SERIES 4

The next generation in gas analysis

A new gas analyser platform for high-performance and ease-of-use, combining the highest specification detectors with a modern user interface.

Raising gas analysis to new levels

SIGNAL GROUP

SERIES 4

The vision

At Signal Group, we wanted to create the next generation in gas analysers. The first range to combine the highest specification detectors with a modern user interface. We wanted them to have cutting edge features available whilst being flexible enough to be adapted to any application. Lastly we wanted to supply them complete with software that was open source to allow our users to collaborate, doing what they do best to drive innovation in the use of our products for ever more sophisticated uses.

Accurate measurement

Much of the accuracy of an analyser comes from the electronics. Issues like linearisation and electronic noise or ambient temperature effects are often overlooked but have a major influence on performance. The Series 4 provides a polynomial calibration for linearity to give a high degree of accuracy throughout the full scale. This is especially important for inherently non-linear methods for detection such as InfraRed.

User interface

The S4 analysers incorporate a wireless tablet which has an intuitive menu structure for quick and easy configuration, operation, fault finding and calibration.

The wireless tablet also stores measurement data, which can be downloaded via USB connection.

S4 analyser communications

RS232
Ethernet
(TCP/IP) AK protocol
CAN bus (optional)
0-10V DC
4-20mA
35 contact closures (programmable)

Options/Configurations

S4 has been designed from scratch with flexibility in mind. From the end user looking for a full turnkey analyser solution with all the latest functionality to a systems integrator looking to add value to a high specification detector, S4 can be configured at a competitive price to meet your needs.

Options are available for OEM detector benches, for analysers without a front panel screen for installation into systems, multiple component analysers and dual detector arrangements plus a wide range of gas path configurations to ensure that every customer has their analyser just the way they want it.

Further information on the configurability of our analysers is available through our expert team.

SERIES 4 ANALYSERS

SOLAR - Heated FID VOC analyser

Flame Ionisation Detector (FID) for measuring Total VOCs, Methane and Non-Methane hydrocarbons.

- Fixed and portable versions
- Trace PPM measurements standard
- High range % available
- 'Hot' and 'Cold' version
- Totally automatic operation
- Precision monobloc FID

QUASAR - Heated vacuum chemiluminescence NOx analyser

Chemiluminescent Detector (CLD) for NOx measurement.

- Very high vacuum with dry vac pump or atmospheric pressure versions
- Dual detector for continuous NO2, NO and NOx readings
- High range % available
- 'Hot' and 'Cold' version
- Trace PPM measurements standard

PULSAR - NDIR Multi-gas analyser

Up to 5 components including CO, CO_2, CH_4, N_2O and O_2. Gas Filter Correlation (GFC) technology to measure only the gas of interest.

- Available in 1, 2, 3, 4 or 5 gas channel configuration
- Multiple gas and range options
- Rotating gas filter design for minimal cross sensitivity
- Suitable for ultra-low measurement applications
- Software suite for use over ethernet or RS232

AURORA - Paramagnetic Oxygen analyser

% 0_2 accurate measurement. Paramagnetic (PMG) technology for the oxygen analysis.

- Many different configurations
- Programmable contact closure for gas path control
- 0.01% O2 resolution
- 0.1% linearity
- Software suite for use over ethernet or RS232

NEBULA - TDLS Ammonia analyser

Tunable Diode Laser Spectroscopy (TDLS) based ammonia analyser for fast and accurate ammonia measurement.

- Low detection limit 0.2ppm
- Large dynamic range
- Quick warm-up time
- Contactless measurement
- High resolution
- Excellent gas sensitivty
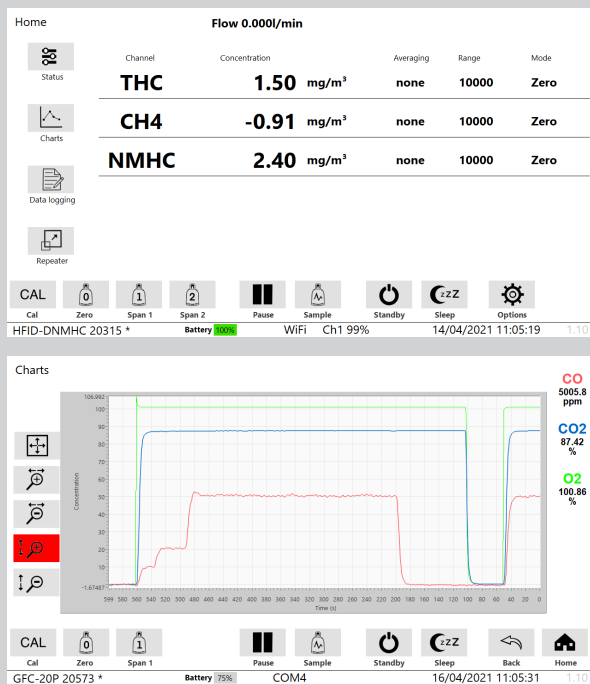
SERIES 4

S4 wireless tablet

Every S4 gas analyser can now be supplied with a rugged, wireless tablet which connects wirelessly to the analyser via an inbuilt 802.11 wifi that can connect up to 50 metres away. Analysers are not always installed in the most convenient or safe environment; so the S4 Wireless Tablet is designed to provide operators with the freedom to manage their analyser remotely. This provides users with the ability to view live data in a different location, and even manage data logging, alarms and calibration.

S4i software

The S4 range of analysers is supplied complete with remote interface software as standard, S4i. This is open source software designed to provide a wide range of functionality, but also to give users the opportunity to modify and write their own software. We believe that it is through collaboration of this nature that real innovation is achieved.

The S4i software offers a whole host of new and exciting features compared with the old Series 3. It boasts incredible remote diagnostic capabilities, allowing Signal service to dial-in from our offices in the UK. It has a fully functional automated zero and span function for straightforward calibration. The ranges are fully configurable; both full-scale and measurement units (ppm,%, mg/m3,etc) may be defined by the user.

S4 TABLET - typical views

Channel	Concentration		Averaging	Range	Mode
THC	1.50	mg/m³	none	10000	Zero
CH4	-0.91	mg/m³	none	10000	Zero
NMHC	2.40	mg/m³	none	10000	Zero

Flow 0.000l/min

HFID-DNMHC 20315 *   Battery 100%   WiFi   Ch1 99%   14/04/2021 11:05:19   1.10

GFC-20P 20573 *   Battery 75%   COM4   16/04/2021 11:05:31   1.10

Portable heated FID VOC analysers

Signal Group can also provide portable gas analysers with multiple configurations available to meet specific requirements.

3010 MINIFID

Compliant
- USEPA: 40 CFR Part 60 method 25A
- China: CPA 2015-C174
- EN14181 QAL1 (MCERTS) applied for

Flexible & reliable
- Designed for portability
- Military Style design
- thousands sold globally
- many still in operation after years of rigorous work

Easy to use
- Warm up typically 20 mins
- No microprocessor or software
- Just 5 simple functions
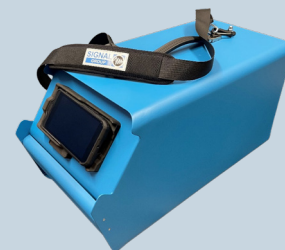- 0-10v output or optional logger

S4 SOLAR XPlore

Flexible
- Designed for portability
- Integrated air purifier (optional)
- Warm up typicall 20 minutes

Easy to Use
- Wireless tablet
- Software suite for use over ethernet or RS232

Accurate
- Precision monobloc FID
- THC & NMHC options
- High range % available

SIGNAL GROUP

QMS ISO 9001 : 2015 REGISTERED
Cert No. 317012019