansive temperature range and a variety of functions – combined with an amazingly low price which offers unbeatable value for money.



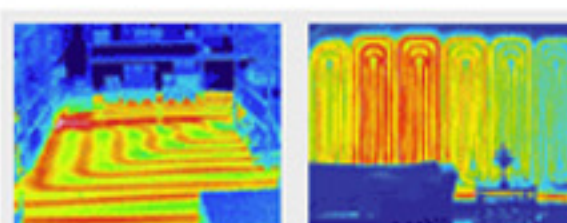
[Industry thermography...](#)



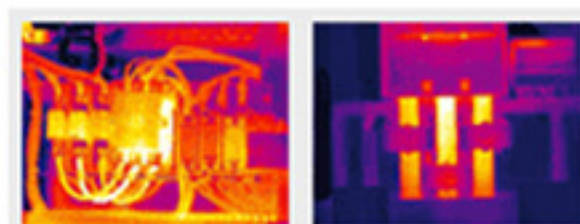
[Building thermography...](#)



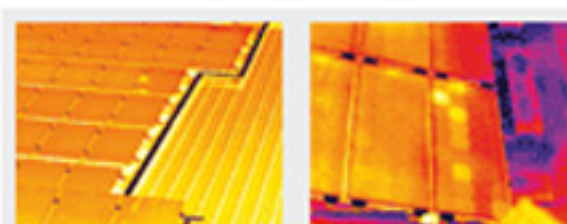
[Energy consultation...](#)



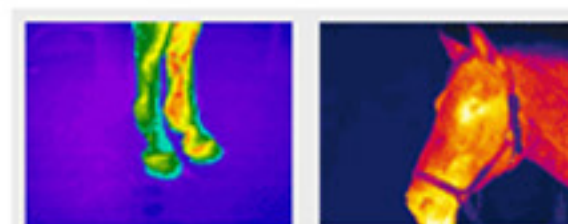
[Leak detection...](#)



[Electrothermography...](#)



[Function test for photovoltaic installations](#)



[Many further areas of use...](#)

The construction basis of the IC Series is one of the most widely sold camera platforms in the world. Benefit during your daily measuring operations from a series of instruments which leaves nothing to be desired.

Features like fully-radiometric temperature measurements with real-time image repetition frequency, a high geometric resolution of 1.1mrad, a large, generously-sized image sensor with 110,592

individual measuring spots, a built-in digital camera for combined real images and patented picture-in-picture DuoVision images, uncooled microbolometer technology for maintenance-free operation, dynamic four-point measurements, automatic temperature tracking... the list goes on. Seven different cameras and three application-specific series guarantee that your infrared thermal imaging camera matches your own individual applications and needs.

The infrared cameras are designed to meet the requirements you would put first: comprehensive standard equipment or numerous expandable options - the infrared cameras in the IC-Series leave nothing to be desired!

1 Independent tests once again confirm what we already know: Trotec will not be beaten on prices for infrared thermal imaging cameras!

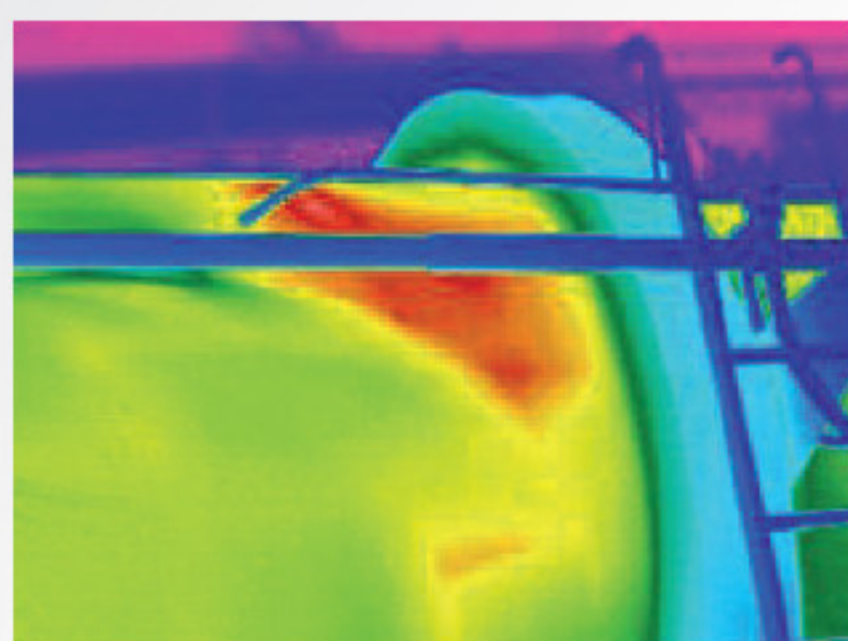
Infrared cameras with the same features and the same wide variety of functions as the infrared cameras in the IC-Series often cost twice the price, whereas other infrared cameras in the same price bracket as the IR cameras in the IC-Series have nowhere near the technology and far fewer features than the IC-models!



IC – Intelligent and Clever...

IC cameras have everything that you would expect from a professional thermal imaging camera whilst at the same time being surprisingly inexpensive to buy. Clever electronics and functions, intelligent power management and mobility concept:

High precision even at high temperatures...



A geometric resolution of up to 1.1 mrad, the high thermal sensitivity and an image repetition frequency of 50/60 Hz enable precise thermograms to be made in real-time in every possible measuring situation – in a measuring range between -20 °C and +1,500 °C depending on the type of model.

We don't do things by halves: Always in the picture thanks to real-time display...



The IC thermal imaging camera's highly developed sensor system constantly determines even the smallest temperature changes.

As many as 110,592 autarkic temperature measuring points measure the current values close to 60 times a second and transfer this information to an LCD display. The high image repetition frequency guarantees that not a single

image – i.e. valuable thermographic information – is left out and that the infrared image is displayed in real-time.

Without real-time, half is missing...

Only a high image refresh rate of 50/60 Hz guarantees working without fatigue and exact measurements, even in the case of moving objects.

You won't miss a thing – with DuoVision...



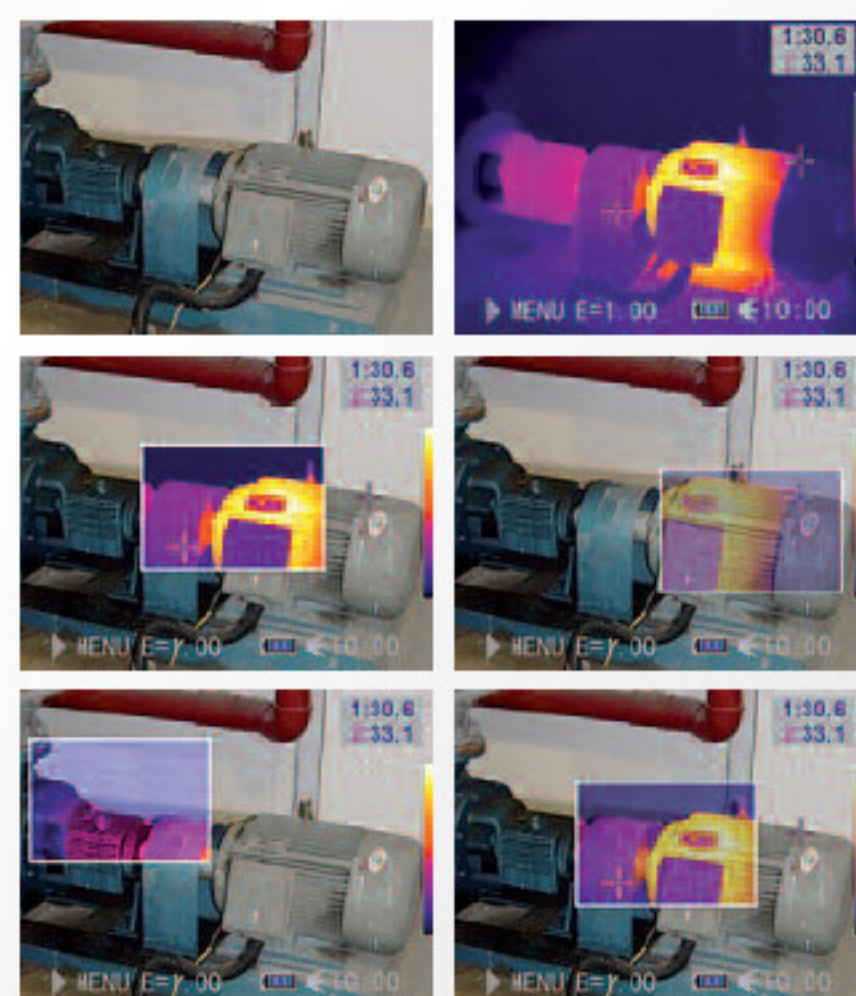
The IC cameras in the V and LV Series are equipped with an additional digital camera for real images and an integrated photo lamp to light up dark areas.

The infrared camera's patented DuoVision technology enables either infrared or real images to be displayed exclusively or a combination of overlapping images in varying degrees of transparency in freely-selectable areas.

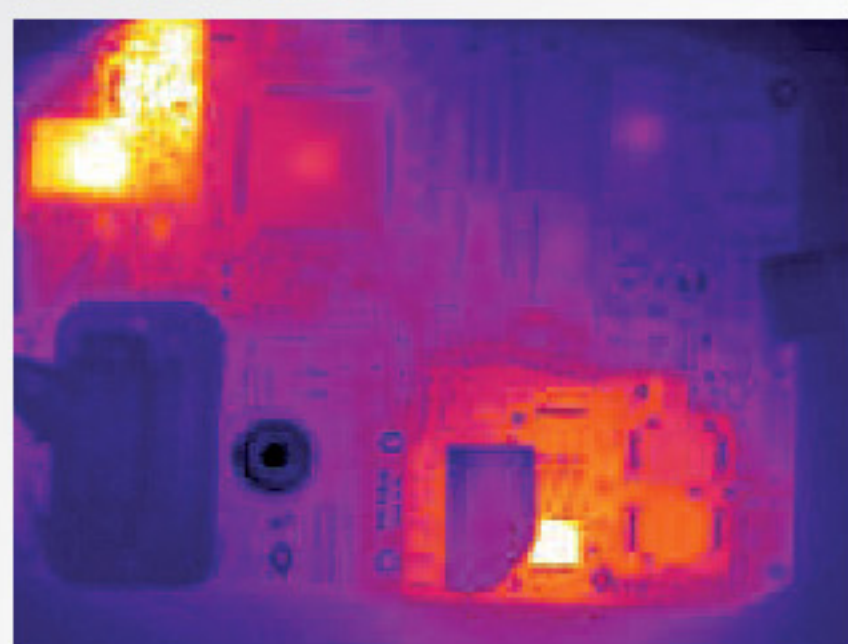
This allows any damage or defects to be detected much more easily.

Regardless which of the display options you use, both the real image and the

infrared image information is stored separately so that the measuring data can be fully retrieved when needed.



The IC gets to the point...



The integrated laser pointer makes it easy to locate problem areas quickly and the integrated hot spot/cold spot detection saves you having to search for the hottest or coldest point in the image.

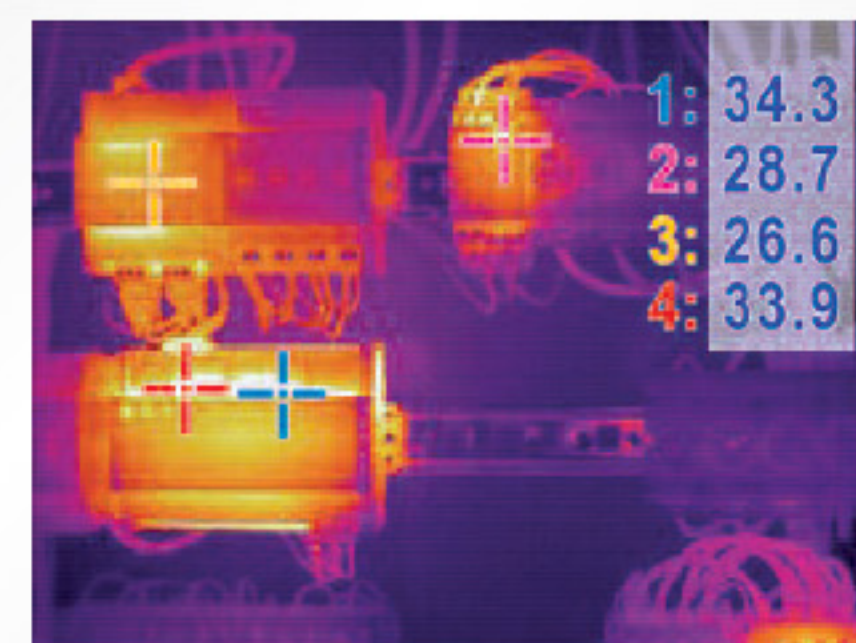
Due to the short minimum focusing distance of just 10 cm, even close-up objects can be examined with pin-point accuracy.

A clear target in view,...

...or two, or three, or four?

The powerful camera technology allows differential measurements at up to four movable temperature measurement points, of which three can be individually configured.

In addition, temperature limits that you set yourself via an alarm or isotherm function can be displayed by a special



colour or by an alarm signal – ideal for **dew point detection** on surfaces!

The IC shows everything as clear as daylight...



The infrared cameras are designed to meet the requirements you would put first: comprehensive standard equipment or numerous expandable options – the infrared cameras in the IC-Series leave nothing to be desired!

The tilting monitor element can be ergonomically adjusted to suit the observer in every recording situation.

Thanks to the folding mechanism, the monitor element can be folded down fully after measurements are completed, thus protecting the LCD display and the operating keypad against dirt.

Rough shell, clever core...

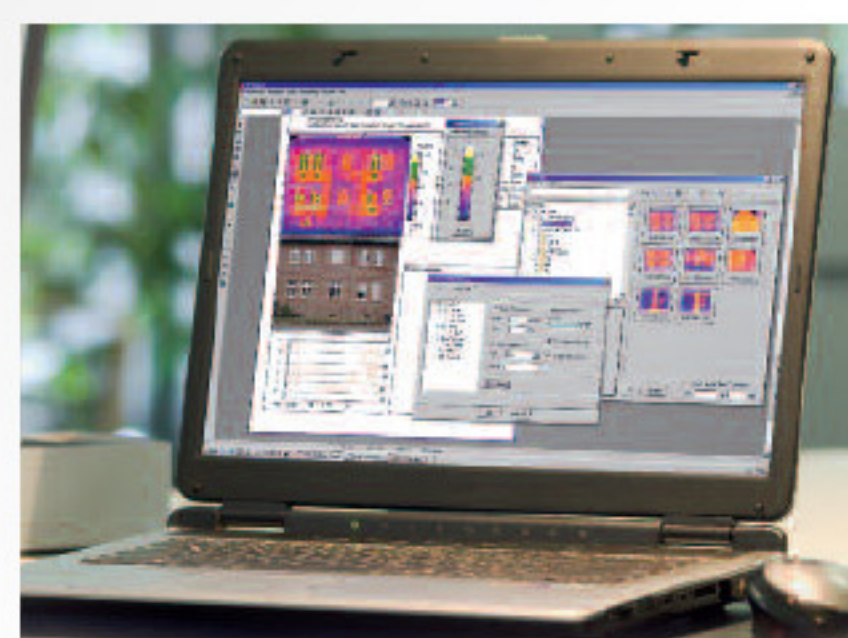
All interfaces are located centrally and well protected in the base of the sturdy IP54 housing, which is also suitable for use under the harshest environmental conditions.

Thanks to the intelligent power management, the cameras are ready for use quickly at all times – the advanced camera circuitry places numerous measurement functions at the user's disposal just a few seconds after switching on.



Quality is standard...

The software included in the package is not just a simple data transfer or display tool – with each IC camera you get a professional, full-value analysis and documentation program with numerous functions for evaluation, organisation and documentation of your measurement results.



The software's DuoVision function also offers the option to overlap infrared and real images in varying degrees of intensity.



These DuoVision images can also be stored and they are then not only easier to evaluate but also provide a more professional means of documentation.

Technical data		IC080V	IC120V	IC080L	IC120L	IC080LV	IC120LV	Trotec
Article no.		3.110.003.011	3.110.003.019	3.110.003.013	3.110.003.017	3.110.003.012	3.110.003.020	
Measure- ment	Temperature range	-20 °C to +600 °C	-20 °C to +1,500 °C	-20 °C to +600 °C	-20 °C to +1,500 °C	-20 °C to +600 °C	-20 °C to +1,500 °C	Planning and survey
	Accuracy	±2 °C or 2 % of the measured value						
Image output radiometric	Detector type	Focal Plane Array (FPA), uncooled microbolometer						Temperature
	Detector resolution	160 x 120 pixels		384 x 288 pixels				
	Spectral range	8 to 14 µm		7.5 to 14 µm				
	Field Of View (FOV)	20° x 15°		24° x 21°				
	Geometric resolution	2.2 mrad		1.1 mrad				
	Thermal sensitivity	0.08 °C at 30 °C		0.05 °C at 30 °C				
	Image refresh rate	50/60 Hz						
	Focus	manual						
	Min. focussing distance	0.10 m						
	Image perfor- mance visual	Digital photo camera	Colour depiction 680 x 480 pixels, integrated photo lamp		–		Colour depiction 680 x 480 pixels, integrated photo lamp	
Video norm		PAL		–		PAL		
Image repre- sentation	Display	3.5 inch LCD, 320 x 240 pixels						Velocity
	Image display	Pseudo colours, 6 colour palettes						
	Image display options	IR image, real image, different DuoVision options for combined display of IR and real imaged		–		IR image, real image, different DuoVision options for combined display of IR and real imaged		
Measuring functions	Measuring point	Up to four moveable measuring points (3x manual and 1x automatic)						Moisture
	Isotherm	Yes (between the upper and lower limit values)						
	Emission factor	Variably adjustable from 0.01 to 1.0						
	Measurement correction	Automatic on the basis of user-defined specifications for environmental temperature, distance, relative humidity						
Image storage	Storage medium	Interchangeable memory card slot for mini-SD card						Multi-function
	Data format	14-bit radiometric IR format						
	Data format visual	CCD		–		CCD		
	Voice recording	Comments can be stored with each IR image (optional Bluetooth expansion kit and Bluetooth headset necessary)						
System sta- tus indicator	Status display	–						Emission
Laser	Type	Semiconductor AlGaInP Diode Laser, 1 mw/635 nm red						
	Classification	Class 2						
Power supply	Battery type	Rechargeable standard lithium-ion battery, replaceable						
	Operating time	≈ 2.5 h						
	Mains operation	8 - 11V DC						
	Energy saving mode	user-defined						
Ambient conditions	Operating temperature	-15 °C to +50 °C						Optical inspection
	Storage temperature	-40 °C to +70 °C						
	Humidity	10 % to 95 % r.H. (non-condensing)						
	Protection class	IP 54 IEC 529						
	Shockproof to	25G IEC 68-2-29						
	Vibration-proof to	2G IEC 68-2-6						
Physical parameters	Dimensions	230 x 80 x 195 mm		211 x 80 x 195 mm		230 x 80 x 195 mm		Leak detection
	Weight	650 g		500 g		650 g		
	Stand mounting	1/4-inch - 20						
Interfaces	PC	USB 2.0 (optional)						Optical inspection
	Video output	Composite Video						
Package contents	Standard lens	20° x 15°		24° x 21°				Leak detection
	Standard equipment	Camera with standard lens, LCD monitor and laser, 110/230 volt battery charger with charging status, Li-ion battery, video cable, user's manual, carry case, software package, temperature test certificate, mini SD card						
	Optional interchangeable lenses	38°-, 28°-, 14°-, 12°-, 9°-, 6.4°-, 4.8°-, 3.5°-lens		48°-, 12°-lens				
	Optional accessories	Tripod attachment, power supply unit, 12 V cigarette lighter adapter, additional battery, Bluetooth expansion pack and Bluetooth headset, real-time upgrade for thermographic video recordings and evaluations in real-time, further software packages on request						