



Short Range Systems

EFM-100 Electric Field Mill



Standard Pole Mount installation

Shown with optional 3 Foot Tripod

- ✓ Field proven with systems installed for over 10 years
- ✓ High Accuracy 24 miles / 38 km range for local activity
- ✓ 2 High Field alarm levels (Red and Yellow)
- ✓ All Clear display (Green)
- ✓ Fully configurable Alarm distances, durations and High Electric field levels
- ✓ Display up to four electric field mills simultaneously
- ✓ Text messaging and email alert notification capability
- ✓ Network data sharing for remote viewing
- ✓ EFM-100 Monitor software shows current alarm state and electrical field level in real time
- ✓ USB or RS232 adapter for optically isolated data output
- ✓ Optional RS-485 output for transmitting status messages to other equipment and/or to a distant Status Monitor computer
- ✓ Daily data and log files for historical viewing
- ✓ Optional Relay Output Module for activating external equipment

Operation

The EFM-100 Electric Field Mill short-range sensor (<20 miles/32 km) constantly monitors for lightning and activates graphical display alerts on a computer or laptop when lightning is detected. There are two high electric field alarms, and lightning distance ranges that are completely customizable to alert you when there is nearby lightning. The software will also reset back to a green All Clear state when no lightning has been detected within the configured time period and when the electric field levels fall below their set levels.

Electric Field Monitor Software

The EFM-100 Electric Field Monitor software (included) displays a real time graph of electrical field in the atmosphere, as well as the lightning strike distances up to 24 miles/38km away. Distance ranges are completely customizable as well as the high field alarm ranges to allow for a wide variety of setups and operating procedures. Data sharing option in the software allows remote access to data either through the internet or a local network.

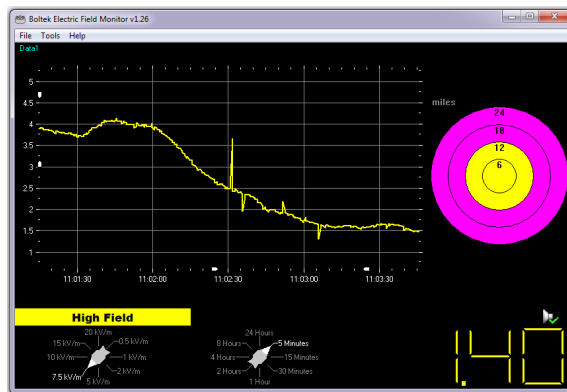
Setup

The EFM-100 is best suited for installations when it is placed away from high foot traffic areas, and placed 2 to 3 feet above the ground or a roof. With the inverted kit, it comes with either a pole mount option or a tripod for quick and easy setup as well as an inverted mounting kit to greatly reduce the number of false strikes during precipitation.

EFM-100 Electric Field Monitor Software (included)



All Clear status



Lightning and high field alarm active

SPECIFICATIONS

Alerts

High field alerts	2 configurable levels (Red, Yellow)
Strike distance:	0 - 24 miles / 0 - 38 km
Electric field range:	-20 kV/m to +20 kV/m
Typical range of interest	-5 kV/m to +5 kV/m
Accuracy	5% +/- 0.05 kV/m
Response time	0.1 seconds

Software Display Indicators

All Clear (green)	Green display when no lightning is detected and electric field levels are below set alarm levels
High Field Alert (yellow)	On when electric field level goes above configured high field level and below configured very high field level
Very High Field Alert (red)	On when electric field level goes above configured very high field level
Lightning (purple)	On when lightning is detected

Software Specifications

Operating System:	Microsoft Windows 8, 7, Vista, XP, 2000, NT
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Communications

Data Port	RS-232 (RS-485 option available)
RS-232 Format	Delimited ASCII Sentences 9600 baud, 8N1
Resolution	Digital output 0.01 kV/m Analog output infinite
Analog Data	Differential 1V per kV/m
EFM Data Connection	62.5/125 Multimode ST fiber optic

Power

Connector	2.1mm/5.5mm coaxial, screw terminals
DC Power Supply	11.5VDC - 14VDC, 0.5A
AC Power Supply	120VAC US plug or 120-240VAC international multi-plug wall adapter
Power Consumption	4 W

Enclosure

Material	Aluminum
IP Rating	20
Dimensions	6.7" dia x 5" (17cm dia x 13cm)
Weight	2.2 lbs (1kg)
Shipping Weight	13 lbs (5.75kg)
Shipping Dimensions	26"x10"x11" (66cm x 25.4cm x 28cm)

Environmental

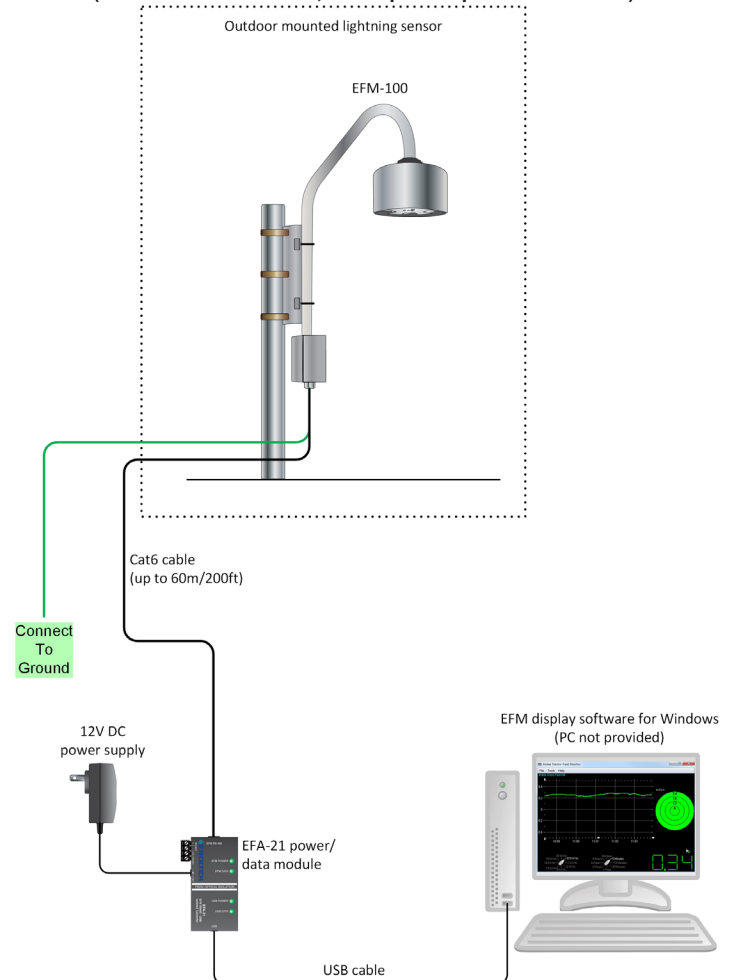
Operating Temperature	-40 to 60 C / -40 to 140 F
Operating Humidity	0 to 99% non-condensing
Agency Approvals	CE, FCC, cULus, C-tick
Warranty	1 Year

Ordering Information

EFM100-120V-100FT Kit	EFM-100 Electric Field Mill 120VAC 60Hz Power Supply 100 Feet (30m) Cable* Pole mount inverting kit*
EFM100-220V-100FT Kit	EFM-100 Electric Field Mill 220VAC 50-60Hz Power Supply 100 Feet (30m) Cable* Pole mount inverting kit*

*Additional mounting options and cable lengths available on request.

CONNECTION DIAGRAM (RS485 EFM-100 shown, fiber optic output also available)



ADVISORY USE ONLY

This equipment does not include self-test circuitry to warn of loss of functionality. Additional measures should be in place to safeguard personnel or equipment.

