

# TRANSIC Extractive

## Oxygen measurement for many application

### Reliable measurements even in difficult conditions

- Reliable measurement in difficult measuring conditions and in contaminated gases
- Slim sample conditioning system results in minimal maintenance work
- Can be used in hazardous areas
- Easy to use and install
- Low operating costs



# Reliable oxygen measurement for challenging process environments

Oxygen is a vital elixir of life. Yet in industrial environments, it is often unwelcome. It is highly reactive and can severely compromise process safety and product quality. For instance, it can lead to uncontrolled combustion, to corrosion, and to changes in product properties in foods or chemicals, for example. In such cases, the absence of oxygen is a sign of quality and absolutely essential to ensuring a safe process.

TRANSIC Extractive reliably measures oxygen content and can be adapted to the most varied of application conditions – whether you are looking to guarantee safety, prevent corrosion, or ensure product quality.

## Focused on essentials

With TRANSIC Extractive, we provide a modular system for the extractive analysis of oxygen that lends itself to virtually all applications and industry standards. The TRANSIC Extractive process gas analyzer system focuses on the

essentials: It impresses thanks to the minimum maintenance it requires, its low operating costs, and components that are perfectly matched to the application in question.

## Proven technology now also available for extractive measurements

TRANSIC Extractive is the answer to all measurement situations where in-situ analysis is not possible: for example, when the measurement point is difficult to access, at temperatures above 80 °C (176 °F), or when process pressures are high.

The proven technology of the TRANSIC100LP laser oxygen transmitter can now also be used for extractive measurements.

As a result, TRANSIC Extractive is opening up new possibilities with respect to oxygen measurement. It is now possible to carry out calibrations and operational checks with an additional air supply without dismantling the device, as the procedures can be performed outside the monitored area. If required, TRANSIC Extractive can also keep its eye on several measurement points: Thanks to the programmable measurement point switchover feature, multiple measurement points can be reliably monitored in turn.

# TRANSIC100LP – The core system component

TRANSIC Extractive combines the benefits of the TRANSIC100LP transmitter design with the flexibility of an extractive analyzer system. Based on modular design principles, it can be individually configured for every oxygen measurement. However, one core system component remains unchanged – the TRANSIC100LP laser oxygen transmitter.

The system uses state-of-the-art laser technology to deliver precise measurement results even in difficult conditions. As a result, TRANSIC Extractive is the ideal solution for monitoring the O<sub>2</sub> concentration in plants and processes across all industries.



## One system solution – many applications

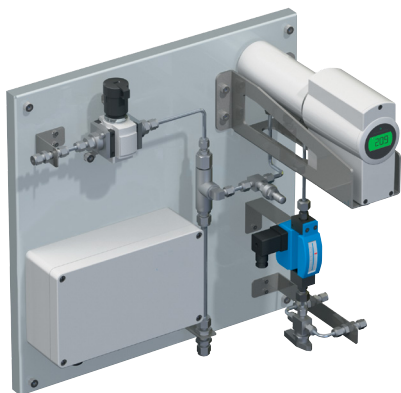
As an extractive oxygen measurement device, TRANSIC Extractive is the right choice for a wide range of applications and industries. It reliably fulfills standardized hygiene requirements, offers standardized protection against environmental influences, and is also certified for use in explosion-hazardous areas (ATEX/IECEX and FM Approvals for the USA and Canada).

Oxygen can be measured for various purposes. One critical application is oxygen measurement for explosion protection. To prevent oxygen – an oxidizing agent – from entering hazardous areas, it is common practice to inert these areas with an inert gas such as nitrogen (N<sub>2</sub>) or carbon dioxide (CO<sub>2</sub>).

Monitoring the oxygen concentration ensures effective inerting and, consequently, operational safety for both personnel and equipment. For this reason, oxygen monitoring devices must, in some cases, also be used in hazardous areas. For use in potentially explosive atmospheres, the TRANSIC100LP is available in two certified variants: one approved by FM Approvals for the USA and Canada, and another certified according to IECEx/ATEX standards.

# TRANSIC Extractive

## Oxygen measurement for every application



### Product description

The TRANSIC Extractive modular analyzer system combines the benefits of the TRANSIC transmitter design with the flexibility of an extractive analyzer system. TRANSIC Extractive is the ideal solution for monitoring the O<sub>2</sub> concentration in plants and processes across all industries. The system uses

state-of-the-art laser spectroscopy to perform reliable measurements even in difficult conditions. As a modular system, it can be adapted to different industry standards and virtually every application, and can even be used in hazardous areas or hygienic areas without any problems.

### At a glance

- Oxygen transmitter based on modern laser spectroscopy (TDLAS)
- Compact design adapted to specific application conditions
- Very easy to operate and install
- Can be combined with sample point switching
- Flexible for virtually every application
- Modular extension possible
- Various Ex-approvals available

### Your benefits

- Reliable measurement results in difficult measuring conditions and in contaminated gases
- Minimal maintenance work due to lean gas conditioner
- Can be used in explosion-areas
- Easy to use and install
- Low operating costs

### Fields of application

- Monitoring of inert gas blanketing in tanks and vessels
- O<sub>2</sub> measurement in process gases
- Measurements in potentially explosive atmospheres
- Process monitoring in fermenters and bioreactors
- Room air monitoring
- Quality monitoring for the production of technical gases
- Replacement of extractive paramagnetic oxygen analyzers and electrochemical cells



### More Information online

For more information, enter the link or scan the QR code to get direct access to technical data, operating instructions, software, application examples, and much more.

[www.endress.com/transic-extractive](http://www.endress.com/transic-extractive)



# Technical data

The exact device specifications and product performance data may vary and are dependent on the respective application and customer specifications.

## TRANSIC Extractive

Measured values	O <sub>2</sub>		
Measurement principles	Diode laser spectroscopy (TDLS)		
Measuring ranges			
	O <sub>2</sub>	0 ... 5 Vol.-% / 0 ... 25 Vol.-% ; other measuring ranges upon request	
Response time (t <sub>90</sub> )	≤ 20 s (depending on operating conditions)		
Accuracy	≤ 0.2 Vol.-%		
Zero point drift	± 0.1 Vol.-% per year		
Process temperature	-20 °C ... +200 °C (-4 °F ... +392 °F); other temperatures on request <sup>1</sup>		
Process pressure	800 hPa ... 60,000 hPa (11.60 psi ... 217.56 psi); higher pressures on request		
Ambient temperature	-20 °C ... +60 °C (-4 °F ... +140 °F)		
Storage temperature	-20 °C ... +80 °C (-4 °F ... +176 °F)		
Ex approvals	IECEX	ATEX	NEC/CEC (US/CA)
Sender / receiver unit	II 1/2G Ex ib IIB T4 Gb; II 2D Ex ib tb IIIC T85°C Db	II 1/2G Ex ib IIB T4 Gb; II 2D Ex ib tb IIIC T85°C Db	Class I, Division 2, Group A, B, C, D T4
Measuring probe	II 1/2G Ex op is IIB T4 Ga; II 2D Ex ib tb IIIC T85°C Db	II 1/2G Ex op is IIB T4 Ga; II 2D Ex ib tb IIIC T85°C Db	Class I, Division 1 + 2, Group A, B, C, D T4
Power supply unit	II 2G Ex e mb [ib] IIB T4 Gb; II 2D Ex tb [ib] IIIC T85°C Db	II 2G Ex e mb [ib] IIB T4 Gb; II 2D Ex tb [ib] IIIC T85°C Db	—
	Applies for TRANSIC itself, not necessarily for the entire system		
Electrical safety	CE		
Enclosure rating	IP 65 for mounting plate IP 66 for stainless steel enclosure		
Analog outputs	1 output: 0/4 ... 20 mA, 500 Ω 1 output: 0/4 ... 20 mA, 200 Ω, only for ATEX/IECEX variant TRANSIC151LP		
Digital outputs	1 relay contact: 30 V AC, 1 A / 60 V DC, 0.5 A 1 NAMUR output: only for ATEX/IECEX variant TRANSIC151LP 1 additional NAMUR digital output for flow meter		
Interfaces	RS-485 (not available for TRANSIC151LP) RS-232 (service interface for TRANSIC111LP, TRANSIC121LP) RS-232 via USB (service interface for TRANSIC151LP)		
Dimensions (W x H x D)	500 mm x 500 mm x 344 mm (19.69 in x 19.69 in x 13.54 in) for mounting plate 600 mm x 600 mm x 400 mm (23.62 in x 23.62 in x 15.75 in) for stainless steel enclosure		
Weight	15 kg ... 30 kg (33 lbs ... 66 lbs); depending on configuration		

[1] Temperature range at system entry: -17 °C ... 60 °C (1.4 °F ... 140 °F)

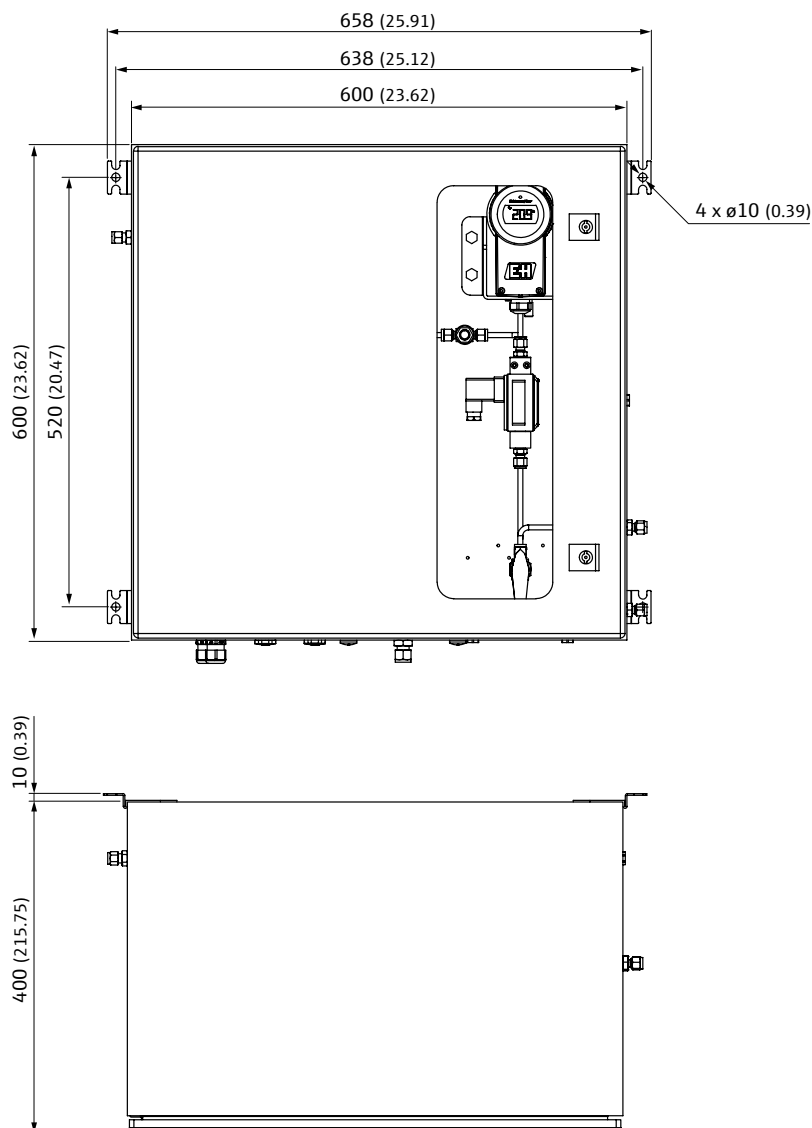
Electrical connection	A PELV power supply is mandatory
TRANSIC111LP, TRANSIC121LP	11 ... 36 V DC
TRANSIC151LP	21.6 ... 26.4 V DC, via TSA151 power supply
Power consumption	≤ 16 W
Corrective functions	Adjustment with ambient air or test gases
Test functions	Contamination check

## Ordering information

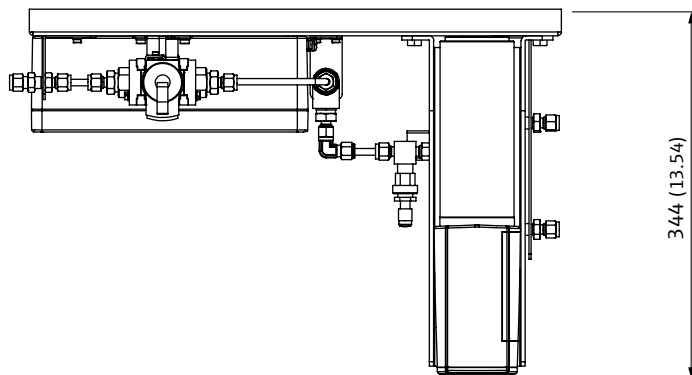
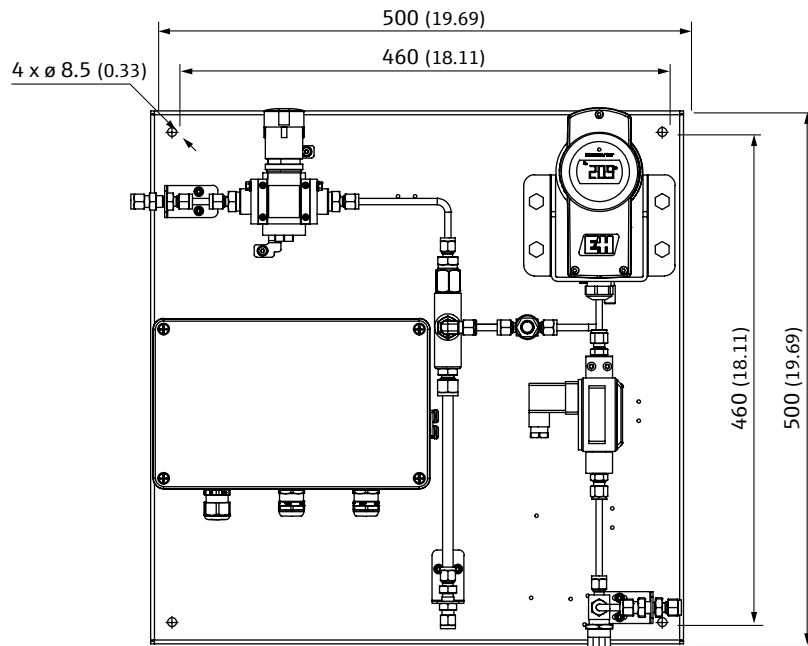
Our regional sales organization will help you to select the optimum device configuration.

## Dimensional drawings

Stainless steel enclosure (dimensions in mm (inch))



## Mounting plate variant (dimensions in mm (inch))



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