HIMA

SMART SAFETY.

TÜV-Tested and Approved BMS Function Blocks for Safety and Reliable Control of Fossil Fuel Burners

The BMS function blocks were developed to comply with the latest normative and technical requirements for safety and reliability control of fossil fuel burners. 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 BMS function blocks reduce engineering time and therefore the cost of the application software design.

* X = for HIMax and HIMatrix H = for HIQuad

Graphic representation of the function blocks in SILworX
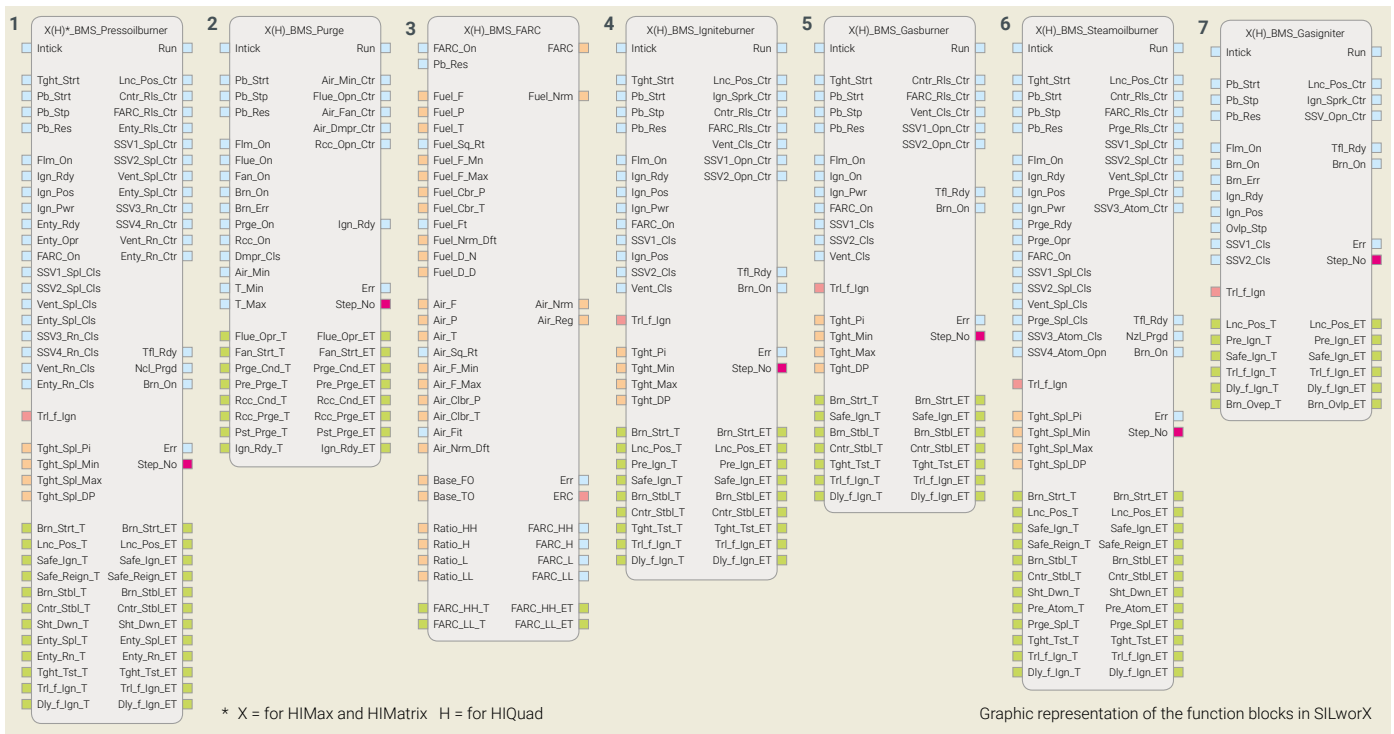
Part Numbers

Block libraries for the start, operating and stop sequences of gas and oil burners. For both SILworX and ELOP II:

- 89 2042570: BMS_Gas_Lib
  Block library for gas burners
- 89 2042571: BMS_Oil_Lib
  Block library for oil burners
- 89 2042572: BMS_Lib
  Block library for gas and oil burners

Benefits

Safety Benefits
- No programming errors thanks to tested pre-programmed solutions
- Fault-avoidance measures in accordance with international safety standards
- Sequential function control SFC with step-by-step diagnostic
- 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(H)_BMS_Purge	The block comprises the functions for a 2-phase pre-purge and a 1-phase post-purge.
X(H)_BMS_Gasigniter	The block comprises the functions of a small pilot burner that is operated with gaseous fuels.
X(H)_BMS_Gasburner	The block comprises the functions of a main burner that is operated with gaseous fuels.
X(H)_BMS_Igniteburner	The block comprises the functions of a direct-ignition main burner that is operated with gaseous fuels.
X(H)*_BMS_Pressoilburner	The block comprises the functions of a main burner that is operated with liquid fuels. The fuel is atomized by the high fuel pressure ahead of the burner head.
X(H)_BMS_Steamoilburner	The block comprises the functions of a main burner that is operated with liquid fuels. The fuel is atomized by an atomizing medium (e.g., steam).
X(H)_BMS_FARC	The block comprises the function of fuel-air ratio controlling. This function is based on volume or mass flows.

* X = for HIMax and HIMatrix (SILworX)   H = for HIQuad (ELOP II)   ** Can also be used for pulverized coal burners

TÜV-tested and TÜV-certified BMS 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
- ELOP II is the efficient engineering tool for the HIQuad systems

Safety System
The fail-safe HIMA safety controllers HIMax, HIMatrix, and HIQuad meet very 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 and can be used up to SIL 3:

- DIN EN 50156-1, DIN EN 61508-1, -2, and -3 (Phase 9), IEC 61511, EN 62061

Selected technical standards:
- EN 298, EN 230, EN 264, EN 676, EN 12067-2, EN 746-2, EN 1643, etc.