

DWVA300/DWVV300

Monitor Distribution Feeder Loads

Simultaneously Measure Watts, VARs & Amps & Volts

DM
SERIES

- Standard ANSI Footprint
— A Perfect Retrofit
- Harmonic Distortion Analysis
- Max Demand
- Multiple Analog Outputs
(0-1mA or 4-20mA)
- Modbus & DNP 3.0
Protocols
- Heavy-Duty Construction
- Direct Replacement for
Traditional Utility Feeder
Monitoring
- Superbright LED Option for
Direct Sunlight Applications



DWVA 300
(Watts/VARs/Amps)



DWVV 300
(Watts/VARs/Volts)

Description

The DWVA 300 series meters supplant traditional utility distribution-feeder meters. There's no need to push buttons. With a rugged utility-grade design, the monitor is built to run flawlessly for years. The DWVA's easy-to-read display shows precise values for Watts, VARs and Amps simultaneously. The DMVV300 meter displays Watts, VARs and Volts readings.

Max/Min Demand

The DWVA 300 measures the maximum and minimum demand for each parameter. A rolling window averaging technique is used to calculate the demand over a user-defined period of time, ranging from 2 seconds to 2 1/2 hours.

Superbright Display
for Direct Sunlight
Applications



Designed and
Manufactured



Electro Industries/GaugeTech
The Leader in Web Accessed Power Monitoring



Analog Outputs

The DWVA 300 has 10 analog transducer output channels. A parameter and scale can be selected for each channel. Both 0-1mA and 4-20mA outputs are available.

Digital Communication

Modbus RTU/ASCII and DNP 3.0 are available as standard protocols for RS232 or RS485 communication. A Unicorn 2500 with the F option can be used to convert communication to a fiber optic link.

Harmonic Measurement

The DWVA 300 calculates harmonics to the 31st order for current and voltage channels. Both %THD and K-Factor are displayed.

Utility-Grade Construction

The standard ANSI footprint of the DWVA 300's sturdy metal housing allows it to directly replace existing meters. Panel alteration is not necessary.

Exceptional Surge Withstand

The unit exceeds all IEEE C37.90.1 surge-withstand requirements. It is designed specifically for utility, industrial and power applications. It can be used safely with relaying current transformers.

Superbright Display

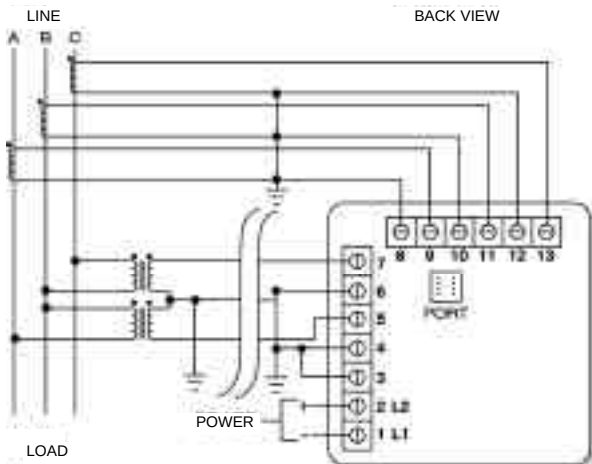
This unit is available in standard brightness for indoor applications or superbright for viewing in direct sunlight. The superbright display option offers a polarized, sun-reflecting lens and LEDs which are 25 times brighter than standard high efficiency LEDs. This feature makes this meter ideal for outdoor breaker panels and hard to read applications.

PARAMETERS	ACCURACY *	RESOLUTION	RANGE
Watts	0.25%	0.1%	0-2,000
VARs	0.25%	0.1%	0-2,000
Amps	0.20%	0.1%	0-2,000
Volts	0.20%	0.1%	0-2,000
Harmonic Calculations	1.00%	0.1%	0-100%

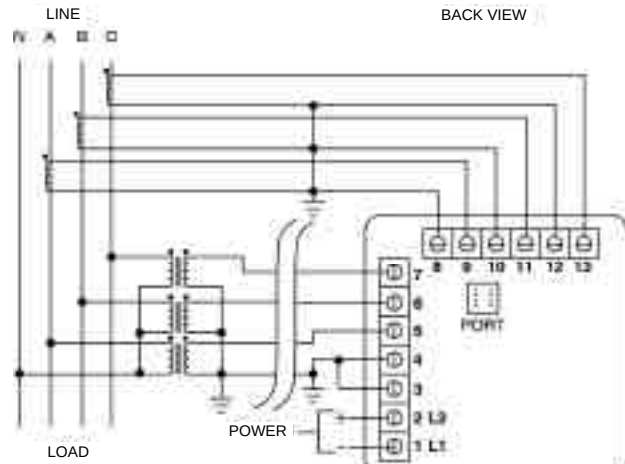
* % of Range

Typical Wiring Information

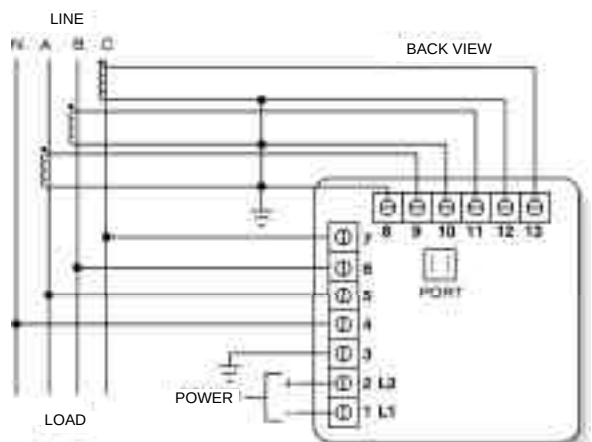
Note: Download manual from www.electroind.com to get additional wiring configurations.



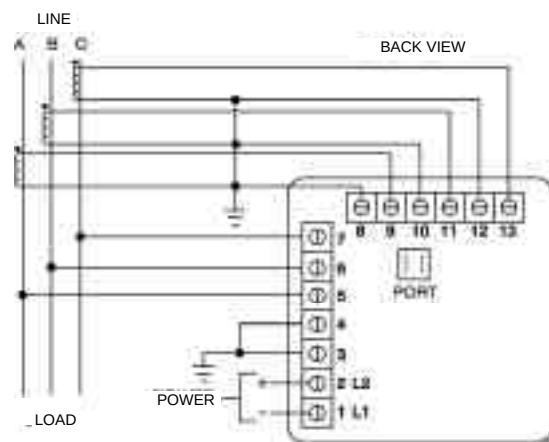
3-PHASE, 3-WIRE OPENDelta with 3 CTs and 2 PTs



3-PHASE, 4-WIRE WYE with CTs and PTs



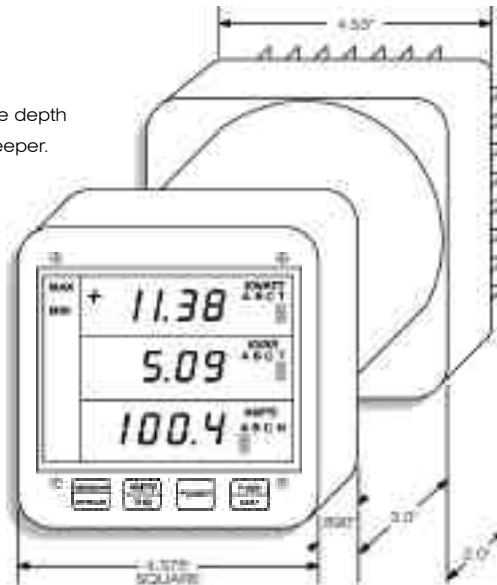
3-PHASE, 4-WIRE WYE with DIRECTVOLTAGE and CTs



3-PHASE, 3-WIRE DELTA with DIRECTVOLTAGE and CTs

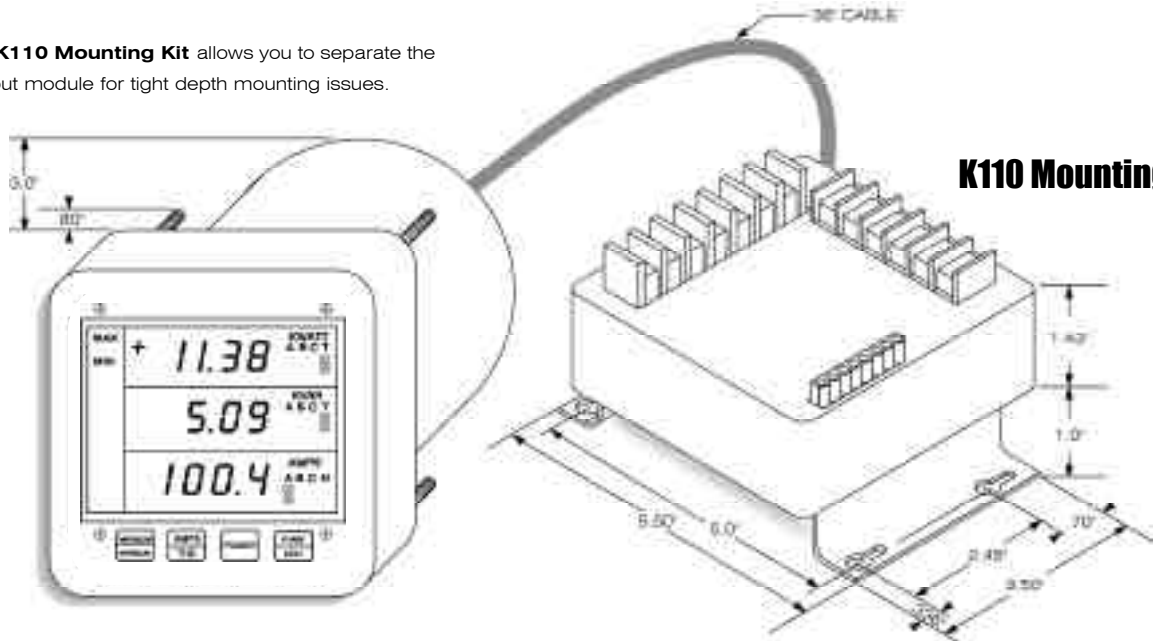
Dimensions

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.



K110 Mounting Kit

Specifications

INPUT VOLTAGE

- 150V volts phase to neutral (also used with PT's for extended input range)
- 300 volts phase to neutral, up to 600V phase to phase . (OPTION G)
- 69V phase to neutral, up to 120V phase to phase (OPTION 75)

INPUT CURRENT RANGE

- 10A Maximum

BURDEN

- Voltage 0.1VA Max
- Current 0.1VA Max

COMMUNICATION FORMAT

- 1 Start Bit, 8 Data Bits, 1 Stop Bit
- Programmable from 1200 to 9600 Baud
- Protocols: Modbus RTU/ASCII, DNP 3.0 & IEC 60870-4

ACCURACY

- 0.25%, ± 1 -Digit Resolution
- Instantaneous: 4 Digits

INPUT WITHSTANDING

- Voltage & Current: Continuous 200% Rated
- Surge: 10x Rated per 3 Seconds
- Surge Withstand: per IEEE C37.90.1
- Meets ANSI C62.41

SENSING METHOD

- True RMS

FREQUENCY RANGE

- Fundamental 45-75 Hz
- Measures up to the 31st Harmonic

UPDATE TIME

- 1 second

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)

ENVIRONMENTAL

- Operating Temperature: -20°C to $+70^{\circ}\text{C}$

I/O ISOLATION

- 2500V AC, 60 Hz (minimum isolation between any input and output)

CONSTRUCTION

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

COMPLIANCE

- IEEE C37.90.1 (Surge Withstand)
- IEEE C62.41 (Surge)
- ANSI C39.1 (Form)

Ordering Information

Model	Harmonic Capability		Labeling		Voltage		Connection		Operating Voltage		Control Power		Display Brightness	
Option Numbers:	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.													
	-		-		-		-		-		-		-	
Example: DWVA 300	-	H	-	KW	-	A	-	3E	-	120	-	115A	-	BRT
DWVA 300 (Watts/VARs/Amps)	H Harmonics to the 31 st Order		KW Kilowatts		A Amps		3E 3 Element Wye System		120 120/208V Wye or Delta		115A 115V AC ±20% 6VA		BRT Superbright for Direct Sunlight	
	X No Harmonics		MW Megawatts		KA Kiloamps		2.5E 2.5 Element Wye System		G 277/480V Wye or Delta		230A 230V AC ±20% 6VA		X Normal Bright	
DWVV 300 (Watts/VARs/Volts)					V Volts		2E 2 Element Delta System		75 69/120V		D 24-48V DC ±20% 6VA			
					KV Kilovolts						D2 125V AC or DC ±20% 6VA universal			

Accessories

K110	SF232DB	SF485DB	SDFI-1 or SDFI-20
Mounting Kit Remote terminal block mounting kit with 36" cable and mounting bracket.	RS232 Communication Adapter Limited to a distance of 50 feet between the central computer and the DWVA 300.	RS485 Multi-Drop, Daisy Chain Communication Adapter The maximum distance is 4000 feet between the computer and DWVA 300.	2 Channel Analog Outputs SDFI-1 provides 0-1mA output. SDFI-20 provides 4-20mA output. Outputs can can be mapped to any reading. Both channels are bidirectional.
SNFI-1 or SNFI-20	SEFI-1 or SEFI-20	SHNI-1 or SHNI-20	Unicom 2500-F
4 Channel Analog Outputs SNFI-1 Provides a 4 channel 0-1mA output unidirectional. SNFI-20 Provides a 4 channel 4-20 mA output unidirectional.	6 Channel Analog Outputs SEFI-1 Provides a 6 channel 0-1mA output. 2 channels are bidirectional. SEFI-20 Provides a 6 channel 4-20mA output. All are bidirectional.	10 Channel Analog Outputs SHNI-1 Provides a 10 channel 0-1mA output. 3 channels are bi-directional. SHNI-20 Provides a 10 channel mA output. All channels are bidirectional.	Interface Converter RS485 to RS232 to fiber Converter.



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