

DMVA100 DMVA100

3 Phase Digital Switchboard Monitors

DMVA100 Volts-Amps Monitor

DMVA100F Volts-Amps-Frequency Monitor

DM
SERIES

Replace Multiple Analog Meters & Selectors with One Digital Monitor

Superior Replacement to Analog

- Volt Meters
- Ammeters
- Frequency Switches
- Selector Switches

More Features

- Max/Min Demand
- High/Low Limits
- Tripping Relays
- Digital Communications
- Programmable CT & PT Ranges

Less Cost

- Lower Price than Analog Meters & Switches
- Less Wiring
- Less Panel Space

Description

The DMVA is a cost effective monitor designed to replace analog meters and switches. It monitors and displays Voltage (phase to neutral and phase to phase) and Current (phase A, B, C and N). The DMVA's microprocessor technology offers many features that are unattainable with traditional analog metering. The unit mounts into a standard ANSI cutout for ease of installation. It dramatically reduces installation costs

and provides superior performance. The DMVA is perfect for many applications such as Load Centers, Generator Panels, Utility Substations, as well as Industrial and Commercial environments. It is a sturdy and durable monitor and will provide years of reliable operation.



DMVA100



DMVA100F



Superior Capabilities

- No Need to Stock Meters with Different CT & PTRatios

Programmable CT and PT ratios are accessible through the faceplate and do not require recalibration. Password protection ensures that there will not be any tampering with the programming feature.

Max/Min Demand

The meters record maximum and minimum voltage calculations for every phase-to-neutral and phase-to-phase reading. The unit also calculates maximum and minimum thermal demand for

phase of current including the neutral. The demand period is programmable. The default period is 15 minutes. Average demand is calculated using a sliding window technique.

Alarm Level/Relay Outputs

The DMVA100 offers set points and 2 Form C dry contact relay outputs for:

- Over/Under Voltage for EachPhase
- Over/Under Current
- Over/Under Frequency

Digital Communication

RS232 or RS485 digital communications are offered at a maximum baud of 4800.

Frequency Monitoring

The DMVA100F allows frequency monitoring between 45-75 Hz range, with resolution and accuracy to 0.1Hz.

Analog



Digital



Superior Product

The DMVA 100 Replaces Multiple Analog Volt Meters, Ammeters, & Selector Switches with One Digital Monitor

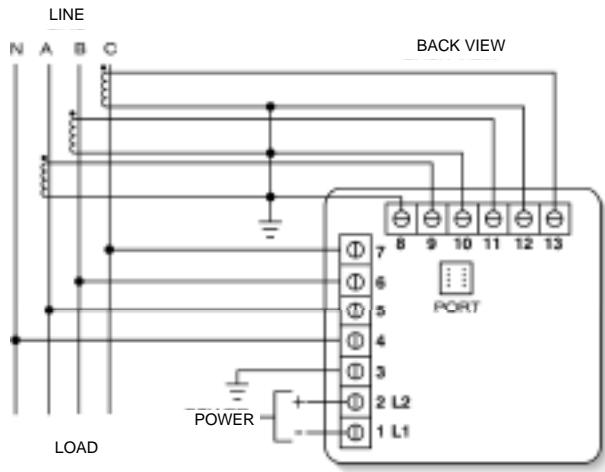
Easier Installation Less Panel Space

Less Wiring than Analog Meters & Switches

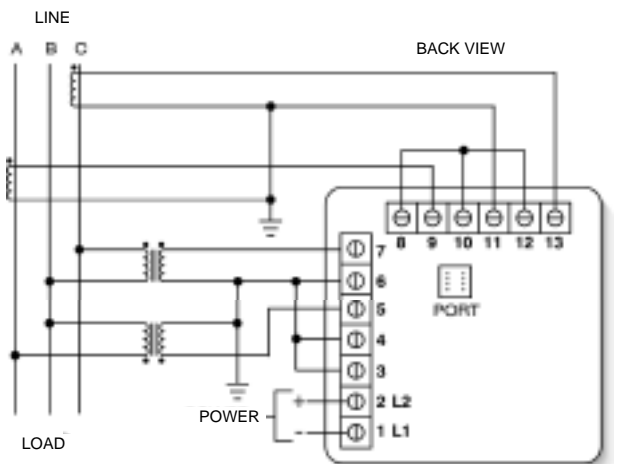
Analog Meters & Switches

DMVA Digital Meters

1%	← Accuracy →	0.20%
Poor	← Resolution →	0.1 Volts 0.1 Amps
Routinely Required	← Calibration →	Not Required
Extensive	← Wiring →	Simple
Extensive	← Panel Space →	Minimal
None	← Max/Min Demand →	Standard
None	← Hi/Low Limits →	Standard
None	← Tripping Relays →	Optional
None	← Programmability →	Any Range Standard



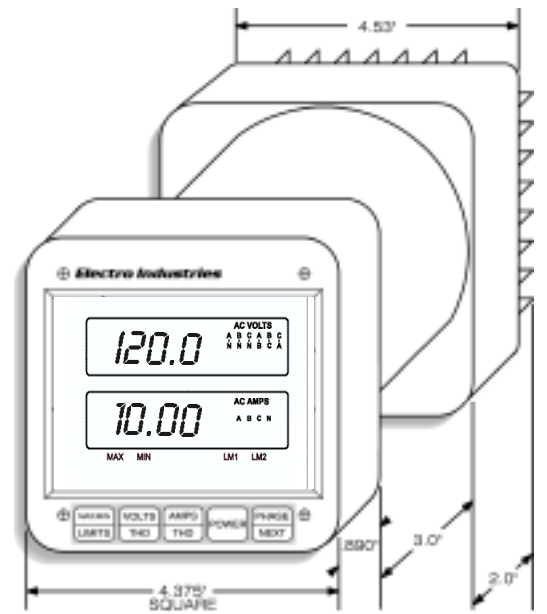
3-PHASE WYE with CTs



3-PHASE OPENDelta

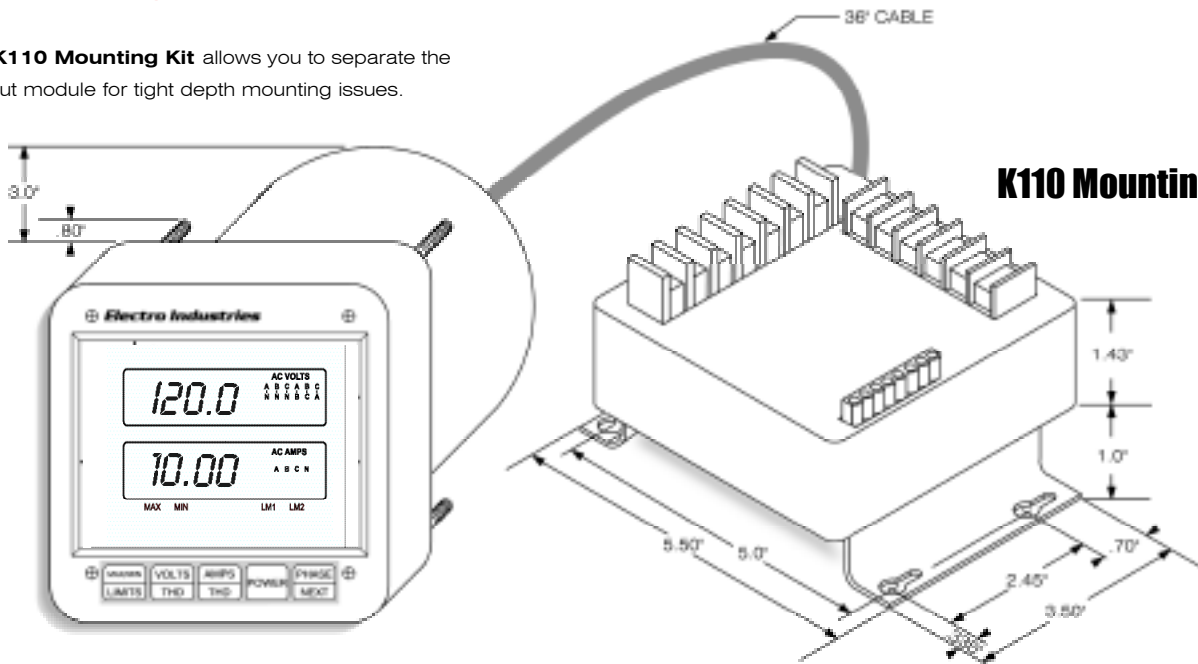
Dimensions

Recommended for installation where depth behind the panel is 5.5 inches or deeper.



Remote Terminal Block Wiring

A **K110 Mounting Kit** allows you to separate the input module for tight depth mounting issues.



Specifications

INPUT VOLTAGE

- 150V volts phase to neutral (also used with PT's for extended input voltage)
- 300 volts phase to neutral **(OPTION G)**

INPUT CURRENT RANGE

- 10A Max (programmable to any CT)

BURDEN

- Voltage 0.1VA Max
- Current 0.1VA Max

COMMUNICATION FORMAT

- 1 Start Bit, 8 Data Bits, 1 Stop Bit
- Programmable from 4800 Baud

INPUT WITHSTANDING

- Voltage & Current
- Continuous 200% Rated
- Surge: 10x Rated per 3 Seconds
- Surge Withstanding: per IEEE C37.90.1

SENSING METHOD

- True RMS

FREQUENCY RANGE

- Fundamental 45-75 Hz

UPDATE TIME

- 1 second

ENVIRONMENTAL

- Operating Temperature: -20°C to +70°C

I/O ISOLATION

- 2500V AC isolation between any input to communication output or relay

CONTROL POWER REQUIREMENTS

- 115V AC $\pm 20\%$, 6VA 47-400 Hz **(OPTION 115A)**
- 230V AC $\pm 20\%$, 6VA 47-400 Hz **(OPTION 230A)**
- 24-48V DC $\pm 20\%$, 6VA **(OPTION D)**
- 125V AC or DC $\pm 20\%$, 6VA **(OPTION D2)** universal
- 12V DC $\pm 20\%$, 6VA **(OPTION D4)**

CONSTRUCTION

- Metal Housing
- Standard Switchboard Dimensions & Cutout per ANSI 39.1

PARAMETERS	ACCURACY*	RESOLUTION	RANGE
Volts AN, BN, CN, AB, BC, CA	0.20%	0.1V or A	0-2,000
Amps A-B-C-N	0.20%	0.2%	0-2,000
Max/Min Demand	0.20%	0.1%	0-100%
Frequency	.20Hz	0.1%	45.0-75.0Hz

* % of Full Scale

Ordering Information

Model	Frequency Measurement	Volts Labeling	Amps Labeling	Connection	Operating Voltage	Control Power	Relay Option							
Example: DMVA 100	Specify a unit by writing its option numbers below. Specify your CT and PT ratio, Delta or Wye System. If a specification is given, it will be preprogrammed in the factory. List each desired accessory for every meter ordered.													
	-	-	-	-	-	-	-							
Option Numbers:	-	F	-	V	-	A	-	3E	-	120	-	115A	-	NL
DMVA 100	F Frequency Measurement	V Volts Label	A Amps	3E 3 Element Wye System	120 120/208V Wye or Delta	115A 115V AC $\pm 20\%$ 6VA	NL Two Control Relays							
		KV Kilovolts Label	KA Kiloamps	2.5E 2.5 Element Wye System	G 277/480V Wye or Delta	230A 230V AC $\pm 20\%$ 6VA								
				2E 2 Element Delta System		D 24-48V DC $\pm 20\%$ 6VA								
						D2 125V AC or DC $\pm 20\%$ 6VA universal								
						D4 12VDC $\pm 20\%$ 6VA								

Accessories

K110

Mounting Kit

Remote terminal block mounting kit with 36" cable and mounting bracket.

SF232DB

RS232 Communication Adapter

Limited to a distance of 50 feet between the central computer and the DMVA 300.

SF485DB

RS485 Multi-Drop, Daisy Chain Communication Adapter

The maximum distance is 4000 feet between the computer and DMVA 300.



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