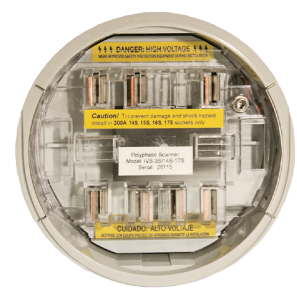




## GUARDIAN



## iVS-2SX+

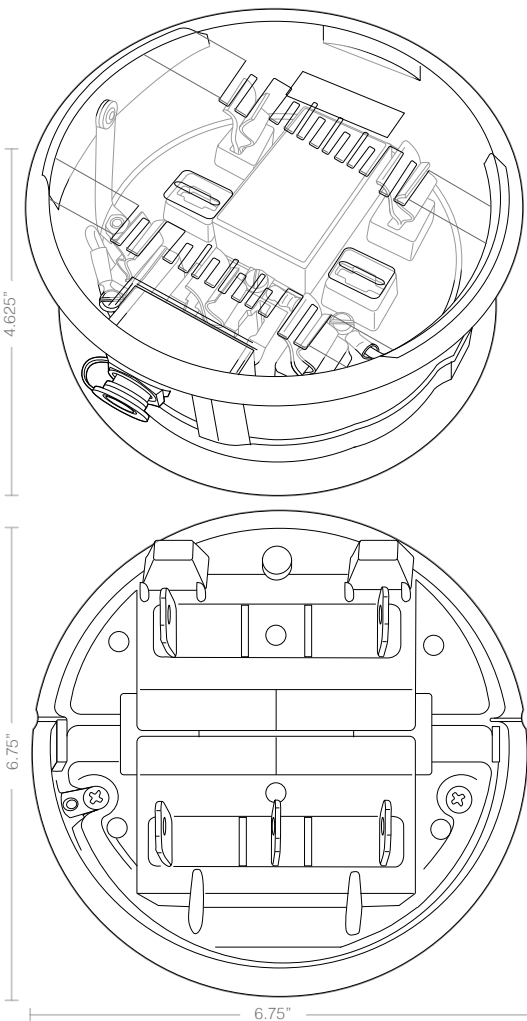


## iVS-3S

|                                      |                    |                                       |                              |   |
|--------------------------------------|--------------------|---------------------------------------|------------------------------|---|
| <b>INPUTS</b>                        | AC Voltage         | 0 to 150 volts continuous per channel | 0 to 140 VAC RMS continuous  | 0 to 600 VAC continuous   |
|                                      | AC Current         | 200 amps RMS                          | 200 amps RMS                 | 200 amps RMS (Forms 12S, 14S, 15S, 16S, 17S) 25 amps (Forms 6S, 8S, 9S) |
|                                      | Sample Rate        | 256 samples/cycle/channel             | 128 samples/cycle/channel    | 128 samples/cycle/channel   |
| <b>CHANNELS</b>                      | Voltage            | 2 channels                            | 2 channels                   | 2 or 3 channels, depending on form                                      |
|                                      | Current            | 2 channels                            | 2 channels                   | 2 or 3 channels, depending on form                                      |
| <b>MEASURED QUANTITIES PER CYCLE</b> | RMS Voltage        | Volts                                 | Volts                        | Volts   |
|                                      | RMS Current        | Amps                                  | Amps                         | Amps  |
|                                      | Real Power         | Watts                                 | Watts (Optional)             | Watts   |
|                                      | Apparent Power     | VAs                                   | VAs                          | VAs   |
|                                      | Reactive Power     | VARs                                  | VARs (Optional)              | VARs  |
|                                      | Phase Angle        | Degrees                               | Degrees (Optional)           | Degrees   |
|                                      | Power Factor       | Watts/VA                              | Watts/VA (Optional)          | Watts/VA  |
|                                      | Displacement PF    | cos (phase angle)                     | cos (phase angle) (Optional) | cos (phase angle)   |
|                                      | Power Usage        | kWh, kVARh, kVAh                      | kWh, kVARh, kVAh (Optional)  | kWh, kVARh, kVAh  |
| <b>ACCURACY</b>                      | Voltage            | 0.33% of full scale                   | 0.33% of full scale          | 0.33% of full scale   |
|                                      | Current            | 1.0% of full scale                    | 1.0% of full scale           | 1.0% of full scale  |
|                                      | Power              | 1.0% of full scale                    | 1.0% of full scale           | 1.0% of full scale  |
|                                      | Phase Angle        | 1.0°                                  | 1.0°                         | 1.0°  |
|                                      | Power Factor       | ±0.02                                 | ±0.02                        | ±0.02   |
|                                      | Displacement PF    | ±0.02                                 | ±0.02                        | ±0.02   |
| <b>HARMONICS</b>                     | Voltage            | to the 51st                           | to the 31st (Optional)       | to the 31st   |
|                                      | Current            | to the 51st                           | to the 31st (Optional)       | to the 31st   |
|                                      | Measures           | magnitude, phase, THD                 | magnitude, THD               | magnitude, THD  |
| <b>COMMUNICATIONS</b>                | Type               | Bluetooth® Wireless, USB              | RS232 port                   | RS232 port  |
|                                      | Remote             | Cell modem option                     | n/a                          | n/a   |
|                                      | Data Rate          |                                       | 4,800 to 28,800 baud         | 4,800 to 38,000 baud  |
| <b>INFORMATION STORAGE</b>           | Interval           | 6.9 MB                                | 2.1 MB                       | 2.1 MB  |
|                                      | Graphs             |                                       |                              |   |
|                                      | Significant Change | 1000 records                          | 1000 records                 | 1000 records  |
|                                      | Flicker            | 1000 records                          | 1000 records                 | 1000 records  |
| Waveform Capture                     | 1.7 MB             | 384 KB (Optional)                     | 384 KB                       |   |

|                           | GUARDIAN  | iVS-2SX+   | iVS-3S   |   |
|---------------------------|---|--|--|---|
| <b>RECORD SETTINGS</b>    | Interval Graphs<br>Significant Change<br>Flicker Settings<br>Waveform Capture | 1 second to 4 hour interval user selected, stop-when-full, or wrap around memory modes<br>1V to 8V in 1V steps<br>User-defined, or conform to IEEE 1453/ IEC 61000-4-15, and IEEE Std. 141.<br>Voltage and current threshold, periodic capture | 1 second to 4 hour interval user selected, stop-when-full, or wrap around memory modes<br>1V to 8V in 1V steps<br>User-defined, or conform to IEEE Std. 141.<br>(Optional) voltage and current threshold | User selected, stop-when-full, or wrap around memory modes<br>Significant Change<br>1V to 8V in 1V steps<br>User-defined, or conform to IEEE Std. 141.<br>Voltage and current threshold |
| <b>POWER SUPPLY</b>       | Power Consumption<br>Operating Temp<br>Shock                                  | Less than 2.5 watts<br>-20°F to +135° F<br>60 Hz to 2kHz, Acceleration 25G   | Less than 2.5 watts<br>-20°F to +135° F<br>60 Hz to 2kHz, Acceleration 25G   | Less than 2.5 watts<br>-20°F to +135° F<br>60 Hz to 2kHz, Acceleration 25G  |
| <b>PHYSICAL DIMENSION</b> | Vibration<br>Size<br>Weight   | 10 Hz to 60 Hz, Amplitude 1.8 mm<br>4.625" x 6.75"<br>3.6 lbs  | 10 Hz to 60 Hz, Amplitude 1.8 mm<br>4.625" x 6.75"<br>3.6 lbs  | 10 Hz to 60 Hz, Amplitude 1.8 mm<br>4.625" x 6.75"<br>3.6 lbs   |

**POWER FAIL OPERATION** Can operate without any input voltage for up to 30 minutes. This allows it to record down to 0 volts on all channels during power outages.



## GUARDIAN

- 2 channels of AC voltage from 0-150 continuous per phase
- 2 channels 200 amps RMS current
- 256 samples/cycle/channel sampling rate
- Voltage and current harmonics to the 51st
- Measures all power functions
- Captures waveforms
- Bluetooth® wireless, USB, cell phone modem (optional) communications
- Up to 6.9 MB memory

## iVS-2SX+

- A budget oriented single-phase meter socket power quality recorder.
- 2 channels AC voltage from 0-140 continuous per phase
- 2 channels up to 200 amps RMS current
- 128 samples/cycle/channel sampling rate
- Harmonics and waveform capture (optional) to the 31st
- Measures real, reactive, and apparent power
- Up to 2.1 MB memory

## iVS-3S

- The only ten function three-phase meter socket power quality recorder available today.
- 2 or 3 channels AC voltage from 0-600 VAC
- 2 or 3 channels 200 amps RMS current (Forms 12S, 14S, 15S, 16S and 17S), or 25 amps (Forms 6S, 8S, and 9S)
- 128 samples/cycle/channel sampling rate
- Voltage and current harmonics to the 31st
- Captures waveforms
- Measures all power functions
- Up to 2.1 MB memory