# **F SERIES**

# **Single Phase Digital Switchboard Monitor**

High-Quality, Easy-to-Read Monitor with Universal Applications

# **Choice of Measurements**

- AC Voltage
- AC Amperage
- AC Frequency
- DC Voltage
- DC Amperage
- Transducer Inputs (Wattage, VARs, etc.)
- Process Signals (Pressure, Temperature, etc.)

# **Features**

- Highly Accurate 12-Bit Resolution
- 4-Digit Readout
- Any Scaling
- .8" Super-Large, High-Output LEDs
- Universal Power Supply
- Directly Replaces ANSI C39.1 Analog Meters

### Description

The F Series digital switchboard monitor is a bright, easy-to-read device that's perfect for utility, industrial and power-generation applications. It can display any AC or DC value, and has a 0-1 or 4-20mA input for process and transducer signals.

### **Superior Accuracy**

The unit's 12-bit analog-to-digital converter provides superb accuracy throughout the scale. This eliminates the chronic problem analog meters have at the low end.

Resolution is often critical with a lightly loaded panel; this full 4-digit monitor has a resolution to 9999 counts.

# Super-Large LED Display

The super-large, bright LED display can be read up to 300 feet away. This reduces user error and eliminates eyestrain.



## **Directly Replaces Analog Meters**

Because the monitor fits a standard ANSI panel cutout, it's a quick and easy upgrade for your analog switchboard meters.

### Rugged, Industrial Design

The top-quality LED Display, heavy-duty metal enclosure and electrically protected power supply make this a device that will operate reliably for many years.

# Highly Accurate Frequency Measurement

The FF60-1000 models accurately measure frequency using a crystal oscillator and a unique phase lock loop scheme. This technique allows the unit to be calibration free. It also allows the monitor to reject noise on the incoming signal.





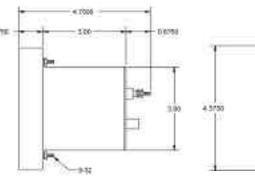


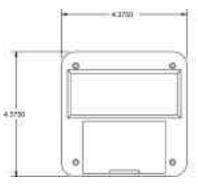


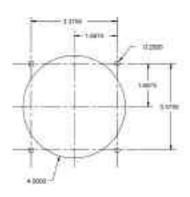




# **Dimensions**







# **Specifications**

#### **ACCURACY**

DC Volts and Amps: 0.05% of full scale, + 1 digit

AC Volts and Amps: 0.2% of full scale, +1 digit

Resolution: 4 digits to 9999 counts

# **CONTROL POWER REQUIREMENTS**

115V AC, +20%; 6VA, 47-440Hz (Suffix 115A)

230V AC, +20%; 6VA, 47-440Hz (Suffix 230A)

24-48V DC, +20%; 6VA (Suffix D)

125V AC/DC, +20%; 6VA (Suffix D2)

#### **OPERATING TEMPERATURE**

-20 to +70°C

#### **BURDEN**

Voltage: 0.1VA maximum Current: 0.1VA maximum

#### **UPDATE**

600ms

# CONSTRUCTION

Rugged metal casing with standard ANSI 39.1 cutout

#### **SURGE WITHSTANDING**

Continuous 200% of maximum rated value, per IEEE C37.90.1 and ANSI C62.41

#### **FREQUENCY RANGE**

45-1000Hz

# **Models**

VOLTS				
	AC Model	DC Model	Full-Scale range	
	FVA10	FVD10	9.999V	
	FVA100	FVD100	99.99V	
	FVA600	FVD600	600.0V	

AMPS		
AC Model	DC Model	Full-Scale range
E4440	EAD40	0.0004
FAA10 FAA20	FAD10 FAD20	9.999A 25.00A

### POTENTIAL TRANSFORMER MONITOR Maximum Input Full-Scale range

300 V FVA120 (Use with 120V PTs. Specify Scaling)

Specify Scaling

DC SHUNT READOUT			
Model	Maximum Input	Full-Scale range	

Specify Scaling 100MV FAD50 FAD100 200mV Specify Scaling (Use with 50 and

100mV shunts)

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CURF	RENT TRANSFO	ORMER MONIT	OF

Maximum Input Full-Scale range FAA5 10A Specify Scaling

(Use with 5A CTs. Specify Scaling)

\*FF10000

RANSDUCER READOUT				
	Model	Maximum Input	Full-Scale range	
	FT1 FT20 (Use with 0- and 4-20mA transducers)	1	Specify Scaling Specify Scaling	

# **Ordering Info**

#### **OPTIONS**

- True RMS Readings (for AC models): Suffix –RMS.
- Extended input voltage to 600 Volts (for FF Models): Suffix -G

#### FREQUENCY MONITOR Model Frequency Range **Frequency Resolution** \*FF60 5.0 - 99.99 Hz 00 01 Hz 50.0 – 999.9 Hz 000.1 Hz \*FF400 $5-9999\; \text{Hz}$

#### ORDERING EXAMPLE

To place an order, please specify meter type (e.g., FVA120), control power and options (e.g., D-RMS), and scaling (e.g., 2400V AC). (Using the examples, your order would be: FVA120-D-RMS-2400 AC Volts.) Please consult Electro Industries/GaugeTech for custom inputs and special configurations.

\*D, D1, D2 power supply no longer supported for FF60, FF400 and FF1000.



Electro Industries/GaugeTech

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