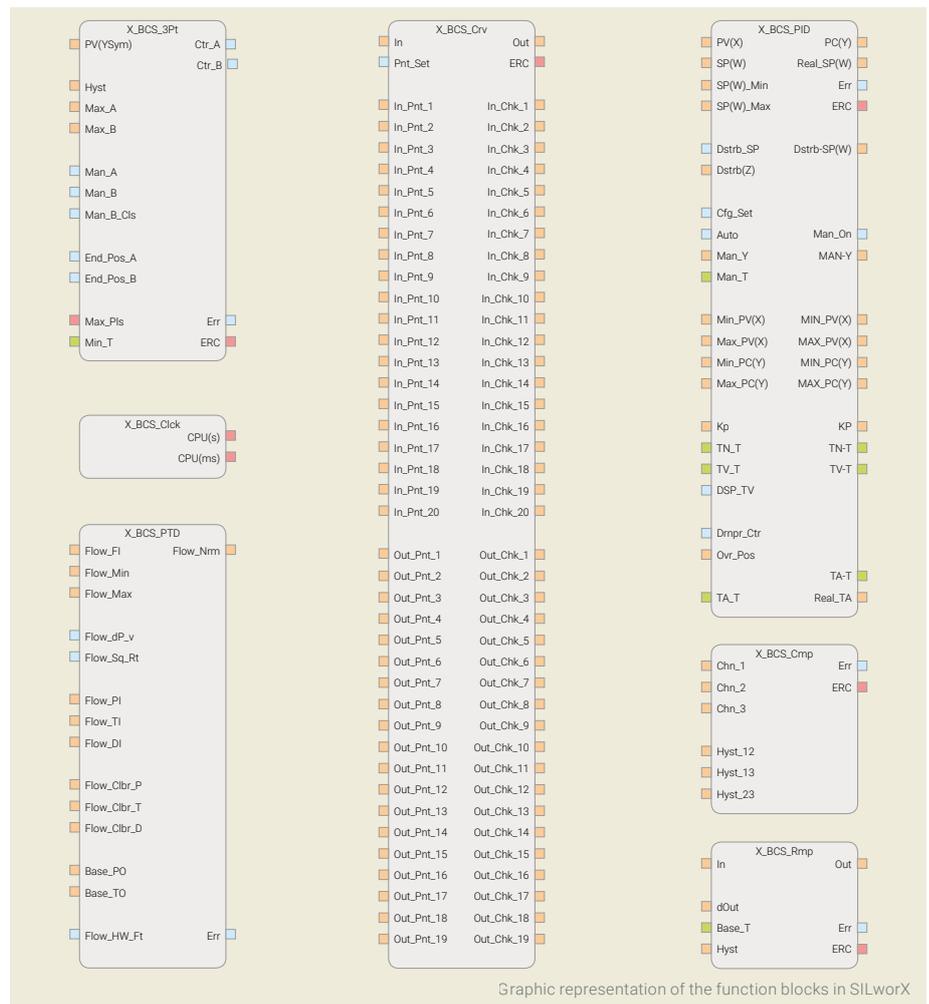




TÜV-Tested and Approved BCS Function Blocks for Load and Fuel Air Ratio Control of Industrial Combustion Appliances

The BCS function blocks were developed to comply to the latest normative and technical requirements for optimizing consumption of fossil fuels and reducing the pollution caused by fossil fuel combustion. Additionally, the usage of pre-programmed and proven function blocks can be understood as a fault-avoidance measure in accordance with IEC EN 61511 (ANSI/ISA 84.00.01) during the design of the application software. Another important aspect is that the proven BCS function blocks reduce engineering time and therefore the cost of the application software design.



Graphic representation of the function blocks in SILworX

Part Numbers

Block library for the load and combined control of fuels and combustion air in industrial firing systems. Can be used for the programming tool SILworX.

8 9 5650005:
X_BCS_Heat_Lib Block library for load and combined control

Benefits

Safety Benefits

- No programming errors thanks to tested pre-programmed solutions
- Fault-avoidance measures in accordance with international safety standards
- Simplified troubleshooting in field thanks to the comprehensive diagnostic of the BCS function blocks

Cost Benefits

- Less programming effort
- Lower inspection and test costs
- Fast commissioning

Operating Benefits

- Comprehensively tested functions facilitate project planning
- SILworX online help function for block parameterization
- Documentation is automatically imported with block library migration to SILworX

Brief Description of the Function Blocks	
X_BCS_PID	The function block comprises the function of a PID sampling controller with speed algorithm. Designed specifically for the structure of combined controls, it has a fault and auxiliary variable override. An override of control valves can be parameterized; it can be set to various control characteristics (PID or PI) in fault and command responses.
X_BCS_3Pt	The function block comprises the function of a 3-point stage, which can be used in combination with the control block for actuating motor control units (right-hand rotation/stop/left-hand rotation).
X_BCS_Cmp	The function block comprises the function of a comparator of 2 or 3 process points. It can be used for checking the plausibility of redundant measurements.
X_BCS_Clck	The function block comprises the function of a millisecond counter started in 2005, which can be used to trigger PID controllers.
X_BCS_Crv	The function block comprises a freely programmable series of curves with 20 input and 20 output support points.
X_BCS_PTD	The function block comprises the pressure (P), temperature (T) and density (D) correction for flow measurements. The block can be used for linear or square root signals, and also for differential pressure measurements, or for speed-based measurements.
X_BCS_Rmp	The function block comprises a ramp function, which can be used to start up a working point, over a defined gradient. This function block can also be used for damping process signals.

* X = for HIMax and HIMatrix (SILworX)

TÜV-tested and TÜV-certified BCS function blocks are part of the HIMA solution FlexSILon BCS.

FlexSILon BCS is the complete solution for the automation of burner control and boiler protection. HIMA offers this complete solution from just one source. The core components are the proven safety systems HIMax and HIMatrix; the configuration, programming, and diagnostic tool SILworX; and the unique know-how of experienced system engineers who support you throughout the entire lifecycle. This is how HIMA guarantees maximum plant safety with optimized availability.

Engineering Tool

SILworX is the fully integrated configuration, programming, and diagnostics tool from HIMA for the HIMax and HIMatrix systems.

Safety System

The fail-safe HIMA safety controllers HIMax and HIMatrix meet highly technical prerequisites for the safety-related monitoring of the firing functions of gas and oil burners.

Functional Safety

The function blocks meet the applicable requirements of the following standards:

- DIN EN 50156-1
Selected technical standards:
- EN 298, EN 230, EN 264, EN 676, EN 12067-2, EN 746- 2, etc.