



## An intelligent serial controller for ISPM

### PM-250E ISPM Controller

#### FEATURES

- Data buffering and support of real-time tasks simplifies integration into host systems
- Eight independent opto-isolated Machine Trigger™ inputs allow synchronization of data collection during key process steps
- Sensor response is user-programmable to optimize sensor performance for each process step



The HYT controllers from Hach Ultra Analytics provide an intelligent interface between any HYT in situ vacuum particle monitor (ISPM) and your data acquisition system. Complete ISPM systems for vacuum process environments include the particle monitor, PM-250E controller and a computer with Particle Vision® software for data acquisition and statistical process control.

The PM-250E controller communicates over a serial interface supporting RS232, RS422 and RS485. An optional fiber optic connector is also available. Each PM-250E supports one HYT sensor; up to 15 controllers can be daisy-chained together and monitored by a single computer. Conveniently mount the PM-250E to any surface using the provided threaded inserts.

HYT controllers support real-time particle monitoring tasks. Use the patented Machine Trigger function to synchronize particle data collection with the process cycle of your semiconductor production equipment. Program particle level thresholds and sensor setup parameters with the HYT letter command set. A 256-point data buffer allows HYT controllers to be used with non-real-time operating systems.

The intelligent PM-250E controller offers complete data synchronization and integration for all ISPM applications.



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## Model PM-250E ISPM Controller

### SPECIFICATIONS

Sensitivity	Determined by sensor
Count Rate	Maximum 1000 per second
Diagnostics	Continuous sensor and controller diagnostics with alarms
Processor	16-bit CMOS 80C196 @ 12.8 MHz, monitored w/ watchdog timer
Machine Trigger Inputs	8 independent opto-isolated inputs 4-30 VDC or VAC 4 kohm input resistance, typical 3 V activation threshold, typical
Alarm Relays	2: one set by Particle Vision® software when particle count exceeds the threshold, one set by the controller to indicate sensor or controller diagnostic failure
Data Buffer	256 points
Operating Temperature	50 to 122°F (10 to 50°C)
Power	90-240 VAC, 50-60 Hz, 0.1 A @ 120 VAC
Number of Sensors	1
Communication to Host	RS232, RS422, RS485, fiber optic (optional)
Dimensions	4.15" w x 3.35" h x 12" d (10.54 x 8.5 x 30.48 cm)

The Model PM-250E is certified for use in environments classified as heavy industrial and complies with EN50082-2 "A" (immunity test). Do not use it in residential, commercial, or light industrial areas.

