

# Products CATALOG

Espec is a global leader in providing comprehensive electrical Power Quality solutions, power quality analyzers and power monitoring software. We focus on developing technology that shifts the power quality market to the next level. With over 35 years of experience, we develop tailor-made power quality solutions along with state-of-the-art power quality analyzers empowering customers to overcome their power and energy challenges



Measure. Control. Resolve.

# Power Quality Analyzers & Multi-functional Recorders

Elspec's advanced analyzers technology captures, monitors and records all waveform signals continuously at 256/512/1024 samples per cycle; Every parameter, nothing ever missed.

All of our analyzers far surpass the highest Industry standards and comply with IEC 61000-4-30 Class A. Elspec's products are equipped with Elspec PQSCADA Sapphire, enabling to view and analyze more than 5,000 power parameters at any given resolution from the acquired waveform signals.



## G4400 Fixed Power Quality Analyzer

- 1 year of continuous waveform recording at up to 1,024 samples per cycle
- No missed events because no triggers settings /no thresholds
- Simple and easy deployment
- The ultimate tool for definitive root-cause analysis
- Analyze harmonics up to the 511th harmonic.
- Time synchronized with each meter in the network
- Real-time high-resolution data at various protocol for control applications
- Seamless integration with existing SCADA systems through Modbus or DNP 3 protocols

## G4500 Portable Power Quality Analyzers

- 1 year continuous waveform recording at up to 1,024 samples per cycle
- No missed events because No Triggers settings /No Thresholds
- The ultimate tool for definitive root-cause analysis
- Analyze harmonics up to the 511th harmonic.
- Measure up-to 1,000VRMS
- All The Data in Your Pocket: Getting the G4500 data via the PQSCADA App!
- Accurately measure DC currents and voltages



## PureBB Handheld Power Quality Analyzers

- Plug & Play small and lightweight solution
- 1 month of continuous waveform recording at 256 samples per cycle
- Configuration free device
- No missed events because No Triggers settings /No Thresholds
- Analyze harmonics up to the 127th harmonic.
- All The Data in Your Pocket: Getting the PureBB data via the PQSCADA App!
- Accurately measure DC currents and voltages

## G5 Multi-Functional Digital Fault Recorder

- 1 year of Continuous waveform recording at up to 1,024 samples per cycle
- No missed events because no triggers settings /no thresholds
- Multi-function:
  - PMU (Phasor Measurement Unit)
  - PQA (Power Quality Analyzer)
  - DFR (Digital Fault Recorder)
  - Merging Unit
- Analyze harmonics up to the 511th harmonic.
- Exceed C37.118 Synchro-phasor requirements for both M and P classes
- IEC 61850 MMS, GOOSE and SV
- Real-time high-resolution data
- Seamless integration with existing SCADA systems through Modbus, DNP 3 or IEC 61850 protocols
- Built-in 7" touch screen



Continuous waveform recording

# Power Monitoring Software

Elspec's PQSCADA Sapphire's multi-vendor support sets a new standard for power monitoring software. This enables the gathering and analysis of all recorded data in one place, regardless of IED manufacturer.

- Sophisticated event detection capabilities
- Real-time overview
- Integrated data from different devices & locations
- Custom reports with more than 5000 parameters
- Automatic alerts
- An expendable platform with options for add-ons & further development to meet the customer's needs



## Power Quality Solutions Real time reactive power compensation systems

Elspec's power quality solutions compensate for full load reactive power demands to achieve unity power factor levels continuously as well as reduce Harmonic levels, eliminate voltage drops, minimize voltage fluctuations and significantly increase voltage stabilization, all in real-time.

Elspec's systems provide transient free smooth switching by connecting capacitors at zero-crossing.



### LV Equalizer Real-Time Reactive Power Compensation System

- Complete compensation within  $\frac{1}{4}$  waveform cycle.
- Reduces losses on cables and transformers
- Significantly reduces voltage sags/flicker & provides voltage support to local electrical networks
- Harmonic filtration
- Transient-free switching (SCR switches)

### MV Equalizer Real-Time Reactive Power Compensation Systems

- Power factor correction system for dynamic loads with extreme variations of reactive power demand.
- Complete compensation within  $\frac{1}{4}$  waveform cycle.
- Reduces losses on cables and transformers
- Significantly reduces voltage sags/flicker & provides voltage support to local electrical networks and harmonic filtration
- Transient-free medium voltage switching (SCR switches)
- Equipped with 2 G5 units or more with trigger-free PQZIP technology (Patented) for advanced control, recording and I<sup>2</sup>t protection.



### Energy Efficiency Concept

- Voltage optimization
- Energy Efficiency Simulation Report
- Significantly reduces voltage sags/flicker & provides voltage support to local electrical networks
- Harmonic filtration
- Improves reverse sequence



### Activar Power Factor Compensation Systems

- Achieves fast & accurate Power Factor control and complete compensation within 1-4 seconds, even in the presence of harmonics
- Unique SCAN feature reduces capacitor duty cycles and extends system life
- Harmonic filtration
- Transient-free switching (SCR switches)
- Numerous industrial/commercial application possibilities



## One of the world's Fastest **Power Factor Correction Systems**

### Compact Activar/Equalizer Power Compensation Systems

- Complete compensation within  $\frac{1}{4}$  waveform cycle.
- Reduces overall facility energy consumption
- Compact & efficient design
- Designed for industrial & commercial applications

**Chosen by the Major Power Companies,** utility consultants and top power quality engineers in the electrical industry.



Ask us about our complete line of power quality solutions

[www.elspec-ltd.com](http://www.elspec-ltd.com)

#### Headquarters

Elspec Ltd.  
info@elspec-ltd.com

#### North America

Elspec North America, Inc.  
info@elspecna.com

#### Europe

Elspec Portugal Lda.  
info@elspecportugal.com

#### India

Elspec Engineering India Pvt Ltd.  
info@elspec.in

#### Colombia

Elspec Andina  
info@elspec.com.co