

# Building Management Smart Metering Building Control



Trade-spanning Building  
Management Systems with VBASE.



# VBASE Trade-spanning Building Management System

## Good-bye to isolated application!

Say goodbye to the flood of „Single Purpose“-automation solutions, which just serve exactly one objective. VBASE unites all trades in one system in one user interface. As a multifunctional and trade-spanning Building Management System (BMS), VBASE automates various trades as lighting, heating & air conditioning, shading, alarm systems etc. Since VBASE is compatible with about 200 different bus-, remote- and protocol systems, it doesn't care about system- or manufacturer barriers.

## If all trades are all perfectly integrated.

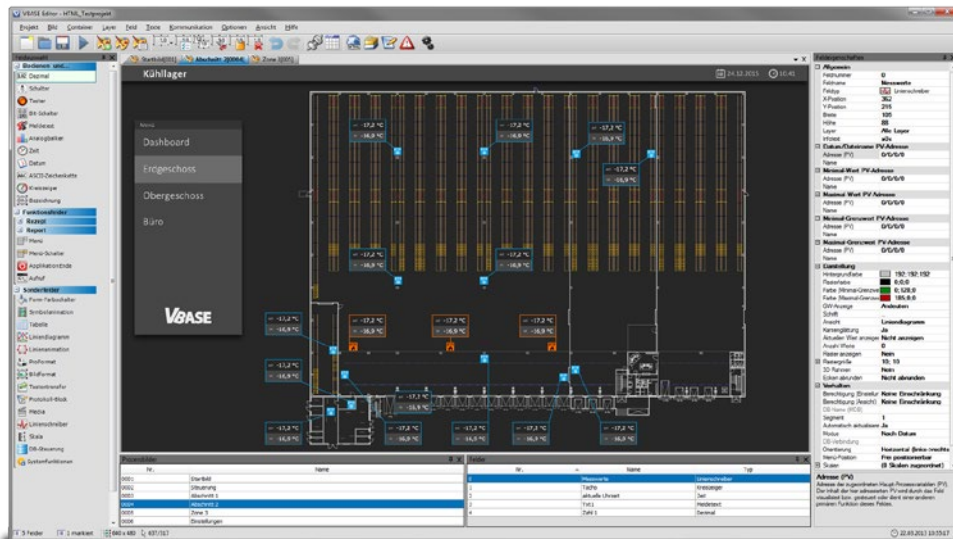
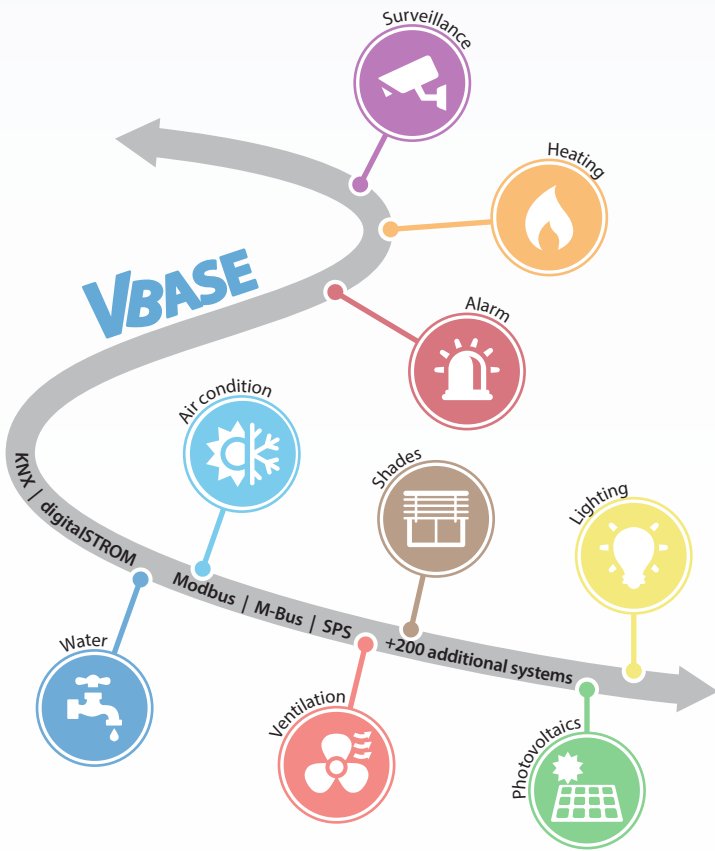
Specifically, this means: all system components of a building can be merged in VBASE. For example, the light, based on KNX, can be automated depending on the alarm equipment, which is connected via OPC. If the alarm is activated, VBASE turns off the light and simultaneously turn down the heating, which is controlled by a PLC. For data exchange between the different trades, manufacturer systems and interfaces, VBASE adopts the gateway functionality and communicates the data between them. So the process variables can, for example, be exchanged between KNX and digitalSTROM.

## Mobile - all trades on a string.

In addition to the local display, VBASE also offers the possible of mobile access to the Building Management System. For this purpose VBASE provides an HTML5 web interface for the visualization and control via notebook, tablet PC or smartphone. Also all mobile trades can be bundled in one system. The required HTML-pages are automatically generated by VBASE.

## Advantages of a trade-spanning BMS with VBASE:

- Integration of all trades (lighting, heating / air conditioning, alarm, ventilation, shading , water, photovoltaics etc.) in one system
- Data exchange between systems of different manufacturer, protocols and interfaces
- One display and user interface for all trades
- Smart automation by linking different trades (for example, alarm switches lights and heating off)
- Reduced energy and resource consumption
- Lower costs for operations and maintenance by TPM
- Secure remote access with smart phone or tablet PC for all trades and system components





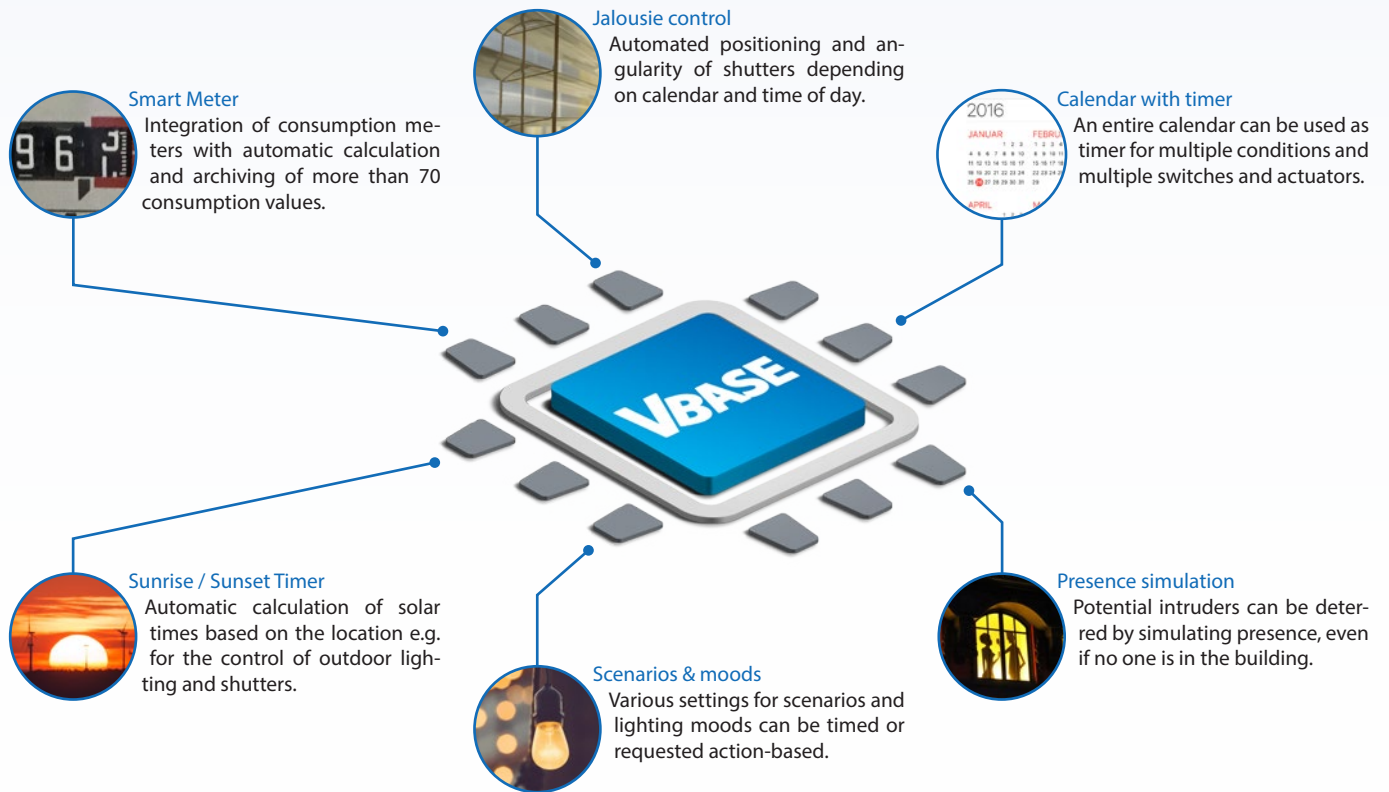


# VBASE Function blocks: Simple integration of complex features.

VBASE works with so-called function blocks to integrate complex and frequently used functions and calculations in a simple manner into the automation project. For this purpose, a library with a wide range of pre-programmed functions is available. The modules are based on a standardized structure and encapsulate recurring logic and functionality. The user only has to choose the appropriate blocks from

the library and determine the input and output variables. Thus, for example, a consumption meter can be integrated within a very short time and is subsequently available with more than 70 precalculated values throughout the project. Functional components can be developed quickly, flexibly and independently from the main system.

## Example for function blocks in VBASE:



VBASE comes with a library of more than 80 pre-build function blocks!



## Energy and Resource Monitoring with VBASE.

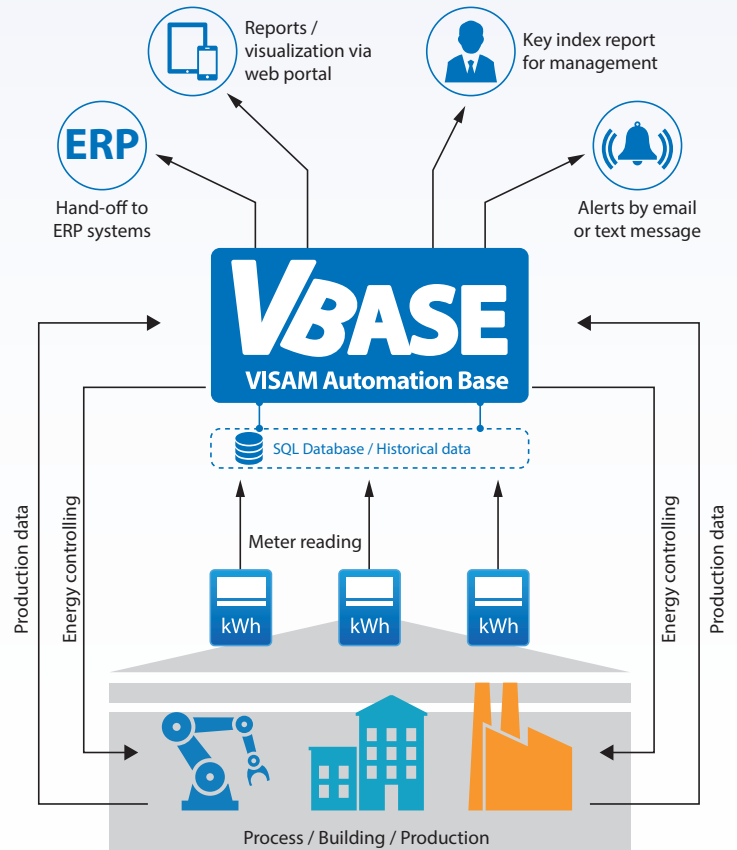
*Durable recording, displaying and analyzing the actual technical energy consumption.*

An energy and resource management retrieves great potential of possible savings for companies. The basis for a successful implementation are the detailed recording of the actual consumption, an analysis of potential savings as well as a permanent and continuous monitoring of the energy consumption respectively the verification for compliance of limit values. Grown, heterogeneous building and facility structures usually make it a major challenge, because the individual sections are often managed by different, autonomous control systems. Due to the high level of connectivity and openness of the system, VBASE can automatically record, analyze and visualize data from different systems, trades and energy consumers. For the formation of meaningful key data there is the parallel recording of data which affects the use of resources. When analysing the consumption for heat production in buildings for example, it is important to contrast the consumption with the value of the outdoor temperature.

The recorded data can be transferred directly to a database server for archiving and are therefore available for the evaluation of higher-level systems (for example, ERP systems) at any time. In addition to the local visualization on the desktop PC or HMI device, the collected information may also be provided to internet enabled devices (PC, smartphone, tablet PC) for mobile display. When values are exceeded, the system alerts the appropriate person or department by email or text message.

Based on the obtained information, a specific energy management can be operated very efficiently for any production or building complexes. For energy monitoring the generated energy data itself (for example from the own PV

system, heat pumps, etc.) can be poured in and contrasted to the self-consumption. The acquisition of consumption data for other resources, such as of water, is also possible and provides additional options to manage the use of resources.



### Energy and resource management

Energy controlling is the logical complement to Energy monitoring, because the information from the monitoring can apply and the savings can be realized. Unnecessary energy consumers are automatically turned down or switched off.

The indicators obtained from the VBASE monitoring can be automatically transmitted to the control systems of the energy consumers to regulate them demand-based and thereby operate energy efficient. When there is no direct control of consumers, VBASE-Controlling can directly intervene regulating and controlling by downstream systems. Peak loads can be avoided by starting particularly energy-intensive

consumers only at specific times or operating at maximum power. Through the use of production and work schedules e.g. Systems, lighting, heating etc. can be accurately timed and regulated.

Self-generated energy (for example from the own PV system) can be used more extensively by energy controlling, because all information about the currently generated power and the consumption are available at any time. Energy storages can also be integrated and operate with a very high efficiency. When values are exceeded, messages can automatically be send by e- mail or text message.

### Weitere Informationen: [www.vbase.net](http://www.vbase.net)

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