



i - c o n s

Analysis Simplified

A Complete Solution in Compact 19" Cabinet

I-CONS is the most Advanced, Intelligent and Compact Extractive Sampling System based on Powerful Peltier cooler. It includes all the essential Sampling Components, Realtime Diagnostics with Auto Correction and Early Warnings, History and Modbus communications. It helps you to achieve quickest integration time with vastly reduced tubings and electricals.

Advanced System

- PLUG and PLAY
- Menu driven Controls and Functions
- Advanced Diagnostic and Self Correction
- History and Modbus Communication
- Engineered for Online Processes and Analysers
- Safe, Efficient and Maintenance free operations

Consumes Less Panel Space

Needs very few external components

Enables fastest Integration time

Reduces Direct and Indirect Cost

Intelligent Features

- Auto Start-up Sequence
- Auto Blowback on Flow Failure
- Monitors Sample Flow
- Efficient Peltier Cooler with
Condensate Carryover protection
- Maintenance reminder for
Peristaltic Pump tube
- Sample Filter
- Sample Pump kit

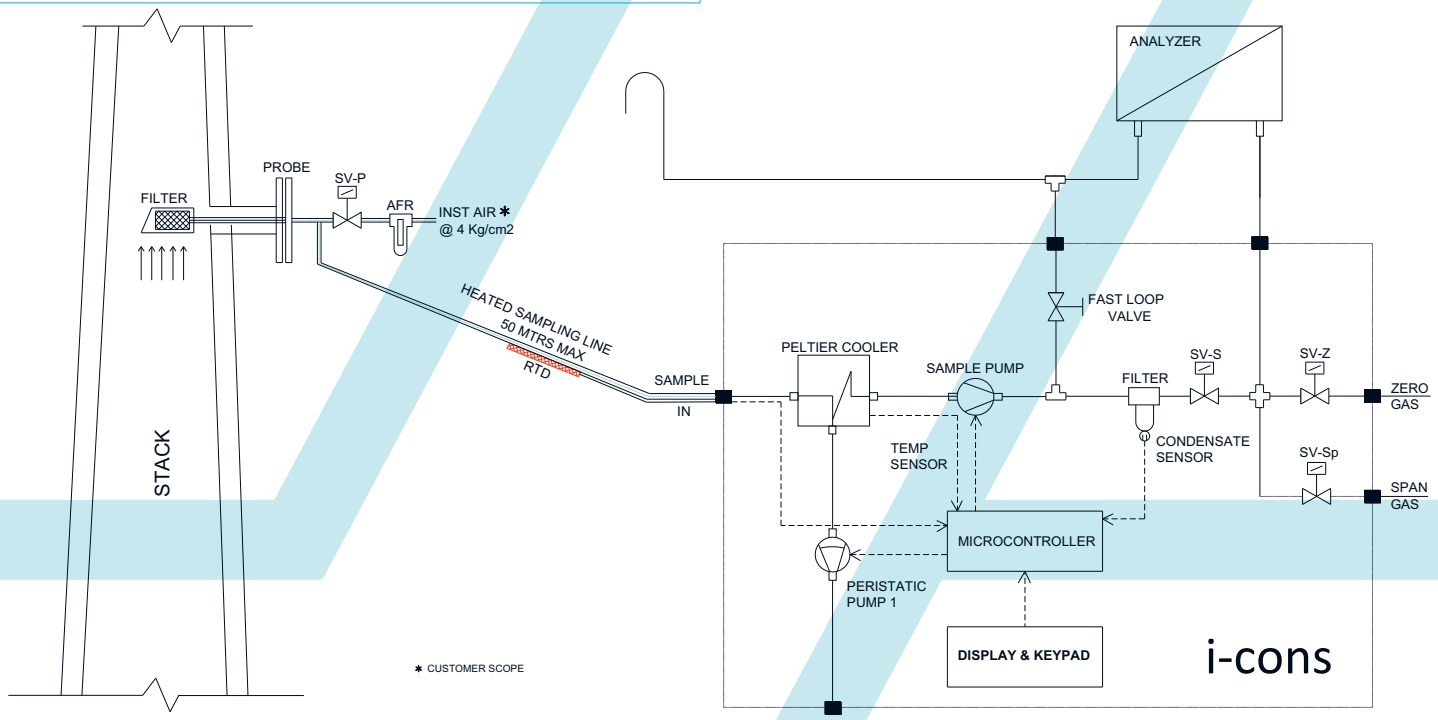


Hardware Specifications

Display & Keypad:	Backlit LCD, 4 Line x 20 Alphanumeric Character, with 7 Keys.
Analog Input (External):	RTD (Pt100) from Heated Hose
Outputs:	
1 x Triac	To drive SSR / Contactor for Heated Hose
1 x Relay	For Sample Probe Blowback Solenoid Valve
3 x Relay	For Calibration Valves
1 x Relay	Fault
All outputs are rated @ 230V AC 1 A	
All relays have 1 Changeover contacts	
Communication:	MODBUS protocol over RS 485
READ:	Status, Setup Parameters & History.
WRITE:	Initiate Blowback Operate Calibration Solenoid Valves
Cooler Specifications:	
Heat Exchanger	1 x PTFE
Sample Inlet Temperature	Max 140° C
Sample Dew Point	65° C max
Sample Flow	240 LPH (4 LPM)max
Sample Outlet Temperature	5° C
Sample Dust Level	< 3 micron
Peristaltic Pump:	1 No.
Sample Fine Filter:	0.1 Micron Coalescing Type
Condensate Sensor:	Long life corrosion free Sensor
Sample Pump with Fast Loop Valve:	Free Flow - 5 LPM
Optional:	Free Flow - 9 LPM
Material in contact with Sample:	SS 316, PTFE, Viton, Silicon, Engineering Plastic

Salient Features

- The Micro controller controls the following operations
 - ✓ Sample Probe Blowback
 - ✓ Heated Hose Temperature
 - ✓ Sample Cooler Output Temperature
 - ✓ Operates the Sample pump below 12° C
 - ✓ Operates the Peristaltic Pumps periodically
 - ✓ Trips the Sample Pump when condensate is detected
 - ✓ Operates Blowback in case of Flow Failure
 - ✓ Operates Solenoid valve over Modbus command
 - ✓ Maintains History, Diagnostics and Maintenance Records
- FAULT ALARM relay is Failsafe. It is generated in following cases
 - Blowback in Progress
 - Low Heated Hose Temperature
 - Cooler Temperature > 12° C
 - Condensate is detected in Sample Line
 - Low Flow Alarm
 - Maintenance Alarms
- BLOWBACK: The Sample Probe Blowback is cyclic based on the user settings. However if a Flow Failure is detected Blowback is initiated again. During Blowback the Sample Pump is OFF.
- HEATED HOSE: The Sample Heated Hose temperature is user programmable. It is used to control the Heated Hose temperature based on RTD (Pt100) input from the Heated hose. During Start-up the Sample Pump does not start unless the set temperature is reached.
- CALIBRATION VALVES (optional) : The calibration Solenoid Valves can be directly controlled by the Gas Analyser through Modbus command. During Calibration the Sample Pump is OFF.



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.



Optional Hardware

Auto - Calibration

This option includes the necessary Solenoid Valves. The Solenoid Valves are internal and are controlled by Analyser directly through Modbus command.

Sample Pump - High Flow Rate

This option includes Sample pump which has 9 LPM free flow. These are suitable for sample line between 60 - 100m.

Sample Probe

- Suitable for sample temperature 500⁰ C max and
- Maximum Dust level 10 gm/Nm³.
- Inbuilt Blowback solenoid valve operated by i-cons
- Heated Filter option available

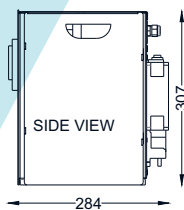
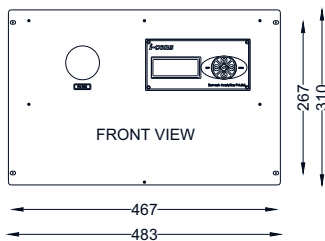
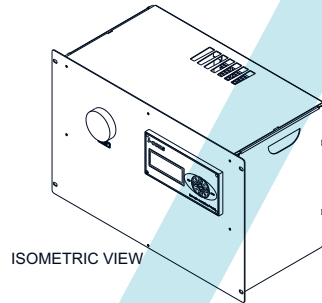
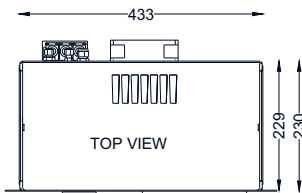
Customer Scope:

- Two core cable between i-cons and Sample Probe for Blowback SOV.
- A 1/2" tapping Clean Dry Instrument Air line at Sample probe

Heated Sample Line

- Prefabricated Heated Hose
- Maximum Length - up to 50m*
- Power Supply - 230V AC 50 Hz
- Wattage - 45 W/Mtr
- Sample Tube - 1/4" OD Teflon Tube

* -Contact Sarvesh Analytics for more higher Sample Line Distance



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.

Sample Condition @ Tapping Point

Suitable for Sample where SO₂, NO, CO < 1000ppm.
Not suitable for samples containing, HCL, HF, H₂S and other highly Corrosive, Toxic and Flammable Samples.

Dust Level: < 10 gm/Nm³

Sample Gas Velocity: between 5 - 20 m/sec

Sample Line Distance: Max 50m*

Other Specifications

Sample Connection	Inlet	- 1/4" OD
	Outlet	- 1/4" OD
	Bypass	- 1/4" OD
	Drain	- Flexible tube connection

Calibration Connections 2 x 1/4" OD

Enclosure	19" Rack / Panel mounted
Dimension	310 (H) x 483 (W) x 285 (D) mm
Protection	Suitable for Safe Area, IP 20
Weight	Approx. 16 Kgs

Power Supply	230 VAC, 50 Hz, 600 VA (excluding Heat Tracer)
--------------	---

Environmental Conditions

Ambient Temperature: +5°C to + 45°C

Storage Temperature: +0°C to + 50°C

Area Classification: Safe Area

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