



Watt/VAR Meter
Models:
QSWIE1, 1-Element
QTWIE1, 3-Element
QTWIE2, 2-Element
QTWIE3, 2½-Element



Wattmeter
Models:
WSWIE1, 1-Element
WTWIE1, 3-Element
WTWIE2, 2-Element
WTWIE3, 2½-Element



VAR Meter
Models:
RSWIE1, 1-Element
RTWIE1, 3-Element
RTWIE2, 2-Element
RTWIE3, 2½-Element

Functional Description

The Watt/VAR instrument family consists of digital wattmeters, VAR meters and power factor meters with optional transducer outputs to feed to SCADA/EMS systems.

There are models for single phase and three phase systems either 3-Wire or 4-Wire. Different models are selected for 1-Element, 2-Element, 2½-Element, and 3-Element connection.

Different combinations of displayed values are available, e.g. Watt/VAR Meter or Watt/Power Factor Meter.

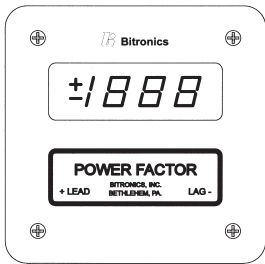
Very accurate and stable measurements are accomplished by using a microprocessor to calculate by sampling and digitizing the voltage and current on each phase many times a second. This method is independent of phase rotation and phase shifting methods are not required.

The meters provide high accuracy, easily read LED displays, standard mount in 4-inch round cutout; modular construction allows for electronics module to be removed from the front without special tools and without interrupting CT circuits.

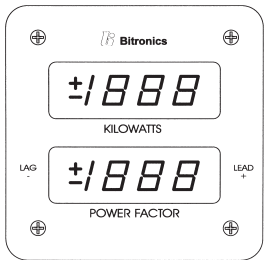
The Watt/VAR family is built with the same concern for harsh electrical conditions common in AC switchboard environments as other Bitronics meters.

Features

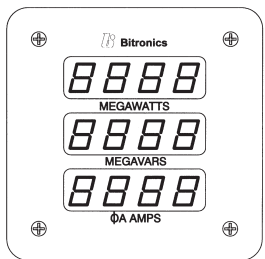
- Simultaneous display of total Watts and VARs or other combinations
- Optional one, two or three-channel transducer outputs built-in
- Built-in secondary transformers provide superior isolation of all inputs and low burden
- Push-button, in-the-field scaling from library of ANSI CT and PT ratios
- Does not require periodic maintenance
- Built-in self diagnostics and modular construction simplifies maintenance
- Nonvolatile memory backup of settings requires no batteries
- Rugged aluminum housing fits 4-inch diameter panel cutout



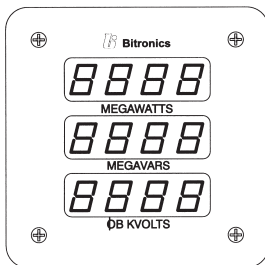
Power Factor Meter
Models:
PSWIE1, 1-Element
PTWIE1, 3-Element
PTWIE2, 2-Element
PTWIE3, 2½-Element



Watt/Power Factor Meter
HSWIE1, 1-Element



Watt/VAR/Amp Meter
XTWIE1, 3-Element,
with Phase A Amps



Watt/VAR/Volt Meter
XTWIE2, 2-Element
with Phase B Volts

Specifications

- **Current Input Signal:**
0 to 5A ac nominal per phase, range 0 to 10A ac with burden of 4 mV at 5A ac. (0.02 VA)
- **Voltage Input Signal:**
0 to 120V ac nominal per phase, range 0 to 150V ac with burden of < 1 mA at 120V ac. (< 0.120VA)
- **Isolation:**
1500V ac minimum
- **Scaling:**
Field selectable from a table of CT and PT ratios
- **Accuracy:**
±0.25% of full scale
- **Surge Withstand:**
Meets ANSI/IEEE std. C37.90.1, Oscillary
- **Transducer Output Options:**
0 to ±1 mA dc into loads up to 10 KΩ, overload through 2 mA dc into loads up to 5 KΩ
or
4-12-20 mA dc, loop powered
- **Auxiliary Power Supply:**
115V ac ± 20V, 6 VA
230V ac ± 20V
or
Universal AC/DC supply with operating range of 55 to 200V ac or 20 to 280V dc
- **Mechanical :**
Four inch round metal case with 4.5" square faceplate
- **Operating Temperature:**
-30C to 70C
- **UL Certification:**
Meets IEC Standard 1010 and is certified by Underwriters Laboratory to meet 3111-1 UL CAN/CSA C22.2NO 1010.1-02 standards. UL File #E164178. This certification requires either of the two ac-only power supply options.

Contact:

NovaTech, LLC
Bitronics Measurement and Recording
261 Brodhead Road
Bethlehem, PA 18017

T: 610.997.5100
F: 610.997.5450
E: bitronics@novatechweb.com
www.novatechweb.com