



Model T700H Source Monitoring Dilution Calibrator

The Model T700H is a microprocessor controlled dilution system for calibration of continuous emissions monitoring gas analyzers. It enables significantly reduced cylinder use and cost while improving on-site flexibility for gas concentrations and converter efficiency checks. The instrument is designed to meet or exceed the performance requirements of the U.S. EPA 40CFR Part 51 Method 205 Appendix M.

The Model T700H can provide precise dilutions of Protocol-1 or certified gases from high concentration cylinders to provide virtually any concentration needed. It is also equipped with a stable, adjustable ozone generator for production of NO₂ using GPT (Gas Phase Titration). This GPT function allows automatic generation of NO₂ using a NO cal gas source. NO₂ can be generated at concentrations up to 100 ppm for performing span checks or converter efficiency testing of CEMS NO_x analyzers. By adding an optional 3rd MFC the T700H can blend gases from two separate cylinders.

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.

- ▶ **Meets or exceeds Method 205 requirements**
- ▶ **Exceptional on-site flexibility for gas concentrations**
- ▶ **GPT for converter efficiency checks up to 100 ppm (NO₂)**
- ▶ **Rapid payback from reduced gas use and cylinder costs**
- ▶ **Optional 3rd MFC for wider dynamic range or gas blending (user selectable)**
- ▶ **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**
- ▶ **12 independent timers for sequences**
- ▶ **Nested sequences (up to 5 levels)**
- ▶ **Software linearization of mass flow controllers (MFC)**
- ▶ **4 calibration ports (configurable for single or multi-blend gases)**
- ▶ **Two-year warranty**

Free Customer Support by telephone and email for the life of the instrument

Model T700H Source Monitoring Dilution Calibrator

Specifications

Dilution System

Flow Measurement Accuracy:	± 1% of full scale
Repeatability of Flow Control:	± 0.2% full scale
Linearity of Flow Measurements:	± 0.5% full scale
Flow Range of Dilution Air:	0 to 10 SLPM
Optional Ranges:	0 to 20 SLPM, 0 to 5 SLPM
Flow Range of Cylinder Gases:	0 to 1 SLPM
Optional Ranges:	0 to 5 SLPM
Zero Air Requirements:	10 SLPM @ 30 psi
Optional:	20 SLPM @ 30 psi
Input Pressure:	20-40 psig
Calibration Gas Input Ports:	4 (configurable)
Diluent Gas Input Ports:	1

NO₂ Generation (GPT modes)

Concentration Range:	5-100 ppm
Maximum Output:	400 ppm LPM
Minimum Output:	10 ppm LPM

Ozone Generator Module

Maximum Ozone Concentration:	100 ppm
Minimum Ozone Concentration:	5 ppm
Response Time:	180 seconds to 98%

Electrical Specifications

Power Requirements:	85V-264V, 47Hz-63Hz
Analog Output Ranges (Test Channel):	10V, 5V, 1V, 0.1V (selectable)

Communication Specifications

Included I/O:	1 x Ethernet: 10/100Base-T 2 x RS232 (300-115,200 baud) 2 x USB device ports 12 x digital control outputs 12 x digital control inputs 8 x digital status outputs
Optional I/O:	1 x USB com port 1 x RS485 Multidrop RS232

Physical Specifications

Operating Temperature Range:	5 - 40°C
Dimensions (HxWxD):	7" x 17" x 24" (178 x 432 x 609 mm)
Weight:	39.29 lbs (17.83 kg)

How to Order

Model T700H includes:

- Two year warranty
- 4 calibration gas inlet ports
- 1 diluent gas inlet port
- 12 digital control outputs
- 12 digital control inputs
- 8 digital status outputs
- RS-232 ports
- Ethernet port
- USB ports for peripheral devices
- APIcom™ remote control software
- Select AC input voltage
 - 100V - 120V 50Hz
 - 220V - 240V 60Hz
- Select DC output voltage
 - 10V 5V
 - 1V 0.1V

Mounting Options:

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

I/O Options:

- USB com port
- Multi-drop RS232
- RS485
- 12V external valve driver
- 24V external valve driver

Other Options:

- 3rd MFC for gas blending option

The values expressed above are in accordance with EPA definitions.
All error specifications are based on constant conditions.
Specifications subject to change without notice.
Printed documents are uncontrolled. SAL000072B (DCN 7037) T700H/12.05.14



9480 Carroll Park Drive ■ San Diego, CA 92121-5201
Ph. 858-657-9800 Fax 858-657-9816
Email api-sales@teledyne.com

For more information about the Teledyne API family of monitoring instrumentation products, call us or visit our website at

www.teledyne-api.com

© 2014 Teledyne Advanced Pollution Instrumentation, Inc.

