



# THERMOFOCUS<sup>®</sup> ANIMAL

06600



## **THERMOFOCUS<sup>®</sup>, a technological innovation**

Thermofocus Animal<sup>®</sup> is the evolution of Thermofocus<sup>®</sup>, the world's first non-contact thermometer intended for human use. With Thermofocus<sup>®</sup>, Tecnimed introduced the non-contact measurement, thus revolutionizing the way to take the temperature. The Tecnimeds thermometers, designed and produced in Italy and provided with a technology constantly refined and covered by patents, are unsurpassed leaders on the market.

THERMOFOCUS<sup>®</sup> is the first non-contact clinical thermometer in the world and the only one that is able to clearly indicate the exact point and the correct distance where to take the temperature. It measures the temperature in a specific point and at an accurate and determinate distance. It provides instantaneous digital reading of body temperature without any contact with the body skin or mucosa.

After revolutionizing and simplifying the way human beings' temperature is taken, Tecnimed has thought to your pets.

Usually, animals' internal temperature is taken by introducing a traditional thermometer in their rectum, a procedure which is invasive and annoying for the animal, and uncomfortable for the person taking the measurement.

Thermofocus Animal<sup>®</sup>, is able to take your pet's body temperature at a distance and without touching its skin, without bothering it, in few seconds and in a simple way.

THERMOFOCUS Animal<sup>®</sup> does not use laser radiations, it is safe and harmless.

THERMOFOCUS<sup>®</sup> Animal can also be used to measure the temperature of the pet food, bath water, kennel etc., thanks to its accuracy over a wide range of temperatures.

THERMOFOCUS<sup>®</sup> is protected by a number of patents and patents pending filed internationally.

THERMOFOCUS<sup>®</sup> is a trade mark registered in Italy and extended internationally.

## **Technical background**

All objects and living beings emit infrared radiations of varying wavelength in relation to their surface characteristics. Particularly, the animal eyes emits infrared radiations of wavelength between 5 and 14 micrometers.

Thermofocus Animal<sup>®</sup> uses a sensor (thermopile) that, when stimulated by infrared radiations, emits an electrical signal, which is amplified and then converted into a digital signal which is elaborated in a sophisticated way using exclusive algorithms according to the temperature of the environment.

## **Temperature measurement**

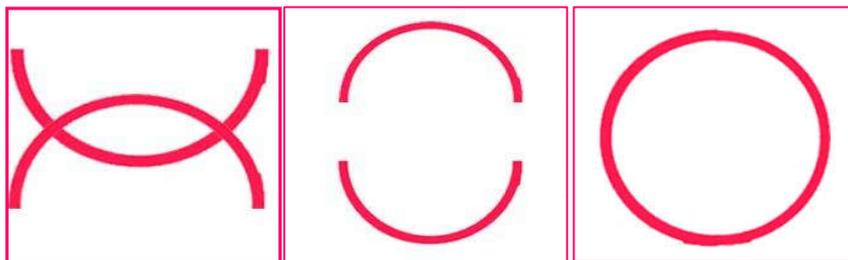
Thermofocus Animal<sup>®</sup>, is able to take your pet's body temperature at a distance and on its eye: without touching its skin, without bothering it, in few seconds and in a simple way.

Any animals' body is subject to heat dispersion and, according to their race, is more or less covered with fur and vascularized. Nonetheless, eyes are not covered with fur, they are always highly vascularized, and moreover they replicate the actual internal body temperature. They are therefore the ideal point for a precise body temperature to be taken.



The right distance between the eye and the thermometer for a correct measurement is easily determined thanks to a LED system emitting two light arc (normal light which is totally safe).

When you press and hold down the "dog&cat"  button, the LED system turn on. As the thermometer is moved closer to the eye and reaches the right distance (approx. cm 3), the two arcs converge to form a circle.



**NO, TOO FAR**

**NO, TOO CLOSE**

**YES! CORRECT DISTANCE**

When you are at the correct distance, release the "dog&cat"  button and keep the thermometer steady for less than one second until the lights flash and the temperature appears on the LCD display. There is no need to concern if the aiming lights are pointed into the eyes: the beams are not laser lights and are absolutely harmless.

Should the measurement on the eye be not possible, you can take the temperature on your pet's rectum area, auricle or on the gum, with no contact and in a non invasive way. You can search for the more comfortable area for both you and your pet.



## **THERMOFOCUS Animal<sup>®</sup> automatically adjusts to the environment**

It is important to remember that each animal's individual temperature varies according to the measurement's site and throughout the day, also in response to physical effort. Moreover, the body temperature can be affected by the outside temperature and other factors may also

come into play. Therefore, when the "dog&cat"  button is pressed for the body temperature reading, the Thermofocus Animal<sup>®</sup> software automatically applies a correction factor according to the ambient conditions

thus giving a resulting value comparable to your pet's internal temperature.

If the thermometer is handled for a long time or if the device is coming from a room with a significantly different temperature, you can let the device stabilize automatically by leaving it for at least 15 minutes in the room in which the measurement has to be taken, or you can run a manual calibration to correct the thermometer temperature.

**Manual Quick Calibration System (MQCS):** it is possible to correct immediately the internal temperature of the device and adjust it to the temperature of the environment in which the pet is (the room temperature must preferably be in the 5-40°C temperature range). The system can work also in environments from -7 to +5 °C but the accuracy is not guaranteed.

The thermometer keeps the calibration for 15 minutes.

The MQCS allows the device to immediately stabilize its temperature with the one of a reference element in just 3 seconds.

To ensure a reliable temperature reading, do not aim the thermometer at a surface having a temperature obviously different from the one of the environment where the pet is. If you take the reading indoor, do not focus the thermometer on outside walls, windows, sources of heating or cooling (radiator, air conditioner, lamp, computer, surface in contact with the human body, etc.).

If you are taking the temperature outdoor do not make the MQCS on the walls of a heated house. You can make the MQCS on the trunk of a tree or on the floor or on the grass.

## **THERMOFOCUS ANIMAL<sup>®</sup> is suitable for all animals**

Due to the fact that the temperature of the animals changes depending on the breed and type of animal, but also in function of the size, Thermofocus Animal<sup>®</sup> has been designed to be able to adapt to all animals.

Thermofocus Animal<sup>®</sup> has been set according to averages statistically obtained from several tests made on pets and farm animals of different races. It is important to know that there is not such a thing as a unique "normal" body temperature common to all animals. If necessary, it is possible to set Thermofocus Animal<sup>®</sup> in accordance with the kind of pet and with the chosen measurement area, and adjust the thermometer to the pet's standard temperature.

Indeed using the  button it is possible to align Thermofocus Animal<sup>®</sup> to each pet .

## **THERMOFOCUS ANIMAL® is multipurpose**

Thermofocus Animal® can also be used to take the temperature of objects, liquids or other surfaces in the 1-55°C (33.8 to 131.0°F) temperature range.

For example:

- temperature of food, doghouse, bathwater, etc.
- room temperature by pointing the thermometer against a wall or a piece of furniture
- temperature of a wound, inflammation, scar, burns, circulations problem. You may also use Thermofocus Animal® to check the temperature of stimulated muscles, for instance on horses (professional use).



Proceed as in the case of a body temperature measurement, but press the home button . These measurements must be considered as relative rather than absolute values. If taken on the skin, they will show the difference between two neighboring or symmetrical areas.

In these cases, the presence of fur, as long as equally spread on the concerned areas, is not critical.

The device is supplied by 4 AAA batteries (normally not included in the box) that have a life of 10,000 measurements or 3 years, according the use. The only necessary maintenance is to protect the wave-guide with its when the device is not in use.

## **Manufacturing and QA**

ThermoFocus® Animal is manufactured by Tecnimed under its certified ISO 9001:2015 and ISO 13485:2016 Quality System.

The production, control and calibration of ThermoFocus® are performed by Tecnimed in an Ambient Controlled room.

## **THERMOFOCUS ANIMAL® packaging**



## TECHNICAL DATA

	For animal
<b>No. of buttons</b>	3
<b>LED lights color</b>	Red
<b>Protective cap</b>	Standard
<b>Display backlight</b>	At request
<b>Room temperature detection</b>	Yes
<b>MQCS (Manual Quick Calibration System)</b>	available but not mandatory
<b>Batteries (not included)</b>	4 AAA/LR03 type (preferably alkaline)
<b>Batteries life</b>	3 years or 10.000 measurements
<b>Resolution</b>	0.1°C (0.1°F)
<b>Body temperature measuring range</b>	32.0/43.5°C (93.2/108.5°F)
<b>General measuring range (out of the body)</b>	1.0/55°C (33.8/131°F)
<b>Room temperature working range:</b>	
Measurement with "dog&cat" button	-7/+40°C (50/104°F) please note that under 10°C the LCD display alternates the value to Lo5 and the accuracy is not guaranteed
Measurements with home button	-7 to 40 °C
Correction factor range	-3/+5 °C (-6/+10°F) dynamic range with respect to the correction factor set by the producer.
<b>Accuracy level (in instrumental tests according to ASTM E 1965-98:2009 standard):</b>	
from 36 to 39°C (96.8/102.2°F) =	+/-0.2°C (+/-0.4°F)
from 34 to 35.9°C (93.2/96.6°F) =	+/-0.3°C (+/-0.5°F)
from 39.1 to 42.5°C (102.4/108.5°F) =	+/-0.3°C (+/-0.5°F)
from 1.0 to 19.9°C and from 42.5 to 55.0°C =	+/-1.0°C
(from 33.8 to 67.9°F and from 108.5 to 131°F) =	(+/-1.8°F)
from 20 to 33.9°C =	+/-0.3°C
(from 68.0 to 93.0°F) =	(+/-0.5°F)
Distance from the pet during operation: about 3 cm (1.2 inch), set through an optical signal	

**Name :** **Thermofocus® Animal 06600**

**Description :** Infrared non-contact clinical thermometer which allows an instant, hygienic and extremely accurate measurement of animal temperature without any contact with the animal

**Manufacturer :** Tecnimed srl, plant in Vedano Olona, Varese

**Project :** Tecnimed srl, Vedano O. (VA) Italy

**Owner Patents :** Tecnimed srl, Vedano O. (VA) Italy

**CE conformity :** LVD (2014/35/UE) and EMC (2014/30/UE) Directives

**Patents :** *MI 1.284.119, EP 0909.377, US 6.196.714, IL 127.876, JP 504.769/98, EP 1.283.983, US 7.001.066, JP 3.863.919, and other International Patents Pending*

**Conformance:** Quality System ISO 9001:2015 and ISO 13485:2016

EN 60601-1, EN 60601-1-2

ISO 14971:2012

ASTM (American Society for testing Materials) E 1965-98(2009)

Accordance with RoHS (Pb-free) directive