



## SE-702 - The Program Controller

high performance • user friendly • premium quality

**Metal working industries**  
Heat treatment  
Surface refinement  
Hardening



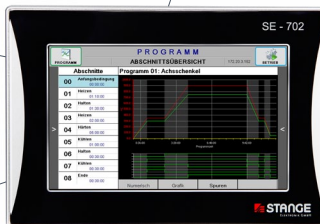
**Glass industries**  
Dryers  
Autoclaves



**Food industries and pharmacy**  
Autoclaves  
Metering and mixing plants  
Sterilizing plant



**Ceramic industries**  
Drying plants  
Burning kilns  
Sintering furnaces



**Plastics industries**  
Extruders  
Dryers



**Cooling and air conditioning**  
Environmental simulation  
Climatic chambers



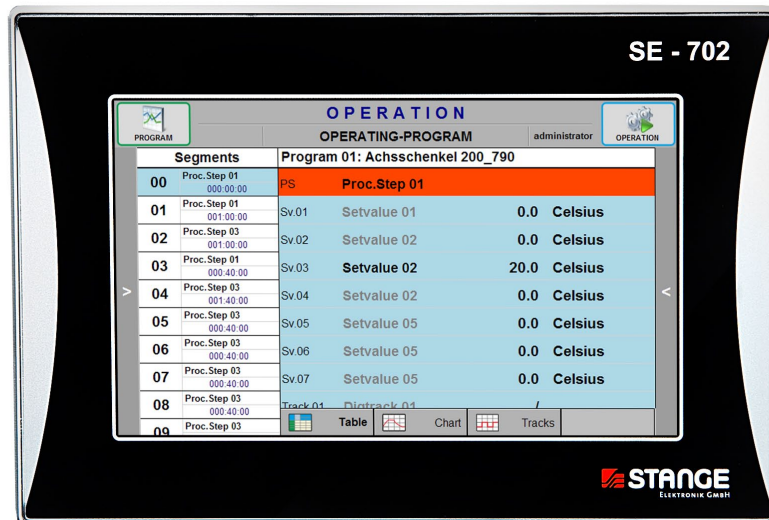
## SE-702 - The Program Controller for your business applications

The SE-702 is a universal compact automation device for small and medium-sized control tasks, which can be configured optimally for the required automation task by using the integrated software function modules and additional CAN peripherals.

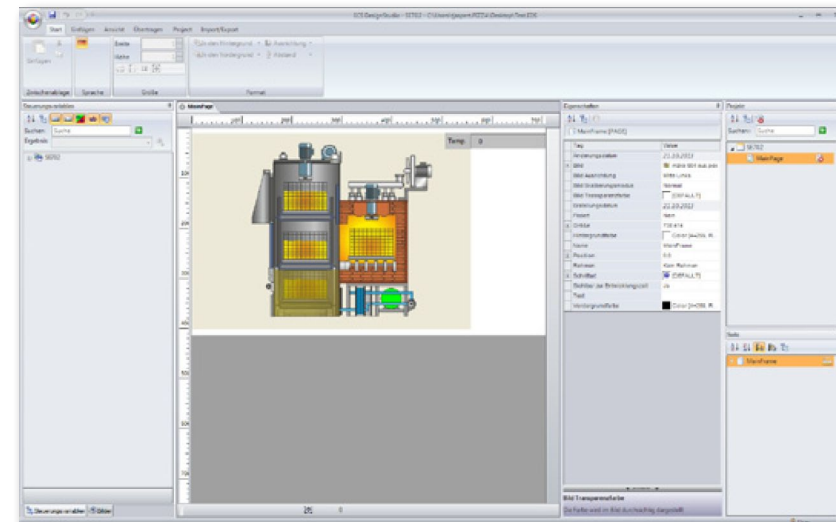
Necessary linkages of the function modules among each other as well as connection to I/O field are created by means of the integrated PLC function (instructions list editor).

Analogue device functions like actual values, set values, programmer, controller, tolerances, limit values etc. can be adapted and/or set easily at the device just like the PLC without external tools. This also applies for the other device functions like e.g. the extensive alarm processing with historical alarm recording.

Plant visualization can be realized by an external graphic editor which provides a good and clear plant overview and the actual process condition.



Program view



SE Designer for creating the visualisation

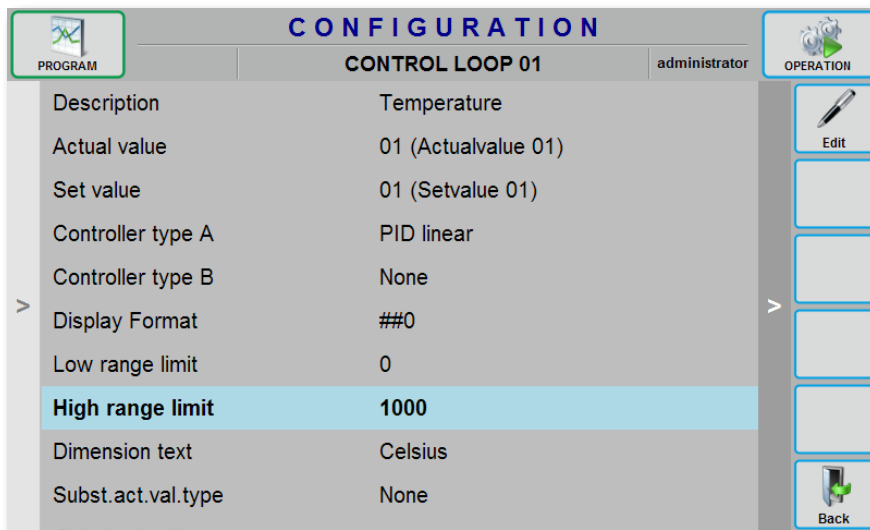
## EXCELLENT: PRICE / PERFORMANCE

### Extensive basic equipment inclusive:

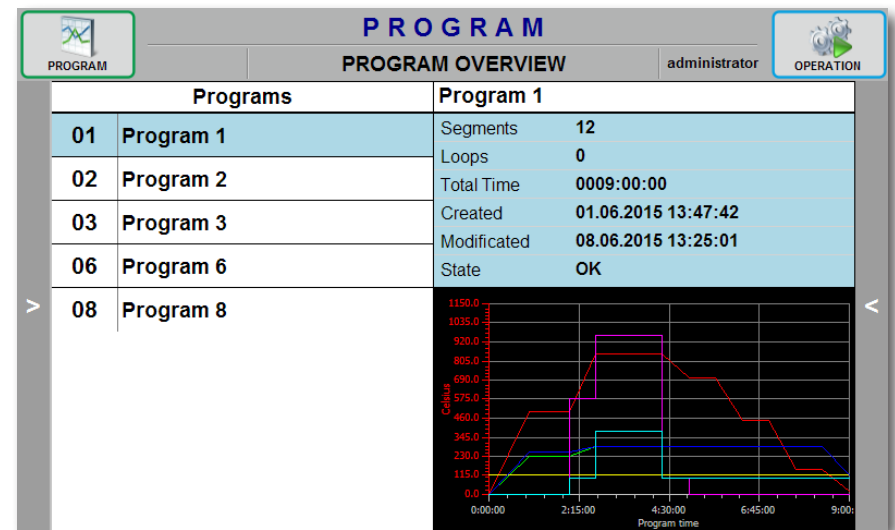
- Programmer
- Controller
- Alarm system
- PLC
- High-resolution glass display
- Capacitive multi-touch screen with gesture control
- Stainless steel housing
- Built up of high-quality parts
- Investment protection by more than 10 years spare part availability

## EXTENSIVE OPTIONAL EQUIPMENT

- Recorder
- Visualisation
- C-level
- Humidity calculation
- Interface modules (PROFINET, PROFIBUS)
- Operating hours counter
- S7-Modbus-TCP
- Language packs



*Individual view control zone*



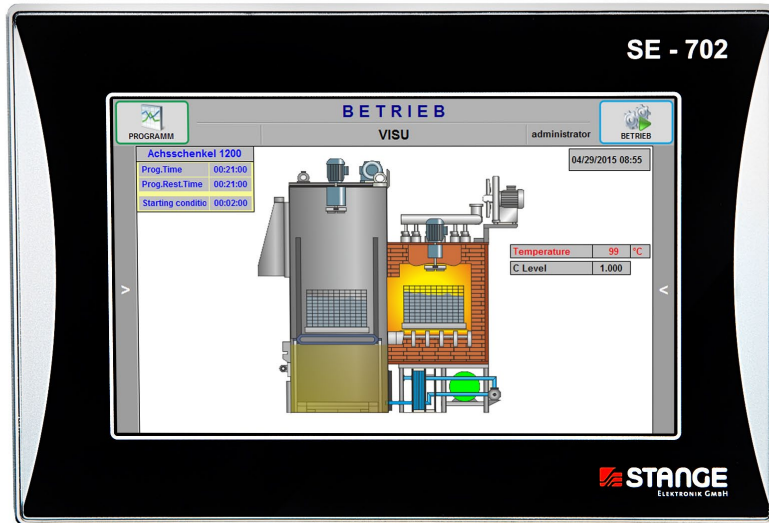
*Program overview*

## EASY CONFIGURATION

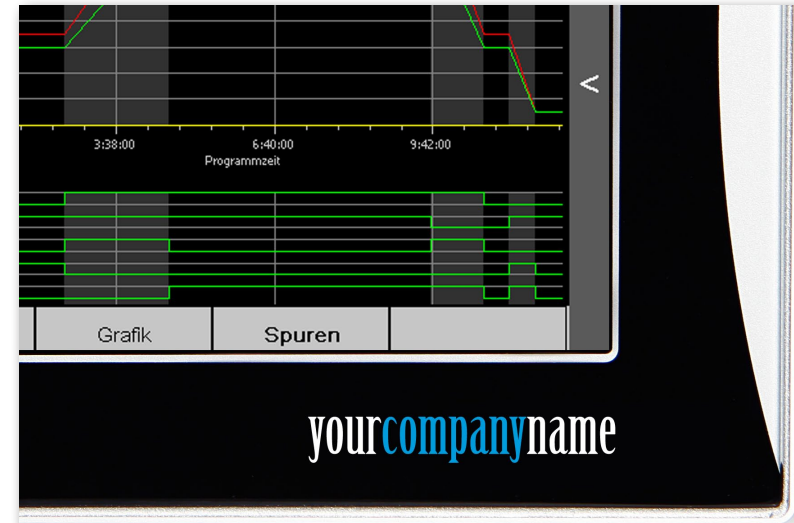
- Easy menu-driven configuration without programming knowledge
- Predefined function groups
- Configuration of functions possible without higher previous knowledge
- Easy integration of analogue functions via functional in-/outputs
- PLC STL with comments, status and search function

## INTUITIVE OPERATION

- Multi-touch screen
- Lists scrollable
- Intuitive operating logic
- Recorder
- User administration
- Online language switching
- Real-time set and actual value diagram
- Visualisation with 16 million colours, 800 x 480 pixels (130 DPI)
- Client operation via MS Windows



*Program controller with device visualization*



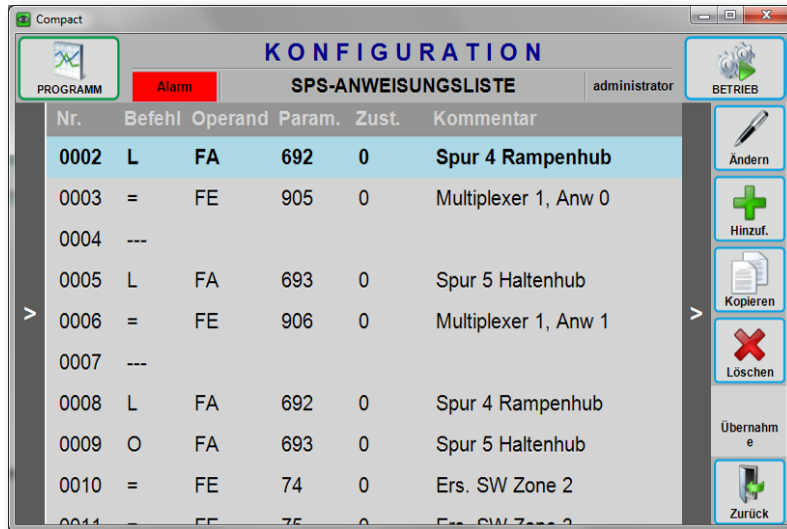
*Program controller in custom design*

## HIGH-QUALITY DESIGN

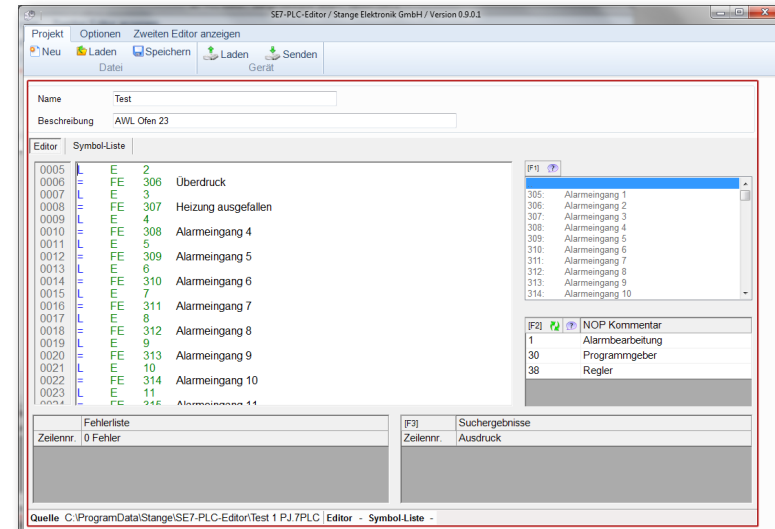
- High-quality manufacturing
- High-quality materials
- Stainless steel housing
- Front panel with glass touch in aluminium mounting profile
- Front panel optional in custom design

## STANGE SERVICES

- Technical consulting with manufacturer know-how
- Task analysis and selection of components
- Free support hotline
- Repair center for short repair times
- After-sales service
- Service offices in China and India



VNC Remote Control / Client Operating Software



PLC Editor

## Operating Software

### Client operating software

- PC software for device operation with input keyboard
- Access to one device from several PCs without restrictions for the operator
- Access authorisation via login code

## CONFIG.-OUTPUT/PLC EDITOR

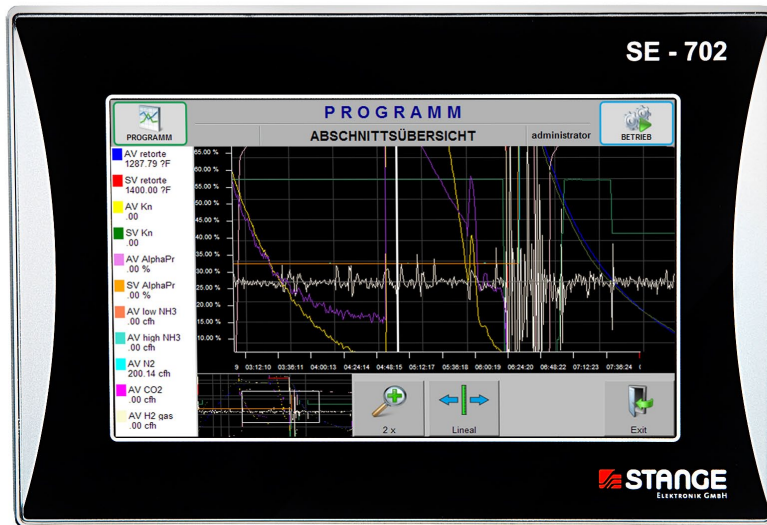
### Configuration Output:

- Device configuration access via PC software
- Printout of the complete configuration data
- Data storage as PDF and/or Word file

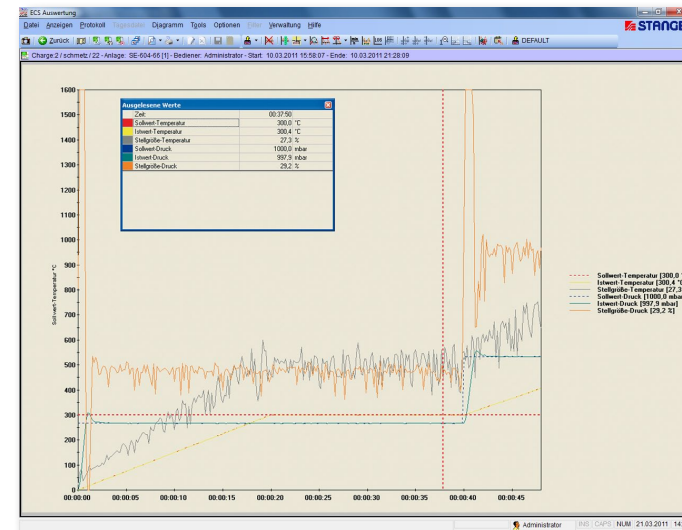
### PLC Editor:

- Editor for editing the device statement list
- Display of two statement lists at the same time to take-over already existing functions
- Search function
- Structure by networks
- Assignable symbol list





Data Recorder with Zoom Function and Ruler



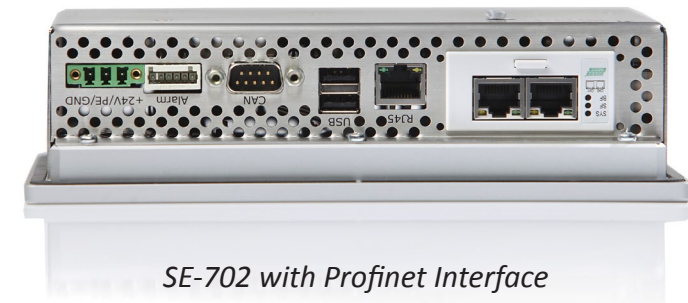
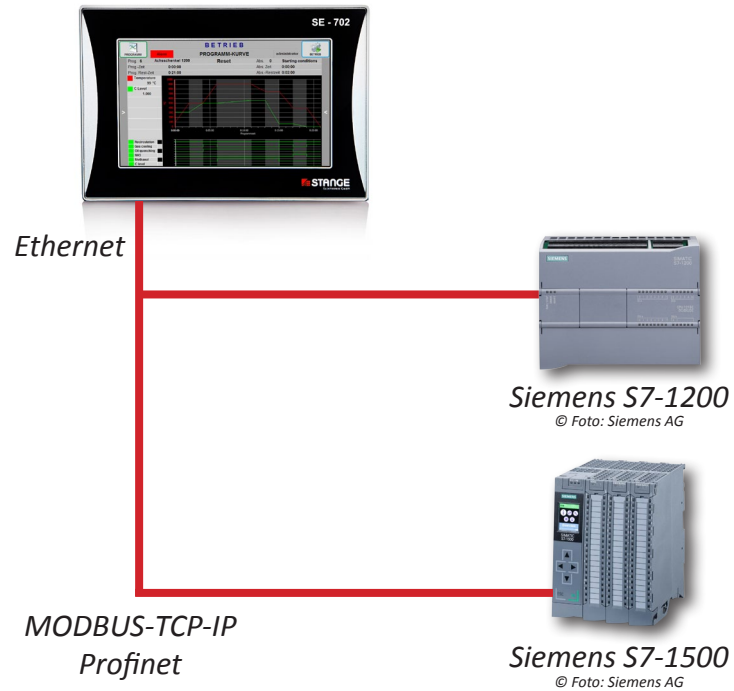
Evaluation Software ECS-AW

## OPTION: 16/32 CHANNEL RECORDER

- Free configurable 16/32 channel data recorder
- Storage of all alarms according to each log file
- 20 configurable header data fields for each log file
- Text field for further information to each log file
- Analysis with super zoom function and ruler in the SE-702 program controller
- Intermediate storage of 200 batch files and/or daily files

## EVALUATION SOFTWARE ECS-AW

- Low-cost evaluation software ECS-AW for PC
- Graph evaluation with all stored channels
- Free configuration of all parameters (channels, colours, legend etc.)
- Any numbers of configurations storable
- Zoom positionable anywhere with the mouse
- Cross-hair to read off detailed values
- Finished files are automatically collected via Ethernet
- User-friendly evaluation options
- Easy convert to CSV or XML format



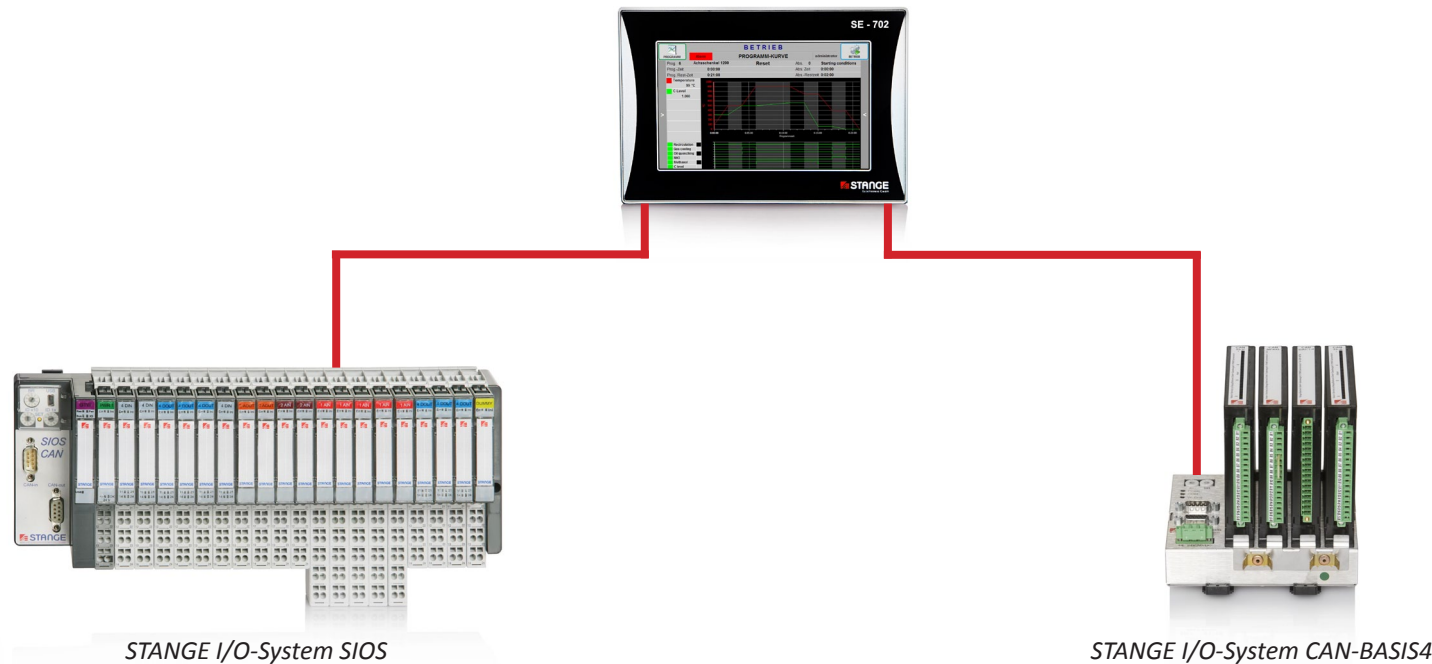
## INTERFACE FOR S7-1200/1500

- SE-702 as program controller OP with data recorder for the S7
- Available interface for SIEMENS S7-1200/1500
- Data blocks for the S7 are included in delivery (plug & play)
- Mirroring of all SE-702 function blocks into the S7;  
Thereby the function blocks of the SE-702 are available in the S7 TIA portal

## PROFINET INTERFACE

- SE-702 as program controller OP with data recorder for the S7
- Available interface for SIEMENS S7-1200/1500
- Data blocks for the S7 are included in delivery (plug & play)
- Mirroring of all SE-702 function blocks into the S7;  
Thereby the function blocks of the SE-702 are available in the S7 TIA portal





## STANGE-SIOS I/O-MODULES

CAN bus connection group for up to 64 modules:

- SIOS-IW1-XL, 1 universal analogue input
- SIOS-IW2, 2 analogue inputs (standard signal)
- SIOS-DAC2, 2 analogue outputs
- SIOS-DI4, 4 digital inputs
- SIOS-DO4, 4 digital outputs

## STANGE-CAN I/O-MODULES

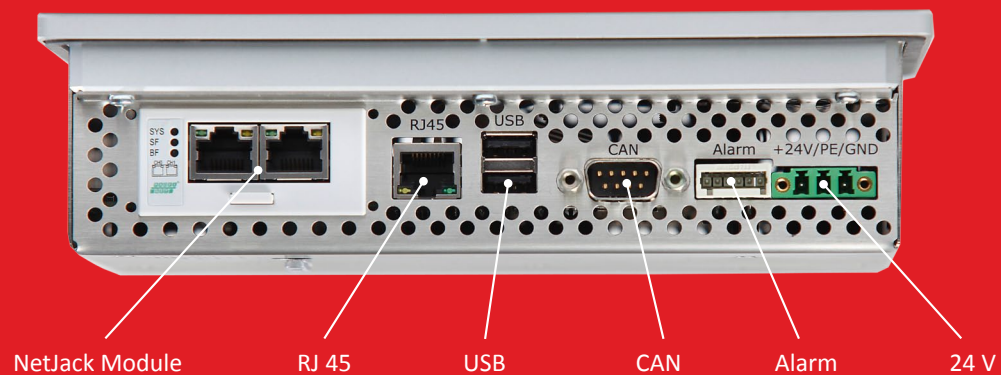
CAN bus connection group for up to 4 modules:

- CAN-IW4-XL/CAN-IW8-XL, 4/8 analogue inputs
- CAN-IW8-Q, 8 standard signal inputs
- CAN-DAC1/2/4, 1, 2, 4 analogue outputs (DAC)
- CAN-E16A16, 16 digital inputs/16 digital outputs
- CAN-E32, 32 digital inputs
- CAN-A32, 32 digital outputs
- CAN-REL8-8A, 8 relay outputs

Programmer	
Programs:	99 (optional: 250)
Loops per program:	8
Set values:	8 (optional: 30)
Digital tracks:	32 (optional: 64)
Segments:	max. 50 per program
Process steps:	max. 50, freely configurable
Controller	
Control zone:	8 (optional: 30)
Controller types:	PID linear, 2-point, 2-point PID, 3-point, 3-point PID, 3-point stepping (PI), configurable
PID parameter:	8 parameter sets
Tolerance band:	1 per control zone
Limit values:	2 limit values per control zone
Formula	
Formula:	8 (optional: 20)
Operations:	+,-, *, /, (, ), square root, e <sup>x</sup> , Lg (logarithm), absolute value, sinus, cosine
Tolerances	
Tolerances:	16 (optional: 60)
Tolerance outputs:	32
Comparisons:	Av-Sv, Av-Av, X-Sv, X-Av, X-X

Limit Values	
Limit values:	16 (optional: 60)
Possible values:	Sv, Av, X, variable value, Y, controller Av, controller Av
Alarms	
Alarms:	64 (optional: 300); internal error alarms 16, alarm priorities 8, alarm delays 8 (= priorities), 0,1 ... 99,9 sec, configurable, alarm processing 1:1, binary or BCD, configurable, system alarm output, visual and acoustic signal, acknowledgement of individual alarms selective
Analogue Multiplexer	
MUX modules:	5 (optional: 10)
Possible values:	Sv, Av, formula value X, variable
Analogue inputs:	4 per MUX module
Internal PLC Function	
Programming:	statement list (STL)
Statements:	max. 3.200
Commands:	logical commands, timer commands (switch-on-, switch-off-delay, time impulse)
Number of timers:	64
Number of flags:	512
Cycle time:	100 ms
I/O system: STANGE SIOS or CAN (via CAN-Bus)	
16 analogue inputs, 16 analogue outputs, 64 digital inputs, 64 digital outputs (optional: 48 analogue inputs, 32 analogue outputs, 200 digital inputs, 200 digital outputs)	

## FUNCTIONS



NetJack Module

RJ 45

USB

CAN

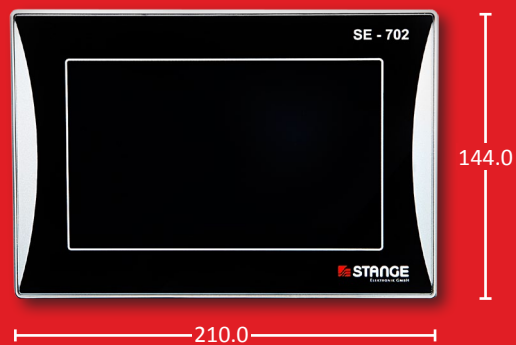
Alarm

24 V

Display	
Display:	TFT LCD 17,8 cm (7")
Resolution:	800 x 480 pixels (WVGA)
Number of colours:	16 million colours
Background lighting:	LED
Front screen:	glass 3 mm
Operation:	capacitive touch
Protection Class	
Protection class front:	IP 65
Protection class back:	IP 20
EMC interference resistance:	EN 61000-6-2
Electromagnetic radiation:	EN 61000-6-3
Processor / Memory	
Processor:	Freescale™ i.MX 6 ARM, 800 MHz
Main memory:	1 GB DRAM
Retain memory:	1 MB SRAM, battery-buffered
microSD memory card :	≥ 1 GB for Firmware
Interfaces	
I/O interfaces:	CAN Master, Modbus TCP-Slave, S7-Modbus (option) Profibus DP-Slave (option), Profinet IO-Device (option) System LEDs: PLC, CAN, Alarm, Watchdog
Ethernet:	10/100 1x USB: 2.0 2x CAN: 1x

Performance Data	
Power supply:	24 V DC (18 ... 36V)
Operation:	capacitive touch
Galvanic separation:	yes
Power consumption:	Typ. 12 W
Battery back-up:	Lithium battery
Real-time clock (RTC):	Date/time
Operating temperature:	0 ... 45 °C
Operating System	
Operating system:	Windows Embedded Compact 7
Dimension / Weight	
Dimension (W x H x D):	210 x 144 x 55 mm
Weight:	1.2 kg

## TECHNICAL DATA



# LOCATIONS & REPRESENTATIONS

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