

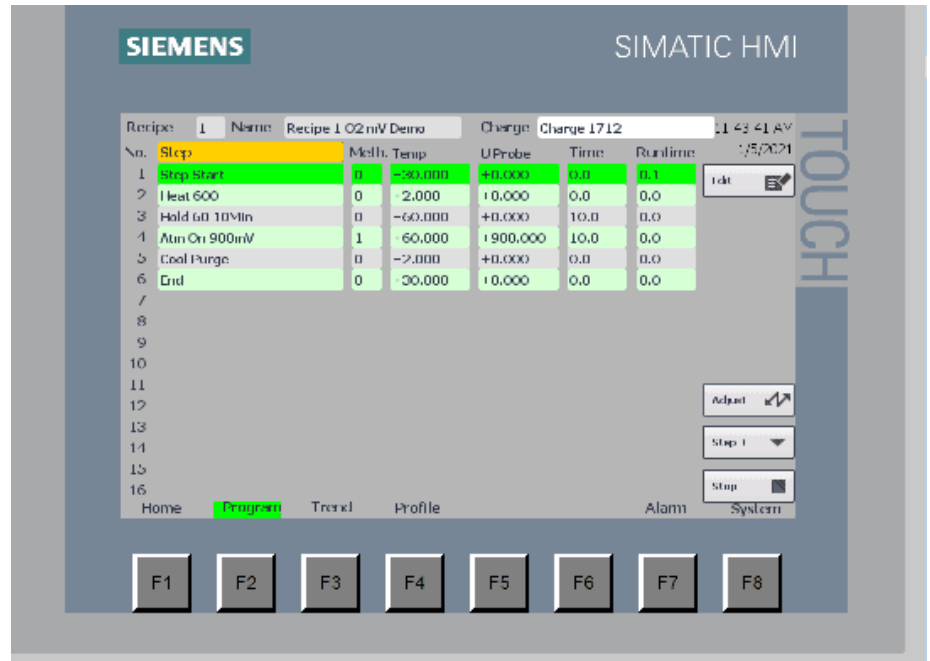
PGS

Programmer for S7 PLC

The programmer software PGS implements a complete programmer function directly on a Siemens S7 1200 or 1500 PLC. A recipe editor and the programmer itself are made available. This means that both the system control and the process control can be implemented directly on the PLC. In addition, functions such as online diffusion calculation for carburizing/case hardening or nitriding potential control for nitriding/nitrocarburizing can be implemented without the use of special manufacturer-dependent control devices. Only S7

The programmer has the following range of functions:

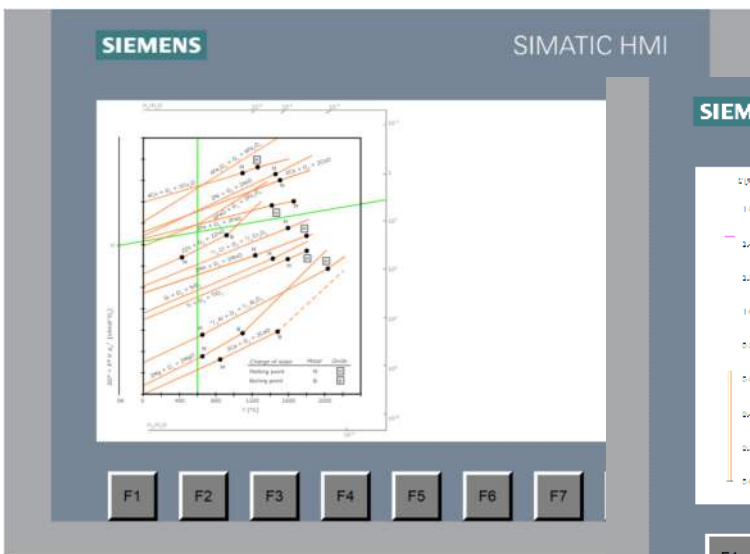
- program steps with templates,
- free variable definition,
- relays and events,
- setpoint assignment and ramp function,
- Time control, maximum time monitoring for each program step
- Band monitoring (comparison of actual value/setpoint) with generation of band alarms,
- Program intervention to change a running program,
- Programmer with online diffusion calculation and target value control (together with sensor module SM 01),
- Programmer with nitriding potential/carburizing potential/oxidation potential control (together with sensor module SM 01).



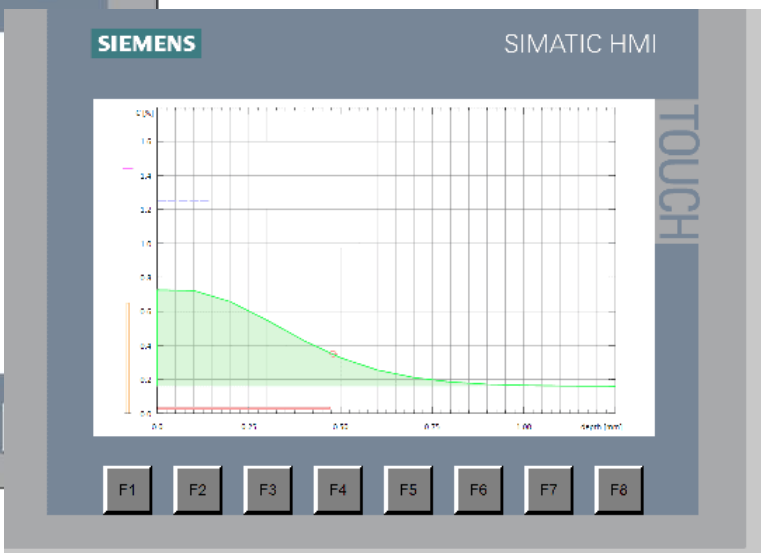
Different versions available:

- PGS 08 for simple furnaces, e.g. tempering or preheating furnaces with at least S7 1212 and touch panel KTP400,
- PGS 16 for batch furnaces, e.g. shaft furnace for carburizing with at least S7 1214 and touch panel KTP700,
- PGS 32 for more complex batch furnaces, e.g. batch IQ furnaces for case hardening, retort furnaces for nitriding or vacuum furnaces with at least S7 1500 and touch panel KTP900.

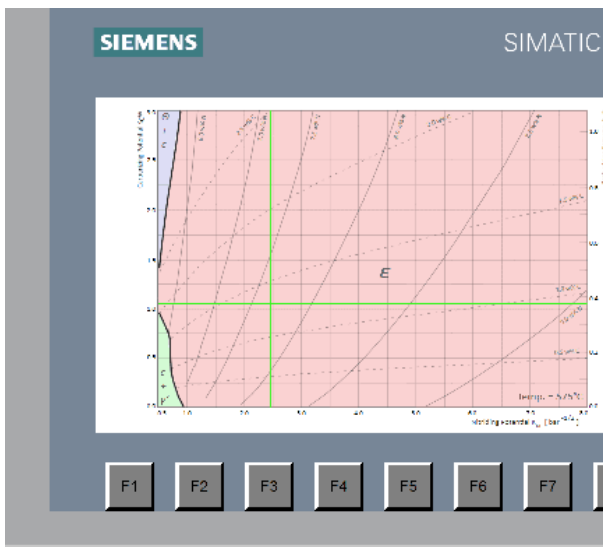
The integration of the SM 01 sensor module enables process engineering calculations for carburizing/case hardening and nitriding/nitrocarburizing. The display of the process engineering diagrams of the sensor module such as carbon diffusion profile, Lehrer diagram, Kunze diagram, Ellingham diagram, etc. is realized through the web browser function of the touch panel. No additional programming effort is required for this.



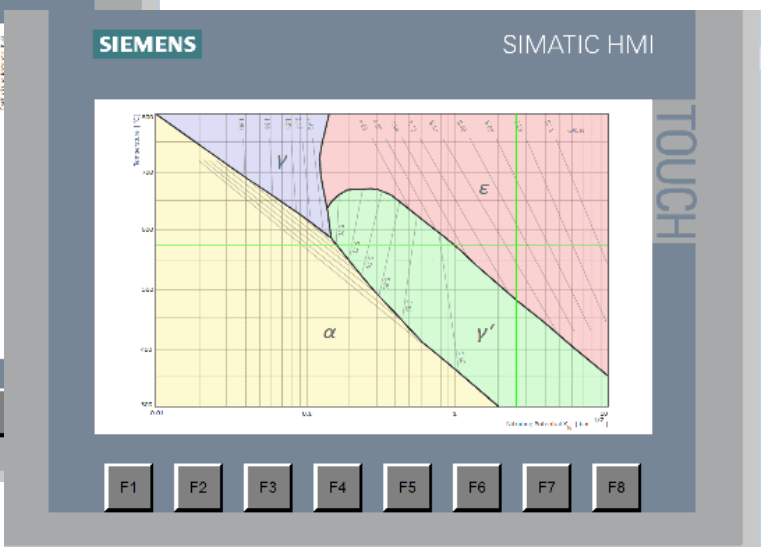
Ellingham diagram



Carbon profile in carburizing / case hardening



Kunze diagram in nitrocarburizing



Lehrer diagram for nitriding

The connection to higher-level systems such as process control systems is possible at any time via network and the protocols Modbus/TCP or S7 communication.