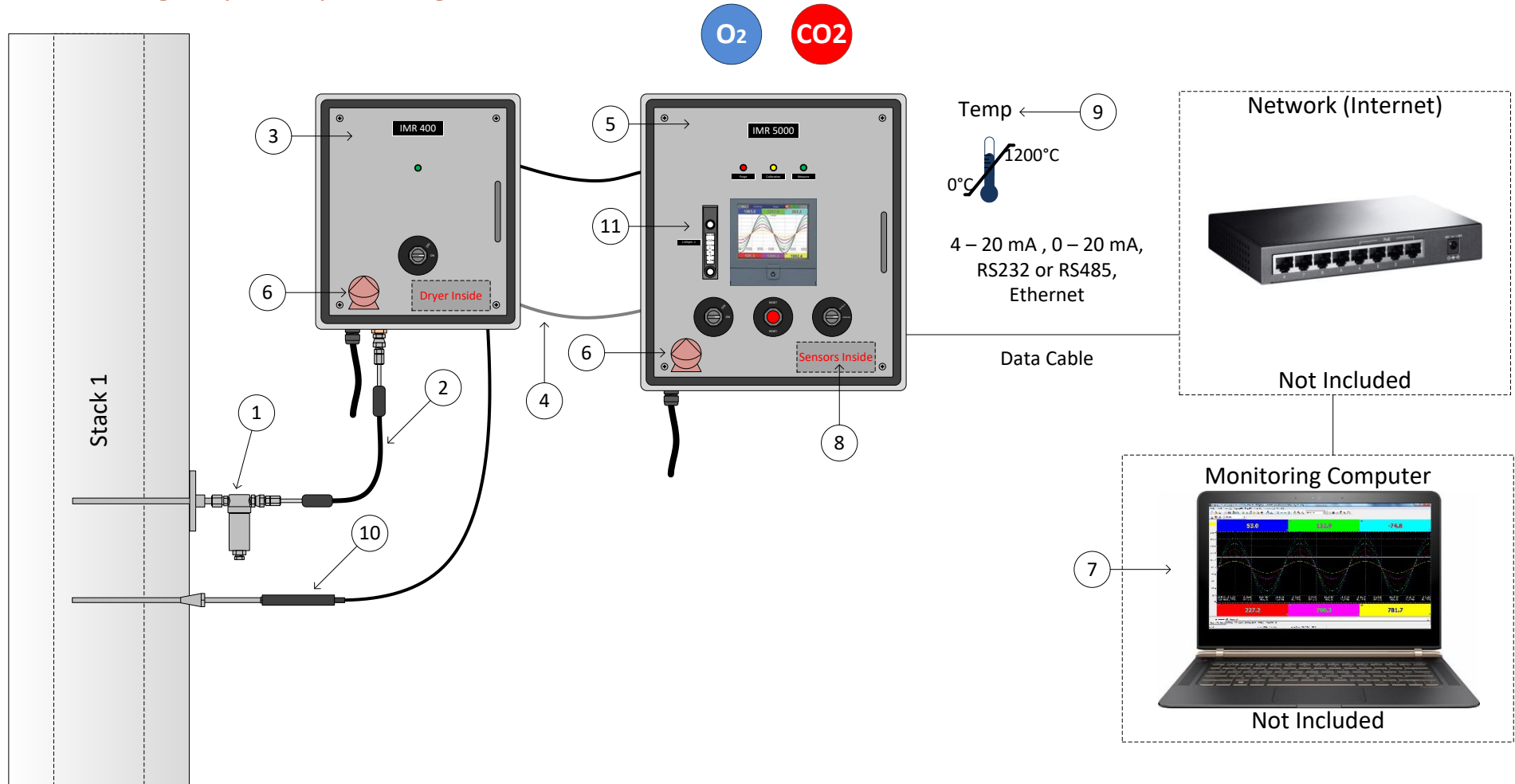


IMR 5000 Sales Brochure

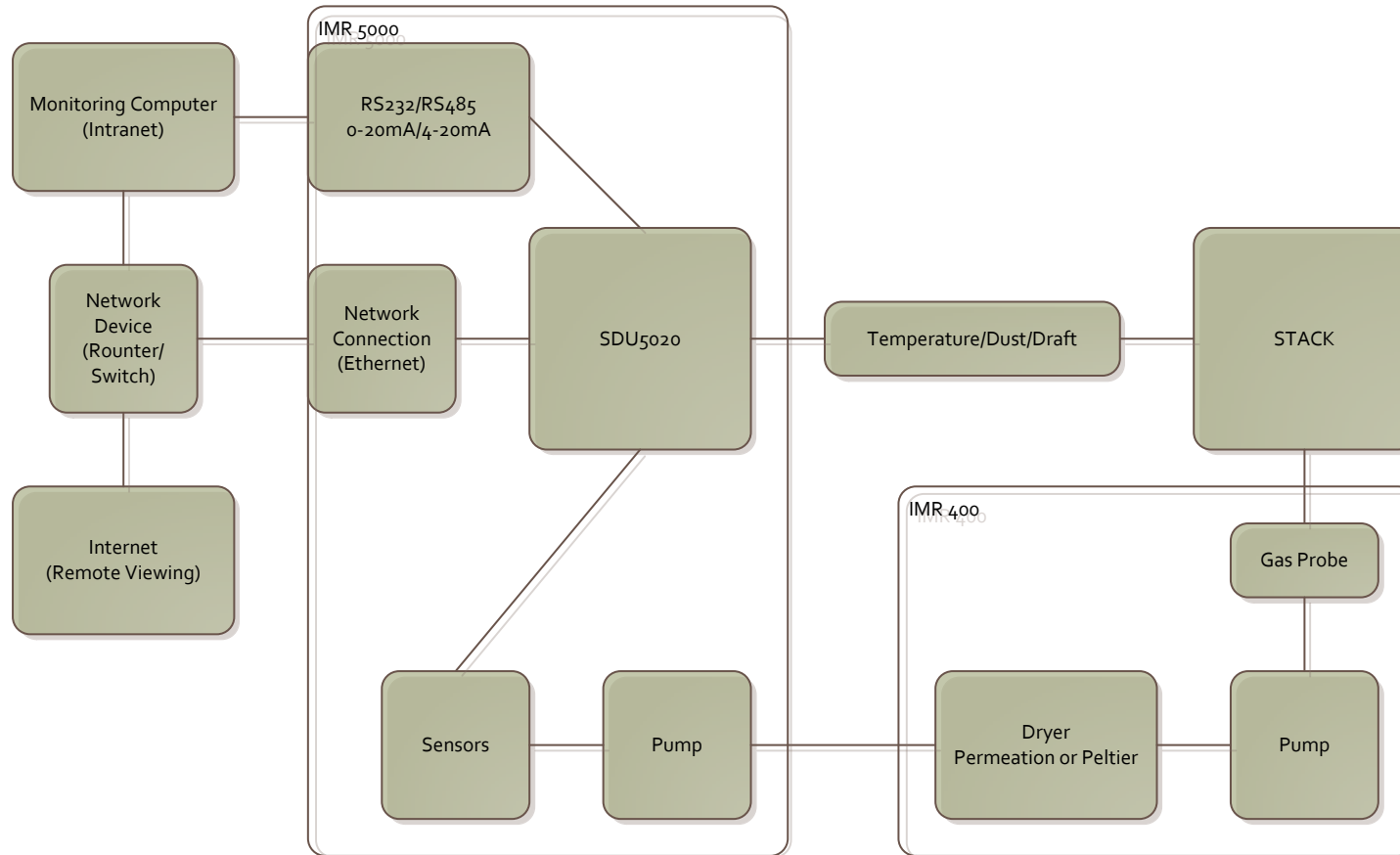
- The IMR 5000 is a state-of-the-art continuous flue-gas monitoring system, and is designed for a wide variety of flue-gas monitoring applications
- The IMR 5000 is a stand-alone analyzer that works automatically. Available in a 19" rack mount or rugged wall mounted enclosure. The wall mount enclosure meets NEMA type 4X (IP65) standards
- The modular approach of the IMR 5000 allows multiple gases (up to 12 gases) to be measured simultaneously
- The IMR 5000 uses the latest sensor technology from electro-chemical sensors to NDIR benches
- The IMR 5000 can be built to customer specifications
- The IMR 5000 supports the following output types: Analog 4 – 20mA or 0 – 20mA, RS232 or RS485, and Ethernet (Internet)



IMR 5000 Single Dryer/Analyzer Configuration:



IMR 5000 Flow Diagram Single Dryer/Analyzer Configuration:





IMR 5000 Sales Brochure

Internal Components:

- (1) Gas Probe / Flange / Stainless Steel Filter
 - Probe length: 750mm (length can vary according to customer's specifications)
 - Flange diameter: 100mm

- (2) Heated Sample Line between Gas Probe and IMR 400
 - 1. 1.5 meters (length can vary according to customer's specifications)

- (3) IMR 400 (Including gas dryer inside)
 - 1. IP65 enclosure NEMA 4x

- (4) Hose between IMR 400 and IMR 5000
 - 1. 10 meters of Silicon

- (5) IMR 5000 (flue gas measuring unit)
 - Includes:
 - 1. Data Logger
 - 2. Display – 5.6" TFT touch screen
 - 3. SDU5020
 - a. Ethernet, RS232, 4-20mA, 0-20mA
 - b. Webservice & Email(Req. Ethernet)
 - c. Direct Printer Connectivity
 - d. 19 international languages
 - e. SD card 16GB, USB host x2
 - 4. Sensor(s)
 - 5. Circuit protection
 - 6. IP65 / NEMA 4 Enclosures

- 7. Capable of working between temperatures of -10 and 50°C
- 8. 115VAC/230VAC 60Hz/50Hz
- 9. Cooling fan
- 10. Heating Element with Thermostat (Optional)

- (6) 24VDC Pump (2x)

- (7) Data logger Software
 - 1. Observer I - Standard (remote configuration software)
 - 2. Observer II - Optional (remote monitoring software)

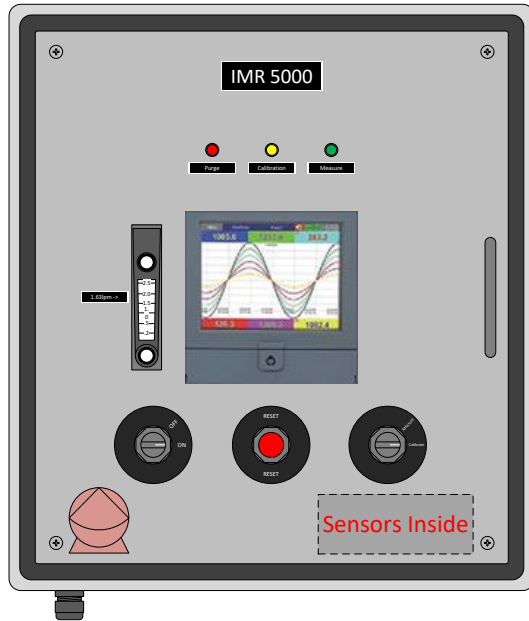
- (8) Sensors
 - O2 (Electrochemical Sensor) 0 – 25% vol.
 - CO2 (NDIR Sensor) 0 – 20% vol.

- (9) Air Temperature °C/F (Optional)
 - Range -20 – 120 °C /-4 – 248° F

- (10) Gas Temp (Optional)
 - Range -20 - 1200°C

- (11) Flow Controller (Optional)
 - Range 0 – 40slm

Technical Data:



Gas Dryer

- Permeation Dryer or Peltier Cooler
- Heated hose 1.5 meters (Thermostat set for 140°C)
- Filter system, Stainless Steel housing
- Gas Probe 250 mm (Varies according to specifications)
- Flange 100 mm (4")
- Gas pump
- IP or NEMA rating enclosures (Varies according to specifications)

Function Process

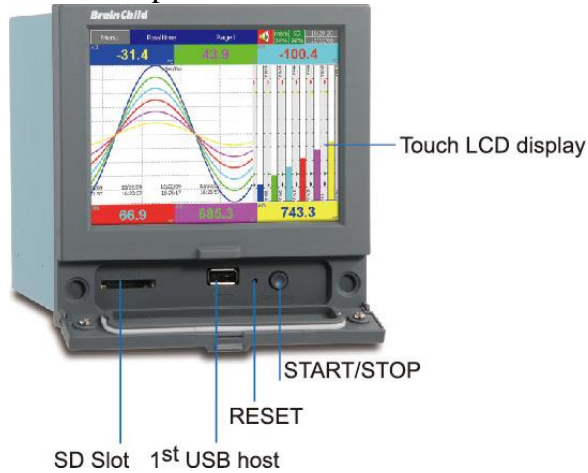
The Internal gas conditioning unit (Peltier cooler or permeation dryer) dries and conditions the gas. The conditioned flue-gas is then analyzed by the individual sensors (NDIR or Electrochemical). Processing unit inside the IMR 5000 process this information and display it on its 5.7inch screen and relays the information to a monitoring computer provide by customer. Thanks to the software application installed in the monitoring unit, the customer is able to monitor this data.

Analyzer

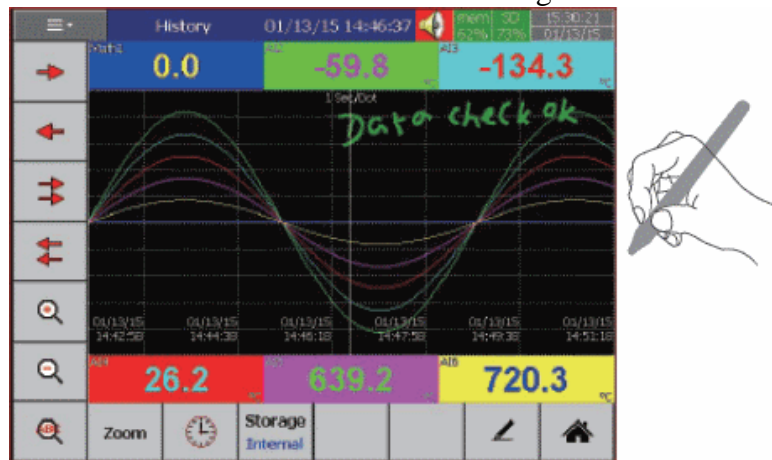
- Data Logger (Model: SDU5020)
- Sensor(s) (up to 12 inputs)
- Communication:
 - 4 – 20mA or 0 – 20mA
 - RS232 or RS422/485 Modbus RTU (Optional)
 - Ethernet (Modbus TCP/IP)
 - Webserver & Email directly from Recorder
- Circuit protection
- Storage Media (SD card 16GB)
- IP or NEMA rating enclosures (Varies according to specifications)
- Capable of working between temperature of -10 and 50oC
- Gas Temperature 0 – 1200oC
- 115VAC / 230VAC 60Hz/50Hz

IMR 5000 Sales Brochure

Recorder Specifications:



Annotate events with hand written messages on screen.



- Touch Screen, TFT, 65K color
- 100 msec. scan rate
- Standard: Ethernet, SD slot & USB
- Option: RS232/422/485 & Pulse input
- Standards: CE, cULus & RoHS
- Pulse input for flow applications
- Direct Printer connectivity
- Webserver & Email directly from Recorder
- Remote IO channels, Virtual channels
- Master & Slave, Modbus RTU and TCP protocols
- Batch operations, built in security & FDA 21 CFR part 11
- 19 international languages



Sensor Options/Ranges

CO (Carbon Monoxide)

Range: 0 – 50,000ppm

Resolution: 10ppm

NO (Nitric Oxide)

Range: 0 – 2,000ppm

Resolution: 1ppm

NO2 (Nitrogen Dioxide)

Range: 0 – 2,000ppm

Resolution: 1ppm

HC (Hydro Carbon)

Range: 0 – 100% LEL

Resolution: 0.1 %

O2 (Oxygen)

Range: 0 – 21%

Resolution: 0.1%

H2S (Hydrogen Sulfide)

Range: 0 – 200ppm

Resolution: 0.1ppm

HCl (Hydrogen Chloride)

Range: 0 – 100ppm

Resolution: 0.1ppm

CL2 (Chlorine)

Range: 0 – 100ppm

Resolution: 0.1ppm

SO2 (Sulfur Dioxide)

Range: 0 – 2000ppm

Resolution: 1ppm

Temperature

Range: 0 – 1200oC /

0 – 2192oF

Resolution: 1 °C / 1 °F

HF (Hydrogen Fluoride)

Range: 0 – 100ppm

Resolution: 0.1ppm

O3 (Ozone)

Range: 0 – 100ppm

Resolution: 0.1ppm

CH4(Methane) NDIR

Range: 0 – 100%LEL

Resolution: 0.1%

Particles System

Range: 0 – 999,999ppm

Resolution: 1ppm

NH3 (Ammonia)

Range: 0 – 100ppm

Resolution: 0.1ppm

N2O (Nitrogen Oxide)

Range: 0 – 1,000ppm

Resolution: 1ppm

Accuracy

Measurement Range: = 100%

0 – 20% = +/-5% of measure range

20 -100% = +/-1% of measure range

Calculated Parameters (optional)

CO2 (Carbon Dioxide)

Range: 0 – 25%

(CO2 can also be measure upon request)

Efficiency (ETA)

Range: 0 – 100%

Excess Air (Lambda)

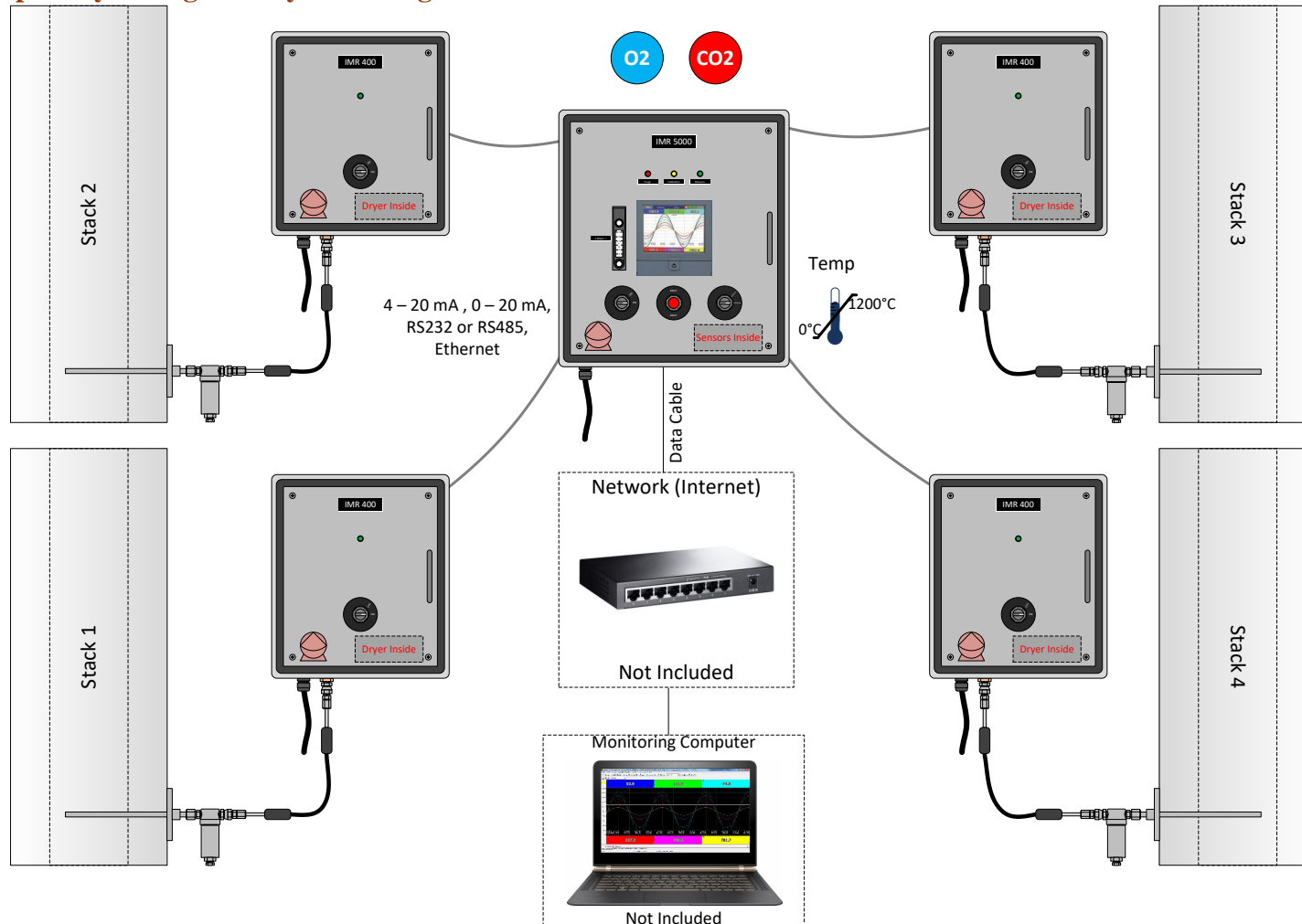
Range: 0 – 100%

Losses (QA)

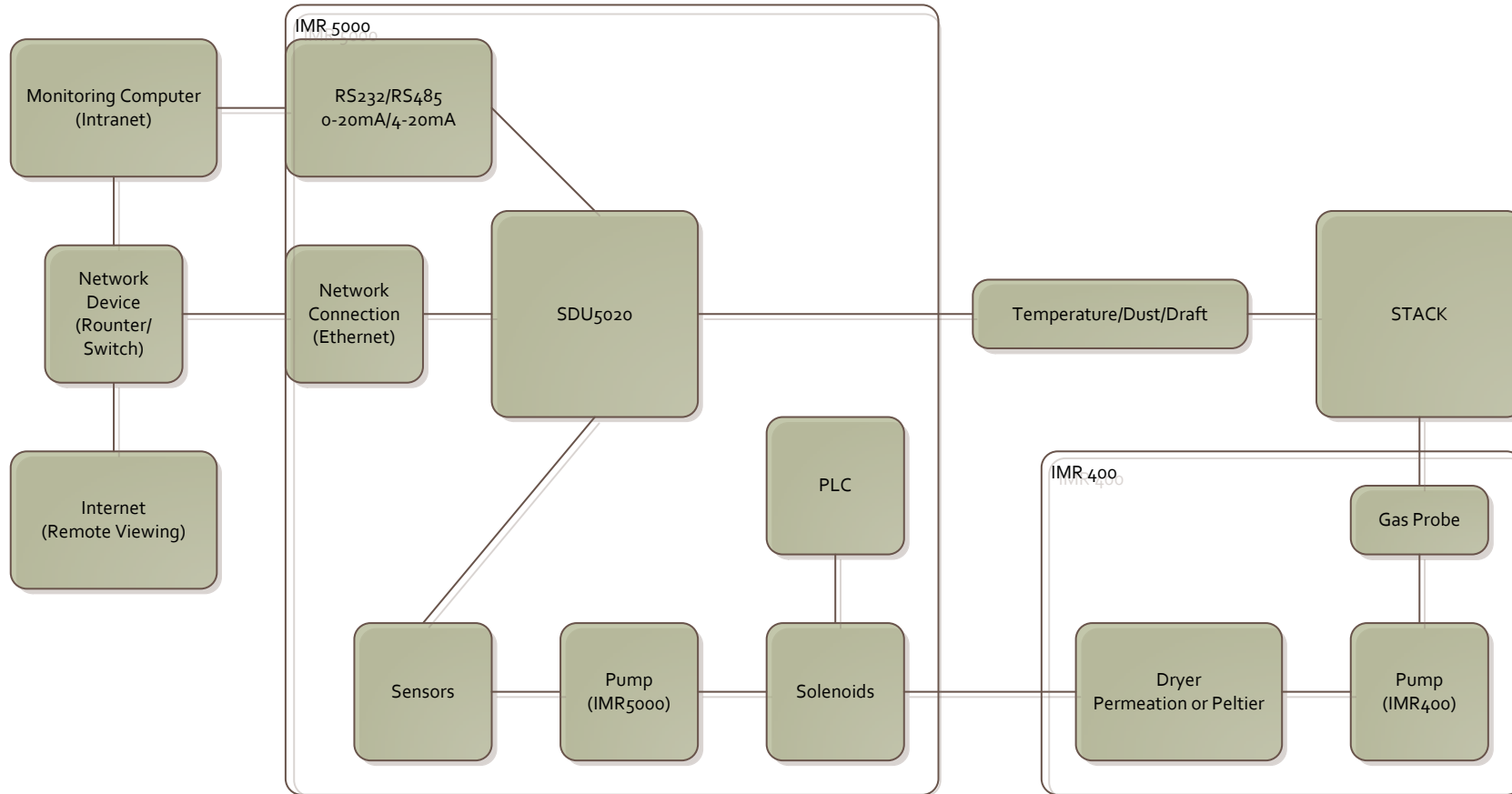
Range: 0 – 100%

*Other gases and ranges upon request

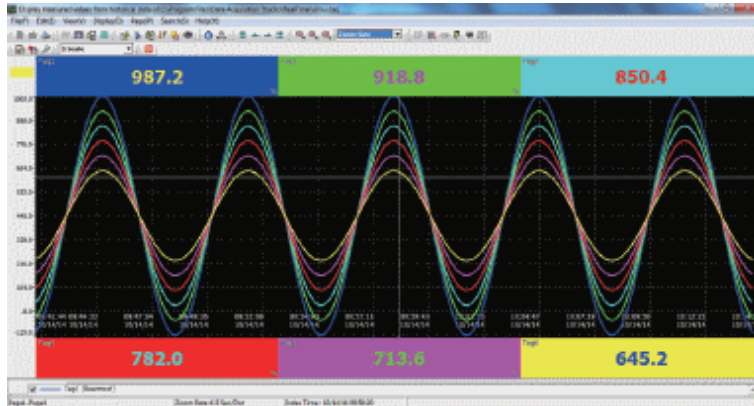
IMR 5000 Multiple Dryer Single Analyzer Configuration:



IMR 5000 Flow Diagram Multiple Dryer Single Analyzer Configuration:

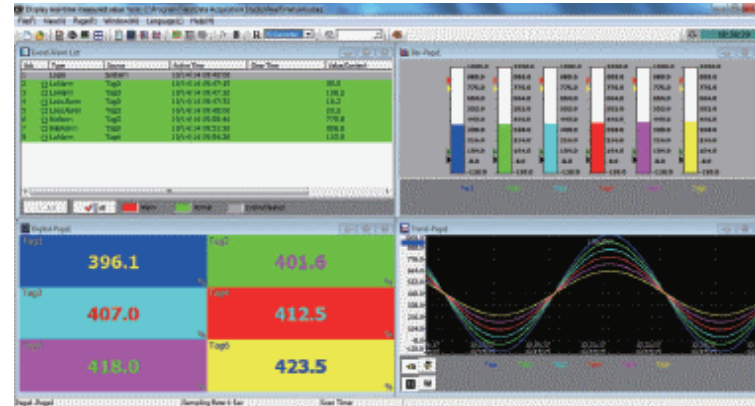


Observer 1



Download and review recorded data; including historical trends, historical alarms and events. Search saved data by time, time period, tag, alarm, events and remarks. Data can also be exported into a CVS spreadsheet.

Observer 2



Includes all functions of Observer 1 and includes access to data on the recorder in Real Time.