our series of articles on energy efficiency and enjoy savings!

Sonel®

# **INCREASE ENERGY EFFICIENCY WITH SONEL INSTRUMENTS** Reducing electricity bills by analysing network parameters with the PQM power quality analyser ENERGY Analyzes and evaluations of example power quality recordings performed with SONEL PQM series analyzers. **Q** 0-Optimising electricity costs with modern tools in power quality analysis instruments 口論 Optimum power billing tariff selection with the energy cost calculator feature **Ŋ** 리 Use thermal imaging to reduce heat energy losses ÉS 1 -0 How to raise awareness of efficient energy use Ċ 0and avoid unnecessary heating costs? Energy-efficient lighting modernisation -0 LED illuminance measurements 0by using Sonel LXP series illumination meters Normative and standard recommendation -0 for modern road lighting

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We measure globally





# Savings on every step

In an era of rising utility prices, any savings are very welcome. When electricity, heat or fuel becomes more expensive, logic dictates that action needs to be taken appropriately to optimise the bills. Just which ones, specifically? How do you identify where and how to reduce costs? We want to help you answer these questions and offer you the tool you need to achieve your objectives: to improve energy efficiency with your customers, in your own business and at your home.

# Sonel MPI-540-PV

Multifunction meter for electrical and photovoltaic systems with an integrated three-phase power logger

#### APPLICATION

• Measurement of active, reactive and apparent power, and other Measurement of active, reactive and apparent power, and other parameters which are the baseline for optimising energy consumption.
Power cost calculator: calculation of energy costs from the power parameters logged according to the user-defined power tariff schedule. The feature assists in choosing the optimum power tariff.
Power loss calculator: quick diagnosis of potential savings. The feature automatically estimates the financial losses caused by poor power quality over a predefined period of time and in the predefined currency.

#### SPECIFICATIONS

 Three-phase power quality logger Four-quadrant power meter.
Measurement of all electric shock protection parameters.
EN 62446 measurements of photovoltaic systems.

Current clamps Different types available, according to the application requirements. Flexible clamps compatible for working with high current loads (6 kA maximum). High resistance to ambient conditions (IP65). The rigid-core current clams are intended for indoor testing and lower current loads (1 kA maximum) and testing with current transformers.



### Sonel PQM-707

Stand-alone, portable and versatile power quality analyser

#### APPLICATION

- Measurement of active, reactive and apparent power to analyse the electrical power consumption trend.
- Energy cost calculator feature for selecting the optimum power tariff
- based on the consumption trend. Analysis of irregularities that can contribute to failure of the power supply system and consumer's loads and unexported power losses.

· Four-quadrant energy metering with full Class S logging. • Fully configurable logging by standard parameters, user-defines settings, or predefined settings.

• 5 voltage inputs and 4 current inputs for accurate measurements in three-phase systems.





Sonel KT-560 · Sonel KT-650 · Sonel KT-670 High-resolution thermal imaging cameras

### APPLICATION

 Professional identification of sources of heat loss. Professional identification and pinpointing of media leaks.
Energy certification of buildings. Building energy auditing.

### SPECIFICATIONS

Resolution: 640x480 (KT-650/670), 384x288 (KT-560).
Thermal response: <35 mK (KT-670), <40 mK (KT-650), <45 mK (KT-560).</li>



Interchangeable lenses • Fisheye: images the entire building in the FOV • Tele lens: images distant features

ENERGY

**EFFICIENCY** 



Sonel PQM-700 Class S-certified power quality analyser

#### APPLICATION

- Measurement of active power and plotting of load profile for contracted power usage verification.
- Measurement of active power, enabling the selection of the most cost-efficient active power tariff.
- · Four-quadrant reactive power measurements and compensation solution selection.

• Active power tariff reporting module in the Sonel Analysis software. · Weather-sealed enclosure (IP65) for outdoor measurements. • The 2 GB storage can hold the data logged over more than year.



## Seria Sonel LXP

#### APPLICATION

with energy-efficient counterparts.

### Sonel KT-200 · Sonel KT-400

Wide-temperature range, high-sensitivity thermal imaging

#### APPLICATION

- Advanced identification of sources of heat loss.
  Advanced identification and pinpointing of media leaks.
  Advanced identification of overheating components in process media systems and mechanical systems.

#### SPECIFICATIONS

- Resolution: 384x288 (KT-400), 192x144 (KT-200).
- Thermal response: <45 mK (KT-400), <50 mK (KT-200).



- Detection of heat exchanger malfunctions.
  Detection of overheating components in mechanical systems.
- Indoor temperature measurements.

#### SPECIFICATIONS

- IR imaging measurement up to 1000°C and type
- K thermocouple measurement up to 1370°C.
- $D^{.}S = 20.1$

Illumination meters for testing different light sources

- Testing the quality of lighting after replacement of indoor lamps
- Testing of road light intensity after upgrading to e.g. LED sources.
- Workplace illuminance testing. Correct illumination means improved
- productivity of work and fewer errors caused by poor visibility