The Model T300 measures low ranges of carbon monoxide by comparing infrared energy absorbed by a sample to that absorbed by a reference gas according to the Beer-Lambert law.

Using a Gas Filter Correlation Wheel, a high energy IR light source is alternately passed through a CO filled chamber and a chamber with no CO present. The light path then travels through the sample cell, which has a folded path of 14 meters. The energy loss through the sample cell is compared with the span reference signal provided by the filter wheel to produce a signal proportional to concentration, with little effect from interfering gases within the sample. This design produces excellent zero and span stability and a high signal-to-noise ratio, allowing extreme sensitivity.

All T Series instruments offer an advanced color display, capacitive touch screen, intuitive user interface, flexible I/O, and built-in data acquisition capability. All instrument set up, control and access to stored data and diagnostic information is available through the front panel, or via RS232, Ethernet, or USB com ports either locally or by remote connection using the included APIcom™ software.

- Ranges: 0-1 ppm to 0-1,000 ppm, user selectable
- Dual ranges and auto ranging
- Large, vivid, and durable color graphics display with touch screen interface
- Ethernet, RS-232, and (optional) USB com ports
- Front panel USB connections for peripheral devices and firmware upgrades
- 8 analog inputs (optional)
- Adaptive signal filtering optimizes response time
- Temperature & pressure compensation
- Comprehensive internal data logging with programmable averaging periods
- Ability to log virtually any operating parameter
- Two-year warranty
- Five-year warranty on GFC wheel
## Model T300 Gas Filter Correlation CO Analyzer

### Specifications

**General**

- **Ranges:**
  - Min: 0-1 ppm full scale
  - Max: 0-1,000 ppm full scale (user selectable), dual ranges and auto ranging supported
- **Measurement Units:**
  - ppb, ppm, μg/m³, mg/m³ (selectable)
- **Zero Noise:** < 0.02 ppm (RMS)
- **Span Noise:** < 0.5% of reading (RMS) above 50 ppm
- **Lower Detectable Limit:** 0.04 ppm
- **Zero Drift:** < 0.1 ppm/24 hours
- **Span Drift:** < 0.5% of reading/24 hours
- **Lag Time:** 10 seconds
- **Rise and Fall Time:** < 60 seconds to 95%
- **Linearity:** 1% of full scale
- **Precision:** 0.5% of reading
- **Sample Flow Rate:** 800 cm³/min ±10%

**Electrical Specifications**

- **Power Requirements:** 100V-120V, 220V-240V, 50/60 Hz
- **Analog Output Ranges:** 10V, 5V, 1V, 0.1V (selectable)
- **Recorder Offset:** ±10%

**Communication Specifications**

- **Included I/O:**
  - 1 x Ethernet: 10/100Base-T
  - 2 x RS232 (300-115,200 baud)
  - Multidrop RS232
  - 2 x USB device ports
  - 8 x opto-isolated digital outputs
  - 6 x opto-isolated digital inputs
  - 4 x analog outputs
- **Optional I/O:**
  - 1 x USB com port
  - 1 x RS485
  - 8 x analog inputs (0-10V, 12-bit)
  - 4 x digital alarm outputs
  - 3 x 4-20mA current outputs

**Physical Specifications**

- **Operating Temperature Range:** 5 - 40°C
- **Dimensions (HxWxD):** 7” x 17” x 23.5” (178 x 432 x 597 mm)
- **Weight:** 40 lbs (18 kg)

**Certifications**

- **US EPA:** RFCA-1093-093
- **MCERTS:** Sira MC 050069/04

### How to Order

**Model T300 includes:**

- Two-year warranty, five-year on GFC wheel
- Internal pump
- Dual ranges and auto ranging
- 47mm diameter particulate filter
- 8 isolated digital outputs
- 6 isolated digital inputs
- RS-232 ports
- Multi-drop RS232
- Ethernet port
- USB ports for peripheral devices
- APIcom™ remote control software
- Select AC input voltage:
  - 100V - 120V 
  - 220V - 240V
- Select DC output voltage:
  - 10V
  - 5V
  - 1V
  - 0.1V

**Mounting Options:**

- Rack mount brackets with chassis slides
- Rack mount brackets only

**I/O Options:**

- 4-20mA outputs (up to three channels)
- USB com port
- 8 Analog Inputs
- RS485

**Other Options:**

- Concentration alarm relays
- Consumables kit
- External Pump and Fittings
- O₂ 0-25% Paramagnetic sensor
- CO₂ 0-20% NDIR

---

The values expressed above are in accordance with EPA definitions. All error specifications are based on constant conditions. Specifications exceed US EPA and Eignungsgeprüft requirements. Specifications subject to change without notice. Printed documents are uncontrolled.