

Instrumentation Systems



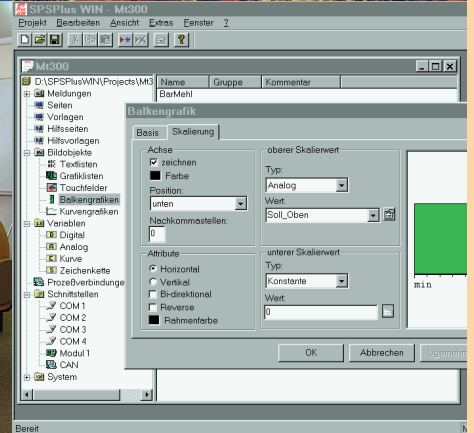
Instrumentation

Equipment Technology

- Control cabinets and system components for all aspects of instrumentation for installation in the control room
- Field stations with I.S. remote I/O systems and terminals for installation in Zone 1 or Zone 2 (Div 2)

Services

- Consulting
- Engineering and project management
- Manufacturing logistics and manufacturing control
- System testing and factory acceptance test
- Documentation
- Parameterisation
- Software applications
- Commissioning support and instructions
- Seminars and training
- On-site service
- Hotline
- References



R. STAHL SCHALTGERÄTE GMBH, being a worldwide operating company, offer a wide range of innovative products as well as comprehensive services in consulting, engineering, project management, commissioning and maintenance. We do not only regard ourselves as a manufacturer and supplier of components and systems, but also as a provider of comprehensive services. Our specially trained R. STAHL engineers guarantee for a qualified consultation in a tight advisory and service network.

We created the organisational capabilities by our Competence Center for Instrumentation Systems: professional handling of projects, process-orientated cabinet design and comprehensive services during the complete life cycle of your system.

We offer a flexible and competent partnership to you in order to meet all challenges arising in the field of instrumentation. We have many years of experience, from engineering to the handling of the smallest details, which is of benefit to you. Our quality control system according to ISO 9001, including all special aspects of explosion protection, guarantees for highest quality of our products.



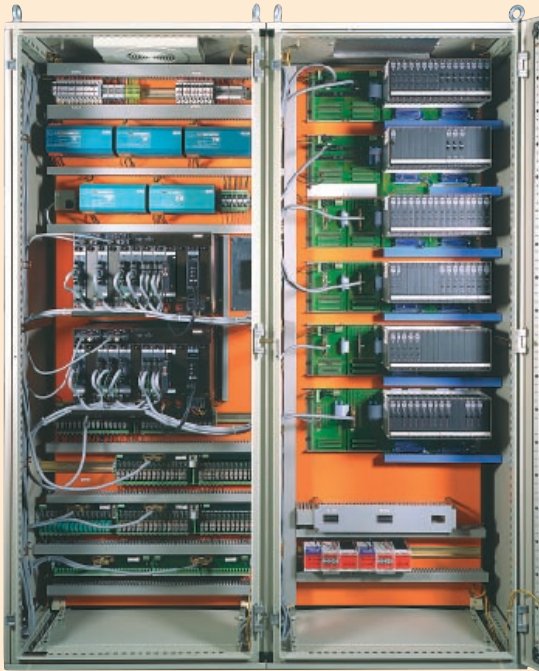
Safe area; Zone 1 and Zone 2

Equipment technology

In case of complex customer requirements, we realise customer-specific equipment, particularly for type of protection Intrinsic Safety in safe areas as well as for Zone 1 and Zone 2 (Div 2).

Our manufacturing is process-controlled and directly oriented to customer requirements. Due to most advanced manufacturing methods we are able to manufacture completely equipped I.S. system cabinets for control room or field installation. In addition to our approved standard components, we only use additional components from certified suppliers.

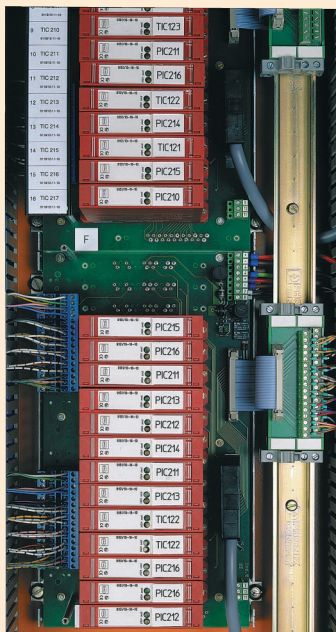
Control cabinets



- Installation of I.S. isolators in various technologies: DIN rail mounting design, modules or Eurocards
- Project-specific wiring and labeling/markings
- Terminal boards for intrinsically safe and non-intrinsically safe circuits
- Construction of complete control cabinets
- Installation of power supply units
- Mounting and wiring of free issue items (customer submitted equipment)

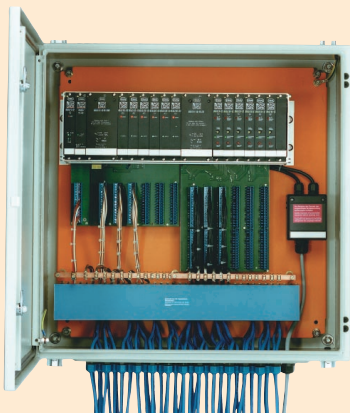


System components

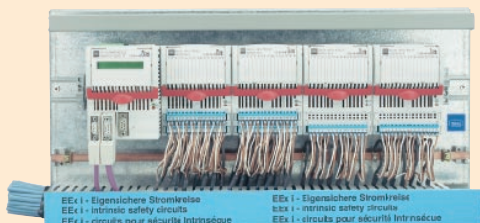


- I.S. isolators (modules) in module carriers
- I.S. isolators in 19" or 24" mounting racks
- Project-specific wiring
- I.S. isolators in system racks (Eurocards)

Safe area

Equipment technology (continuation)
Remote I/O field stations


- Standard field stations for temperature signals (thermocouples and PT100 in 2-, 3- and 4-wire technology) and digital input signals
- By installing premanufactured system units and by using standard cabinets, systems can be supplied quickly at favourable prices
- Problem-free connection to process control systems and PLCs via standard interfaces (Modbus, Profibus, etc.)
- System-specific field stations for I.S. signals and Ex e signals in one unit. The housings can be configured according to the requirements of the customers

System components for remote I/O


- Devices for remote I/O systems
- For installation into distributions cabinets, we supply pre-manufactured and pre-parameterised system modules with the requested signal mix on mounting plates

Terminals


- Installation of terminals in field housings
- Various housing materials: plastic, steel, stainless steel
- Installation of additional operating elements, e.g. large buttons, indicator lights, key-operated pushbuttons
- Through installation of a heater, the equipment can also be used at low temperatures (down to - 20 °C)

We also manufacture for our customers system-specific field stations with indicator lights, pushbuttons, switches and displays. Due to our comprehensive overall program, we are able to combine intrinsically safe equipment with components such as transformers, fuses, contactors, light fittings, heaters, and control panels in the type of protection Ex e or Ex d.

Cabinets in Ex p technology - see Chapter 11

Services

Consulting



In case of questions and problems regarding the field of instrumentation, our customers can always contact a competent person at R. STAHL:

- in our branch offices and agencies, engaged employees are at your disposal
- specially trained sales engineers are glad to visit you in order to advise you in the best way on site
- our employees in the Competence Center Instrumentation Systems at Künzelsau are at your disposal any time in order to find optimal solutions, even for difficult problems.

Engineering and project management

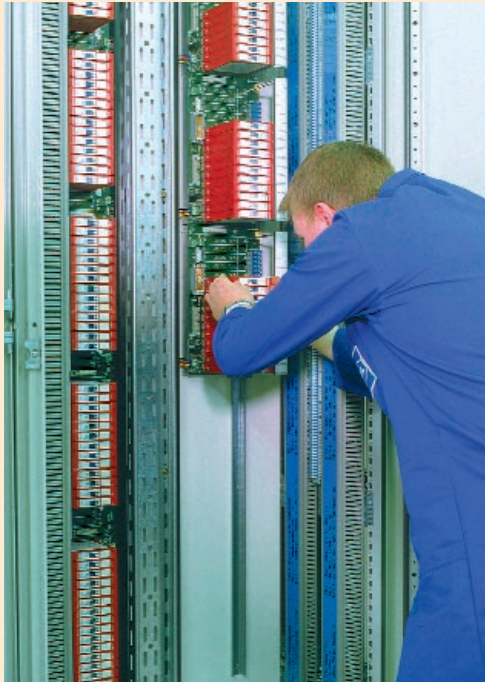



In planning and operating safe systems in hazardous areas, high requirements have to be followed. For that purpose our specialists and experts offer customised solutions:

- Upon request, we provide proof of intrinsic safety.
- The quantity and distribution of the I/O signals is determined on the basis of your documentation.
- The required components and the mechanical construction of the cabinets and housings are determined in an individual consultation using planning documents and data sheets.
- Different housing versions, sizes, material, degree of protection and the required cable entries are engineered for control cabinets and field stations. On request, a corresponding reserve for extensions is taken into account.
- Various redundancy structures can be realised according to your conceptions.
- A wide range of terminal types is available for the connections. Corresponding to the requirements a termination of the signals on additional terminal boards can also be realised.
- When our customers use the field busses, we advise them with the selection of the interface units and protocols for the automation systems.

Services (continuation)

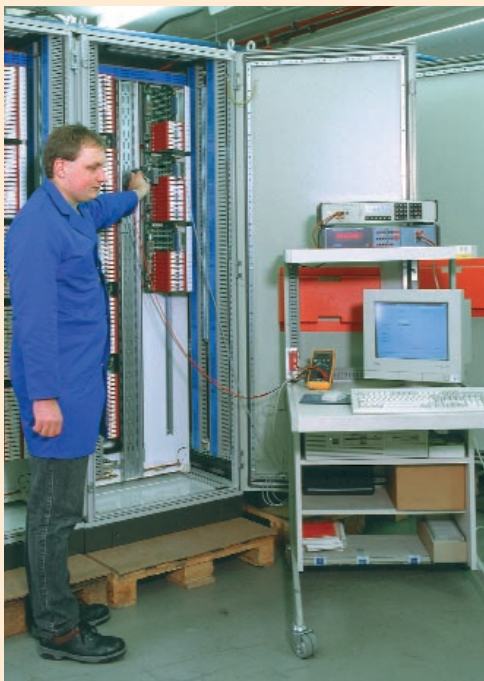
Manufacture



Our control cabinet manufacture is directly linked with the Competence Center Instrumentation Systems.

- All customer specifications are incorporated directly in the manufacture. Thus you have almost immediate access to the manufacturing process of your order.
- The technical modifications occurring in the course of a project are professionally implemented.
- Our manufacturing department distinguishes itself in particular by its flexibility and variety.

System testing and factory acceptance test



Safety in explosion protection knows no compromises. Therefore the quality of the product is our highest principle: from the planning stage to shipment.

- Each equipment is tested with the most modern testing equipment and means of measurement, piece by piece. These tests are conducted by qualified employees who are responsible for each product tested.
- This strict standard also applies for the functional capability and operating safety of our control cabinets. Every wire connection is tested in a system test.
- Within the context of an factory acceptance test, our customers can convince themselves of the high quality of our technical execution.



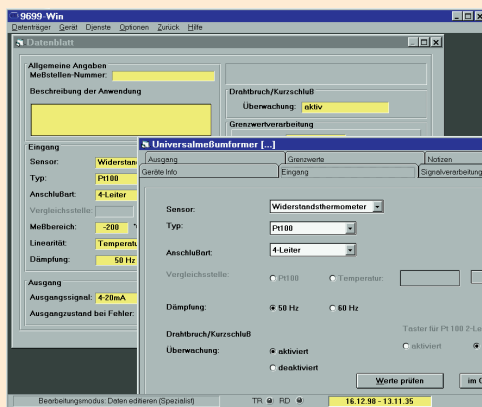
Services (continuation)

Documentation



- The wiring lists are created by means of a simple programming tool, which is based on a database.
- The drawings for the mechanical construction are generated by using a CAD system. Data can be made available in a variety of data formats.
- Data sheets, operating instructions, installation regulations and certificates of conformity supplement the system documentation.

Parameterisation

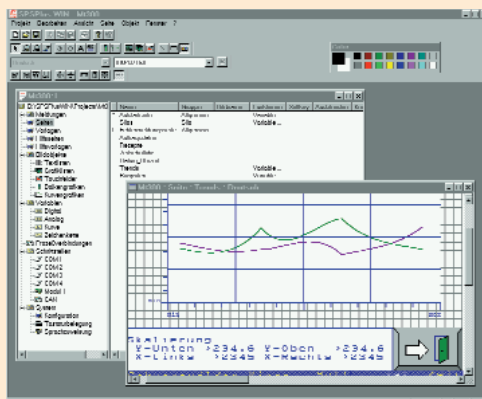


We execute the settings on all components and systems that we supply. Thus immediate use is guaranteed.

- Hardware settings on units
- Software settings, e.g. with multi-purpose transmitters
- Parameterisation of remote I/O systems

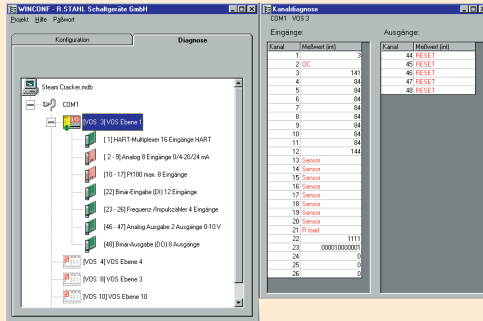


Creation of software applications



For customers requesting for solutions from only one provider, we offer complete applications.

- Creation of the process and operation images for terminals
- Creation of complete visualisations in connection with a remote I/O system on the basis of PCs or PLCs.

Services (continuation)
Commissioning – support and instruction


After the cabinets are installed and the cables are laid, the system can be tested and commissioned.

- The commissioning time of our remote I/O systems can be reduced considerably by means of a diagnostic system, since installation faults can be quickly recognised through a signal test. This can also be accomplished independent from the automation system via a PC.
- Our specialists gladly support our customers with the commissioning of the communication with a process management system.
- If desired, we also give instruction in the hardware, in the configuration, and diagnosis software, and, if necessary, in the HART management system.
- By combining the automation system with an I/O simulator, which simulates the field signals, all inputs and outputs, as well as the operation in the case of a fault, can be tested separately in advance.

Seminars and training


Our offer is directed in particular to planning and project engineers, as well as to maintenance personnel.

- Individual consulting and support in project training, both on site and at R. STAHL, rank first.
- Product training on hardware and software make handling our products easier and highlight important topics.
- Further more, R. STAHL organises training courses and seminars to the topic explosion protection. Please find the current schedule in our Ex-Magazine and (in the near future) also on our Internet homepage.



Services (continuation)

Service



Our services are internationally available to our customers:

- troubleshooting,
- expansions and rebuild measures,
- system maintenance and inspection and
- maintenance contracts

International hotline



With problems in continuing operation of the system or with repair or maintenance works, we are at your side with advice and action.

- Our hotline is accessible to you during business hours.
- Upon request, we offer a 24-hour service. Then, all it takes is a call and our employees assist you immediately with help services, quick spare parts, deliveries or repairs.
- The remote diagnosis packages available for our I/O systems enables our service staff to check the system around the clock, no matter where the system is located.

References



We can provide you with references of numerous satisfied customers worldwide, which are active – among other things – in the below mentioned sectors:

- mechanical engineering and plant construction
- chemical and supply companies
- oil and gas industry (offshore and onshore)
- automotive suppliers
- system integrators
- control system manufacturers.

Soon a current list of references can also be seen up on our homepage on the internet.

