

safety, IH, Stacks, Process, Carbon Bed Breakthrough, Drying Ovens,
Leak Detection, Environmental & Process Measurement in Chemical,
Petrochemical & Manufacturing Plants



Model 900 Transmitters



Model 202 IR



Model 1000 Toxic Gases



Model 301B 19" Rackmount PID



DataWorks™ Software



Model 201B Wallmount PID



Model 112 PID



Model 210 19" Rackmount O₂



Model 204 TCD



CONTINUOUS ANALYZER PRODUCT LINE

PROCESS GCs, CONTINUOUS ANALYZERS: PID, FID & PARAMAGNETIC O₂

Model 201-B- Analyzers for Total VOCs (total HC) in Air or Water

PID or FID with 5 digit Smart Meter

Features: No H₂ or air required for PID; Fast response-PID- **10 sec. to 90%- Rack (19") or wall mount enclosures available;** Autocal, RS232; Alarms for PID or FID out... ; Range 0.1 to 3000 ppm (higher ranges available with dilution system- for PID; 1-20,000 ppm for FID; **Class 1 Div. 1 or 2 (X or Z) purging** available for hazardous areas; **Options:**Datalogger & alarms; 4-20 mA, 2 or 4, 8, 12, 16, 24 or 32 pt. Multipoint **Applications:**Carbon bed breakthrough, Total hydrocarbons in air, Area monitoring for total hydrocarbons, or Selected inorganic cpds via PID; **Stack and incinerator monitoring-** sampling systems available; **Total VOC's in water** with optional Model 650 sparging system

Model 210 - Paramagnetic Oxygen Analyzer

Paramagnetic O₂ with temperature and pressure compensation & 5 digit Smart Meter

Features: Temperature & pressure compensation for additional stability; fast response-PID- **10 sec. to 90%- Rack (19") or wall mount enclosures available;** Autocal, RS232; Alarms, Range- ppm 100%; **Class 1 Div. 1 or 2 (X or Z) purging** available for hazardous areas; **Options:**Datalogger & Alarms; 4-20 mA, 2 or 4, 8, 12, 16, 24 or 32 pt. Multipoint

Applications: Air liquification plants, Gas purity analysis, Hydrocarbon stream monitoring, Fermentation processes, Heat treating & annealing, Protective blanketing, Combustion efficiency, Stack Gas monitoring, Blast furnace ga, Natural gas

Stack and incinerator monitoring- sampling systems available

Model 301B & 501B- Process Gas Chromatographs

The **301B** is a low cost Process GC with an embedded Pentium PC and Windows operating system, PeakWorks chromatography software, Color VGA Display

Enclosures- 301B: 19" Rack (33 Lbs) or NEMA 4 wall (55 Lbs) mount enclosure, Class 1 Div. (1 or 2) for hazardous area

The **Model 501B** is a Process GC with an embedded Pentium PC and Windows 2000 NT operating system, PeakWorks chromatography software, multiple diagnostics, PeakWorks communication software, network card, Color VGA Display

Enclosure- 501B: NEMA 4 wall (85 Lbs) mount 2 enclosures- electronics & oven, Class 1 Div. (1 or 2) for hazardous area

Detectors: Specific (ECD, FPD), Selective (FID, PID) and Universal detectors (FUV & TCD) available

Gas or liquid (heated) **valves** available, Multipoint (1, 4, 8, 12 pt.), 1 alarm per channel, 2nd level optional

Applications: Ambient air, fence line monitoring, process, stack emissions from ppb to % levels, measurement of non-methane HC, natural gas analysis, chlorinated HC, sulfur compounds, aromatic HC, amines, NH₃, H₂S, water, etc.; range sub ppb to 100%

ENCLOSURE SPECIFICATIONS

Model 201 B

19" Rack Mount

19" W x 5^{1/2}" H x 14" D

Weight: PID 12.2 lbs / FID 14 lbs

NEMA 4- Wall Mount

PID 23"W x 21"H x 10"D-

FID 27"W x 21"H x 10"D-

Wallmount Weight:

PID 19 lbs / FID 22 lbs

Model 210

19" Rack Mount

19" W x 5^{1/2}" H x 14" D

Weight: 12.2 pounds

NEMA 4- Wall Mount

23"W x 21"H x 10"D

Weight: — 19 pounds

Model 301-B

19" Rack Mount

19" W x 11" H x 17" D

Weight: 33 pounds

NEMA 4- Wall Mount

23"W x 21"H x 20"D

Weight: — 53 pounds

Model 501-B

Electronics Enclosure-

NEMA 4- Wall Mount

23"W x 21"H x 20"D

Weight: — 56 pounds

Oven-

NEMA 4- Wall Mount

23"W x 21"H x 15"D

Weight: — 29 pounds

VOCs, H₂S, SO₂, Cl₂, O₂, CO, CO₂, ETO, CH₄, HCN, NH₃, PH₃, H₂, SiH₄

DUAL BEAM IR, THERMAL CONDUCTIVITY, & ELECTROCHEMISTRY- TRANSMITTERS

Model 202 IR

-This **dual beam** (reference and measurement wavelength) IR instrument is very stable and has a fast response (15 sec. to 90%). It is ideal for process control, stack measurements or even ambient levels of CO₂ or freons

-Measure Lower explosive limit (LEL) for hydrocarbons in drying processes; Measure methane (CH₄) in landfill gas, mines and other sources;

Applications: Monitor ambient CO₂ in buildings, greenhouses, stacks, landfill gases ..., CO in parking lots, CO, CO₂ in stacks, Freons leaks from refrigeration

-Typical Range (CH₄/CO₂/Freons) high ppm to 100%

-Species Measured: CH₄, CO₂, CO, Refrigeration Gases (Freons)- Z purging available

Model 112 PID +

-Compact wall mount **PID or FID based** sensor in a NEMA 4 enclosure with 5 digit bright LCD, and an optional RS485 output. Can add 1-3 additional sensors such as LEL and 2 electrochemical or 3 electrochemical sensors. For safety monitoring. Z purging available; Monitoring **total VOCs and toxic gases**.

Model 204 TCD

-This technique determines the difference in thermal conductivity between a reference and a sample stream using a Wheatstone bridge circuit.

-NEMA 4 enclosure with 5 digit bright LCD, and a 4-20 mA output

Applications: -It is most useful for binary mixtures where the gases have a difference in thermal conductivity or for leak detection because of its universal response

-Range 100 ppm to 100% for Hydrogen, Helium, CO₂, Neon ... Z purging available

Model 1000 Toxic Gases

-Measure- CO, SO₂, H₂S, Cl₂, HCl, H₂, NO, NO₂, O₂, HCN, CO₂, NH₃, PH₃, SiH₄ via electrochemistry for worker safety at ppm levels- single component only; Model 1004 for 2-4 Components including LEL + 3 electrochemical sensors- **note no PID**

-NEMA 4 enclosure with 5 digit bright LCD digit meter & optional RS485 output, calibration stored in software- no pots to set, built in pump provides a fast response; dual setpoint, alarms, RS232 for multiple sensors

Model 900 Transmitters

IR, TC, PID or various Electrochemical sensors in an explosion proof enclosure with a glass window. Output is 4-20 mA. **Measure** CH₄, CO₂ by IR, H₂ by TC, VOCs by PID, These units are powered by 18-30 VDC,

ENCLOSURE SPECIFICATIONS

Model 202

NEMA 4 Wall Mount (Only)

6.75"W x 11"H x 6.75"D

Weight

7.4 lbs.

Material: Fiberglass

Model 112

NEMA 4 Wall Mount (Only)

7"W x 9"H x 5"D

Weight

12 lbs.

Material: Fiberglass

Model 204

NEMA 4 Wall Mount (Only)

6.75"W x 11"H x 6.75"D

Weight

7.4 lbs.

Material: Fiberglass

Model 1000

NEMA 4 Wall Mount (Only)

7"W x 9"H x 5"D

Weight

12 lbs.

Material: Fiberglass

Model 900

Aluminum Explosion proof enclosure with 3.5" glass window

Class 1 Div. 1

Diameter: 4.75"

Depth: 3.5" or 6.5"

pH, CONDUCTIVITY, ORP & DO CONTROLLERS- DATAWORKS SOFTWARE

Model 600 Series for pH, ORP, T, dissolved O2 in water

- A variety of systems are available from 1/8 to 1/2 DIN panel mounts
- Measure and/or control pH, ORP, conductivity, T, dissolved O2
- 4-20 mA output, dataloggers available
- **Industrial pH, conductivity, ion selective, & dissolved O2 electrodes available**
- Easy to maintain- designed to reduce maintenance by plant personnel
- Range pH- 0.0 to 14.00;
- Clean Water Act compliance
- pH , ORP ,T, conductivity, dissolved O2 transmitters or Controllers
- Effluent monitoring
- Municipal water treatment
- Analysis of water for process input
- Monitoring cooling water

DATAWORKS DATA COLLECTION SOFTWARE

Data Works is PIDs data collection and logging software that can be used with a wide variety of Sensor or Analyzer outputs such as Ethernet, RS485 & 4-20 mA . The latter two outputs are for long distance transmission of data as shown in Table I below. In-plant installations are typically 4-20 mA or RS485 because of the long distances involved 1,000-5,000'.

The software is written in visual C++ as an overlay/ interface for various hardware devices. One hardware version used for our Model 201-B, 202, 203, 204, 210, 301B GC, 501 B GC or other manufacturer's instruments that have 4-20 mA outputs or an RS485 output. There is a 12 bit ADC on board with 16 digital input/outputs. The latter can be used to control calibration,diagnostics for the PID Analyzers units. Low

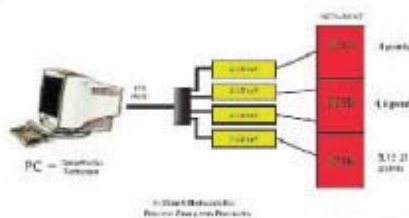
pH Controller



Conductivity Controller



DO Controller



Instruments that can be linked in
DATAWORKS include the
following:
112, 201, 202, 204, 210, 301, 501,
1000 Analyzers & 900 transmitters



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