EMS 100, 200: SAUTER EMS and EMS Mobile

SAUTER EMS has proven its effectiveness for more than a decade as a professional solution for visualizing and exploiting all data related to energy consumption and carbon emissions in organizations. SAUTER EMS provides vital information to act more effectively around energy, cost, facility efficiency and therefore the competitiveness of the organization.

SAUTER EMS is the solution when it comes to complying with the requirements of ISO 50001, ISO 50002 (EN 16247) standards or to apply the concepts of the IPMVP.

Advantages

Modern and flexible

SAUTER EMS offers all the advantages of a modern solution by being available in a Cloud version. Opting for the Cloud mode means that users benefit from a high level of security, benefit from the latest innovations and ensure a quick and worry-free production launch of the necessary IT equipment. For large projects, SAUTER EMS' InHouse mode integrates perfectly into an existing IT infrastructure. Based on modern technologies such as HTML5 or NoSQL databases for raw values (optional), SAUTER EMS allows you to consult online, at any time, from a client workstation or mobile equipment, information relating to the organization's energy management.

Accessibility and communication

Automatically sending reports in different formats, consulting collected or defined alerts, accessing document management or learning about the actions taken by people involved in the improvement process are all easy operations to perform thanks to the solution's intuitive interface.

The interface has been designed so that a person without specific IT skills can work quickly and efficiently so that finally the actual time of analysis of the collected data is really available.

Data centralization and accuracy

Data can come from one or more sites, one or more sources. SAUTER EMS responds to the immense necessity of flexibility in the measurement concept with its many automatic or manual connectors.

SAUTER EMS is not limited to the data from the meters since the operating status, setpoint values, temperature values, valve opening rate, number of users, number of parts produced, amounts invoiced are some examples that allow the essential correlation of the energy value to its use in practice.

Data quality

The most experienced know that reality does not always allow to have a reliable physical measurement point on all equipment. That is why SAUTER EMS provides functions for analysing the received data to inform about data behaviour errors. Missing values, faulty counters, extreme or inconsistent values are detected, reported and can be configured. An automatic or manual correction is then possible and reversible.

Calculation capacity

One of the great strengths of SAUTER EMS is its computing capacity. Thanks to the formulas, setting up as many virtual points as you need is easy. Beyond the consumption chain, calculating the HDDs according to known standards, calculating CO_2 emission equivalences or comparing the invoiced values with the estimated amounts are all operations that an energy manager can easily perform in SAUTER EMS. We know that the calculation rules evolve over time and that is why SAUTER EMS has a time management of formulas.

In addition to the formulas, specific modules are available. CM objects are used, for example, to calculate instant power from counter readings. The forecast module allows to set up calculation algorithms to give a future visibility based on past data.

Clear and configurable visualization

The numerous visualization elements, from the value table to maps, graphs and custom elements, highlight not the data but the analysis that needs to be done. Users with permissions are completely autonomous in setting up the visuals they want to deliver to their users directly from the interface. For the most ambitious projects, SAUTER EMS uses the BIRT report engine to generate specific reports on a large scale.

High-performance engineering

With the pressing nature of the situation, one of the great strengths of SAUTER EMS is its dynamic templates. Once an approach for a building, equipment or organization is confirmed, operators will be able to create one or more templates, dynamizing them so that they can be easily deployed. A time and efficiency saving for a tremendous efficiency.

Delivery content of the license version

The SAUTER EMS solution is supplied ready to use. It is not necessary to purchase additional licenses to run SAUTER EMS on a server. The deployment of the standard solution therefore only requires about a few minutes.

SAUTER EMS is supplied in the form of a VMWare virtual machine (Hyper-V on request) with the following technical characteristics:

Technical data

Virtual machine HW configuration[1]		
	Processor	1 × Dual-Core CPU 64 bits
	RAM memory	4 GB
	Storage capacity	80 GB HDD
	Network	1 card – bridge mode

Virtual machine SW configuration		
	Operating system[2]	Linux openSUSE
	Database[3]	PostgreSQL
	Web server	Apache Tomcat
	Application available	SAUTER EMS BIRT engine

GUI access

- Through browser (Firefox, Chrome, Edge) on any computer
- Through browser on mobile devices
- Through Mobile app (Android and iOS)

Data sources

Automatic

- Files attached in email
- EDL boxes
  - Protocols supported as standard: BACnet/IP, MBus, Modbus/TCP, KNXnet/IP (EIB), EDL2EDL
  - Optional protocols: Wurm TCP/IP, Danfoss, SNMP, SQL, SAIA SBus/IP, Siemens S5/S7, CS IEC 61107
- SQL database
- Files available on FTP servers
- Specific software connectors (SDC)
  - SAUTER Software (nPO, Vision Center)
  - External database
  - Custom-made with the SDC-X
- SNMP protocol
- Weather data
- SOAP Web Service
- Invoices

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[1] *These characteristics are those of the virtual machine as delivered. The benefit of virtualization technology is that they can be adapted as the needs of the project increase.*

[2] *Modifications may be furnished on request, as an option and subject to technical validity.*

[3] *Modifications may be furnished on request, as an option and subject to technical validity.*

Manual
- CSV file
  - Uploaded from the interface or copied to a server directory
- Manual input
  - From the interface with value consistency check
  - From mobile with value consistency check and search by QR code

Product references

EMS basic packages and user licences

EMS100F011	EMS Sys Basic package 10DP/1CUL/1PCL/1SDC nPO (1 Mandant)
EMS100F012	EMS Sys Basic package 10DP/1CUL/1PCL/1SDC EDL (1 Mandant)
EMS100F013	EMS Sys Basic package 10DP/1CUL/1PCL/1SDC nP (1 Mandant)
EMS100F014	EMS Sys Basic package 10DP/1CUL/1PCL/1SDC nP32 (1 Mandant)
EMS100F015	EMS Sys Basic package 10DP/1CUL/1PCL/1SDC nPWeb (1 Mandant)
EMS100F016	EMS Sys Basic package 10DP/1CUL/1PCL/1SDC nPE (1 Mandant)
EMS100F017	EMS Sys Basic package 10DP/1CUL/1PCL/1SDC SVC (1 Mandant)
EMS110F001	(Sys) 10 EMS Datapoints from 11 to 30 DP
EMS110F002	(Sys) 10 EMS Datapoints from 31 to 100 DP
EMS110F003	(Sys) 10 EMS Datapoints from 101 to 200 DP
EMS110F004	(Sys) 100 EMS Datapoints from 201 to 1.000 DP
EMS110F005	(Sys) 200 EMS Datapoints from 1.001 to 2.000 DP
EMS110F006	(Sys) 500 EMS Datapoints from 2.001 to 6.000 DP
EMS110F007	(Sys) 1000 EMS Datapoints from 6.001 to 10.000 DP
EMS110F008	(Sys) 5000 EMS Datapoints from 10.001 to 100.000 DP
EMS120F011	(Sys) 1 additional concurrent User
EMS120F012	(Sys) 5 additional registered Portal User
EMS120F013	(Sys) automatic Export of up to 20 portal elements from a portal
EMS420F001	(Sys) Software maintenance per year from delivery
EMS420F004	(Sys) Software maintenance reinstatement per month since the phase-out

Software Data Connector (SDC) options for data acquisition for various BMS, email, FTP, SQL and SNMP systems licences

EMS140F001	(Sys) SDC to novaPro Open per SDC with up to 5.000 DP
EMS140F002	(Sys) SDC to novaPro Web pro SDC with up to 5.000 DP
EMS140F003	(Sys) SDC to novaPro32 pro SDC with up to 5.000 DP
EMS140F004	(Sys) SDC to novaPro pro SDC with up to 5.000 DP
EMS140F005	(Sys) SDC to novaPro Entreprise SDC with up to 5.000 DP
EMS140F006	(Sys) SDC to SVC per SDC with up to 5.000 DP
EMS140F009	(Sys) SDC to Sauter EDL
EMS140F020	(Sys) SDC for generic SQL connections and 10 data points
EMS140F031	(Sys) 10 SDC-SQL data points from 11 to 100 DP
EMS140F032	(Sys) 100 SDC-SQL data points from 101 to 1.000 DP
EMS140F033	(Sys) 1.000 SDC-SQL data points from 1.001 to 50.000 DP
EMS140F021	(Sys) SDC for generic SNMP connections and 10 data points
EMS140F028	(Sys) 10 SDC-SNMP data points from 11 to 100 DP
EMS140F029	(Sys) 100 SDC-SNMP data points from 101 to 1.000 DP
EMS140F030	(Sys) 1.000 SDC-SNMP data points from 1.001 to 50.000 DP
EMS140F022	(Sys) SDC for Email (csv*/XML*/MSCONS*/LPEX*) and 10 data points
EMS140F025	(Sys) 10 SDC-Email data points from 11 to 100 DP
EMS140F026	(Sys) 100 SDC-Email data points from 101 to 1.000 DP
EMS140F027	(Sys) 1.000 SDC-Email data points from 1.001 to 50.000 DP
EMS140F023	(Sys) SDC for FTP (csv*/XML*/MSCONS*/LPEX*) and 10 data points
EMS140F034	(Sys) 10 SDC-FTP data points from 11 to 100 DP
EMS140F035	(Sys) 100 SDC-FTP data points from 101 to 1.000 DP
EMS140F036	(Sys) 1000 SDC-FTP data points from 1.001 to 50.000 DP
EMS140F040	(Sys) SDC for Web Services and 10 data points
EMS140F041	(Sys) Update per 10 SDC-Web Service data points 11 to 100 DP
EMS140F042	(Sys) Update per 100 SDC-Web Service data points 101 to 1.000 DP
EMS140F043	(Sys) Update per 1.000 SDC-Web Service data points 1.001 to 50.000 DP

EMS basic hosting packages and user access fee

EMS200F001   Basic package Hosting 10DP/1CUL/1SDC nPO (1 Mandant)

EMS200F002   Basic package Hosting 10DP/1CUL/1SDC EDL (1 Mandant)

EMS200F003   Basic package Hosting 10DP/1CUL/1SDC nP (1 Mandant)

EMS200F004   Basic package Hosting 10DP/1CUL/1SDC nP32 (1 Mandant)

EMS200F005   Basic package Hosting 10DP/1CUL/1SDC nPWeb (1 Mandant)

EMS200F006   Basic package Hosting 10DP/1CUL/1SDC nPE (1 Mandant)

EMS200F007   Basic package Hosting 10DP/1CUL/1SDC SVC (1 Mandant)

EMS210F001   (Host) 10 EMS Datapoints from 11 to 30 DP

EMS210F002   (Host) 10 EMS Datapoints from 31 to 100 DP

EMS210F003   (Host) 10 EMS Datapoints from 101 to 200 DP

EMS210F004   (Host) 100 EMS Datapoints from 201 to 1.000 DP

EMS210F005   (Host) 200 EMS Datapoints from 1.001 to 2.000 DP

EMS210F006   (Host) 500 EMS Datapoints from 2.001 to 6.000 DP

EMS210F007   (Host) 1.000 EMS Datapoints from 6.001 DP to 20.000 DP

EMS210F008   (Host) 5.000 EMS Datapoints from 20.001 DP to 100.000 DP

EMS220F001   (Host) 1 additional concurrent User access on EMS Hosting (CUL)

EMS220F002   (Host) 5 additional registered Portal User on EMS Hosting (PCL)

EMS220F013   (Host) automatic Export of up to 20 portal elements from a portal

Software Data Connector (SDC) options for hosting for data acquisition for various BMS, e-mail, FTP and SQL systems

EMS240F001   (Host) SDC to novaPro Open per SDC with up to 5.000 DP

EMS240F002   (Host) SDC to novaPro Web per SDC with up to 5.000 DP

EMS240F003   (Host) SDC to novaPro32 per SDC with up to 5.000 DP

EMS240F004   (Host) SDC to novaPro per SDC with up to 5.000 DP

EMS240F005   (Host) SDC to novaPro Entreprise per SDC with up to 5.000 DP

EMS240F006   (Host) SDC to SVC per SDC with up to 5.000 DP

EMS240F009   (Host) SDC to EDL

EMS240F020   (Host) SDC for generic SQL connections and 10 data points

EMS240F031   (Host) 10 SDC-SQL data points from 11 to 100 DP

EMS240F032   (Host) 100 SDC-SQL data points from 101 to 1.000 DP

EMS240F033   (Host) 1.000 SDC-SQL data points from 1.001 to 50.000 DP

EMS240F022   (Host) SDC for Email (csv*/XML*/MSCONS*/LPEX*) and 10 data points

EMS240F025   (Host) 10 SDC-Email data points from 11 to 100 DP

EMS240F026   (Host) 100 SDC-Email data points from 101 to 1.000 DP

EMS240F027   (Host) 1.000 SDC-Email data points from 1.001 to 50.000 DP

EMS240F023   (Host) SDC for FTP (csv*/XML*/MSCONS*/LPEX*) and 10 data points

EMS240F034   (Host) 10 SDC-FTP data points from 11 to 100 DP

EMS240F035   (Host) 100 SDC-FTP data points from 101 to 1.000 DP

EMS240F036   (Host) 1000 SDC-FTP data points from 1.001 to 50.000 DP

EMS240F040   (Host) SDC for Web Services and 10 data points

EMS240F041   (Host) Update per 10 SDC-Web Services data points 11 to 100 DP

EMS240F042   (Host) Update per 100 SDC-Web Services data points 101 to 1.000 DP

EMS240F043   (Host) Update per 1.000 SDC-Web Services data points 1.001 to 50.000 DP

Summary of key figures

Data processing

- Formulas
- Plausibility
- Alarms
- Forecasts
- Reference curves
- Hierarchical data organization
- Notes on time period of the chart
- Building logbook
- Action Plan
- Reversible and visible value corrections
- Fully customizable object attributes (data points, groups, notes)
- Configuration of custom units

- Data aggregation
- Responses to requirements 4.1, 4.3, 4.4.3, 4.4.4, 4.4.5, 4.4.6, 4.6.1, 4.7.2 of the ISO 50001 standard
- Lot analysis (industry)

Data layout
- Complete visual library
  - 46 types of curves
  - Energy flow diagram (Sankey)
  - Load curves
  - scatter-plot with regression and fracture
  - Monotonic charging
- Custom Widgets
- Key indicators
  - Energy label (2010/31/EU)
  - Gauge
  - Traffic light
  - Customized
- Table of values
- Geographical maps
- Images with clickable areas
- Dynamic HTML elements for advanced customization
- Synoptic view integration

Data exposure
- Configurable and customizable data export
- Creation of a portal including editor and access rights management
- Mobile application
- Export of graphic elements via permalink for external display
- Escalation of alarms by email or third party system (Alert) with escalation rules
- Automated data export
- Sending pdf reports by email

Data collection
- Multi-sources
- Interface to several software applications
- Manual entry, e.g. of counter values
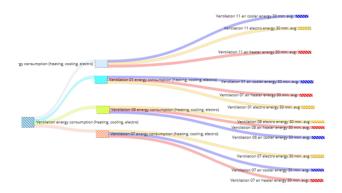- Importing invoices or billing data

User interface
- Full configuration from the interface
- Bookmarks within the application and for each user
- Customization of the interface (colors) possible
- Multi-client approach with secure logical data space
- Multi-language
  - Interface language per user
  - Translation of certain customizable content through the interface
- Application-internal tab system

System administration
- Template for optimal engineering productivity
- Full rights management with profile customization
- Activity logs
- Local user database or active directory
- Easy update installation
- Specific server administration console for IT operations
- Enabling https mode in the console
- SSH connection possible with external sources

Product visuals

The visuals provided are not contractual.