



## The Model T640 PM Mass Monitor



Teledyne API is excited to unveil the latest addition to our ambient particulate monitoring product portfolio: The Model T640 PM mass monitor. Delivering continuous, real-time PM mass measurements using innovative broadband spectroscopy, the T640 comes with high resolution, fast response, low power, and effortless operation.

— With NumaView™ premium T Series software —

- Large, vivid, and durable color touchscreen display
- Ethernet with TCP/IP Modbus communications and Remote control software
- Lifetime technical support by phone and email
- Standard two-year warranty
- US EPA-approved

# T640 Specifications

Performance	■ Measurement Principle	Broadband spectroscopy using 90° white-light scattering with Polychromatic LED
	■ Particle size resolution	256 sizes over 0.18 – 20µm range, combined to 64 channels for mass calculation
	■ PM Mass Measurements	PM <sub>10</sub> , PM <sub>2.5</sub> , and PM <sub>10-2.5</sub> simultaneously; PM <sub>1</sub> (optional)
	■ PM Mass Resolution Measurement Range	0.1 - 10,000 µg/m <sup>3</sup>
	■ Mass Measurement & Display Resolution	0.1 µg/m <sup>3</sup>
	■ Precision	±0.5 ug/m <sup>3</sup> (1-hr average)
	■ Lower Detectable Limit	<0.1 ug/m <sup>3</sup> (1-hr average)
	■ Data Rate	10s to 48hr (user selectable)
	■ Mass Concentration Accuracy	Exceeds US EPA PM10 FEM and Class III FEM PM2.5 performance requirements for additive and multiplicative bias compared to FRM samplers
	■ Flow Rate	5.0-lpm sample flow (Standard model); 11.67-lpm optional bypass flow (with option 640x)
	■ Flow Accuracy	Within ±1%; (Typically within ±0.5%)
Operating Conditions	■ Operating Temperature	0 - 50°C, non-condensing
	■ Ambient Temperature	-40 - 60°C
	■ Ambient Relative Humidity	0 - 100%
	■ Sample Humidity Control	24VDC, 90W (max) heater controlled to 35% RH
	■ Weatherproof enclosure required with 0 - 50°C, non-condensing environmental control	
	■ Requires only 10-min warm-up time	
Interfaces and Data Storage	■ T Series analyzer interface with full touch screen display and NumaView™ premium operating software and NumaView™ remote software	
	■ 4Gb memory allows for >1 year of internal data storage	
	■ Front Panel USB Ports	2x type-A Peripheral Ports
	■ Ethernet Communication (supports TCP/IP Modbus and HTTP polling protocols)	
Electrical	■ T640 instrument	100 - 240VAC 50/60Hz, Power consumption < 120W @ 120VAC
	■ External pump (for optional bypass flow - option 640x)	100 - 120VAC 60Hz or 220-240VAC 50/60Hz, Power consumption <360W @ 120VAC
Physical Specifications	■ Unit dimensions (HxWxD)	7" x 17" x 14" (17.8 x 43.2 x 35.6 cm)
	■ Unit weight	19 lbs (8.6 kg)
	■ Sample heater tube height	43" (109 cm)
	■ Sample heater tube weight	6 lbs (2.7 kg)
Certifications	■ US EPA PM <sub>2.5</sub> Federal Equivalent Method EQPM-0516-236	
	■ US EPA PM <sub>2.5</sub> Federal Equivalent Method EQPM-0516-238*	
	■ US EPA PM <sub>10</sub> Federal Equivalent Method EQPM-0516-239*	
	■ US EPA PM <sub>10-2.5</sub> Federal Equivalent Method EQPM-0516-240*	

\* with 640x option  
Specifications subject to change without notice.



Representante Oficial  
Tel: +54 11 4932-2322  
Email: ventas@cvcontrol.com.ar  
www.cvcontrol.com.ar



**TELEDYNE API**  
Everywhere you look™

9970 Carroll Canyon Road ■ San Diego, CA 92131  
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:

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