



ACCURRA-Hz

Trace / Percentage / Purity O2, CO, CO2, H2

- Hazardous Area Analyser**
- Best suited for your tough Application**
- Reliable and Accurate**
- Lowest Cost of Ownership**



Applications

Process Monitoring
Safety Monitoring

N2 Blanketing
Spray Dyers
Hydrogenation Process

H2 Generator
Storage Tanks

Salient Features

Calibration Possible w/o opening covers

Calibration History with Deviation Record

Alarm and Fault History

Calibration Check Facility

Isolated 4-20 mA Output; Dual Range with Range ID relay output

Output Freeze / Follow during Calibration

Separate Hardware Diagnostics Menu

Password Protected Calibration, Setup & Diagnostics Menu

Modbus RTU over RS 485

4-20mA output range is USER configurable over entire measurement range

Alarm Set Points are USER configurable & can be set as Lo - LoLo / Lo - Hi / Hi - HiHi

Cyclic and Remote Auto-calibration (Optional)

Enclosure Certification:
Gas Group IIC Zone 1 & 2, T6
as per IS/IEC 60079-1:2014

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.

Measurement Capabilities

TABLE - 1	Oxygen			
Model Variant	3015	3030	3130	3190
Measurement Range	0 - 1000 ppm	0 - 25 %	0 - 100 %	95 - 100%
Sensor Technology	Electro Chemical		Paramagnetic	
Sensor Life	> 18 Months	> 2 Years	Not Applicable	
Minimum Range	0 - 100 ppm	0 - 5%	0 - 5%	N. A.
Display Resolution	0.1 ppm	0.01 %	0.01 %	0.01 %
Intrinsic Error (Accuracy)	1% of reading ± 2ppm	± 0.01 % FS	± 0.1 % of FS	± 0.5% of FS
Repeatability	Zero: ± 2ppm Span: 1% of reading	± 0.04 %	± 0.1 % of FS	± 0.5% of FS
Response Time-T90 @ 1 LPM	< 30 Sec	< 20 Sec	< 5 Sec	< 5 Sec

All measurements in ACCURRA-Hz has **in-built Temperature Compensation**

Oxygen Purity Analyser ACCURRA-Hz Model 3190 has **in-built Ambient Pressure Compensation**

TABLE - 2	Carbon Mono-Oxide		Carbon Di-Oxide		Hydrogen
Model Variant	2015	2030	6015	6030	1030 ^{Note 1}
Measurement Range	0 - 2000 ppm	0 - 100 %	0 - 5000 ppm	0 - 20% (or 0- 100%)	0 - 100 % in N2
Sensor Technology	Electro Chemical	NDIR	NDIR		Thermal Conductivity
Sensor Life	> 2 Years	N. A.	> 5 Years		Not Applicable
Minimum Range	0 - 100 ppm	0 - 5 %	0- 100 ppm	0 - 5 %	0 - 5%
Display Resolution	0.1 ppm	0.01 %	0.1 PPM	0.01 %	0.01 %
Intrinsic Error (Accuracy)	1 % of FS	2 % of FS	± 1% of FS		< 1% of FS
Repeatability	Zero: ± 2ppm Span: ± 10ppm	2% of Reading	Zero: ± 10 ppm Span: ± 50 ppm	± 0.05%	< 1% of FS
Response Time-T90 @ 1 LPM	< 30 Sec	< 30 Sec	< 60 Sec	< 60 Sec	< 1 Sec

Note 1: Contact Sarvesh Analytics for background gases, minimum and maximum range.

Note 2: The Response Time specifications are at 1 LPM flow rate unless otherwise mentioned.

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 ID option is unavailable.

History

The ACCURRA-Hz store Calibration, Alarm and Fault record. This is helpful in analysis of process. Calibration History helps to know Drift / Residual Sensor Life.

Diagnostics

The ACCURRA-Hz has inbuilt hardware diagnostic check which can be used for various 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 (Recommended)

It is strongly advised to install a upstream Sample Flow meter to regulate the sample Flow.

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

It is strongly advised to install a upstream External Filter with Glass Microfibre Element .

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

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

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 Sample Pump

OR indicate Output Range Change.

The Internal Sample pump is an optional feature.

Relay 5 and 6 : For Auto-calibration (Optional)

Modbus Communication: MODBUS protocol over RS 485.

READ: Measured Value, Status, Setup Parameters & History.

WRITE: Initiate Auto Calibration

Optional Hardware

Auto - Calibration

This option includes the software and two potential free relay outputs. The Solenoid Valves are External and are only controlled by ACCURRA-Hz.

Sample Pump

This option includes one potential free Relay Output to control an External Sample pump. During calibration this Output (pump) will be OFF. When Sample Pump option is selected Range ID option is not available.

Environmental Conditions

Ambient Temperature: +5°C to + 45°C

Storage Temperature: +0°C to + 50°C

Area Classification: Gas Group IIC Zone 1 & 2, T6 as per IS/IEC 60079-1:2014

Other Specifications

Gas Inlet / Outlet 1/4" OD SS316

Enclosure 19" Rack / Panel 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

Ordering Code

ACCURRA-Hz -

1	2	3	4	5	6	7	8	9	10	11
				X	X	X	X			

Measurement Gas

Hydrogen % (TCD)	1	0	3	0
Carbon Monoxide ppm (Ec)	2	0	1	5
Carbon Monoxide % (NDIR)	2	0	3	0
Oxygen ppm (Ec)	3	0	1	5
Oxygen Percentage (Ec)	3	0	3	0
Oxygen Percentage (Pm)	3	1	3	0
Oxygen Purity (Pm)	3	1	9	0
Carbon Di-oxide ppm (NDIR)	6	0	1	5
Carbon Di-oxide % (NDIR)	6	0	3	0

Auto Calibration

X	None
S	Yes, External Solenoid Valve

Range ID / Sample Pump

R	Range ID
P	Yes, External Sample Pump

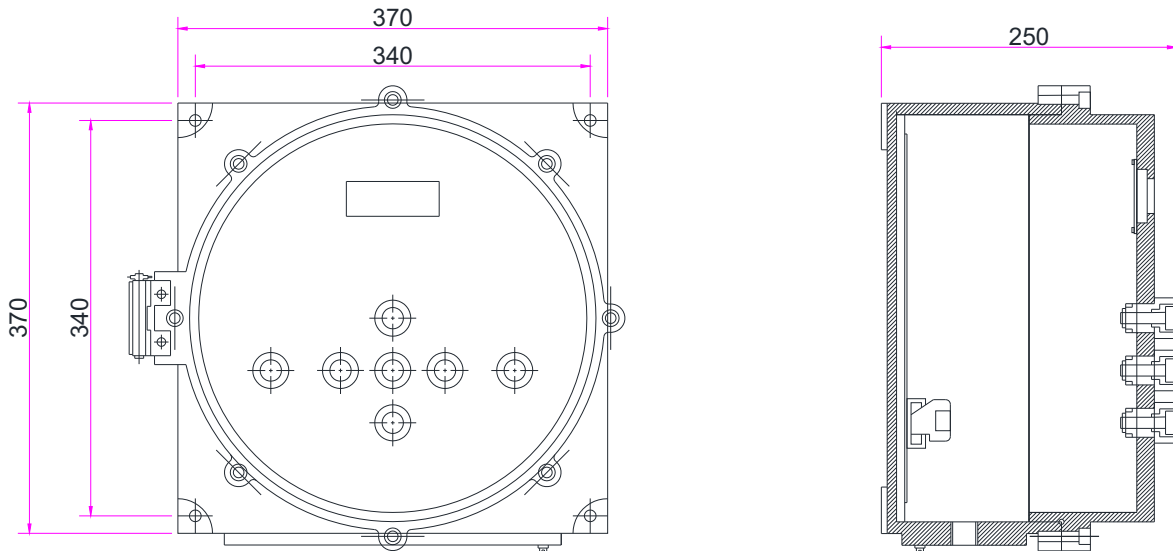
Power Supply

D	24 V DC
A	100 - 260 V AC

"Ec" : Electrochemical Sensor
 "Pm" : Paramagnetic Sensor
 "NDIR" : Non-Dispersive InfraRed
 "TCD" : Thermal Conductivity Detector

Solenoid Valves and Sample Pump are not in scope of supply
 * Contact Sarvesh Analytics Pvt. Ltd. for more details

Dimensional Details



Notes: - The final responsibility to check whether this product meets the requirement of the Process and / or Analyser remains solely with the customer.
 - 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.

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
 Telephone: 91 94 2300 4179

