



Saia PCD Supervisor EM

Complete solution for energy management in the Saia PCD Supervisor

Capture, analyse and optimise the energy consumption of your building.

GENERAL

Saia PCD Supervisor **EM** - the EM stands for Energy Monitoring.

Saia PCD Supervisor EM is an energy management suite for energy benchmarking and analysis in the HVAC market. It is based on Saia PCD Supervisor using HTML5 technology and provides a large range of techniques for the management of all aspects of energy related data.

Saia PCD Supervisor EM is the ideal system to:

- ▶ manage energy by analyzing and optimizing the operation of facilities and
- ▶ measure performance across multiple levels within the building or estate

FEATURES – BENEFITS

Feature	Benefits
Complete integration into Saia PCD Supervisor	Saves costs. No additional equipment needed. Gets metering data from most of the metering communication protocols. Visualizable on smartphones, tablets or PCs.
Automatic collection and aggregation of metering data	Needs no expensive data collection devices. Reliable and continuous data collection. No need to send the housekeeper to note metering data.
Monitoring of energy consumption with daily, weekly, monthly or annual profiles	Easily recognizes waste of energy
Analysis of energy profiles	Detects waste of energy. Optimizes energy efficiency.
Translation of raw energy values into monetary units	Provides overview of the energy costs. Compares actual costs with budget.
Energy Benchmarking graphs, with weekly, monthly, yearly views	Proves the efficiency of energy saving actions. Allows easy comparison of current energy consumption in comparison to target profiles and historical consumptions.
Visualization and ranking of consumption between meters, zones, systems, buildings, and sites	Gets an overview of the highest consumers. Starts optimizing the energy efficiency where you can achieve the biggest savings.
Instant and automatic reports for users, energy managers and auditors	Saves costs for generating energy reports. Provides relevant data with highest accuracy and just in time for energy managers and auditors
Kiosk Mode – a rotating sequence of easy understandable energy efficiency data	Provides increased awareness of occupants in building foyers or reception areas
Complete offer of meter portfolio	SBC and Honeywell offer all needed metering devices starting from one and three phase electrical meters, heating, cooling energy meters, hot and cold water meters and all types of flow meters.
Cost-efficient solution	Logos and layout can be customized free of charge. Existing BACnet schedules can be used.
Low training effort for engineers and users	Very easy installation and start-up. Low training efforts for customers and partners. Face-to-face trainings offered by TCS team.

RANGE OF FUNCTIONS

► 100%Web-Enabled Architecture

The Saia PCD Supervisor EM is a 100% web-enabled software. This means that it:

- Needs to be installed only at a single location
- Can be accessed via the internet or intranet
- Requires only one browser for access via client smartphone, tablet or PC
- Can be managed from a single central location which makes installation and ongoing maintenance simple and cost-effective

► Integration of Data from Multiple Sources

Saia PCD Supervisor EM is able to integrate data from a wide range of existing systems. Saia PCD Supervisor can provide data from most of the metering devices commercially available. Saia PCD Supervisor EM enables an integrated solution allowing the user to collate and manage all aspects of energy data at a central location.

► Energy Analysis

By using a number of pre-defined analysis templates, the software detects energy waste of metering data, including heating/ cooling energy, electricity, water, and other meters. Saia PCD Supervisor EM proactively monitors facilities and identifies opportunities for cost savings. The software supports intelligent metering components with normalization of data, handling meter roll-over, and periods of missing data.

► Analyze Energy Profiles

Building management systems, utility smart meters, data loggers, and utility online databases are rich of data, yet many customers find the data difficult to acquire, aggregate, analyze, and leverage. Saia PCD Supervisor EM delivers this information in real-time and provides the intelligence needed for pro-active business and Saia PCD Supervisor EM decisions.

► Optimization of Building Performance

Saia PCD Supervisor EM uncovers opportunities of efficiency gains and provides data to continuously optimize the performance of each of those building systems without affecting the comfort of occupants. Once building systems are optimized, Saia PCD Supervisor EM helps to keep the systems operating at high efficient levels so that you can realize long-term energy reductions and extended life cycle of the equipment.

► Financial Analysis

The financial tools within the Saia PCD Supervisor EM software enables users to convert energy usage into monetary values. Users input single-tariff utility contracts to convert kWh into financial data. In addition, users are able to create and analyze consumption or financial targets.

► Reports

Combining historical usage information and energy analytics with real-time data feeds provides usable information and justification for both, operational and capital business decisions. With Saia PCD Supervisor EM, you can pro-actively monitor your facility and identify opportunities for cost savings.

► User Management

Saia PCD Supervisor EM can be configured to support different users, e.g. normal users with limited access and energy managers with complete access.

► Cyber Security

Compliant to the newest Cyber Security standards. HTML5 views for any smartphone, tablet or PC.

ENGINEERING

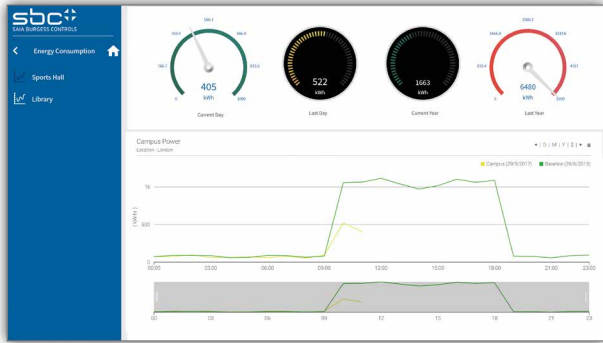
The Saia PCD Supervisor EM engineering can be done using Saia PCD Supervisor.

Saia PCD Supervisor EM is full integrated in Saia PCD Supervisor.

KEY ENERGY ANALYSIS FEATURES

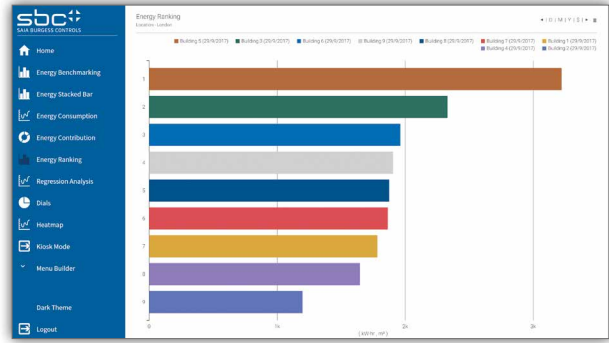
Daily Consumption

Detection of inefficient energy usage by comparing multiple days across their 24-h periods.



Energy Ranking

Visualization and comparison of performance of sites, buildings and plants. Start of energy efficiency actions to optimize biggest consumers.

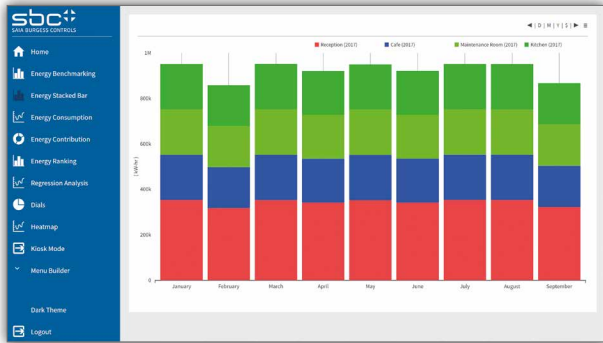


Stacked Bars

View of stacked bar charts which show the contribution of different consumers to the cumulated energy over time:

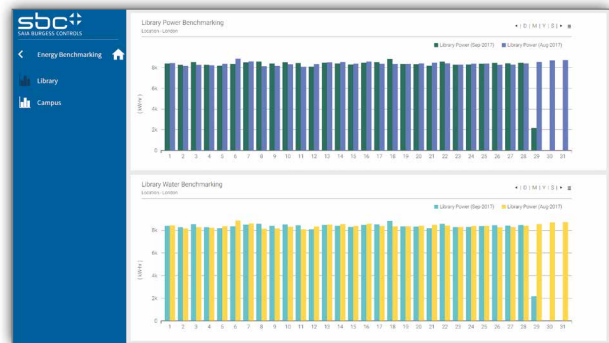
- (Day / Week / Month / Year / Cost)

Add a common allowed target/ budget.



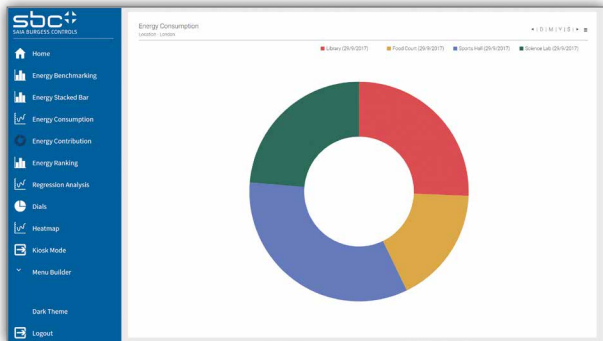
Energy Benchmarking

Detection of low energy-efficiency areas by comparing consumptions against similar periods, e.g., days, weeks, months, years.



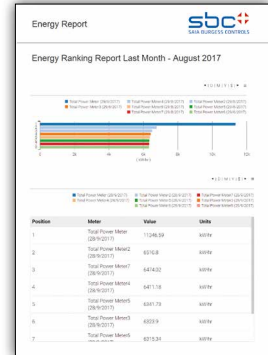
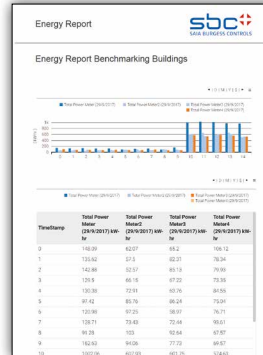
Energy Contribution

Graphic overview of the energy or monetary energy contribution for different zones, buildings, or time periods.



Energy Efficiency Reports

Storage of management effort, generation of booklets of reports, e.g., for the energy manager, departments, or energy audits.



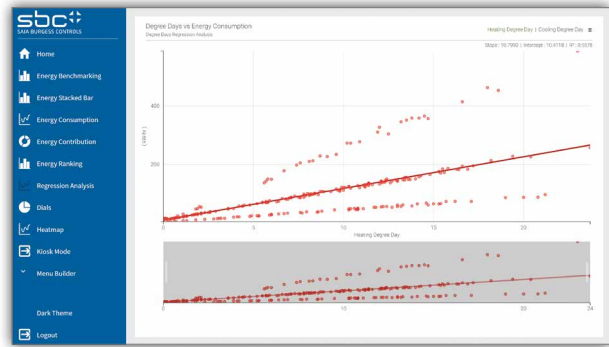
Heat Map

One screen heat map view of the yearly data of a consumer. Clickable daily profile view. Easy configuration of the heat map.



Regression Analysis

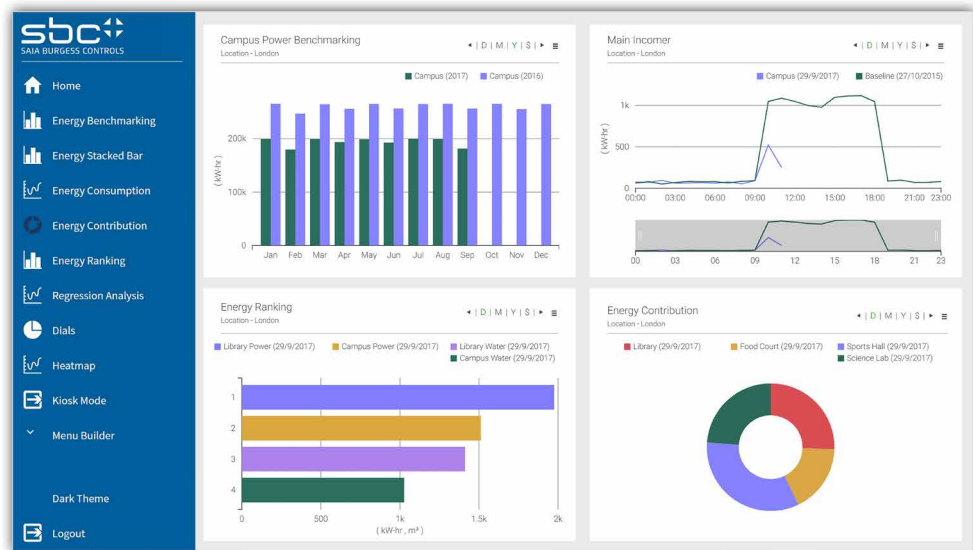
Comparison of own consumption with the line-of-best-fit against outdoor temperature, degrees days, or any other value of interest.



Kiosk Mode

Increase of awareness of building occupants. Visible overview of the most important energy consumers. Shows a rotating sequence of energy dashboard pages, ideal for use in a building foyer or reception area.

Training for occupants by explaining them how they can increase the energy efficiency of their building.



1. Reports

There are two types of reports which Saia PCD Supervisor EM can generate: Instant Reports and Automated Reports.

Instant Reports: Saia PCD Supervisor EM charts can produce an instant report as a PNG, PDF or CSV file.

Automated Reports: Automated Reports give a powerful way to generate customized reports and automatically generate them on a schedule of your choosing. These reports can then be 'pushed' elsewhere by using standard forwarding options from the Reporting Palette (e.g. Email Recipient or File Recipient).

2. Gauges & Dial

Gauges & Dials differs in a graphical way and style. They are not linked directly to aggregators. Instead, they are linked to a numeric value. They can be used for any normalized point.

3. Navigation Menu

The Navigation Menu folder in the Saia PCD Supervisor EM Palette contains two widgets: The Vertical Menu and the Menu Builder.

The Vertical Menu can be used for navigation within your station, between defined PxPages. The Vertical Menu widget can be added to a single PxPage and configured. You can then use this as a PxInclude page on any page you wish to see the Navigation Menu.

The Menu Builder has been designed for engineers to build a menu structure, without the need of any coding experience. The Menu Builder is a widget, the same as the other widgets of Saia PCD Supervisor EM and resides in the Saia PCD Supervisor EM Palette.

PLATFORM REQUIREMENTS

To run Saia PCD Supervisor EM on Saia PCD Supervisor the following licenses are required:

► **Saia PCD Supervisor license**

Existing license for the Saia PCD Supervisor

► **Saia PCD Supervisor EM license**

The Saia PCD Supervisor EM is an Add-on for the Saia PCD Supervisor. To run Saia PCD Supervisor EM on Saia PCD Supervisor the PCD8.SUP-EM25-license is required. This basic license with maximal 25 meter points can be acquired just once. If additional meter points are needed than the basic license must be upgraded with extension PCD8.SUP-EMxxxEXT licenses (see also "products and licenses" section).

PC HARDWARE REQUIREMENTS

The following table shows the minimum and recommended hardware requirements for the installation of Saia PCD Supervisor EM. The hardware specifications should be used as a guide only, since the number of simultaneous users, metering channels, and read frequency will affect the required hardware.

As a general rule classifying the projects into small, medium and large, we recommend the following hardware capacities:

Project Size	No of Aggregators	Processor	Min. Main Memory	Storage
small	less than 500	4 cores, 2.5 + GHz	4 GB	250 GB
medium	less than 2000	8 cores, 2.5 + GHz	8 GB	500 GB
large	greater than 5000	8+ cores, 2.5 + GHz	16 GB	500 GB

Display	Video card and monitor capable of displaying 1024 × 768 pixel resolution or greater
Network Support	Ethernet 100 Mbit/s or 1 Gbit/s NIC (network interface card) with TCP/IP support
Connectivity	Full-time high-speed ISP connection recommended for remote site access (e.g. T1, ADSL, cable modem)

Storage:

The secondary storage is dependent on the estimated amount of the history archive.

SSD is faster than HDD but it will not be possible to provide a performance figure as it depends on too many variables.

Remote Access

Saia PCD Supervisor EM Web Browser access is possible using the newest versions of the following browsers:

- Google Chrome (V. 50 and above)

PRODUCTS AND LICENSES

Saia PCD® Supervisor EM provides the following licenses:

Product	Description
PCD8.SUP-EM25	Saia PCD® Supervisor EM: base license for Saia PCD Supervisor with max. 25 meter points
PCD8.SUP-EM50EXT	Saia PCD® Supervisor EM: license for additional 50 meter points
PCD8.SUP-EM100EXT	Saia PCD® Supervisor EM: license for additional 100 meter points
PCD8.SUP-EM500EXT	Saia PCD® Supervisor EM: license for additional 500 meter points
PCD8.SUP-EM1KEXT	Saia PCD® Supervisor EM: license for additional 1000 meter points
PCD8.SUP-EM-DEMO	90 day demo license (with full range of functions)

SOFTWARE DOWNLOADS

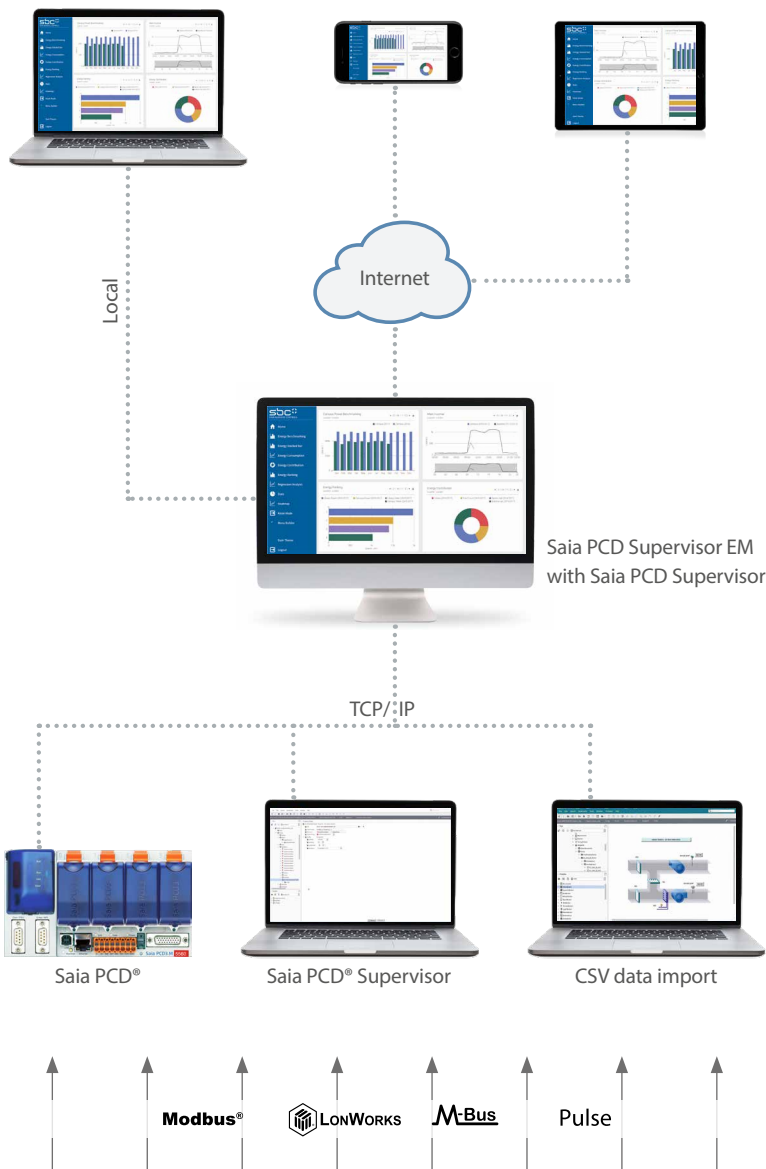
You can download the following files at the DOWNLOADS area of the support web site www.sbc-support.com:

- ▶ Software files
- ▶ Release bulletin
- ▶ User Guide
- ▶ Link to the Demo Station (which can be accessed only outside the Honeywell network)

Basic licences

- ▶ The PCD8.SUP-EM25 license is the basic license for the Saia PCD Supervisor EM.
- ▶ It's required to use Saia PCD Supervisor EM on Saia PCD Supervisor.
- ▶ The Basic license can be order just once.
- ▶ If the customer uses more then the 25 meter points, he can extend the license with all the other upgrade licenses.
- ▶ All upgrade licenses are additive.
- ▶ For a scalable solution, you can simply add upgrade licenses.

SYSTEM DIAGRAM



Analyze and Optimize

Saia PCD Supervisor EM is the SBC program package for monitoring energy consumption. It includes an impressive range of technologies for managing all aspects of energy related data. The fully Internet-enabled solution allows you to monitoring and analyzing your energy consumption locally or remotely from a location of your choice. By different access rights and display options, tenants, house managers and service partners can optimize energy consumption according to their individual requirements.

Capture

The SBC system offers different options for capturing measurement data:

- ▶ via the Saia PCD controller
- ▶ via Saia PCD Supervisor Control Center
- ▶ by data import

Measure

Measuring all consumers is the basis for the analysis and optimization of energy consumption. SBC supports the wide range of SBC and Honeywell energy meters. In addition, counters from other manufacturers can also be integrated seamlessly.

Water meters	Heat energy and cooling energy meters	Active-energy meters

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