

# TELEDYNE ANALYTICAL INSTRUMENTS



## 7320

### *Infrared Gas Analyzers*



## 7300A

- Expanded measurement capability
- Patented detector design

Teledyne's 7300 series of non-dispersive infrared (NDIR) gas analyzers features fast response, high accuracy, sensitivity, stability, and excellent linearity. The cost competitive measurement solutions are due in part to the uniquely designed and patented IR detector.

The 7300 Series can be provided in a variety of configurations.

- 7300A - Flush panel or rack mount
- 7300B - NEMA 4 wall mount (suitable for Div 2 or Eex(p) purge)
- 7320 - Fully explosion proof design (Class I, Division 1, Group B)

The heart of these microprocessor-based analyzers is a temperature compensated, hermetically sealed, steady state thermopile detector integrated into an IR photometric bench.

This design eliminates the traditional motor driven chopper wheel, signal conditioning circuitry, and complex optics resulting in a compact and rugged analyzer. The optical detection bench has been qualified for critical life support systems in space suits, shuttles, and space station Freedom.

The Series 7300 NDIR Analyzers are supplied with the following standard features:

- Three programmable ranges with auto-ranging capabilities
- Auto-calibration software
- 4-20 mADC isolated and 0-1 VDC outputs
- RS-232C bi-directional serial interface
- Dual concentration alarms and system failure alarm
- Self-diagnostic check of system electronics

**Built for Reliability and Performance**

# Series 7300 Specifications

## Applications

- Chemical and petrochemical processes
- Combustion and flue gas processes
- Pulp and paper
- Vapor recovery systems
- Enhanced oil recovery
- Food, agriculture, medical
- Metals, ceramics and heat treating atmospheres
- Landfill gas power stations
- Emissions testing (part of the mobile stations)
- Carbon dioxide scrubber efficiency
- CO / CO<sub>2</sub> / C<sub>2</sub>H<sub>4</sub> monitoring in oxyhydrochlorination process in EDC manufacturing

## Specifications

Accuracy:  $\pm 2\%$  of full scale at constant temperature or better

Linearity:  $\pm 1\%$  of full scale

Repeatability:  $\pm 1\%$  of full scale

Drift:  $\pm 1\%$  of full scale per week at constant temperature

Response time: 90% of full scale in less than 5 seconds

Span stability: Less than  $\pm 1\%$  of full scale change per month

Noise:  $\pm 1\%$  of full scale

Analysis ranges:

### Typical Gas Analysis Applications

CO<sub>2</sub> 0-1% to 0-100%

CO 0-5% to 0-100%

CH<sub>4</sub> 0-10% to 0-100%

C<sub>2</sub> to C<sub>5</sub> 0-5% to 0-100%

(For lower ranges and other gases, contact factory.)

Ranges: Three user programmable ranges with auto-ranging  
Ratio of 4:1 for low to high range  
(i.e. 0 - 5 up to 0 - 20% CO)

Range ID: Via range ID contacts

Outputs: 4-20 mA DC iso or 0-1 VDC negative ground

Serial output: RS-232C bi-directional user interface

Auto-calibration: User programmable auto-cal software standard

Alarms: Dual alarms + system failure alarm

Self-diagnostics: Self-check of analyzer electronics

Operating temperature: 5 to 45°C (41 to 113°F)

Ambient temp: 5 to 45°C (41 to 113°F)

Power supply : 110 VAC or 230 VAC, 50 Hz or 60 Hz  
(Specify at the time of order)

Wetted parts: Application dependent

## Area Classification / Dimensions

7300A: Non-hazardous  
7.5" H x 10.8" W x 13.7" D

7300B: Non-hazardous (can also be purged to meet Div 2 or Eex(p) areas)  
11.81" W x 20.28" H x 8.9" D

7320: Class I, Division 1, Groups B, C, D  
25.63" H x 5.25" W x 11" D

## TELEDYNE ANALYTICAL INSTRUMENTS

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## Warranty

Instrument is warranted for 1 year against defects in material or workmanship

NOTE: Specifications and features will vary with application. The above are established and validated during design, but are not to be construed as test criteria for every product. All specifications and features are subject to change without notice.

