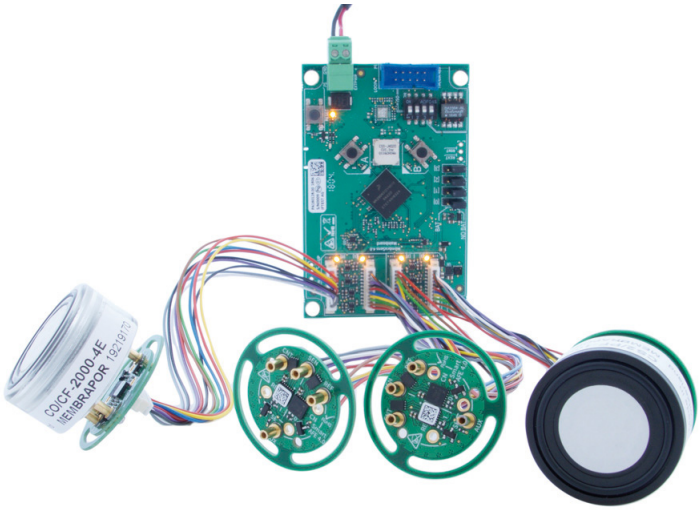
MembraSens 4.0

Universal electronic for electrochemical gas sensors

MembraSens consists of a motherboard with microcontroller, MODBUS interface and up to four connected analog front-ends. Such an analog front-end (AFE) includes a potentiostat for operating an electrochemical gas sensor and an EEPROM memory for securing sensor-specific data such as calibration parameters. All common gas sensors with 3 or 4 electrodes can be used with *MembraSens*.

Main features



- Suitable to operate up to 4 electrochemical sensors in Compact or Prime size (7 series)
- For 3-electrode sensors (1 signal)
- For 4-electrode sensors (2 signals)
- Programmable smart AFE: Operation of whole range of toxic gas sensors
- Storing configuration, calibration and temperature compensation into EEPROM of the AFE
- Dimension: AFE diameter 32 mm with mounting option, main board 60 x 92 mm^2
- MODBUS RTU: Digital communication for configuration, calibration and signal monitoring of all AFEs
- RS-485 interface (TIA/EIA-485)
- Bus-operation with up to 247 *MembraSens* possible
- Power supply: 4 ... 36 VDC and power management with reduced energy consumption
- Defined states of sensors in power-off mode, incl. maintenance of bias
- Extensive signal processing possible:
  - Various models for ppm calculation, incl. hydrogen compensation
  - Various models for temperature compensation
- Calibration made possible with and without gas at anytime
- Zero point calibration is possible directly on mainboard with buttons
- Alerting in the case of violation of alarm thresholds

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Content of Delivery

Item	Detail	Remarks
MembraSens Mainboard	1	With plug for power supply and 2x5 pin socket for the RS-485 interface, without batteries
MembraSens AFE	1 till 4 pcs	With cable to connect to the mainboard
USB-to-RS485 Converter	optional	Converter Cable to connect *MembraSens* to a PC
MembraSens Test-Panel	optional	PC software

The *MembraSens* Handbook with detailed instructions will be sent as a PDF by email.

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