MENARDI

DATA SHEET

Mikro-Charge™ Continuous DustGauge

A high quality continuous dust emissions concentration monitor for bag houses, cartridge collectors, stacks, cyclones, precipitators, scrubbers and process pipes.

The Mikro-Charge Continuous DustGauge is an ultra reliable solution for EPA continuous emissions monitoring or early warning leak detection regulations. The system assures regulatory compliance and assists personnel in reducing filter maintenance, thereby providing a significant return on investment.

It is equally suited for process applications including optimizing particulate collection in powder recovery systems and for analyzing flow in powder processing pipes.

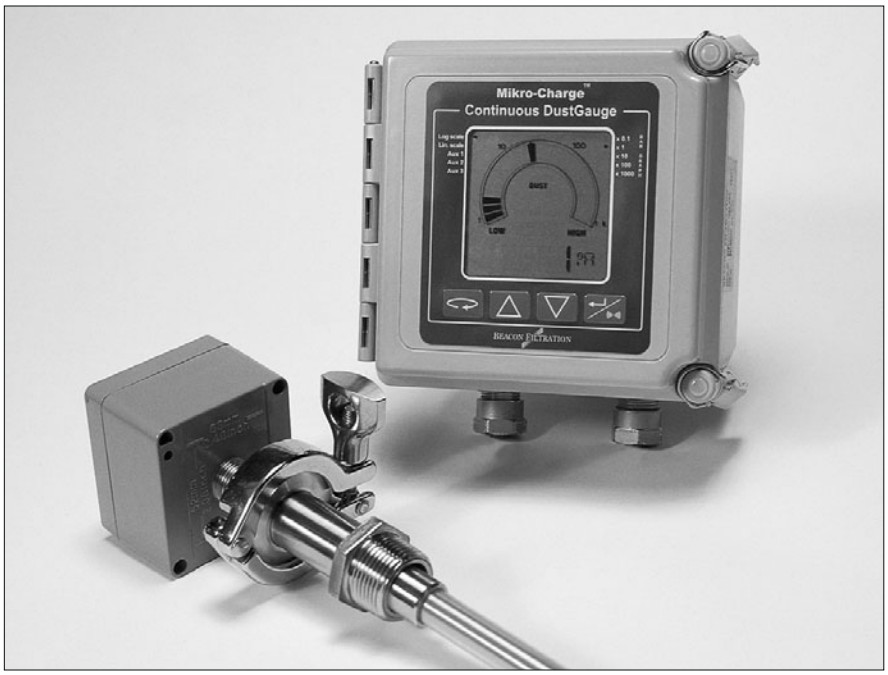
The Mikro-Charge has proven itself in dust control and powder processing applications around the world. Its sensing technology is superior to opacity and triboelectric designs. In addition, simple operation, durable construction, and responsive technical support further set it apart.

Features

- Standard 4-20 mA output
- Includes function for pre-visible alarming

Data collected with the Mikro-Charge permits dust and pollution control personnel to:

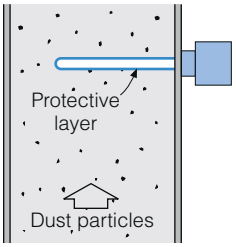
- Generate reports to comply with US-EPA regulations for CAM, MACT, Title V, and PM 2.5.
- Utilize the collected data in a simple absolute output or correlate to mg/m^3 or gr/cf.



- Utilize PC software for:
  EPA reports and data
  Logging
  Remote monitoring and control
  Process flow analysis

Operating Principle

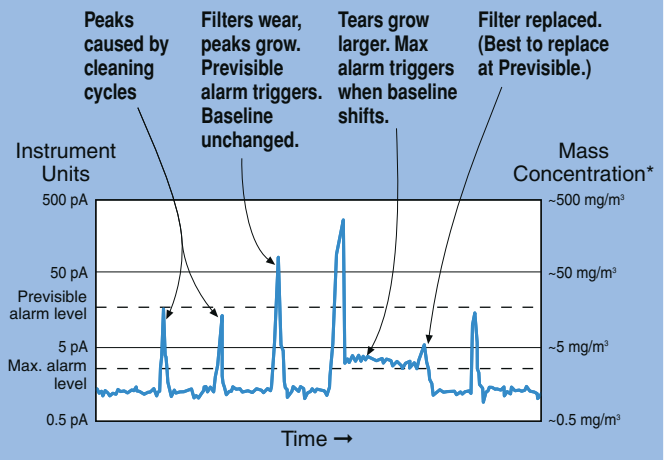
The Mikro-Charge Continuous DustGauge utilizes a combination of induction-sensing and protected-probe technologies. As dust particles flow near a probe placed downstream of the dust source, small signals are induced into the probe by particle electrons (charge). A digital signal processor converts the induced signal into an absolute output that correlates to actual mass concentration. The probe's protective layer, in combination with induction sensing, ensures reliable operation even with condensate or conductive dust on the probe.



Benefits

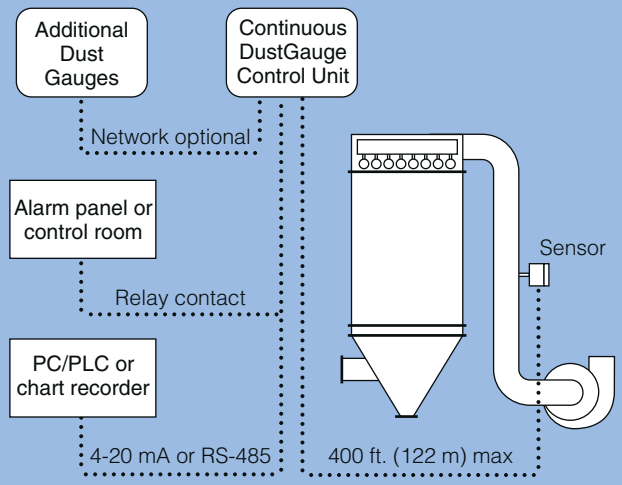
- Eliminates unplanned shutdowns and manual inspections.
- Protects downstream blowers, oxidizers, HEPAs, etc.
- Reliable in tough applications (dryers, smelters, carbon, etc.).
- Easy to use, informative and virtually maintenance-free.
- Prevents the escape of valuable powders to atmosphere.
- Meets EPA regulations for continuous particle monitoring and more stringent leak detection guidelines.
- Helps you keep a clean workplace and be a good neighbor.

Typical Recorded Output, Pulse-Jet Application



* Output in mg/m³ or gr/cf requires gravimetric test.

Example Pulse-Jet Installation



Continuous DustGauge Specifications

Control Unit

General	Conformal coated; temperature tested.
Display	Graphical LCD, 10 yr. backlighting opt.
Keypad	4 button membrane, lockable via secret code
Electronics accuracy	+/-1% of output range.
Calibration	Absolute, linear to mass.
Supply	115/230 VAC 50/60 Hz std. 24 VDC opt..
Consumption	10 watts max.
Temperature	-13 to 160°F (-25 to 70°C).
Relays	2 SPST, 5A at 240 VAC.
4-20mA	500 Ohms, non-isolated std. Isolated opt.
Serial I/O option	Modbus RS-485 network.
Enclosure	NEMA 4X aluminum std. NEMA 4/7/9 opt.
Beacon option	10 yr. LED, tower style, red.
Approvals	CE approved FM, CSA consult factory.

Sensor

General	Not affected by vibration, temperature or alignment.
Probe length	3", 5", 10" std. 15", 20", 30", 36", 48", 60+" opt.
Sensor cable	Coaxial; 400 ft. (122m) max.
Mount	½" NPT std. Quick Clamp opt.
Materials	304SS, polymer/conductive core
Enclosure	NEMA 4X aluminum std. NEMA 4/7/9 opt.
Max temperature	250°F (120°C) std. 450°F (232°C) opt.
Pressure	Full vacuum to 30 psig (12 bar) std. Higher pressures opt.

Operating and Application Ranges

5.0 pA unit	At least 5.0 to 5,000 mg/m³ (0.002 to 2.0 gr/cf)*; barely visible to visible, >5% opacity.
0.5 pA unit	At least 0.5 to 5,000 mg/m³, (0.0002 to 2.0 gr/cf)*; invisible to barely visible, <5% opacity.
0.1 pA unit	At least 0.1 to 5,000 mg/m³, (0.00001 to 2.0 gr/cf)*; well below visible, <1% opacity.
Fluid velocity	300 ft. (91m) per min & higher std. Lower velocities opt.
Particles	Any type >0.1 micron. For 1–10 micron, 0.5 pA unit recommended; for <1 micron, 0.1 pA unit.

* Approximate guide. For actual correlation to mass, a gravimetric test must be performed for each installation.

Specifications subject to change

MENARDI

A member of Beacon Industrial Group

United States
Menardi
One Maxwell Drive
Trenton, SC 29847
www.menardifilters.com
Tel: 800-321-3218
803-663-6551
Fax: 803-663-4029
info@menardifilters.com

United Kingdom
Menardi
Chadwick House
Birchwood Park
Warrington, Chesire WA3 6AE
England
Tel: +44-01925 849220
Fax: +44-01925 849221
menardi@uk.mikropul.com

France
Filter-Media
15 Quai Tilsitt
69002 Lyon
France
Tel: +33 472 56 9010
Fax: +33 478 37 6448
info@menardifilters.com

South American Representative
Seventy-A Consultoria S/C Ltda.
Rue Comendador Francisco Pettinati,
389-cj 04
São Paulo—SP Brazil
Tel: 55 11 3743 6228
Fax: 55 11 3742 5512
info@menardifilters.com

BIM602 12/01 5k