

Trace Oxygen Analyser AMS 5100



available options:

- sample gas pump
- electronic flowmeter
- auto-calibration
- pressure reducer
- automatic adjusting measuring ranges
- different housings

The Application:

The basics of the Trace Oxygen Analyser AMS 5100 is the development project "AMS 5000" for a compact electronic to be used with Zircon dioxide and electrochemical sensors for the measurement of trace oxygen and Oxygen concentrations in Percent range. The Trace Oxygen Analyser AMS 5100 is for the measurement of oxygen traces in inert gases. For this application the Trace Oxygen Analyser AMS 5100 is equipped with a Zircon dioxide sensor. Due to the compact size of the electronics the Trace Oxygen Analyser AMS 5100 can be mounted in an electronic housing 28 TE, 3 HE and has a depth of 250 mm. The Trace Oxygen Analyser AMS 5100 is available in several housings for General- and Ex-Applications.

The Measuring Principle:

The Zircon dioxide sensor is the ideal transducer for the trace analysis of Oxygen in Inert gases. The sensor can be mounted together with the electronics in one single housing. In combination with a

calibration adapter the Zircon dioxide sensor can be mounted directly into a gas pipe. This setup allows the supply of the Zircon dioxide sensors with reference- and calibration gas. To increase the reproducibility of the measuring values the analyser can be equipped with the optional Auto-Calibration feature.

The Measuring System:

A long list of options allows adopting the Trace Oxygen Analyser AMS 5100 for almost every application. Four measuring ranges with automatic switchover can be set freely within the measuring range. The software for remote control, calibration and service with remote display allows the direct access via the computer network of the customer to further increase the flexibility of the Trace Oxygen Analyser AMS 5100.

Technical Data

Analyser	AMS 5100
Measuring principle	ZrO ₂ probe with Pt-electrodes
Application	Soldering machines, Gases Industries, Chemical Industries
Measuring range	0 ... 25 Vol % 0 ... 10 ppmv
Analogue signal port	(0) 4...20 mA or 0...10V, galvanically separated
Reproducibility	+/- 2 % of the measuring value
Resolution	0,01 ppm – C(O ₂) – 0,01 % depending on the O ₂ concentration
T90-Time	< 20 Seconds
Display	2* 16 digit, illuminated LCD display 1. Line: display of concentration in ppm or Vol % 2. Line: Messages, device status, sensor parameters
Messages	1 System message (measuring value yes / no) max. 2 messages configurable as oxygen value, calibration message, measuring value in the range, flow
Gasconnection (inlet/outlet)	3 / 6 mm ferrule pack (other on request)
Gas sampling	built-in inlet
Sample flow	min. 30 NI/h, max. 50 NI/h
sample pressure (inlet)	min. 1,1 bar abs., max. 10 bar abs.
Digital communication	serial interface RS232
Ambient operating temp.	-10 °C up to + 60 °C
Power supply	110 ... 230 VAC or 24 VDC
Protection / Housing / Dimensions	IP20 / electronics unit, 28 TE / 3HU IP65 / wall mounting housing / ca. 300 x 260 x 130 mm (hxbxt) IP54 / portable housing 42 TE / 3 HU IP 54 / panel mounting 144 x 144 mm Ex-d housing for Ex Zone 2
Weight	2,5 kg ... 10 kg depending housing and built-in options
Options	Sample gas pump electronic flow control software for remote control and service max. 4 measuring ranges automatically switching with digital identification auto-calibration pressure regulator Different housing types
Version: AMS 5100 E V-2021-08	

Specifications subject to change.