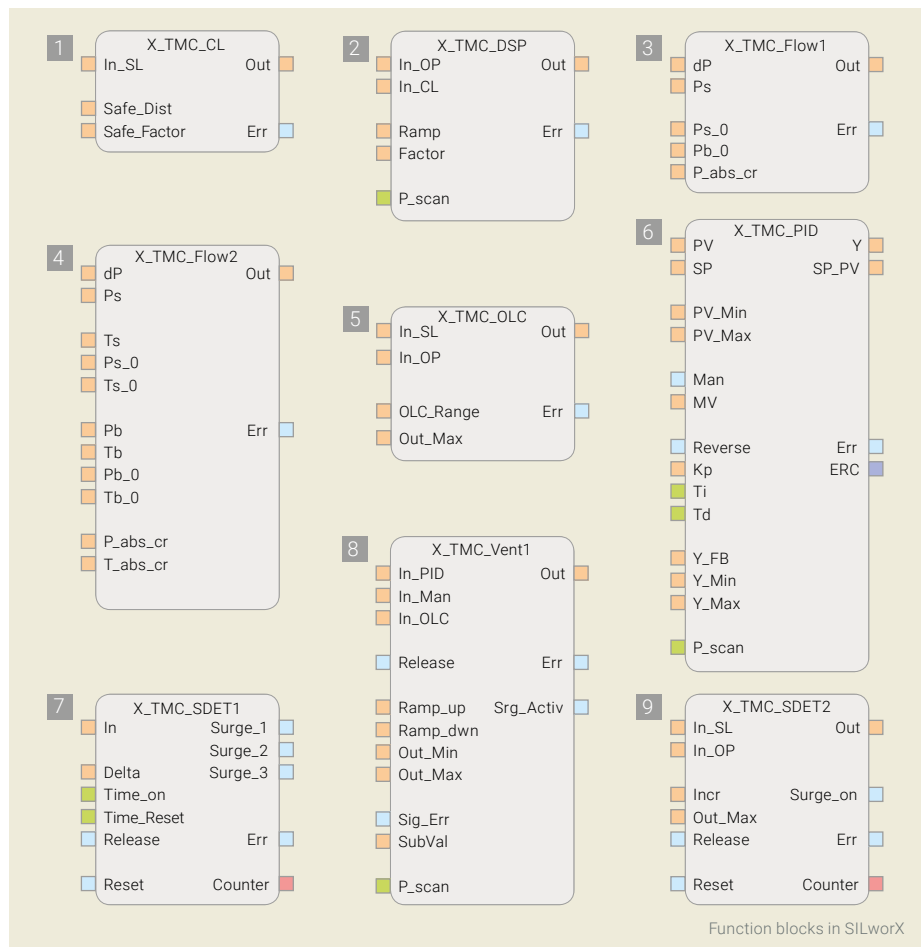




New HIMA Function Blocks for Turbo Compressors

These function blocks were specifically developed for controlling and monitoring axial and radial compressors. Based on the HIMax safety system, the automation of a compressor is possible without self-programming of required functions. Used in conjunction with additional function blocks from the standard SILworX function block library (e.g., the ramp function block, the interpolation function block or the PID controller), the entire operation of a compressor can be realized. Additional special function blocks for Transition and Loop Decoupling are available, to ensure decoupling of surge- and load-control in compressor networks.



Part Numbers/Delivery Date

Part Numbers:

- 89 5650001: X_TMC_Comp_Lib
Compressor function block library for surge-control and protection
- 89 5650002: X_TMC_SDET1
Function block for surge detection on an axial compressor
- 89 5650003: X_TMC_SDET2
Function block for surge detection on a centrifugal compressor

Delivery Date:
Immediately

Benefits

Safety Benefits

- Tested pre-programmed solutions mean fewer programming errors
- Fault prevention measures according to international safety standards

Cost Benefits

- Reduced programming effort
- Reduced testing costs by pre-tested functions
- Quick commissioning due to fault prevention

Operating Benefits

- Facilitation of projecting due to fully proven TMC functions
- SILworX online help for configuring the function blocks
- The complete documentation is imported while the function block library is imported to SILworX

TECHNICAL FACTS

FUNCTION BLOCKS FOR TMC

Short Description of the Function Blocks		
1	X_TMC_CL	Control Line, calculates the left limit of the operating zone depending on Surge Line
2	X_TMC_DSP	Dynamic Set Point, to prevent compressor surging due to very quick drop of the mass flow
3	X_TMC_Flow1	Mass flow calculation, orifice on suction
4	X_TMC_Flow2	Mass flow calculation, orifice on discharge
5	X_TMC_OLC	Open Loop Control, quick opening of the recycle valve on reaching Surge Line
6	X_TMC_PID	PID control block
7	X_TMC_SDET1	Surge Detection Block, for axial compressor with trip functionality
8	X_TMC_Vent1	Valve Block, collecting of the events of all control blocks to the recycle valve
9	X_TMC_SDET2	Surge Detection Block, for centrifugal compressors with CL shift

Engineering Tool

SILworX is the fully integrated configuration, programming and diagnostic tool from HIMA.

Safety System

The HIMax safety system from HIMA provides the required performance for controlling, regulating, monitoring, and protecting turbo machines.



HIMax®

The function blocks are part of the HIMA TMC solution.

- Control: start-up, operation, manual functions, shut down, etc.
- Regulation: speed control, steam distribution, power control and distribution, anti-surge, etc.
- Monitoring decoupling of surge- and load-control and protection: over speed trip, bearing, temperature, pressure, etc.

Functional Safety

HIMax and SILworX can be used in applications up to SIL 3 in accordance with:

- IEC 61508
- IEC 61511
- EN 62061

Also usable up to PL e in accordance with EN ISO 13849.