inomed

we share competence

Intraoperative neurophysiological monitoring has become the 'Gold Standard' to control the nervous system during surgical interventions.

The ISIS IOM System is especially designed for that purpose by inomed in cooperation with clinical neuro-physiological specialists. It stands in the forefront of the high-performance devices on the international market. Due to its flexible configuration options, it suits many kinds of operation procedures and can be designed for your individual needs.

Take advantage of inomed's well-founded system competence and more than 20 years of experience in the field of neuromonitoring and benefit from comprehensive activity around the intraoperative neuromonitoring. We work continuously on future trends in amplifier technology and software tools as well as offering international application workshops and a fast on-site service.

ISIS IOM Systems
for Intraoperative
Neuromonitoring

- Neurosurgery
- Spine surgery
- Orthopaedics
- Vascular surgery
- Cardio and chest surgery
- General surgery
- ENT surgery

ISIS Headbox

Each ISIS Headbox consists of 8 input channels and acts combined with a medical computer as a complete unit for the recording of electrophysiological signals. Additionally an output for AEP stimulation can be integrated. The recorded signals are digitised directly in the Headbox and are transmitted to the PC via USB-interface. This enables optimal signal acquisition without significant artefacts despite difficult conditions in the operating room.

Adaptor

Special adaptors for stimulation and recording have colour coded plug-ins, connectors and cable. Combined with a significant inscription this leads to an easy handling. Electrodes and probes can hence be connected to the system without problems.

ISIS Neurostimulator

The ISIS Neurostimulator is a multifunctional constant current stimulator for the complete range of intraoperative neuromonitoring. It provides 12 high current stimulation outputs up to 250 mA and 1 direct nerve stimulation output up to 25 mA.

The ISIS Neurostimulator can be used with a special software as a stand-alone device or can be used as a part of the ISIS IOM system, which is controled by the software NeuroExplorer.

Parameters for various stimulation modes can be modified and saved permanently. Integrated in the ISIS IOM system the ISIS Neurostimulator allows to use every channel for different neurophysiological measurement methods. This option as well as the possible stimulation current up to 250 mA and the continous control of stimulation electrode impedances during the surgery gives the high flexibility needed for the latest standard of intraoperative neuromonitoring.

ISIS Headbox MER
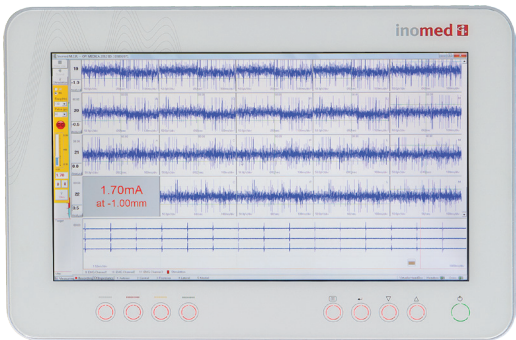
### ISIS MER Software

ISIS MER System

When implanting a DBS electrode, the intraoperative micro-electrode recording (MER) technique is used to ensure that the expected target point determined in path planning is reached. This involves introducing micro-macro electrodes along a planned trajectory and recording the differing neuronal activity.

The ISIS Headbox MER offers the complete hardware basis for target point localisation in deep brain stimulation. It includes 5 MER amplifier channels for extracellular recording and an integrated stimulator for deep brain stimulation. The product range also includes the autoclavable recording cables and the electrodes necessary for recording and test stimulation. Recording cables are provided for use with both the inomed MicroMacro and the inomed MicroMove electrodes.

ISIS MicroDrive

The electrodes are introduced by the MicroDrive system which advances up to five electrodes simultaneously into the tissue. Haptic feedback after a defined rotation constantly provides the surgeon with certainty regarding the insertion depth already achieved. The depth sensor also allows the stereotactic position of the electrodes to be transmitted fully automatically to the ISIS MER System.
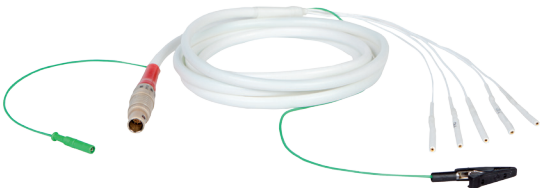
ISIS MER Recording Cable

| Configuration	ISIS IOM System	ISIS IOM System Compact	ISIS IOM System Portable
Base unit with PC, inomed monitor height adjustable with hotkey function, laser printer, keyboard and two accessories drawers	■		
Base unit with PC, monitor, keyboard drawer and accessories basket		■	
Option inomed monitor		■	
Multitouch option for inomed monitor	■	■	
Case unit with laptop, wheels and removable telescopic handle			■
Amplifier channels	max. 128, individual configurable	max. 24, individual configurable	max. 24, individual configurable
Software Module			
EMG software module	■	■	■
SEP software module including PRSEP	■	■	■
AEP software module	■	■	■
MEP software module	■	■	■
VEP software module	■	■	■
EEG software module	■	■	■
Features			
Software mute function to reduce disturbing noise from cautering	■	■	■
External mute sensor to reduce disturbing noise from cautering	■	■	
Video module with synchronization function	■	■	
Remote Monitoring	■	■	■
Narcotrend® Integration	■	■	
Zeiss Pentero® Integration	■ [1]	■ [1]	
Screen2Video recording with audiosynchronization	■ [1]	■ [1]	
Network Option	■	■	■
Upgrade possibility with MER (5 channels)	■	■	
iSSS - inomed System Security Solution	■	■	■

iSSS - inomed System Security Solution

By networking different systems in the hospital and exchanging various data with different media, the danger of viral infections and malware grows significantly. Inappropriate handling leaded to expensive system failures in the past. To prevent those kind of failures the iSSS – inomed System Security Solution – was developed for the ISIS systems.

For safe use of our inomed systems in clinical performance and network connectivity, all ISIS systems will be provided automatically with iSSS and updated periodically with approved and adapted virus definitions.

[1] Only one of the numbered options can be chosen.

ISIS IOM Software NeuroExplorer
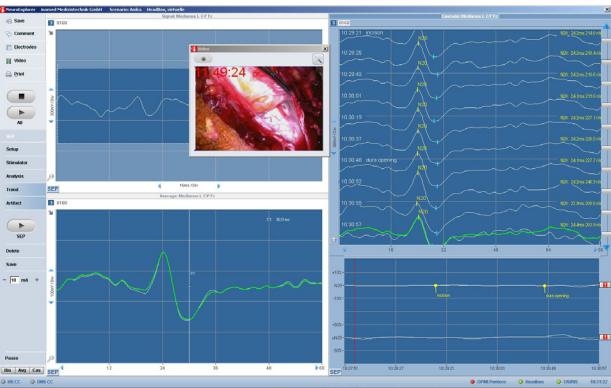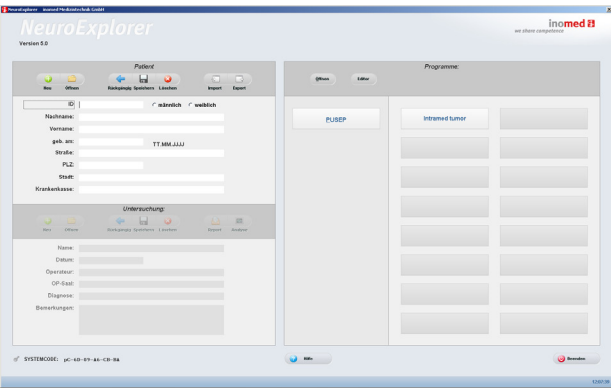
The software NeuroExplorer enables to create and memorize an unlimited number of programs with individual measurement modalities. Your system can be activated with the intended functions by simply pressing one button.

The flexibility in each program allows an intraoperative adjustement of the display and parameters like cascades, trend curves, amplitude and time base etc. during measurement. The interval time for the different measurements can be set individually, thus priorities can be made without skipping other measurements. The video option allows to synchronize video and EMG/EP recordings in real-time for later analysis or just for documentation. Remote monitoring is an additional feature which allows to see the screen from every place even outside the operation room.

Features

- Narcotrend® Integration for measuring the anaesthesia depth
- Pentero® Interface to superimpose relevant measuring data into the microscope eyepiece
- Screen2Video recording with audiosynchronization
- Remote Monitoring
- iPad App
- Network option
- iSSS - inomed System Security Solution
- Upgrade possibility with MER
- Video module with synchronization function

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