ANESTHESIA. **PERSONALIZED.**

Bispectral Index™ (BIS™) monitoring system product guide

Personalize anesthetic dosing. For better patient comfort — and to reduce complications.[1,2]

BIS™ brain function monitoring:

- Can help you reduce anesthesia use by up to 50%[3]
- Streamlines patient emergence time and discharge from the PACU[4]
- Indicates hypnotic effect through the easy-to-read BIS™ index
- Facilitates improved patient outcomes.[1,2,5]

INSIGHTS FROM **RELIABLE DATA**

Reliable data based on objective, quantified science. We know how important it is.

BIS™ monitors use innovative technology to link patient-specific EEG information to individual clinical states.

Here's how it works:

1. Sensors collect the raw EEG data that indicates brain activity in real time.
2. The system uses its clinically validated algorithm to filter, analyze, and correlate the data.
3. Results are continually calculated and displayed as the BIS™ index (a number between 0 and 100), indicating the patient's response to anesthetic agents.

You may improve clinical outcomes by customizing individual dosing to keep the BIS™ monitor value within the target range during all phases of anesthesia.[1,4-10]

2-channel monitor

This monitor:

- Includes a user-configurable display
- Is a versatile platform designed for future expandability

Part number 186-0210

5 year warranty

BIS™ LoC 2 channel with patient interface cable (PIC+)

Product ID: 186-0195-AMS

PIC+ only: 186-0107

4-channel monitor

The same proven BIS™ anesthetic depth monitoring, with enhanced bihemispheric capabilities.

Combine it with our bilateral sensors to detect hemispheric differences in the brain. It features:

- Asymmetry indicator (ASYM)
- Ability to trend BIS™-Left and BIS™-Right values Density spectral array (DSA)

Part number 186-1014

5 year warranty

BIS™ LoC 4 channel with patient interface cable (PIC-4)

Product ID: 186-0224-AMS

PIC-4 only: 186-1018-AMS

Medtronic
Further, Together

IMPROVE **PERFORMANCE**

High-quality sensors that are easy to apply, with positioning instructions printed right on them. They adhere well to skin and are comfortable for your patient. Limited for short term use (maximum of 24 hours).

BIS™ quatro 4-electrode sensor

Measures brain activity in adult patients undergoing general anesthesia or sedation.

Part number 186-0106, box of 25

BIS™ pediatric sensor*

Measures brain activity in pediatric patients.

Part number 186-0200, box of 25

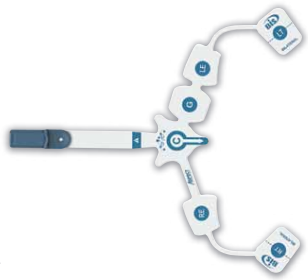
*Ages four and up recommended.

BIS™ bilateral sensor**

Lets you detect hemispheric differences in the brain, which may be useful for advanced monitoring applications.

Part number 186-0212, box of 10

**Not compatible with BIS™ 2-channel systems. BIS™ LOC 4-channel cables required.



BIS™ extend sensor (extended use)

Measures brain activity in adult patients who require longer periods of monitoring, including those in the ICU.

Part number 186-0160, box of 25

Talk to your Medtronic representative to order BIS™ monitors and sensors, or visit **medtronic.com/covidien**

References

1. Luginbühl M, Wüthrich S, Petersen-Felix S, et al. Different benefit of bispectal index (BIS) in desflurane and propofol anesthesia. *Acta Anaesthesiol Scand*. 2003;47(2):165-173.
2. Liu SS. Effects of bispectral index monitoring on ambulatory anesthesia: a meta-analysis of randomized controlled trials and a cost analysis. *Anesthesiology*. 2004;101(2):311-315.
3. Chan MT, Cheng BC, Lee TM, et al. BIS-guided anesthesia decreases postoperative delirium and cognitive decline. *J Neurosurg Anesthesiol*. 2013;25:33–42.
4. Gan TJ, Glass PS, Windsor A, et al. Bispectral index monitoring allows faster emergence and improved recovery from propofol, alfentanil, and nitrous oxide anesthesia. BIS Utility Study Group. *Anesthesiology*. 1997;87(4):808-815.
5. Punjasawadwong Y, Phongchiewboon A, Bunchungmongkol N. Bispectral index for improving anaesthetic delivery and postoperative recovery (review). *Cochrane Database Syst Rev*. 2007;4:CD003843.
6. White PF, Ma H, Tang J, et al. Does the use of electroencephalographic bispectral index or auditory evoked potential index monitoring facilitate recovery after desflurane anesthesia in the ambulatory setting? *Anesthesiology*. 2004;100:811-817.
7. Myles PS, Leslie K, McNeil J, et al. Bispectral index monitoring to prevent awareness during anaesthesia: the B-Aware randomized controlled trial. *Lancet*. 2004;363:1757-1763.
8. Avidan MS, Zhang L, Burnside B, et al. Anesthesia awareness and the bispectral index. *N Engl J Med*. 2008;358:1097-1108.
9. Avidan MS, Jacobsohn E, Glic D, et al. Prevention of intraoperative awareness in a high-risk surgical population. *N Engl J Med*. 2011;365:591-600.
10. Ekman A, Lindholm ML, Lennmarken C, et al. Reduction in the incidence of awareness using BIS monitoring. *Acta Anaesthesiol Scand*. 2004;48:20-26.

02/2017-16-PM-0168(1)-[WF#1580984]

6135 Gunbarrel Avenue
Boulder, CO 80301 800.635.5267 **medtronic.com/covidien**

American Society of Anesthesiologists®
INDUSTRY SUPPORTER

Medtronic