



SARVESH ANALYTICS Pvt. Ltd.



ACCURRA-S

ACCURRA-S series from Sarvesh Analytics is a reliable and accurate analyser suitable for wide range of applications. It has the most powerful features and has numerous successful installations. ACCURRA-S can house two measurements sensors.

Salient Features

- Microprocessor Based Electronics
- User Friendly Menu with Diagnostics
- Password Protection
- Alarm, Fault and Calibration History
- 19" Rack Design
- Dual Range isolated 4-20 mA output
- Calibration Check Facility
- Modbus Communications
- Optional - Autocal Facility
- Internal Sample Pump

Applications

- Process Monitoring
- PSA O2 and N2 Plants
- Cryogenic Plants
- H2 Generators
- CO2 manufacturing Plants
- Welding Gases
- Gas Mixers
- Biogas Plants
- Emmission Monitoring



Sarvesh Analytics Pvt. Ltd. offers ACCURRA-S having the widest measurements range with the least cost of ownership in the industry. The performance of ACCURRA-S is of the highest order and each analyser comes to you after the toughest of quality test. ACCURRA-S has been working in the industry since 2007 with more than 99.99% of satisfied customer.

Table -1 shows the specifications of some of the widely used measurements in the industry.
 Table -2 shows the specifications of the measurements for new or upcoming applications
 Table -3 Shows the specification for Thermal Conductivity based measurements.

TABLE - 1	Oxygen			Carbon Di-Oxide	
Model Variant	3015⁴	3030⁴	3090	6015	6030
Measurement Range	0 - 1000 ppm	0 - 25 %	0 -100 / 95-100% ¹	0- 5000 ppm	0 - 100%
Sensor Technology	Electro Chemical		Paramagnetic	NDIR	
Sensor Life	> 18 Months	> 2 Years	N. A.	> 5 Years	
Minimum Range	0 - 100 ppm	0 - 5%	0- 25% / N.A.	0- 500 ppm	0 - 5 %
Display Resolution	0.5 ppm	0.05 %	0.05 %	10 PPM	0.05 %
Accuracy ²	Accuracy is subject to accuracy of the Calibration Cylinder				
Repeatability	1% of FS	0.1 %	0.5% of FS	1% of FS	0.1% of FS
Response Time-T90 ³	< 30 Sec	< 30 Sec	< 5 Sec	< 60 Sec	< 60 Sec

TABLE - 2	Hydrogen	Carbon Mono-Oxide		Methane	Hydrogen Sulphide	Sulphur Di-Oxide	Nitric Oxide
Model Variant	1015	2015	2030	4030	5015	9010	9020
Measurement Range	0 - 2000 ppm		0 - 100 %	0- 100 %	0 - 1000 ppm		
Sensor Technology	Electro Chemical		NDIR		Electro Chemical		
Sensor Life	> 2 Years		N. A.		> 2 Years		
Minimum Range	0 - 200 ppm		0 - 10 %	0 - 5 %	0 - 100 ppm		
Display Resolution	0.1 ppm		0.05 %	0.05%	0.1 ppm		
Accuracy ²	Accuracy is subject to accuracy of the Calibration Cylinder						
Repeatability	1% of FS			2%of Reading	5 ppm	2 ppm or Better	
Response Time-T90 ³	< 60 Sec		< 30 Sec	<45 Sec	< 60 Sec	< 30 Sec	

Note 1: The range 95- 100% O2 is ambient Pressure compensated and Temperature Compensated.

Note 2: For all practical purpose the Accuracy figures will be better than repeatability

Note 3: The Response Time specifications are at 1 LPM flow rate

Note 4: Model No 3015 and 3030 have inbuilt Temperature compensation



ACCURRA-S has the capability to house two measurements. Each Sensor has it's own electronics and micro controller making the hardware completely independent.

Further each sensor has its own Display, Keypad, Current output, set of Relays and Modbus ID.



TABLE -3 **Series - 7000**

Measurement Range	0- 100% / with Suppressed Zero
Sensor Technology	Thermal Conductivity
Minimum Range	Based on Background Gas
Display Resolution	0.05%
Linearity	< 1% of the Range
Repeatability	< 1% of the range
Response Time-T90	< 1 sec @ 1 LPM
Errors & Drift	< 2% of smallest range / week

Measurement Gases	Background Gas
Hydrogen - H ₂ %	N ₂ /Air, Ar, He, CO ₂ , CH ₄
Helium - He %	N ₂ /Air, Ar
Carbon Di-Oxide - CO ₂ %	N ₂ /Air, Ar
Argon - Ar %	N ₂ /Air, CO ₂
Methane - CH ₄ %	N ₂ /Air, Ar
Oxygen - O ₂ %	N ₂ , Ar
Nitrogen - N ₂ %	Ar, CO ₂
Ammonia - NH ₃ %	H ₂ , N ₂
Nitrous Oxide - N ₂ O %	O ₂
And Many More	

ACCURRA-S series 7000 from Sarvesh Analytics is a accurate, highly sensitive and stable Thermal Conductivity analyser. It can have customised and linearised compensation for various background gases making it suitable for complex binary gas applications. It can house two measurements sensors making it even more powerful.

Hardware Specifications

Display	Backlit LCD, 4 Line x 20 Character, Alphanumeric.
Analog Output	1 x 4-20 mA, isolated, Max Load 500 Ω Range Dual Range. Analog Output range is freely selectable by user over entire measurement range.
Output Relays	6 x 1CO rated @ 1A 230V AC. All relays are configured as Failsafe Relay 1 : Alarm 1 Relay 2 : Alarm 2 The Alarm set points are user configurable and can be set as Lo - LoLo / Lo - Hi / Hi - HiHi . Relay 3 : Fault Alarm The Fault is activated during Calibration or Instrument Failure. Relay 4 : Sample Pump / Range ID This relay can be used to run a external / Internal Sample Pump OR indicate Output Range Change. The Internal Sample pump is an optional feature. Relay 5 and 6 : For Internal Auto-calibration (Optional)
Modbus Communication:	MODBUS protocol over RS 485. READ: Measured Value, Status, Setup Parameters & History. WRITE: Initiate Auto Calibration

Salient Features

Output Freeze Function	Output signals- 4-20mA and Alarm Relays can be hold to last value during Calibration Check, Calibration and Auto Calibration. This is a user configurable feature.
Dual Range Current Output	Two ranges can be defined for the current output e.g. 0- 10% and 0- 25%. When the reading is below 10% the current output will correspond to 0- 10%. When the reading crosses 10% the current output will correspond to 0- 25% and vice versa. This feature is very useful during start up. The Range ID Relay when configured can be used for remote indication.
Auto-Calibration	This feature is optional. If selected then you can initiate Auto calibration through keypad or by setting the internal cyclic timer or initiate remotely through MODBUS command. The Auto-calibration relays used are internal to the analyser.
Sample Pump	The ACCURRA-S can control an external Sample pump. It can also have an option of Internal Sample Pump. This pump will be off during calibration. When Sample Pump option is selected Range change option is unavailable.
History	The ACCURRA-S store Calibration, Alarm and Fault record. This is helpful in analysis of process.
Diagnostics	The ACCURRA-S has inbuilt hardware diagnostic check which can be used for hardware simulation during failure.



Sample Condition

Suitable for Non- Corrosive, Non-Toxic, Non Flammable, Non-condensing dry, free from entrained oil.

In case your Sample does not comply to the specifications, please contact us for a Sample Conditioning System that is customised to your application needs.

Sample Flow rate: 1 LPM
ACCURRA -S has in-built Sample Flow indicator however the flow has to be regulated externally by user.

Sample Temperature : 5° C - 45° C Max

Sample Pressure: 2 - 10 psig Max
The Sample Pressure has to be regulated externally by the user.

Sample Dust/Particulate: < 3 Micron
ACCURRA -S has in-built Sample Filter however if the dust level is high install upstream Filter externally.

Sample Dew Point: 5° C less than the lowest ambient Temperature

Material in Contact with Sample : SS316, Viton, PTFE, Glass, Aluminium, Acrylic.

Optional Hardware

Auto - Calibration

This option includes the necessary Solenoid Valves and the software & hardware associated with it. The Solenoid Valves are internal and are controlled by ACCURRA-S.

Sample Pump

This option includes internal Sample pump which is controlled by ACCURRA-S. During calibration this pump is OFF. When Sample Pump option is selected Range ID option is unavailable.

Environmental Conditions

Ambient Temperature: +5°C to + 45°C

Storage Temperature: +0°C to + 50°C

Area Classification: Safe Area

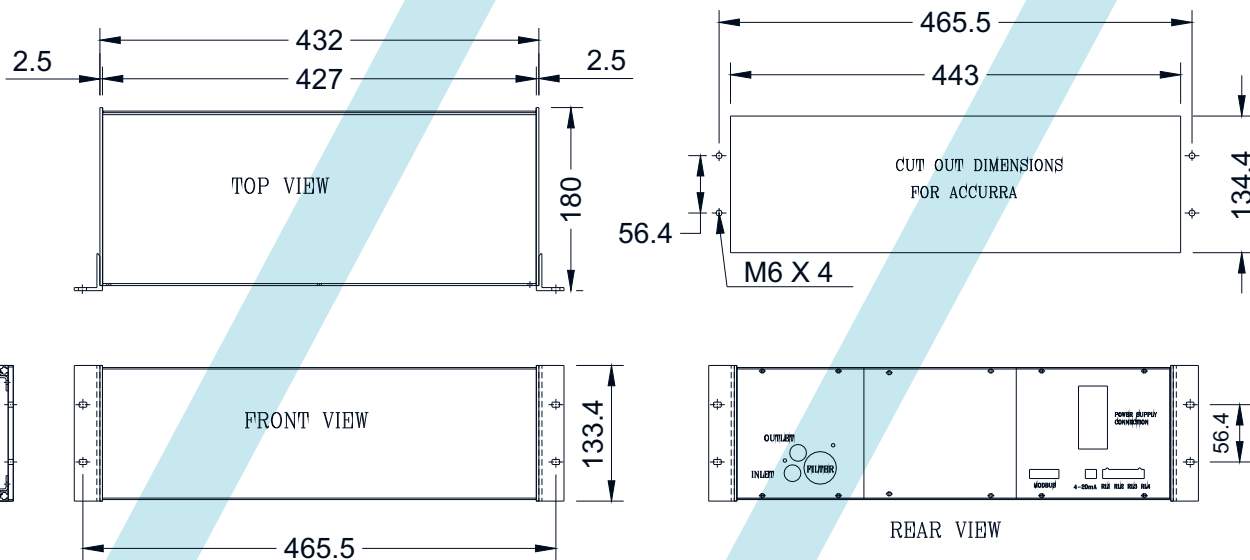
Other Specifications

Gas Inlet / Outlet 1/4" OD SS316

Enclosure 19" Rack / Panel mounted
Dimension 134 (H) x 483 (W) x 180 (D) mm
Protection Suitable for Safe Area, IP 20
Weight Approx. 6 Kgs

Power Supply 24V DC, 30W or
100 - 240 V AC 50/60 Hz, 45W

Dimensional Details



M/s SARVESH ANALYTICS PVT. LTD. has a policy of continuous improvement of product & services and hence reserves the right to change the specifications and features without prior notice.

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