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TCM40

Ultimate flexibility in respiratory care



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# Ultimate flexibility in respiratory care

## One instrument, multiple applications

Radiometer's TCM40 provides continuous transcutaneous  $pO_2$ ,  $pCO_2$  and  $SpO_2$  information, giving you patient ventilation and oxygenation levels on the same display at a glance.

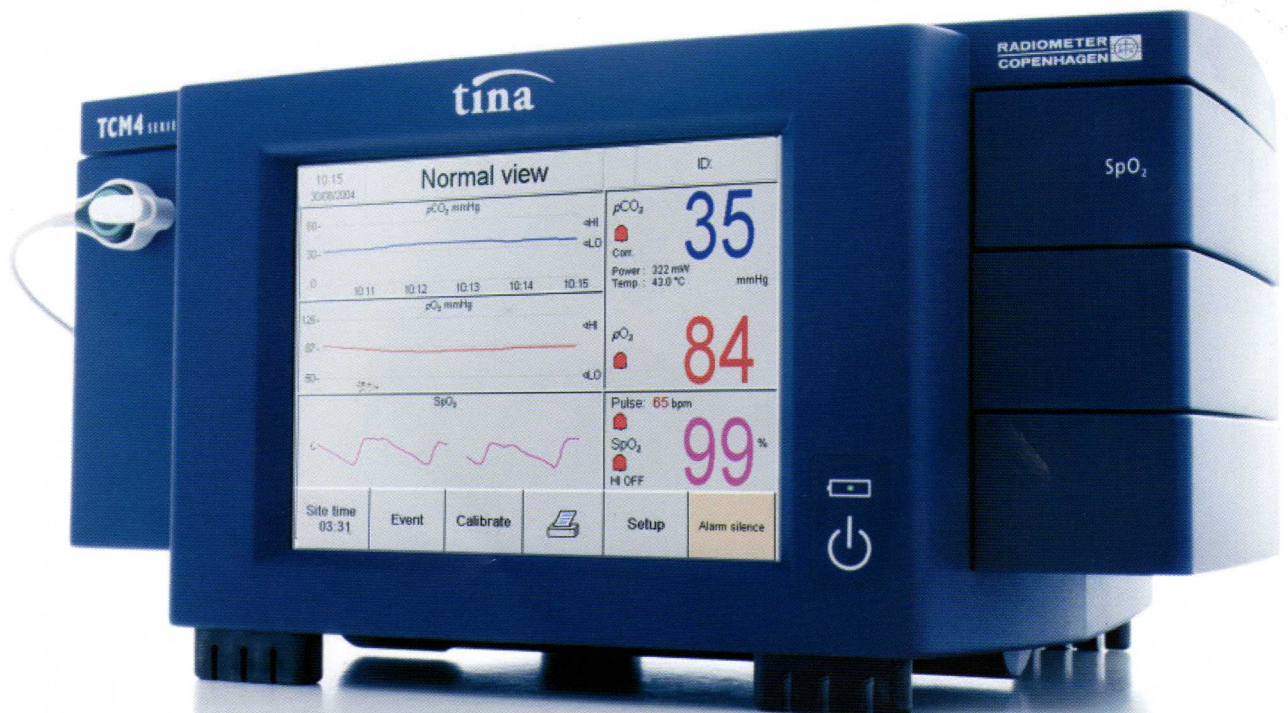
The transcutaneous monitor is designed for busy hospital environments evaluating the respiratory status of critically ill patients. The monitor can also be used as a tool in the assessment of sleep disorders and in the evaluation of patients with general respiratory difficulties.

## Measurement of oxygen saturation

The TCM40 measures  $SpO_2$ ,  $tcpCO_2$  and  $tcpO_2$ . One electrode measures  $tcpCO_2$  – alone or in combination with  $tcpO_2$  – while  $SpO_2$  is measured separately through a Nellcor sensor.

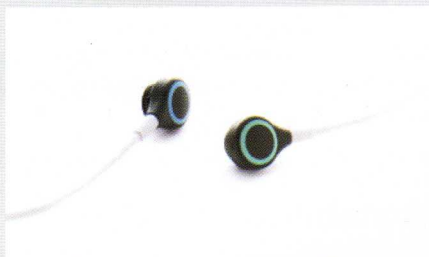
Different  $SpO_2$  sensors can be used with the TCM40, providing alternative application sites for different patient groups, e.g. neonates, infants and adults.

Parameters can be measured together or separately. This ensures the continuous measurement of  $SpO_2$ , even when the  $tcpO_2/tcpCO_2$  electrode is being calibrated.





## TCM40



### Broad electrode and sensor compatibility

- Combined  $tcpO_2$ / $tcpCO_2$  or single  $tcpCO_2$  electrode
- Choice of various Nellcor  $SpO_2$  sensors adapted to different patient groups



### Always ready to use

- SmartCal: Built-in function that ensures automatic calibration
- Integrated 1-point-calibration system secures reliable, reproducible measurements every time



### Windows-based user interface

- Windows CE and touch screen technology for ease of use
- Requires minimal training
- On-screen video tutorials make it easy to teach new staff



### Take it everywhere

- Built-in battery and flexible handle
- Lightweight
- Ideal for patient transport

### Smart software features

- Possibility of entering patient ID
- Marking of events
- Different data views for analyzing data



### Data storage and output options

- Choice of analog or digital output
- Connection to PCs for downloading and storing data
- Connection to a standard printer for printing reports

### Interface to monitoring systems

- Interface to major patient monitoring systems
- Automatic export of parameter and alarm limit values



# Rapid assessment of patient ventilation and oxygenation

## Immediate detection of changes in transcutaneous values

The TCM40's solid-state transcutaneous  $pO_2/pCO_2$  electrode gives you accurate information and rapid response during measurements.

The thin electrolyte layer and membrane promote a faster chemical reaction. The short reaction time ensures immediate detection of changes in the patient respiratory status.

## Improving stability of measurements

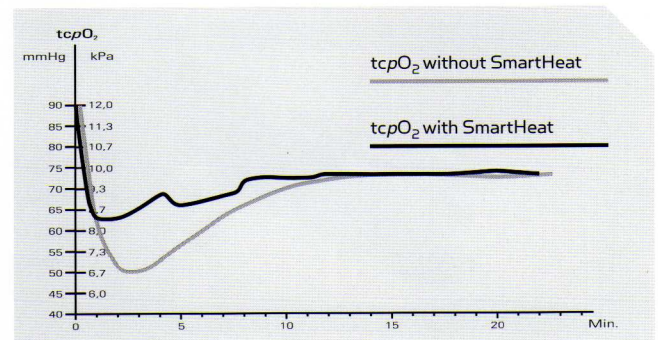
The new Radiometer generation of transcutaneous monitors are equipped with SmartTrend. The SmartTrend function uses a unique algorithm that minimizes false alarms and improves the stability of measurements.

## Faster readings

The SmartHeat option provides  $tcpCO_2$  readings faster than ever before by increasing electrode temperature one degree during the first five minutes of measurement.

Without any additional patient discomfort, this feature stabilizes transcutaneous values faster by increasing the arterilization of the capillary blood flow.

## SmartHeat stabilization curve





## SpO<sub>2</sub> sensors for different patient groups

TCM40 can be configured to measure SpO<sub>2</sub> with a broad range of Nellcor's intelligent OxiMax sensors. The sensors range from classic adhesive fingertip sensors to a full line of reusable sensors and specialty sensors that address specific patient-care needs.

A digital memory chip is embedded in all sensors to enhance pulse oximetry performance.

## Reducing nuisance alarms

When measuring pulse oximetry, minor or brief desaturation events can often cause false or nuisance alarms.

Nellcor's SatSeconds Alarm Management technology offers a way to manage nuisance alarms without sacrificing patient safety.

The SatSeconds feature allows clinicians to set the monitor to accept desaturation events that are short in duration and/or small in magnitude without alarming.





# Monitor respiratory status - according to your needs

## Immediate detection of changes

The condition of a sick neonate can take a turn for the worse in a matter of minutes.

However, being able to constantly monitor and immediately react to changes in oxygen and carbon dioxide levels can help to avoid organ damage and failure.

The TCM40's fast-reacting transcutaneous electrodes combined with Nellcor OxiMax pulse oximetry sensors for neonates provide continuous and effective monitoring of this patient group, while reducing the need to draw arterial blood gas samples.



## Examination of sleep disorders

In sleep centers, transcutaneous monitoring is primarily used as an aid to assess the status of patients suffering from CO<sub>2</sub> retention during sleep, chronic hypercapnia and terminal respiratory insufficiency.

The TCM40 is a valuable tool in assessing these disorders by providing continuous monitoring of  $tc\text{pCO}_2$  and  $\text{SpO}_2$  in one single monitor. To meet the specific needs of sleep centers, the monitor provides an analog output for the transfer of data to polysomnographs.





## Monitoring in adult critical care

Transcutaneous monitoring of  $p\text{CO}_2$  can be used to evaluate the respiratory status of spontaneously breathing adult patients in ICUs, postanesthesia care units, step-down units, pulmonary function labs and respiratory departments.

Monitoring of the main respiratory parameters reduces the need for arterial blood samples while improving the value of the actual blood gas testing. By combining  $\text{tc}p\text{CO}_2$  with  $\text{SpO}_2$ , the TCM40 provides an early warning of changes in patient status, which makes it possible to limit the extent of blood gas testing to when patient status is critical.





## Get the most out of transcutaneous monitoring

For more information on Radiometer's transcutaneous monitors and support services, visit [www.radiometer.com](http://www.radiometer.com).

For more information about Nellcor, visit [www.nellcor.com](http://www.nellcor.com).

## Radiometer's knowledge site

For practical information on blood gas testing in neonates and adults, visit [www.bloodgas.org](http://www.bloodgas.org).

For information on the different applications of transcutaneous monitoring, visit [www.radiometer.com/tc](http://www.radiometer.com/tc).

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### Contact information:

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