Static Monitor
Multi-point Fieldmeter and Alarm System

model **177A**



Features:

- **Intrinsically safe sensor operation (with optional barriers) in explosive atmospheres.**
- **4 channel Static Monitor detects static levels in as many as four locations up to 1000 feet away**
- **Accurate and drift-free measurement including ionized environments**
- **Provides analog outputs and control via RS232/485 and front panel**
- **Control and data acquisition, configuration via RS232/485 using MODBUS interface format**
- **Built in, fully configurable dual level alarms programmable via front panel, PC or PLC**
- **Cascade up to 32 units via RS485 providing 128 sensor locations**
- **Simple Windows® GUI interface for set up and control**
- **PLC compatible using MODBUS protocol**
- **Password Security**
- **"Fail safe" relay configuration**
- **"Bad Input" protection or console failure indication**
- **Founded on proven Monroe Electronics Non-Contact Electrostatic Fieldmeter technology**

The only full-time, plant-wide automatic defense against undetected static build-up

Monroe Static Monitor/Alarm System model 177A, an enhanced version of the 177, is the only intrinsically safe system that continuously monitors the critical points in your facility to detect and warn of electrostatic charge buildup before it becomes a problem.

In a typical scenario - as static levels in your application surpass a preset value, beyond which there may be a danger to personnel or possible disruption or destruction to the process or product, an initial warning is triggered and the process is allowed to continue. If the problem is rectified, the "warning" returns to a "normal" state. If the condition persists and the static level exceeds a second more crucial value, an alarm is activated terminating the process until corrective action is taken and the system is reset.

Accurate, versatile and dependable, unattended operation makes the 177A ideal for applications such as:

- **Converting, coating, and printing processes**
- **Dry particle transport systems**
- **"Static-free" environments**
- **Explosive atmospheres** - Safely monitors potentially hazardous sites to detect charge buildup. Model 1036 Sensors are **Factory Mutual Research** approved: Class I, Division 1, Groups C and D.

Simple to install and use

The 177A is as easy to install and use as it is effective. In a short time you can:

1. Mount sensors at all static-critical locations.
2. Mount the 177A console in your rack enclosure. (Monitoring more than four location requires additional consoles.)
3. Connect leads between sensors and console and RS485/232 and Alarm contact.
4. Install software and configure your system.
5. Turn console power on and zero each channel to be used.
6. Begin reliable, continuous, drift-free, multi-point static measurements.

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TREK Has Joined Advanced Energy

Static Monitor Multi-Point Fieldmeter and Alarm System model 177A

Specifications:

Monitor Console Temperature Range: +15° to +45° C

Analog Outputs (user selectable): ±10 V, 0 - 5V (2.5V, ±2.5V full scale); <10 Ω impedance; or simultaneous 4-20mA (optional)

RS232/485 Control: Channel status, channel disable / enable, group control

Accuracy: ±3% of full scale at analog outputs
±3% of full scale, ±2% counts
+0.3 counts/^{0}C at front panel meters

Displays: Four 3½-digit LED's, 0.6" (one per input channel)

Power Requirements: 90-260 VAC, 47-60 Hz; 13 Watts max.

4 - 20 mA Option Power Requirements: Internal power supply 11V min
External power supply 24 V max

Alarm Relays: Per channel fail safe, NC (Form B)
System O.K.
Channel O.K.
Warning
Alarm
Contact Ratings: DC: 1A, 30V
AC: 0.5A, 125V

Connector Styles: RS485 - DB9
Probe - DB9
Analog Out - BNC
Test Connector - Screw Terminals
4-20 mA option - Screw Terminals

Dimensions: 1¾ x 19 x 11 inches
(4.45x 48.26 x 27.9 cm)
Mounts in a standard 19" rack

Weight: approx. 9 lbs

Enclosure (optional)
Capacity: Two Monitor Consoles
Dimensions: 4.5 x 20 x 14 inches
(11.4 x 50.8 x 35.6 cm)

Accessories Included: Manual on CD, 110V Line Cord, 220V Line Cord, DB9 M/F Straight-Thru Cable, USB A-Male/B-Male Cable, Mounting Hardware. 2 - 2 Position & 4 - 6 Position plugs

1036 E(H) & F(H) Sensors*

Standard Range: ± 10kV/inch

Optional: ± 1kV/cm (100kV/m)
± 10kV/cm (1MV/m)
± 20kV/cm (2MV/m)
± 1kV/inch

Drift: 1% of full scale (typical), non-cumulative, long-term when purged according to manufacturer's instructions.

Noise: <0.05% of full scale, peak-to-peak

Speed of Response: 1 sec max, 10%-90% of full scale (typical)

Dimensions:
Model 1036E: 6.0 x 3.0 x 2.063 inches (15.24 x 7.62 x 5.24 cm)
Model 1036F: 1.75dia. x 1.22 inches (4.45 x 3.11 cm)

Maximum Cable Length: 1000 ft. (305 m)

Temperature Range: -30° C to +80° C Model 1036E & F
-30^0 C to +100^{0}C Models 1036 EH & FH

***Sensors Sold separately**

Calibration:

Monroe Electronics instruments are factory-calibrated prior to shipment. Recalibration should be performed annually, or more frequently if specified by contract or company policy. Your instrument should also be recalibrated any time it has been repaired or tampered with. We are happy to recalibrate your instrument for you at a reasonable cost, or provide information and procedures on calibration upon request.

Warranty:

Monroe Electronics, Inc., warrants that each instrument and sub-assembly manufactured by them shall be free from defects in material and workmanship for a period of one year after shipment from the factory. This warranty is applicable to the original purchaser only.

The Monroe Electrostatic & ESD product line is now owned by Advanced Energy and managed by TREK in Lockport, NY.

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