

Variable Control System

DE-VR 4008

Freely configurable

Recording functions

Integrated PLC

Integrated process control system

Symbolic programming

Compact size

System Visualization

High resolution LCD-Display

The universal control system with integrated PLC allows application in all cases where sophisticated complex control and automation problems call for a solution, e.g. the heat treatment of metals, glass and ceramics and in the chemical and foodstuff industries.



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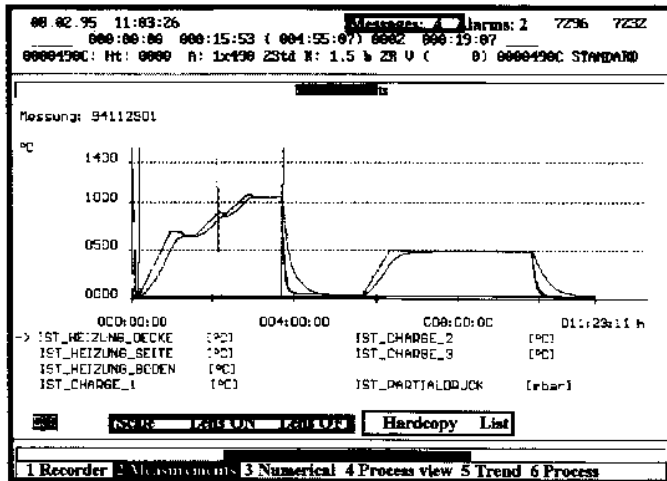
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Prozessautomatisierung

DE-VR 4008 in Operation

Visualization

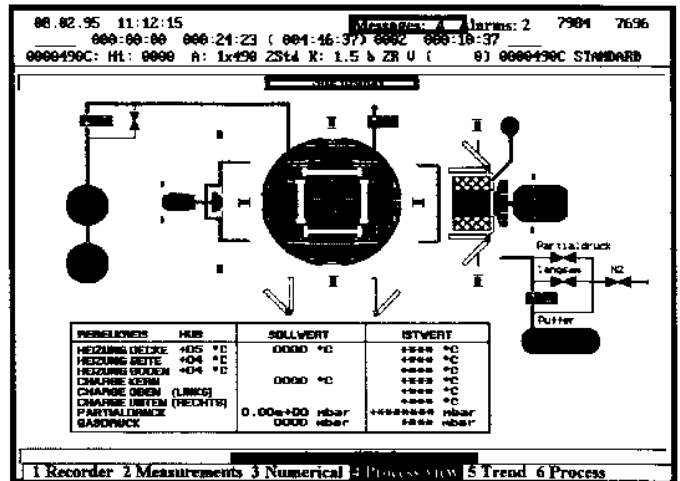
Curve diagrams

(Recording functions of the Process)



Site diagrams

("on-line" view of the process values)



Manual functions

Softkeys (control functions)

Start-up functions

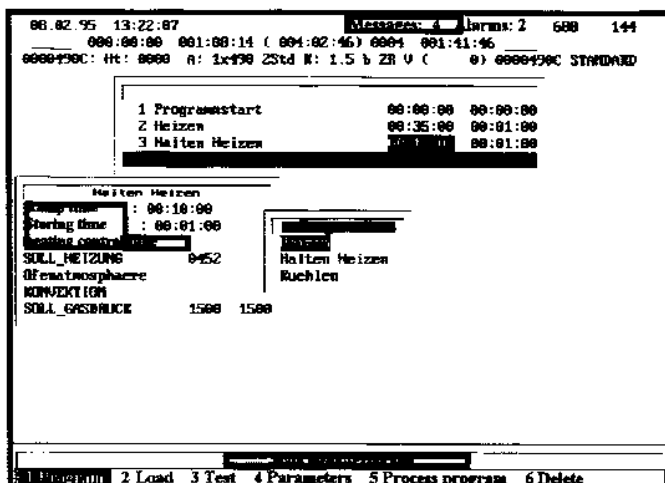
Password functions

Print out functions

Help functions (Offset, Backup and Restore)

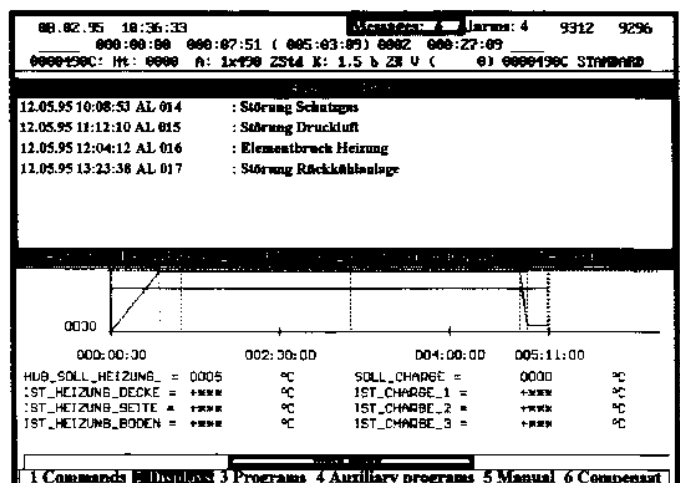
Programming

(Creating of treatment programs with the help of the "symbolic program structure")



Prozess status

(Display of alarms and messages)



TECHNICAL DATA

System computer unit

- * Computer components in 19in (3xstandard unit height) industrial-type rack housing with LC colour display in the computer housing with 640x480 dots graphic resolution)
- * Industrial (80486 DX/2) computer system

* Integrated PLC

(max program length: 10,000 instructions at <10ms time requirement for 1000 bit instructions at 486DX/2 25MHz)

* Memory:

- 4 MByte RAM (operating store),
- 128 kByte RAM (battery-buffered current process status store),
- 384 kByte RAM (battery-buffered treatment program store)

- 2 MByte ROM (operating program),
- 512 kByte FLASH EEPROM (configuration store).

- * Interfaces: 1 x parallel (centronics), 2 x serial
1 x keyboard interface for PC keyboard

- * Bus system with 7 free slots for max. 7 I/O cards

- * Docking to demig process control systems *prosys / provis*

- * Power pack: 230V AC switchable to 115V AC

- * Dual safety function by global and local Watchdog functions:

- global - automatic (post-PC interrupt) operating program restart e.g. reset,
- local - automatic deenergizing of all outputs in the event that controller-to-output card liaison fails within the defined time limit

- * Power failure monitoring

- * Operation by means of

- keypad (to DIN 40050 - enclosure IP 65) and key-lock switch (locks keyboard)
- connectable external PC keyboard, or
- coupled *prosys/provis* control systems

- * Mass storage (optional) diskette-drive, silicon disk (PCMCIA memory card)

- * Ambient temperature: 0...+45°C

- * Storing temperatur: -20...+60°C

- * relative humidity: 0...90% (non-condensing at +40°C and below 3000m)

- * Assembly dimensions - process controller:
282mm x 137mm x 350mm

Display Unit:

- * 6.5in screen diagonal
- * Resolution: 640 x 480 picture points at 16 colours
- * Standard VGA interface

Input/Output Cards

Eightfold analog input card

- * Potential separation: each input electrically isolated from the other and from system potential
- * Input wiring: all thermocouple types 0...10V, 0(4)...20mA, PT100 (2/3/4 wire technique)
- * free combination of input types, choice of input types by software configuration
- * Resolution: +/- 0.2°C for thermo couples
+/- 0.5°C for thermo couples types S,R,EL18
+/- 0.1°C for PT100
- * Scanning intervals: max. 120ms x (number of assigned inputs)
= 120ms to 960ms

Eightfold analog output card

- * Potential separation: all outputs electrically isolated from system potential
- * Output variables, simultaneously per output:
0...10V and 0(4)...20mA
- * Resolution: 12 BIT/0.25%
- * Output rate depending on configuration
- * Local watchdog function integrated

32-fold digital input card

- * Potential separation: all inputs electrically isolated by optocoupler from system potential
- * Input potentials: 12...30V DC - 15mA
- * Hardware debouncing of each input

16-fold digital output card

- * Double potential separation by optocouplers and relays
- * Outputs each with zero-potential contacts
- * External voltage supply to output relays: 24 AC/DC
- * Relay contacts load: max. 65V/max. 1A/max. 60W
- * Local watchdog function: integrated.

Special Programs:

A multitude of special programs (e.g. statistics/computation of diffusion) based on process and quality assurance technology is available specifically for this control system and can be integrated in the system depending on the relevant application.

The scope of supply covers the following PC configuration

- 1) Analog inputs configuration
- 2) Controller structures configuration
- 3) PLC/statement register (AWL) translator
- 4) Symbolic process programming configuration
- 5) Configuration of (detailed) system process views
- 6) PLC online display program (online debugger)

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