



daeg

SpO2 Analyzer

PRODUCT HIGHLIGHTS

- Extensive simulation range for SpO2, heart rate, and pulse amplitude
- Large flash memory for storage of up to 80 downloaded R-curves (oximeter makes)
- Compact, lightweight unit
- Comprehensive probe test (with PTA-1 Adapter)
- 5 lead ECG simulations
- Firmware updates available via the Metron website
- Graphical display with backlighting
- Compatible with PRO-Soft test software
- Low battery warning
- RS-232c and Centronic printer interface

OVERVIEW

The **daeg** SpO2 Analyzer provides simple and accurate testing of your Pulse Oximeters. The Analyzer not only performs SpO2 tests, it also indicates the quality of the IR and red LEDs.

daeg simulates a variety of patient conditions to test most modern oximeters. New models of oximeters can easily be added to the unit's menu.

The finger probe concept gives excellent performance at a low cost. Probes are calibrated independently, and are therefore moveable between host **daeg** units.

The Probe Test Adapter (PTA-1) and a variety of available SpO2 probe adapters let you utilize the probe test features in the **daeg** menu. Probes can be easily tested and faults can be quickly identified.

With PRO-Soft software, you can add new oximeter "makes" to the **daeg**, create your own test protocols, store test results to disk, and recall tests and results for future use.

daeg – Specifications

SPO2 SIMULATION

GENERAL

- Factory installed, downloadable and user programmable R-curves, patient conditions and templates.
- Probe signal and LED test

ACTIVE PROBE SPO2 SIMULATION

- O2 saturation range: 35 – 100 %
- Simulation resolution: 1% SpO2%
- Simulation accuracy:
 - ± 0.5 SpO2% 65-100% SpO2%
 - ± 1 SpO2% 30-64% SpO2%
- Simulation repeatability: ± 0.2 SpO2%
- Simulation rate: 30 – 300 bpm
- Rate resolution: 5 bpm (sync. to ECG for "C-lock" testing)
- Rate accuracy: ± 0.1%
- Pulse amplitude: 0 – 100% of nominal pleth amplitude.
- Amplitude resolution: 0-10 range, 1%
10-100 range, 5%
- Amplitude accuracy: ≥30% amplitude ±1%.
1-29% amplitude ±5%.
- Pigmentation: Low, medium and high
- Light repeater bandwidth: DC – 1MHz
- Optical slew rate: 50 mcd/μs
- Light repeater dynamic range: 1mcd + 13 dB – 60 dB
- Receiver optical 3 dB bandwidth: 600 – 1050 nm.

INSTALLED R-CURVES

- BCI International
- Criticare
- Dolphin
- Masimo
- Nellcor
- Nonin
- Novamatrix
- Philips (Agilent)
- Ohmeda

INSTALLED PATIENT CONDITIONS

- Normal patient
- Geriatric patient
- Obese patient
- Patient with weak pulse
- Bradycardia
- Tachycardia

ARTIFACTS (ACTIVE PROBE ONLY)

- Motion: 0 - 4Hz
- Ambient sunlight: Ambient, Sun
- Interfering light: 50Hz, 60Hz

PROBE LED OPTICAL FREQUENCY

- Frequency range: 550 – 1050 nm
- Resolution: 1nm
- Accuracy: ±2% of range

PROBE TEST

Available with PTA-1 Probe Test Adapter Box -Tests cable, photo sensors, Red LED and IR LED.

- Interface for Nellcor and Ohmeda type sensors as standard.
- Adapters for most major manufacturers available.
- LED current continuity tests.
- Photodiode response test with numerical display of light transfer function, 0-100%
- Advance cable test by detecting response glitches when flexing the cable.

ECG SIMULATION - GENERAL

The data below is related both to factory installed and downloadable waveforms.

- Lead configuration: 5 lead RL, RA, LA, LL, V1-6
- Low level output amplitude: 0.2-2mV, resolution 100 μV
- Low level output impedance: 1000 ohm to RL
- High level output amplitude: 0.5V/mV of low level.
- High level output impedance: 50 ohm
- System amplitude accuracy: ±2% @1mV
- System rate accuracy: ± 0.1%
- System time resolution: 10 μs
(100 kHz maximum update rate)

ECG OUTPUT

The data below is related to factory installed waveform types.

NORMAL ECG SINUS

30 – 300 BPM, resolution 5 BPM
(synchronized with pleth wave)

ACCESSORIES

- Battery Eliminator 240V or 115V
- Batteries
- User/Service Manual

OPTIONS

- PTA-1 Probe Test Adapter Box
- SpO2 Probe Adapters (check availability)
- Carrying case
- Universal Snap-to-Banana Adapters

GENERAL INFORMATION

POWER SUPPLY

- Power sources: 4 standard AA/LR6/MN-1500 cells.
230VAC/115VAC to 9vDC battery eliminator.
- Power consumption:
 - 200 mA w/o display backlight.
 - 400 mA w/full backlight.
- Battery lifetime: 12 h for alkaline cells without backlight.

HOUSING

High impact plastic case.

DIMENSIONS

- Height: 237 mm/9.2"
- Width: 122 mm/4.8"
- Depth: 42 mm/1.6"

WEIGHT

With battery: 0.6 kg/1.3 lb

TEMPERATURE

- Storage temperature: 0/32 to +50/122 ° C/F
- Operating temperature: + 15/59 to +35/95 ° C/F

HUMIDITY

Operating humidity:
10% - 80% (non-condensing)

DISPLAY

Graphical LCD, with backlighting.

CONNECTORS

- 9V DC power inlet (standard 2.1 mm power jack.
- RS-232/C for PC or printer communication (9-pin D-sub male)
- 1 probe connector (Redel 8-pin).
- 5 low level ECG outputs RA, RL, LA, LL and V1 (AHA color coded safety connector)
- 1 high level ECG output (standard phono jack).

RECOMMENDED PRINTERS

HP DeskJet, Canon Bubble Jet or compatible.

daeg SpO2 Analyzer Ordering Information

Order no:

12700: daeg SpO2 Analyzer

Accessories:

- 12715:** Finger Probe AFP-1
- 17030:** Battery Eliminator daeg, 240V
or
- 17027R:** Regulated Battery Eliminator 115V
- 17031:** Battery package, 4-cells
- 12710:** User and Service Manual (CD)

Options:

- 11150:** Carrying case
- 12711:** Probe Test Adapter Box
- 12712:** PRO-Soft daeg
- 12713:** PRO-Soft daeg, demo
- 12714:** User Manual PRO-Soft daeg
- 17024:** Universal Banana Adapter

SpO2 Probe Adapters

- 12761:** BCI Compatible Direct SpO2
- 12761N:** BCI Compatible 9-Pin SpO2
- 12762:** Criticare Compatible Direct SpO2
- 12762N:** Criticare Compatible 9-Pin SpO2
- 12764:** Datascope Compatible Direct SpO2
- 12764N:** Datascope Compatible 9-Pin SpO2
- 12765:** Datex Compatible Direct SpO2
- 12765N:** Datex Compatible 9-Pin SpO2
- 12766:** Philips Compatible Direct SpO2
- 12767:** Invivo Compatible Direct SpO2
- 12768:** Nihon Kohden Compatible Direct SpO2
- 12769N:** Nonin Compatible 9-Pin SpO2
- 12770:** Novamatrix Compatible Direct SpO2
- 12773:** Simed Compatible Direct SpO2
- 12774:** Spacelabs Compatible Direct SpO2
- 12775:** Sensormedics Compatible Direct SpO2
- 12776:** Masimo Compatible Direct SpO2