

BEMS 3000



In Europe, motor vehicles (light-duty vehicles) will in the future be tested for braking emissions in the WLTP cycle. The basis for this is the directive ECE/TRANS/WP.29/GRPE/2023/4, in short, UN GTR. The particle sizes in brake emissions are in the nanoparticle range of up to about $10 \mu\text{m}$ in concentrations of up to 2×10^6 particles/ cm^3 . Therefore, emissions in this size range are tested for TPN (Total Particle Number, solid and volatile) and SPN (Solid Particle Number, solid particles only, in particles/ cm^3). The $\text{PM}_{2.5}$ and PM_{10} values (in $\mu\text{g}/\text{m}^3$) are also considered.

This device is sold via our partner Link.¹

优势

- Compliance with the new regulations ECE/TRANS/WP.29/GRPE/2023/4
- Integrated flow rate measurement and zero count rate verification
- Measurement paths also available separately for TPN or SPN only
- Monitoring of all data relevant to operation
- Robust, compact design
- Expandable with BEMS 4000 for time-resolved measurement of $\text{PM}_{2.5}$, PM_{10} , TSP, and particle size distribution.

应用领域

- Measurement of brake dust emissions according to UNGTR
- Measurement of the number concentration up to $2.5 \mu\text{m}$ in other applications such as tire wear measurement

¹Link Website: <https://www.linkeng.com/product/model-4222-brake-emissions-particle-measuring-system/>

技术数据

| | |
|-------------------------|--|
| 测量原理 | Condensation particle counter |
| 测量范围(粒径) | 10–2,500 nm |
| 颗粒物最大数量浓度 | 0.1–1,000,000 particles/cm ³ , single-count mode including 1:100 dilution, photometric -10 ⁸ |
| 体积流量 | 2*5 l/min (Aerosol) |
| Volume flow (clean air) | 180 l/min |
| 接口 | Ethernet (LAN) |
| Protocols | RJ45 / TCP/IP |
| 电源 | 100/230 V, 50/60 Hz, max. 600 W |
| Power consumption | Max. 600 W |
| Installation conditions | Temperature range: +15°C–25°C; humidity: 85%; operating pressure at the aerosol inlet: 850–1,050 mbar absolute |
| Compressed air supply | 4–8 bar ISO, compressed air quality required in accordance with ISO 8573-1:2010, minimum purity class 2 |
| Dilution factor | 1:10 / 1:10 |
| Dimensions | 1,090 • 779 • 684 mm (H • W • D) |
| 重量 | Approx. 135 kg |

标准和证书

ECE/TRANS/WP.29/GRPE/2023/4