Technical Specifications

**Amplifiers**

**Channels**
- The Protektor32 is now upgradeable with both 16 and 32 channel options.
- 1.5 mm touch-proof input jacks on pods
- Four color-coded acquisition pods with 16 inputs each, 10ft cable length (20" optionally available)

**Amplifier Input Impedance**
- Differential: Greater than 100 MΩ
- Common Mode: Greater than 50 MΩ

**Noise Level**
- Common Mode Rejection (CMRR): Greater than 93 dB

**Sampling Rate**
- 60 KHz, simultaneously sampling

**Resolution**
- 16 bits

**Differential Amplifier Input Impedance**
- Greater than 100 MΩ

**Amplifier Input Impedance**
- Greater than 50 MΩ

**Common Mode Noise Level**
- Greater than 20nV/Hz

**Common Mode Rejection (CMRR)**
- Greater than 93 dB

**Acquisition Timebase**
- 1 ms/division - 2 sec/division
- Can record multiple EP, EEG, EMG recordings simultaneously (64 measurements)

**Artifact Rejection**
- Independent rejection for each channel

**Stimulators**

**Electrical**
- Two low level; Constant Voltage stimulators allow biphasic stimulation
- 16 programmable (0-100mA, in 1mA increments), high level constant current outputs (0 – 100 mA), Duration: 0.05 – 1 ms, monophasic
- 2 low level constant current/voltage outputs (20mA intensity - 20VP-P max), Duration: 0.05 – 1 ms, monophasic
- 4 programmable TcMEP constant voltage outputs (0 – 1000V P-P, 1500mA max), Duration: 0.05ms
- Electrical Modes: single, repetitive, trains

**Auditory**
- Click, pip, tone, noise
- Rate: 0.2 – 100 Hz
- Intensity: 125 dB nhl
- Polarity: Condensation, rarefaction, alternating
- Transducers: TDH-39 headphones, TIP 300 inserts

**Visual**
- LED goggles or monitor
- Rate: 0.1 – 100 Hz
- Modes: Full field, Hemi-fields, Quadrants; Flash or Stripes
- Colors: Black, red, green, blue

**External Trigger Input/Output**
- 2 independent with standard TTL Levels

**Recording Modalities**
- Somatosensory (SEP)
- Motor evoked potentials (MEP)
- Transcranial electrical motor evoked potentials (TcMEP)
- Auditory evoked potentials (BAEP)
- Visual evoked potentials (VEP)
- Electromyography (EMG)
- Electrocencephalography, 32 Channel (EEG)
- Multi-modality

**Display Options**
- Selectable baseline, stacked, superimposed, waterfall presentations

**Quantitative Analysis**
- Compressed spectral analysis (CSA)
- Density spectral analysis (DSA)
- Spectral edge

**Trending**
- Graphical and numeric formats for both EP and Pulse Oximetry data

**Nerve Integrity Monitoring**
- Selectable chimes for automatically detected activity on up to 8 individual EMG channels
- Selectable stimulator contact chimes
- Selectable stimulus delivery chimes

**ESU Detection**
- Automatically detects use of electrosurgical devices, mutes audio, protects averages

**General Specifications**
- Power Supply: 100-240 VAC, 50/60 Hz
- Power Consumption: 60 W
- Environmental Limits
  - Temperature: 10° to 40° C
  - Relative Humidity: 30%–75%
  - Altitude: Up to 4600 meters above sea level

**System Architecture**
- CPU/RAM: Minimum AMD Athlon X2 Dual Core 2.2 GHz or Intel Core 2 Duo 3.0 GHz, 2 GB memory
- Graphics: 1280 x 800 or greater
- Storage: Minimum 160 GB hard-disk
- Operating System: Windows 7 Professional or Ultimate
- Printers: Windows Compatible

**Patient Safety**
- Patient applied parts have reinforced insulation type BF. System complies with IEC60601 standard.

**Mechanical**
- Isolation Module: 5.0" D x 3.8" W x 5.5" H (12.7cm x 9.6cm x 13.8cm)
- Acquisition module: 8.5" D x 10" W x 5.5" H (21.6cm x 25.4cm x 14cm)
- Stimulator Module: 8.5" D x 10" W x 5.5" H (21.6cm x 25.4cm x 14cm)

Specifications subject to change without notice.

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P/N DOC-004322D