

Multigas Module



Multigas is anesthesia gas analyzer intended for continuous sidestream measurement and monitoring of gas concentration in the patient's airways. Specially designed for implementation into medical devices, including anesthesia machines, patient monitors and ventilators.

Benefits:

- Comprehensive Anesthetic Gas Monitoring — Simultaneously measures inhaled & exhaled concentrations of O₂, CO₂, and all major volatile agents (Iso, Sev, Des, Hal, N₂O)
- OEM-Optimized for Anesthesia Platforms — Designed for seamless integration into anesthesia machines, ventilators, and patient monitors
- Maintenance-Free Operation — No routine calibration or servicing—reducing total cost of ownership and downtime
- Rapid Response — 2.5-second response time and full CO₂ accuracy in just 10 seconds enable real-time decision-making

Measured Parameters:

- Concentration of anesthetic gas agents (Ax): Isoflurane (Iso), Desflurane (Des), Sevoflurane (Sev), Nitrous oxide (N₂O), Enflurane (ENF) (option), Halotane (HAL) (option), on inspiration (FiAx) and expiration (EtAx).
- Concentration of CO₂ on inspiration (FiCO₂) and at the end of exhalation (EtCO₂).
- Respiration rate (RR).
- Concentration of O₂ (option) on inspiration (FiO₂) and at the end of exhalation (EtO₂)

Technical Specification

Technology	Non-dispersive infrared (NDIR)
Measured gases	Anesthetic agents: Iso, Des, Sev, N ₂ O, Enf (option), Hal (option), CO ₂ , O ₂ (option)
Measured parameters	Inspired and expired gas concentrations of all gases; respiration rate; ambient pressure
Patient age groups	Adult, pediatric
Self-diagnosis	Available
Warm-up time	ISO accuracy within 45 sec. Full accuracy within 10 min CO ₂ channel 10 sec.
Response time	2.5 sec
Resolution	0.1
Gas sampling rate	50–250 ml/min
Respiration rate range	0–160 breath per minute (BPM)
Respiration rate accuracy	± 1 breath
Apnea detection range	10–60 sec, default 20 sec
Calibration	No user calibration required. Supports automatic atmospheric pressure compensation
Dimensions & Weight	With housing: 150x95x60 mm, 0.5 kg Without housing: 117x44x70mm, 0.25 kg
Power	Voltage: 5 V ± 5% Power consumption: 2.5 W, not more than 5 W at the warm-up
Environment/Protection	Water and splash resistance: Ip22 Operation: 10–35°C, RH 10–90% Storage: 5–40°C, RH <80% at 25°C, 390-900 mmHg Transportation: -50 to 50°C
Integration	Interface: RS232 Connector: 5-pin ODU Data output: FiCO ₂ , FiO ₂ , FiAx, EtCO ₂ , EtO ₂ , EtAx, Respiration rate
Standards	Developed in accordance with the requirements: EN 60601-1, IEC 60601-1-2, EN ISO 80601-2-55, RoHS

Agent Measuring Ranges

Gas	Measurement range, Vol %	Accuracy
Isoflurane (Iso)	0–5	$\pm(0.2\% + 15\% \text{ of gas level})$
Desflurane (Des)	0–17	$\pm(0.2\% + 15\% \text{ of gas level})$
Sevoflurane (Sev)	0–7	$\pm(0.2\% + 15\% \text{ of gas level})$
Enflurane (ENF) (option)	0 – 5	$\pm(0.2\% + 15\% \text{ of gas level})$
Nitrous oxide (N ₂ O)	0 – 100	$\pm(2\% + 8\% \text{ of gas level})$
Halothane (Hal) (option)	0–5	± 0.2
CO ₂	0–15	$\pm (0.43\% + 8\% \text{ of gas level})$
O ₂ (option)	0–100	± 2

Delivery kit

Multigas Module	TESM.943129.001	1 pcs.
Water trap	60-1300-00 DRYLINE	1 pcs.
Sampling line	010-700 Flexicare	1 pcs.
Connector	15M-22M/15 REF2713 or 15M-22M/15 010-638 Flexicare	1 pcs.
Interface cable	TESM.704021-03	1 pcs.
Developer kit	On request Et555494	1 pcs.

Contacts

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