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

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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_{10}, $PM_{2.5}$, and $PM_{10-2.5}$ simultaneously
	PM Mass Resolution Measurement Range	0.1 - 10,000 µg/m³
	Mass Measurement & Display Resolution	0.1 µg/m³
	Precision	±0.5 ug/m³ (1-hr average)
	Lower Detectable Limit	<0.1 ug/m³ (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 - 230VAC 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 $PM_{2.5}$ Federal Equivalent Method EQPM-0516-236	
	US EPA $PM_{2.5}$ Federal Equivalent Method EQPM-0516-238*	
	US EPA PM_{10} Federal Equivalent Method EQPM-0516-239*	
	US EPA $PM_{10-2.5}$ Federal Equivalent Method EQPM-0516-240*	

* with 640x option

Specifications subject to change without notice.

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

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