

Multigas Module

OEM solution

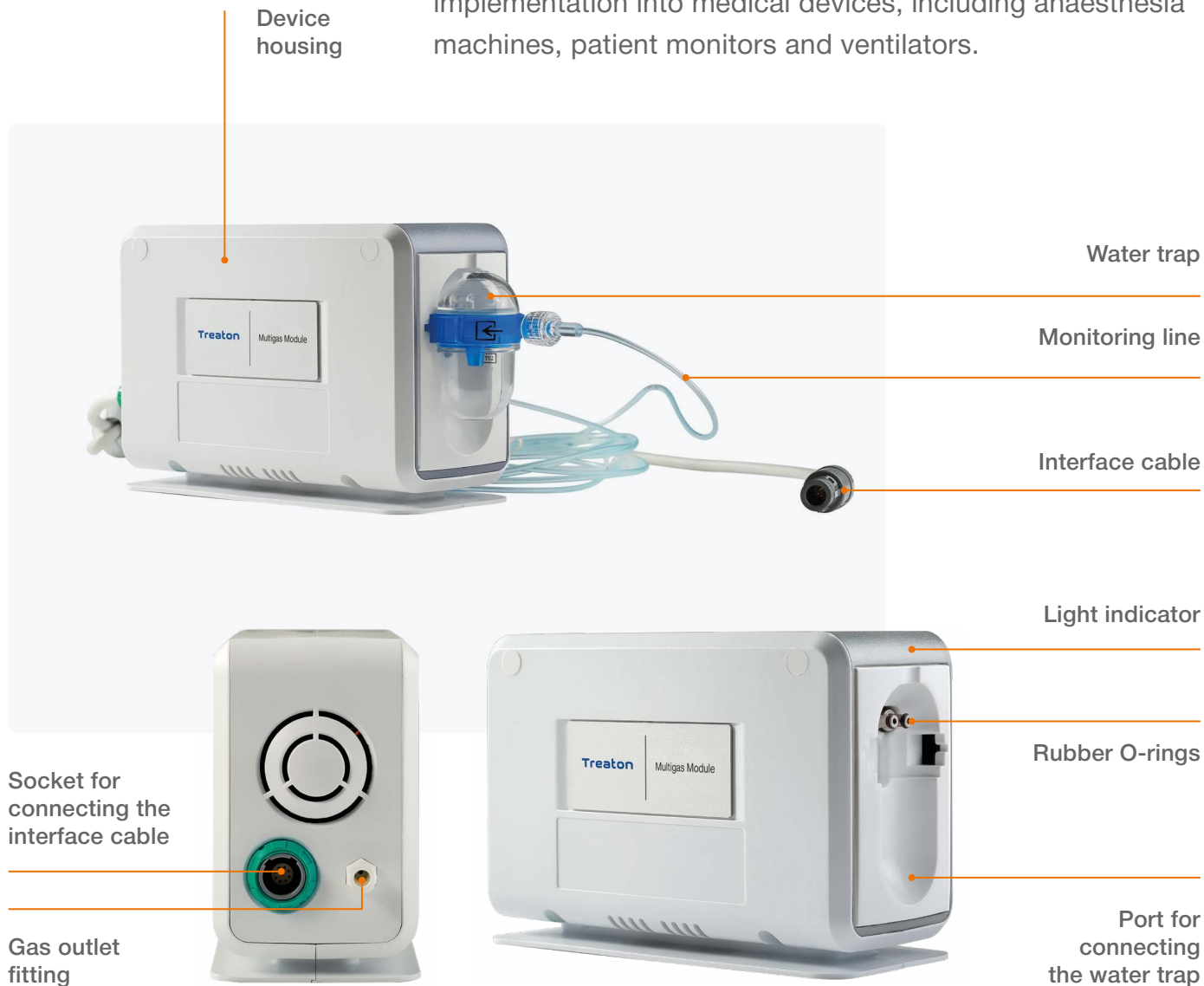


Complete solution for anesthesiologists:
Anesthesia Gas Monitoring



Appearance

Multigas is anaesthesia 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 anaesthesia machines, patient monitors and ventilators.



Multigas Module

Measured Parameters

Concentration of anesthetic gas agents (Ax):
Halotane (option), Isoflurane (Iso), Desflurane (Des),
Sevoflurane (Sev) 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).

Multigas Benefits

- Easy integration.
- Maintenance-free.
- Standard accessories.
- No routine calibration.

Agent Measuring Ranges

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

OEM 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 includes: RS232-USB converter; USB cable; CD with development software and data protocol description; Integration manual.	On request ET555494	1 pcs.

Technical Specification

Technology	Non-dispersive infrared (NDIR)
Measured gases	Anesthetic agents: Iso, Des, Sev, 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	Availability
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	External module: 150x95x60 mm. 0.5 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, MDD 93/42/EEC, RoHS

We continuously improve the technological principles and implement new profitable solutions based on market demands



In biomedical signal processing, gas monitoring and respiratory support since 1989

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Quality management system certified as meeting the requirements of EN ISO 13485

Second revision
September 2021

