

LPS 2830 ONLINE PARTICLE SENSOR 1 CFM

The 28.3LPM [1.0cfm] Built-In Pump Online Particle Counter, the Remote Sensor provides real-time continuous data collection at a cost-effective price per point. Using an internal vacuum source, the compact Remote Sensor can be installed where space is at a premium.

2- Channel remote particle sensors for Cleanroom monitoring applications

FEATURES OF ONLINE PARTICLE COUNTER

- Compact laser particle sensor with stainless enclosure
- Two size channels 0.5 & 5.0 micron sensitivity
- Flow Rate: 2.83L/min or 1 CFM
- Measures multi-parameters, particle, air velocity, temperature, humidity, differential pressure (optional)
- Multi-function, user-friendly monitoring software



BENEFIT OF ONLINE PARTICLE COUNTER

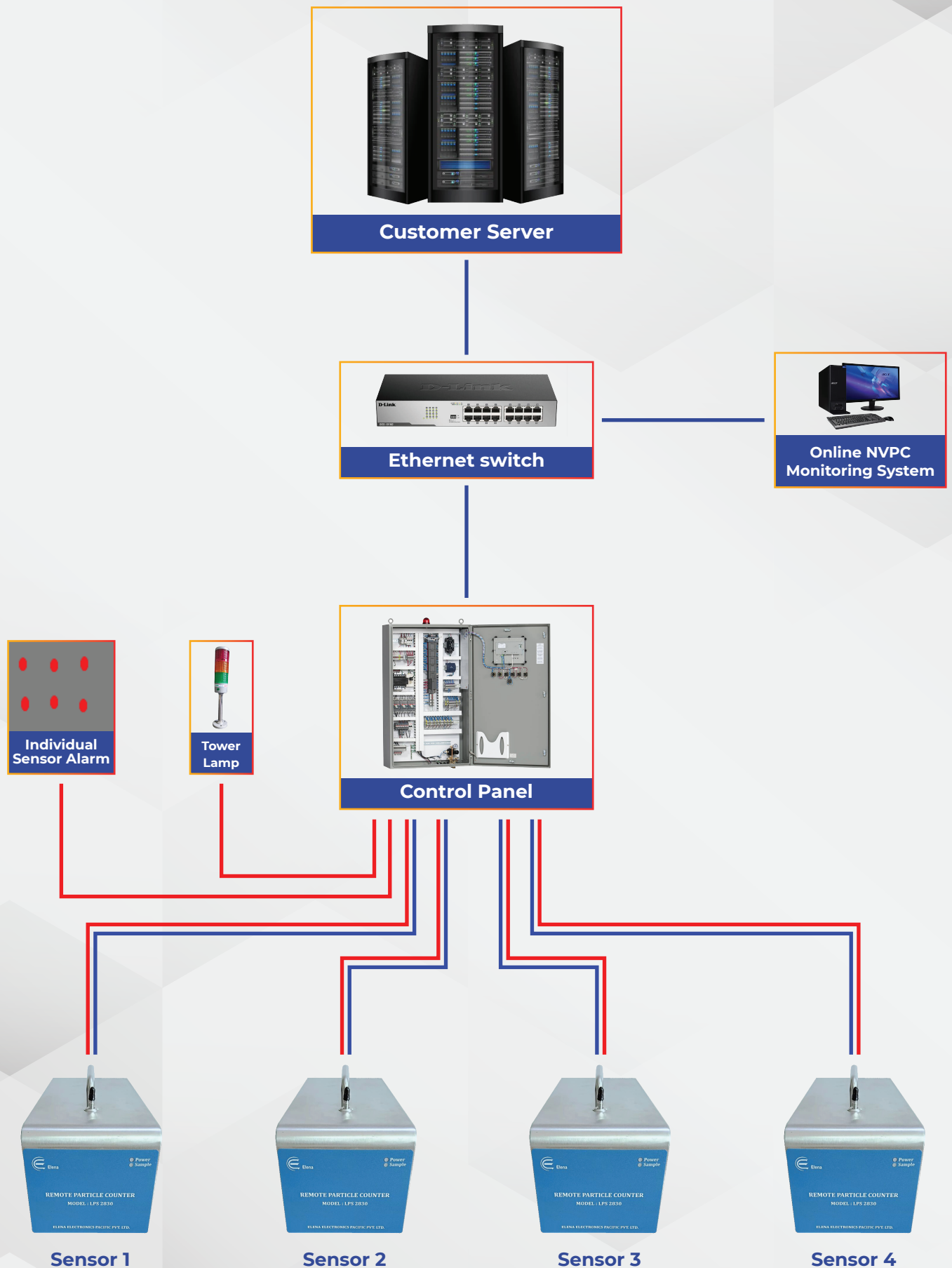
- Secure, long-term collection and storage of critical manufacturing data
- Reduce installation costs and complexity—wireless enabled with minimal infrastructure and built-in pump
- Simplifies integration with Ethernet or DC power
- Reliable operation with heavy industrial electrical immunity compliance
- Early-warning of adverse environmental trends with per second sampling
- Predictive instrument maintenance alerts
- ISO 14644-14 suitability for use classified sensor auto discovery.
- Sample inlet capping auto-detect automatically stops built in pump and prevents accidental damage, Easy Integration into third party systems with 4-20 mA analog data output model options

APPLICATIONS

- Cleanroom Monitoring
- Hospital Surgical Rooms
- Facility Monitoring



Online NVPC Monitoring System Schematic Architecture Diagram



TECHNICAL PARAMETERS

Model	LPS2830	
Size Channels	0.5 μm, 5.0 μm	
Flow Rate	28.3L/min [1CFM]	
Optical Sensor	Laser Diode	
Counting Efficiency	GMP, ISO14644, FDA, JJF1190-2008	
Max Detectable Concentration for 0.5 μm	500,000CNT/ft ³	
Max Detectable Concentration for 5.0 μm	500,000CNT/ft ³	
Concentration Limit for 0.5 μm	500,000 particles/ft ³ at 10% coincidence loss	
Setting Parameter	Sampling Time: 1 to 60 seconds Output Range Setting (To be configured for each particle size) Count: 0-10CNT, 0-100CNT, 0-1,000CNT, 0-10,000CNT Concentration: 0-10CNT/cf, 0-100CNT/cf, 0-1,000CNT/cf, 0-1,000,000CNT/cf, 0-353CNT/ m ³ , 0-3,530CNT/m ³ , -35,300CNT/m ³ , 0-35,300,000CNT/m ³ Alarm Setting: 0%-100% Address Setting: 0-9600 error Output Setting: ON/OFF	
Sampling Pump	Inbuilt vacuum>51kPa	
Interface & Communication	RS485, Analog Output (4-20mA), [0 to 10 V for calibration] Setting Software	
Setting Software	English	
Operating Environment	Temperature:10℃~40℃; Humidity:20%-90%RH; Atmosphere Pressure:86-106Kpa	
Storing Environment	14 to 122°F (-10 to 50°C), up to 98%RH with no visible condensation	
Outside Dimensions	275*450*175 mm ³ (Wide*Deep*High)	
Weight	4kg	
Max. Consumption	40W	
Power Supply	DC24V	
Laser Power	Wave length 775 to 800 nm [1550 to 1600mV] Output 80 mW	
Laser classification	lass 1 EN60825-1 : 2007 [0 to 10V]	
Peak Noise	Less than 200 mV	
Laser Volts Distributio [Threshold Voltage]	0.5μm	1. Voltage output of Particle count or Concentration output range is 0 to 10 V. for 0.5, Channel measurement output Voltage is 2V ±30 mV 2. The output terminal is also use when flow calibration output is 0 to 10 V 3. Voltage output range for flow error is more than 6 to 8V 4. Voltage output 5 to 6 V for LD error 5. Voltage output 8 to 10 for both LD and Flow error
	5.0μm	1. Voltage output of Particle count or Concentration output range is 0 to 10 V. for 0.5, Channel measurement output Voltage is 4.5V ±50 mV 2. The output terminal is also use when flow calibration output is 0 to 10 V 3. Voltage output range for flow error is more than 6 to 8V 4. Voltage output 5 to 6 V for LD error 5. Voltage output 8 to 10 for both LD and Flow error
Particle Resolution	Average value should be 15 % or Less	
Counting Efficiency	50 ±20 for 50% and 100 ± 10 for 100 %	
False count	0.5 μm ft ³ =3 count, m ³ = 9 count for 1 m ³ & 5.0 μm ft. = 0 count, m ³ = 0 count for 1 m ³	
Sampling Air Flow rate	0.5 for 1 cfm	