Datasheet HVAC Building & Process Automation SL

The **HVAC Building & Process Automation SL** package contains field-tested function blocks and HTML5 visualization macros for building automation applications. It includes libraries for HVAC control, BACnet communication, Modbus integration, alarm management, and CSV data logging.

The package is optimized for rapid engineering with the CFC editor and includes complete project templates for quick start development.

For more information: https://support.powerio.com/hub/codesys-hvac

Without license acquisition (download only), the HVAC Building & Process Automation SL operates for 30 minutes without functional limitations (Demo).

Description

HVAC Library

The **HVAC Library** contains function blocks and system macros for creating heating and ventilation systems as well as room automation. The focus is on parameterization over programming to accelerate engineering.

The library provides hardware independence for controllers and I/O groups. The function blocks are optimized for the CFC editor and include comprehensive parameter sets for flexible configuration.

Description and documentation: HVAC Library

HVAC Visualization Library (HVACV)

The **HVACV Library** provides ready-made visualization elements for HVAC devices and systems. It includes pre-built frames for pumps, fans, temperature and sensor displays, as well as complete system diagrams.

The library supports manufacturer-specific device interfaces for Belimo, Danfoss, ebm pabst, Thermokon, and others. It integrates with the HVAC Modbus, KNX, and BACnet2 libraries.

Description and documentation: HVACV Library

HVAC BACnet Library (HVACBACNET2)

The **HVAC BACnet Library** enables simple reading and writing of BACnet data points, optimized for rapid engineering in the CFC editor. The focus is on parameterization over programming.

The library makes working with many up to several thousand BACnet objects in CODESYS practical and clear. It uses the CODESYS BACnet2 Stack and adds practical function blocks for diagnostics, client, and server operations.

Note: Requires an additional separate CODESYS BACnet SL license.

Description and documentation: HVACBACNET2 Library

HVAC CSV Library (HVACCSV)

The **HVAC CSV Library** enables time-controlled data recording to CSV files. Measurement values, process data, and other information can be logged and saved for analysis.

The library provides functions for converting timestamps to various string formats, automatic filename generation with timestamp integration, processing of column and row data, and rounding of floating-point numbers to defined decimal places.

Description and documentation: HVACCSV Library

HVAC Alarm Library (HVACFAM)

The **HVAC Alarm Library** enables access to all AlarmManager alarms via IEC code. It provides a high-performance alarm buffer system with filtering by type, class, group, and text patterns.

The library supports email notifications directly from the controller or via the HVAC Portal, management of policies and groups for alarm behavior, as well as status and diagnostic information for email delivery.

Description and documentation: HVACFAM Library

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HVAC Modbus Library (HVACMODBUS)

The **HVAC Modbus Library** contains manufacturer-specific function blocks for rapid engineering without manual register configuration. It supports both Modbus RTU (serial) and Modbus TCP (network).

The library uses a master-slave architecture: A master block (serial or TCP-based) connects to slave devices. Matching visualization elements are available in the HVACV library. Missing device support can be added upon request.

Description and documentation: HVACMODBUS Library

Available Projects

The use of the libraries is supported by project templates:

- HVAC Macro Project - Complete example project with system macros and visualization
- HVAC I/O Project - I/O configuration example for powerIO hardware
- Starter Project - Empty project template for new applications

Manufacturer

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General Information

Product	HVAC Building & Process Automation SL
Article Number	2312000005
Scope of Delivery	HVAC Building & Process Automation Library, Example Project
Demo/Test Mode	30 minutes
Distribution	CODESYS Store – https://store.codesys.com

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System Requirements and Limitations

Programming System	CODESYS Development System V3.5.17.20 or higher
Runtime System	CODESYS Control V4.2.0.0 or higher
Supported Platforms	All CODESYS runtime systems in the specified version

Licensing

Single device license: The license can be used on the controller where the CODESYS runtime system is installed.

License activation is done on a software-based license container (soft container) that is permanently bound to the controller. Alternatively, the license can be stored on a CODESYS Key (USB dongle). By plugging the CODESYS Key into a different controller, the license can be used on that controller.

Without license acquisition (download only), the library functions for 30 minutes without functional limitations (Demo).

License: HVAC Building & Process Automation SL License

Note: Use the "Device Reader" project to determine the functions supported by the controller. "Device Reader" is available free of charge in the CODESYS Store.