



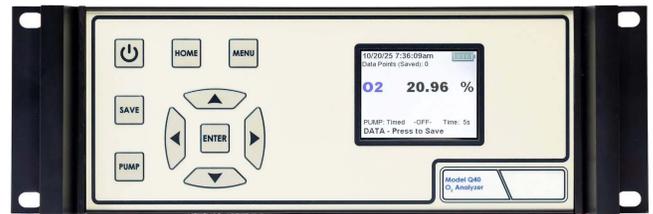
www.qclabequipment.com

Q40 Series Overview

Rackmount Analyzer Family

Test for O₂ and/or CO₂ levels in a variety of applications

- ❖ *Intelligent*
- ❖ *Durable*
- ❖ *Rackmount*
- ❖ *32-bit microprocessor*
- ❖ *On-board storage*
- ❖ *Available for O₂, CO₂, or both*
- ❖ *For use across many industries for a large variety of applications*



Analyzed Gases	
Q40	Oxygen only
Q41	CO₂ only
Q42	Oxygen and CO₂

Overview

The Q40 series of analyzers feature a color display, menu driven setup, calibration functions, a built-in sample pump, and data collection (up to 100,000 values).

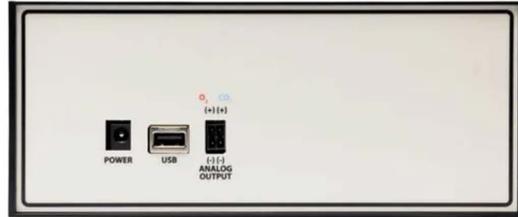
This analyzer combines fast response sensors in a 2U rackmount form for use in all types of gas measurement applications. It is powered by an AC to 12 Volt DC wall adapter. The analyzer can be equipped with a rugged miniature diaphragm pump with adjustable timing functions to operate only when sampling.

The Q40 Series is available with several sampling inlet configurations to suit many different monitoring applications. Swagelok compression fittings, a traditional sample probe, or luer fittings with flexible tubing are all options. Unless otherwise specified, the inlet and outlet are located on the rear of the rackmount analyzer for ease of access.

Applications

The Q40 Series is equipped with fast response sensors, and is ideal for many different types of applications including:

- ❖ Inert Gas Systems
- ❖ Pre-gas check in MAP food packaging
- ❖ Research
- ❖ Oil and Gas Industry
- ❖ Carbon Capture
- ❖ Reactors
- ❖ Process Applications
- ❖ Controlled atmosphere rooms
- ❖ Gas blending



Sampling Pump

The optional internal miniature diaphragm pump has menu driven functions to operate in several timing configurations (timed, continuous, and cycling). It is durable and long lasting, rated for 5000+ hours of use.

Data Collection

With built-in data collection, values can be stored either automatically or manually. The touch of a button can store individual data points. For continuous testing, data collection can be set to store values at predetermined time intervals. Storage capacity is available to record 100,000 values, complete with date/time stamp. These values can be exported to a USB thumb drive as a "CSV" file.

Electrochemical O₂ Sensor

The Q40 features our 5-year oxygen sensor, reducing downtime and replacement costs.

Our long-life, proprietary design yields accurate low-level measurements down to 0.1% oxygen and measures full range up to 100% level. The sensor response is 5 seconds to 95%. The output is compensated for ambient temperature variations. The sensor is not heated, has no moving parts, and requires no routine

maintenance. CO₂ does not interfere with the oxygen reading – even 99% CO₂ will have no effect on the oxygen reading.

Sample Fitting Options

The Q40 series sample inlet and outlet are located on the rear panel for ease of access. By default, both fittings are 1/8" stainless steel Swagelok. Other inlet/outlet configurations are available upon request. Some examples include standard luer fittings, 1/4" Swagelok fittings, or a sample probe. We can recommend or customize fittings to give the most seamless sampling experience for whatever system you may have.

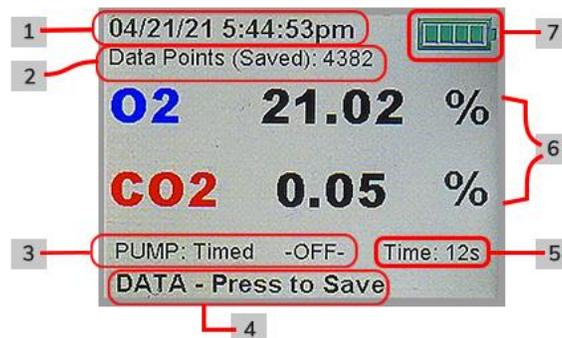
Microprocessor/Electronics

Micro-processor based electronics are controlled by a 32-bit microprocessor, for sensor signal processing, pump timing, data collection and on/off control provide high accuracy and reliability with minimal component use to reduce size and cost.

Comparison Chart

	Q40	Q41	Q42
Oxygen sensor	YES		YES
CO ₂ sensor		YES	YES
Range	0-25% OR 0-100% Oxygen	0-20% or 0-100% CO ₂	0-25% OR 0-100% Oxygen 0-20% or 0-100% CO ₂

Menu Screen



1. **Date and Time** can be set by the user under “Advanced Options”
2. **Total data points** that are stored in the onboard memory.
3. **Pump Mode** (Timed/Cycling/Continuous)
4. **Data Mode** (Single/Auto/Interval)
5. **Pump timer** that counts run time (and rest time when cycling on and off)
6. **Percent O₂ and CO₂**

Technical Specifications – Sensors, Accuracy

SENSORS	Oxygen Sensor	Carbon Dioxide Sensor
Type:	Proprietary Electrochemical	NDIR
Range:	0-25% or 0-100%	0-20% or 0-100%
Sensitivity:	0.1% O ₂	0.1%; .01% for 0-20% range
Minimum Detection Limit:	0.1% O ₂	0.1% or .01% CO ₂
Response time:	5 seconds to 95% of the final reading, 17 seconds to final reading	15 seconds to 95% of the final reading, 20 seconds to final reading
Accuracy:	± 0.1 % O ₂ or ± 1% of reading, whichever is greater	± 0.2% CO ₂ or ±1% of reading, whichever is greater (for 0-100% range)
Calibration Controls	Menu driven adjustments for all calibration functions, including SPAN and ZERO adjustment for O ₂ and CO ₂	
O ₂ Calibration	Weekly; set with room air set to 20.9% O ₂ .	
CO ₂ Calibration	Every 12 months; calibration gas recommended.	

Technical Specifications – Components, Battery, Dimensions

Sample Pump	Miniature diaphragm type with menu driven timing. Flow rate ~ 5 cc/sec.
Sampling Assembly	Sample Probe/Needle holder with luer needle, disposable filter, 1/16 O.D. PTFE tubing. Optional flexible tube/ plastic tubing connection to front panel.
Readout Display	Color display, TFT 320x240 pixels, 2.6 in diagonal
Power	Wall adapter, 110/240 Vac to 12 Vdc.
Size	8W x 2H x 7D in. (203 x 51 x 178 mm)
Weight	5 lb. (0.9 Kg)
Warranty	2 years, parts and labor
Standards	
Included Consumables	For package testing applications: Sample probe assembly, 2 luer fit needles, 200 foam septas, (2) particulate filters, (2) Moisture Guard filters.
Origin of Goods	Our products are manufactured in the U.S.A.