

GE DATEX OHMEDA EEG MODULE



ABOUT

The GE Datex-Ohmeda EEG Module is a sophisticated plug-in parameter module designed for integration with Datex-Ohmeda S/5 modular patient monitoring systems to enable comprehensive neurophysiological monitoring. This module, when used with the N-EEG headbox, allows clinicians to monitor electroencephalograph (EEG), frontal electromyograph (FEMG), and auditory evoked potentials (AEP) in hospitalized patients.

FEATURES

- **Neurophysiological Monitoring:** Measures up to four EEG waveform channels, one FEMG channel, and two AEP channels during monitoring.
- **EEG Analysis:** Performs spectral analysis on each EEG channel.
- **Auditory Evoked Potential (AEP):** Includes integrated auditory stimulation with adjustable click frequency and intensity.
Impedance Checking: Monitors electrode impedance either at set intervals or manually. Includes leads-off detection.
Montage Configuration: Supports up to eight lead sets, including three preset and five user-defined montages.
Signal Acquisition: Provides 10,000× signal amplification, 60 nV resolution, and 800 μ Vpp maximum EEG amplitude range.
S/5 Monitor Compatibility: Single-width plug-in module compatible with S/5 Anesthesia Monitors (AM), Compact Anesthesia Monitors (CAM), Critical Care Monitors (CCM), and Compact Critical Care Monitors (CCCM).



SPECIFICATIONS



POWER

Power Source: Powered through the GE Datex-Ohmeda S/5 modular system chassis. No external power supply required.

Power Consumption: Integral to the host monitor's power budget.

PHYSICAL SPECIFICATIONS

Module Type: Single-width plug-in module for S/5 monitor series.

Compatibility: Designed for S/5 Anesthesia Monitors (AM), Compact Anesthesia Monitors (CAM), Critical Care Monitors (CCM), and Compact Critical Care Monitors (CCCM).

FRONTAL ELECTROMYOGRAPH

Number of Channels: 1 channel.

Frequency Range: 50-150 Hz.

Sampling Rate: 400 Hz.

Display: Integrated bar graph or trend display.

SPECTRAL ANALYSIS PARAMETERS

Total Power Range: 0-100 μV^2 .

Spectral Edge Frequency (SEF) Range: 0-30 Hz.

Median Frequency Range: 0-30 Hz.

Burst Suppression Ratio (BSR) Range: 0-100%.

Frequency Resolution: 0.25 Hz.

Analysis Epoch: 2 seconds.

Update Rate: Every 2 seconds.

AUDITORY EVOKED POTENTIAL

Stimulation Type: Click stimulus.

Click Frequency: Adjustable from 1.1 to 9.1 Hz.

Click Intensity: Adjustable from 10 to 90 dB nHL.

Signal Averaging: 100 to 2000 responses.

Analysis Window: 100 ms post-stimulus.

Latency Measurement Accuracy: ± 1 ms.

Amplitude Measurement Accuracy: ± 0.1 μV .

EEG MEASUREMENT SPECIFICATIONS

Number of Channels: Up to 4 real-time EEG channels.

Amplification: 10,000x.

Resolution: 60 nV.

Maximum Amplitude: 800 μVpp .

Frequency Response: 0.5 Hz to 150 Hz.

Sampling Rate: 400 Hz.

Input Impedance: >10 M Ω at 50/60 Hz.

Common Mode Rejection Ratio (CMRR): >110 dB.

Noise Level: <2 μVpp .

Input Dynamic Range: ± 2 mV.

ELECTRODE IMPEDANCE SPECIFICATIONS

Impedance Measurement: Automatic or manual on-demand.

Measurement Frequency: 30 Hz.

Measurement Current: <1 μA .

Impedance Range: 0-50 k Ω .

Impedance Warning Threshold: User-configurable (default typically 5 k Ω).

Leads-Off Detection: Automatic with visual indicator.

SPECIFICATIONS



MONTAGE CONFIGURATION

Lead Sets: Supports up to 8 different lead sets.

Preconfigured Montages: 3 standard montages included.

User-Programmable Montages: 5 customizable montages.

Montage Recognition: Automatic via identification pins on lead sets.

Electrode Positions: Standard 10-20 system compatible.

ENVIRONMENTAL CONDITIONS

Operating Temperature: 50°F to 104°F (10°C to 40°C).

Operating Humidity: 15% to 95% relative humidity (non-condensing).

Operating Pressure: 600 to 1100 hPa.

Storage Temperature: -4°F to 140°F (-20°C to 60°C).

Storage Humidity: 10% to 95% relative humidity (non-condensing).

SAFETY & CLASSIFICATION

Applied Part Classification: Type BF (floating) defibrillator-proof.

Degree of Protection: Defibrillator-proof input circuits.

EMC Compliance: Meets applicable IEC 60601-1-2 requirements.

Safety Standards: Designed to meet IEC 60601-1 and IEC 60601-2-26 (if applicable) requirements for electroencephalographs.

CONNECTIVITY & INTEGRATION

Interface: Direct backplane connection to S/5 monitor chassis.

Data Integration: Fully integrated with S/5 monitoring platform for trend display, alarm management, and data export.

Alarm Management: Uses host monitor's alarm system with configurable limits for EEG and AEP parameters.

Trending: Long-term trend storage integrated with host monitor's trending capabilities.