



**MEASUREMENT, CONTROL AND
WARNING UNIT FOR SENSORS**

Multitronik 592



standard



compact



portable

ADOS GmbH

Instrumentation and Control

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Application

ADOS Multitronik 592 is a modular-constructed measurement, control and warning unit, designed for universal use with gas sensors. It can be used either stationary or as a portable measuring system, depending on the design of the unit being used.

Various types of sensors can be connected to the system by means of a 4–20 mA current interface or the LON[®] field-bus.

ADOS Multitronik 592 in conjunction with the ADOS 592 TOX CO LON[®] gas-test sensor, conforms to the requirements of the German VDI 2053 standard.

The microcontroller-aided unit allows installation of an all-electronic version without pneumatic components as well as the assembly of a version with gas intake.

In the all-electronic version, each measuring point is fitted with a local gas sensor, with the signals being transferred to the unit by way of a current interface.

Specific application versions, using 19"-techniques, are realised by inserting standard format plug-in Euro-cards into a Bus system and the use of the modules required for a defined application.

Fields of Application

- In garages and tunnels for measurement, control and warning, according to the German VDI 2053 standard, with ADOS TOX 592 CO LON[®] carbon monoxide sensors
- For monitoring the air at working places, to control the maximum level of concentration and for protection against explosion
- In shelters for monitoring the external and internal air
- For measuring the concentration of exhaust and waste gases at motor and brake test benches
- Monitoring liquid gas reservoirs
- Control of cold storage houses
- Control of fruit storage cells



Design and Operational Characteristics

All information significant to operation is displayed in clear text on a 4-line, 16-digit display. This information includes the gas actual value, gas half-hourly average value, monitoring period, measuring point, sequence timing, alarm and faults (or errors).

The alarms and centralised malfunctions are all indicated by LED's.

A total 6 keys are used to operate the equipment. Four keys, together with menu-assistance, are used for defining the number of measuring points, the monitoring period and other parameters without any previous knowledge of programming. An electronic check of the units including the display of a single selected measuring point, is initiated by pressing a key. The siren after an alarm, can be cancelled either at the unit or as an option, externally.

Digital switching outputs can be used for any ventilation and alarm control units; digital inputs are also available for external signals.

For data communication RS 232 or RS 485 as well as current outputs 0 (4)–20 mA or voltage outputs 0–10 V and the LON[®] field-bus are provided as standards interfaces.

ADOS Multitronik 592 is almost independent of mains supply networks. A line filter is provided as a standard. A charging unit for 24 V battery supply is integrated.

The apparatus can be equipped with or without UPS (uninterruptable power system), according to the German VDI 2053 recommendations.

The unit is delivered as standard, in a three-section sheet-steel housing with transparent lockable door, according to IP 54 standards.

Control and power sections for the ventilator drive are mounted on an installation panel.

Equipment Description

The complete ADOS Multitronik 592 gas measurement system consists of the following system components:

- ADOS 592 gas sensors in a housing with amplifier and 4–20 mA current interface
- Input & output cards and modules for standardized input and output signals
- Microcontroller-aided evaluation unit in 19"-system with application specific, standard plug-in Euro cards
- Measuring units with integrated gas sensors for gas intake system with measuring point selection switch and filter, optionally available with automatic calibration unit
- Portable test unit, including battery with integrated charging unit incorporating discharge protection
- Power and control units for ventilators
- The housing



Technical Data

Sensor inputs:	4-20 mA current interface for connecting sensors using two- or three-wire techniques LON [®] four-wire techniques galvanically isolated, data transmission 78 kbps
Digital inputs:	Opto-isolated inputs, with galvanically isolated power supply
Digital outputs:	Floating control outputs max. 230 V 4A 900 VA Warning outputs max. 230 V 6A 1400 VA
Standard output signals:	Serial interfaces RS 232 or RS 485 Analog Output 0–10 V or 0 (4)–20 mA option - galvanically isolated LON [®] fieldbus, galvanically isolated, data transmission 78 kbps
Battery operating time:	> 10 h with „mains fault“ display, battery discharge protection > 1 h optionally, maintaining all Multitronik 592 functions
Battery charging time:	15–16 h, permanent charging system
Power supply:	24 V–230 V, 130 VA , DC or AC
Test certificate:	To German standards, according to VDI 2053 in conjunction with ADOS 592 CO test numbers: 09-02-0120 09-95-0128 432-987615

Version “standard”

Dimensions (WxHxD):	23.6 x 13.6 x 19.7 inch
Weight:	approx. 44 lbs
Protection class acc. to DIN 40050:	IP 54



Version “compact”

Dimensions (WxHxD):	14 x 10.2 x 9.4 inch
Weight:	approx. 11 lbs
Protection class acc. to DIN 40050:	IP 55



Version “portable”

Dimensions (WxHxD):	14.6 x 6.7 x 15.8 inch
Weight:	approx. 28.7 lbs
Protection class acc. to DIN 40050:	IP 40

