



NiBP2010/ChipOx

The combination of blood pressure measurement and pulse oximetry

The NiBP2010/ChipOx combination module offers oscillometric blood pressure measurement, the determination of the functional oxygen saturation (SpO₂) and measurement of the pulse rate in one device. Its size has been optimized and can therefore be easily integrated in medical devices. Both modules communicate over a common interface.

With the NiBP2010/ChipOx, both SpO₂ and the pulse rate, as well as the plethysmogram, can be output continuously. Here, the amplitude of the plethysmogram is adapted to the display area and is therefore independent of the pulse volume. The extensive warning and error message system, as well as the indication of the signal quality, allow for reliable patient monitoring.

There are 3 measuring modes available for pulse oximetry with flexible artifact leveling (FAL): sensitive, normal and stable. Therefore, for every application, one can select a suitable combination of sensitivity and artifact stability.

The blood pressure is measured quickly with the NiBP2010/ChipOx and is also relatively quiet. Manual individual measurements as well as freely programmable measurement intervals and continuous measurements are possible. If several measurements are made, the initial pressure is automatically adapted to the previous measurements. Artifacts are already detected during measurement and result in the values being revalidated.

We would be happy to demonstrate the system to you or to adapt it to your needs.

Technical specification:

1. Functional description

- Measurement of oxygen saturation and pulse rate
- Transmission of the plethysmogram
- Integrated warning and error message system
- Oscillometric blood pressure measurement
- Artifact detection during measurement
- Selectable measuring modes
- One serial interface for data exchange

2a. Technical data NiBP2010/ChipOx

- Size: 80 mm x 60 mm x 25 mm (l x w x h)
- Supply voltage: 5 VDC (4.8 VDC to 7.0 VDC) or 12 VDC (11.0 VDC to 13.0 VDC)
- Max. current consumption: 750 mA (5 VDC) or 530 mA (12 VDC)
- Interface: RS232-TTL level
- Temperature range: 0 – 55 °C
- Humidity: 95 % max, non-condensing
- Development-Kit available

2b. Technical data blood pressure module

- Measuring method: oscillometric
- Pressure range: 0 – 300 mmHg
- Measuring range adults: pSYS: 25 – 280 mmHg
pDIA: 10 – 220 mmHg
pMAP: 15 – 260 mmHg
- Measuring range children: pSYS: 20 – 150 mmHg
pDIA: 5 – 110 mmHg
pMAP: 10 – 130 mmHg
- Resolution: 1 mmHg

2c. Technical data pulse oximetry module

- SpO₂ measurement: 45 – 100 % +/- 2 %
- Pulse rate: 20 – 250 bpm +/- 2 %
- Plethysmogram: 0 – 127 LSB
- Signal quality: 10 (low) – 0 (high)

