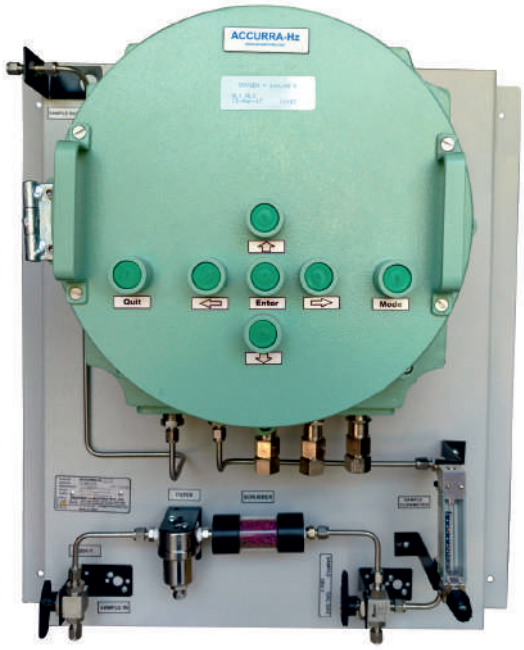
SARVESH ANALYTICS Pvt. Ltd.



ACCURRA-Hz

ACCURRA - Hz series Analyser from Sarvesh Analytics is suitable for Hazardous applications. It comes with various measurement options and our application support for most of your toughest applications.

Salient Features

Microprocessor Based Electronics

User Friendly Menu with Diagnostics

Password Protection

Alarm and Calibration History

Dual Range isolated 4-20 mA output

Calibration Check Facility

Modbus Communications

Optional - Autocal Facility

Applications

Process Monitoring

Safety Monitoring

PSA O2 and N2 Plants

Cryogenic Plants

H2 Generators

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ACCURRA-Hz

Sarvesh Analytics Pvt. Ltd. offers ACCURRA-Hz having one the widest measurements range with the least cost of ownership in the industry. The performance of ACCURRA-Hz is of the highest order and each analyser comes to you after the toughest of quality test. ACCURRA-Hz has been working in the industry since 2010 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 -1	Oxygen			Carbon Di-Oxide	
Model Variant	3015[4]	3030[4]	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

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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 %	N2/Air, Ar, He, CO2, CH4
Helium - He %	N2/Air, Ar
Carbon Di-Oxide - CO_2 %	N2/Air, Ar
Argon - Ar %	N2/Air, CO2
Methane - CH_4 %	N2/Air, Ar
Oxygen - O_2 %	N2, Ar
Nitrogen - N_2 %	Ar, CO2
Ammonia - NH_3 %	H2, N2
Nitrous Oxide - N_2O %	O2
And Many More	

ACCURRA-Hz 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-Hz can control an external Sample pump. This pump will be off during calibration. When Sample Pump option is selected Range change option is unavailable.

History
The ACCURRA-Hz store Calibration, Alarm and Fault record. This is helpful in analysis of process.

Diagnostics
The ACCURRA-Hz has inbuilt hardware diagnostic check which can be used for hardware simulation during failure.

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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-Hz has external Sample Flow indicator

Sample Temperature : 5^0 C - 45^0 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-Hz has in-built Sample Filter however if the dust level is high install upstream Filter externally.

Sample Dew Point: 5^0 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 external and are controlled by ACCURRA-Hz.

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

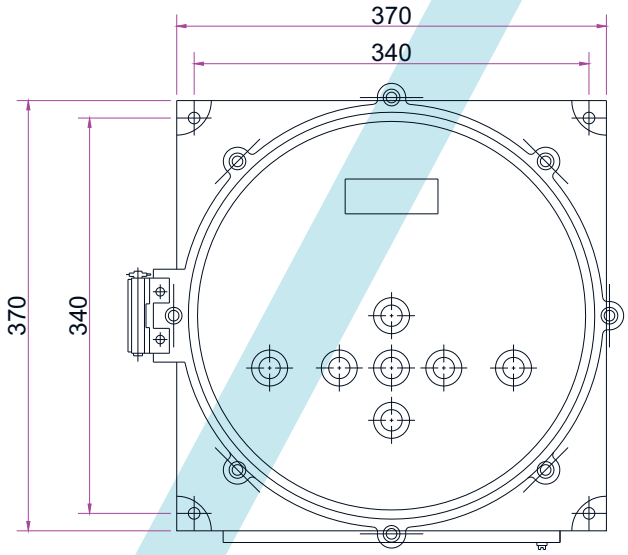
Environmental Conditions

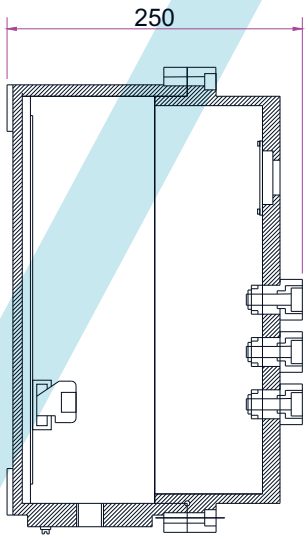
Ambient Temperature:	$+5^0$C to + 45^0C
Storage Temperature:	$+0^0$C to + 50^0C
Area Classification:	Gas Group IIC Zone 1 & 2, T6 as per IS/IEC 60079-1:2007

Other Specifications

Gas Inlet / Outlet	1/4" OD SS316
Enclosure	Wall mounted
Dimension	465 (H) x 425 (W) x 260 (D) mm
Protection	IP 65
Weight	Approx. 12 Kgs
Power Supply	24V DC, 30W or 100 - 240 V AC 50/60 Hz, 45W

Dimensional Details





SARVESH ANALYTICS Pvt. Ltd.

Regd. Off: # 207, Vinayak Arcade, Akurdi, Pune - 411035, INDIA

Factory: Gat No.188, Jyotibanagar, Talwade, Pune - 411062 INDIA

Email: info@sarveshindia.com

Website: www.sarveshindia.com

Telphone: 91 94 2300 4179