



Elena

Precision in Every Particle

NVPC

Particle Counter Solution



www.elenaelectronics.com

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Elena LPS 2830 Online NVPC

TECHINICAL DATA & ORDERING INFORMATION



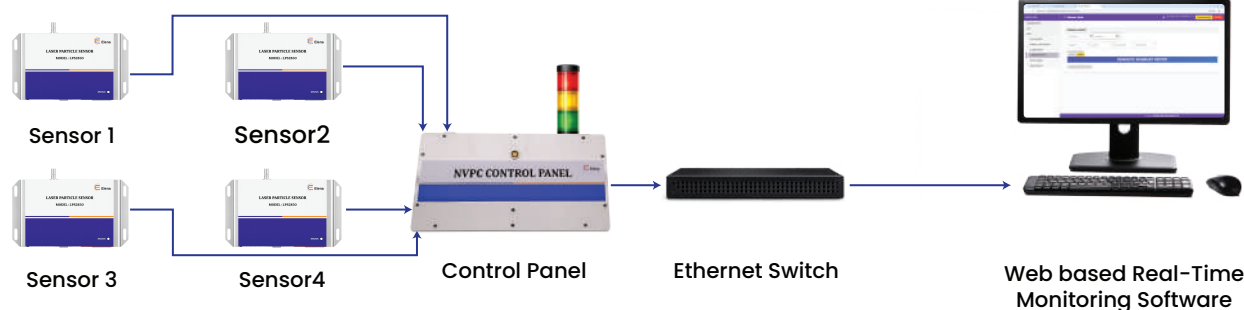
Extended Specifications

Details	Specifications
Counting Efficiency Standard	GMP, ISO 14644, FDA, JJP1190-2008
Concentration Limit (0.5 µm)	500,000 particles/@ 10% coincidence loss
Sampling Time	60 s (configurable)
Alarm Setting	0-100% threshold range
Output Setting	ON / OFF Digital Control
False Count Rate	<3 counts/ft³ (0.5 µm) / 0 counts (5.0 µm)
Laser Classification	Class 1 EN 60825-1:2007
Power Consumption	Max 40 W @ DC 24 V
Dimensions / Weight	205 × 125 × 85 mm / 1.45 kg

Advanced Features

- ★ Web based Configuration Software
- ★ Online Service Support in case Emergency
- ★ 21 CFR Part 11 Compliance
- ★ Auto Cap operation of Isokinetic Probe
- ★ User-friendly Operation
- ★ Individual Sensors start / Stop with Different Multiple Batch Operations, All sensors on with Single batch Operations
- ★ Individual Sensors start / Stop with individual timings for Grade A and Grade B.
- ★ Summary Report / Alarm Report / Trend Report / Individual Sensor Batch Report
- ★ Simple Plug and play system & very compacted design can be installed in very short period

System Architecture



Ordering Codes

Model Code	Description
LPS2830	DC 24 V with RS485 & Analog Output

- Running
- Count Alert
- Count Alarm

Compliance & Certifications



Elena Electronics

LPS 2830 ONLINE NVPC

PARTICLE COUNTER

High performing, reliable 0.5 μm & 5.0 μm sensitivity remote sensor with built-in pump

High Performance

- ★ 0.5 μm and 5.0 μm Dual Channel Sensitivity
 - ★ ISO 14644-14, GMP, FDA Compliant
 - ★ Measures Particles, Temperature & Humidity
- RS485, Analog 4-20 ma, Ethernet Output



Faster Troubleshooting & Reduced Downtime

- ★ Predictive Maintenance Alerts
- ★ Optional Alarm Tower Lamp



Built-In Vacuum Pump

- ★ 1 CFM (28.3 LPM) Internal Pump
- ★ No External Vacuum Required

Applications



Cleanroom Monitoring



Hospital Surgical Rooms



Facility Monitoring

Specifications

Parameter	Details
Size Channels	0.5 μm , 5.0 μm
Flow Rate	28.3 L/min (1 CFM)
Interface	RS485, Analog 4-20a, Ethernet
Operating Environment	10-40°C, 20-90% RH
Dimensions	205 × 125 × 85 mm
Power	DC 24 V, Max 40 W



Running



Count Alert



Count Alarm

Technical Parameters

Model	LPS2830
Size Channels	0.5 μm, 5.0 μm
Flow Rate	28.3L/min [ICFM]
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	1.45 kg
Max. Consumption	40W
Power Supply	DC24V
Laser Power	Wave length 775 to 800 nm [1550 to 1600mV] Output 80 mW
Laser classification	lass I 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

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