THE STRONGEST LINK.

STAHL

#STAHL4AUTOMATION
MORE THAN YOU EXPECT

THE FUTURE OF
EXPLOSION PROTECTION

Automation challenges

- Digitalisation, globalisation and ever shorter innovation cycles.
- Integration of information technology and process automation.
- Industrial Internet of Things and modularisation in production.
- Future-proof infrastructure for the production of clean energy such as LNG and hydrogen.

R. STAHL's Automation Business Unit concentrates the expertise from the areas of „Interface and System Solutions" and „HMIs and Camera Systems", in order to be able to react faster to the challenges of the world of automation with its high-quality products and solutions.

Our experts are active worldwide in technology task forces, such as the Ethernet-APL project or the NAMUR Open Architecture (NOA), and are members of all key panels on international explosion protection, such as ATEX, IECEx, NEC and many others.

YOUR SPECIALIST FOR SOLUTIONS
IN HAZARDOUS AREAS

EXPLOSION PROTECTION CONSULTATION & PLANNING

CERTIFIED PRODUCTION

COMMISSIONING / FAT / SAT

TRAINING & AFTER-SALES SUPPORT

- From explosion-protected components to customised solutions – everything "Made by R. STAHL".
- Worldwide expertise in explosion protection and highly developed competence in automation solutions.
- Many years of project experience, also in extreme ambient conditions.
- ATEX- and IECEx-certified production as well as certified ETL Panel Shop (NEC, CEC).

THE BEST SOLUTION FOR EVERY TASK

As a leading supplier of automation technology for hazardous areas, R. STAHL has for over 50 years offered state-of-the-art components and complete solutions, perfectly matched to the varied operating conditions of different industries.

With its customary high level of reliability and quality "Made in Germany", R. STAHL ensures your safety when it comes to explosion protection. Be it the integration into modern Ethernet networks, the integration of diagnosis information in plant asset management systems, wireless communication, or the development of visualisation concepts – we meet any challenge head-on!

LIFE-SCIENCES

Our products and solutions meet the hygiene directives according to GMP. The implementation of requirements to FDA 21 CFR Part 11 completes our service portfolio.

HYDROGEN

R. STAHL is your partner for explosion protection along the entire H_2 value chain – from its production to its application.

OIL & GAS UP-/MID-/DOWNSTREAM

Robustness, state-of-the-art technology and low operating costs are the major features of our automation products – perfect for the world of the digital oilfield.

FINE AND SPECIAL CHEMICALS

R. STAHL's multi-usage products are ideally suited for the modern modular automation concepts of the Industrial Internet of Things.

LNG APPLICATIONS

Our products and systems guarantee safety at every stage of the process: from natural gas extraction and liquefaction, during transport and supply to engines, all the way to re-evaporation and supply to gas networks. Thanks to international ship approvals our products and systems can be installed onboard LNG tankers and FPSO ships.

BASIC & PETROCHEMISTRY

The great number of integrated diagnosis functions in R. STAHL's products can be used for predictive maintenance and ensure smooth operation.

MACHINE BUILDING & PACKAGE UNITS

We use our internationally certified components to come up with individual solutions tailored to meet the machine's requirements; including integration via MTP.

FOOD & BEVERAGE INDUSTRY

Certificates for dust and gas explosion hazards as well as compliance with EHEDG make R. STAHL's products ideal for installation in this industry.

INTERFACE PRODUCTS

Intrinsic safety is the type of protection most used worldwide in system automation in hazardous areas. The complete range of solutions from R. STAHL includes:

- INTRINSPAK safety barriers for highly flexible individual solutions.
- ISpac isolators with galvanic separation and cost-saving installation options.
- IS1+ Remote I/O – the system most used worldwide in Zone 1, 2, Division 1, 2.
- Network technology for the effective installation of the new Ethernet-APL technology as well as classic fieldbuses.

International certificates and largely certified for functional safety or ship building.

Remote I/O

Safety barriers   Ex i isolators   Ethernet-APL field switch

HMIS AND MOBILE SOLUTIONS

R. STAHL's Human-Machine Interfaces and HMI solutions are almost fully internationally certified for hazardous areas Zone 1, 2, 21, 22; and some also for Class I, Division 2 / Class II, Division 1, 2 / Class III. In addition to our HMIs, our portfolio also includes application-specific, mobile solutions such as tablets, smartphones and smartwatches.

- 7"-/ 12"-/ 15"- and 22"- HMIs.
- All HMI technologies: Thin Clients, Panel PCs, KVM systems, Operator Panels.
- REMOTE HMI firmware for Thin Clients and tablet PCs.
- HMI device platforms for GMP areas / cleanrooms, harsh ambient conditions and onboard ships.
- Peripherals such as barcode scanners and RFID readers.
- Application-specific, individual solutions with mobile devices.

New, modular indoor operator stations ORCA and tablet PCs for mobile solutions
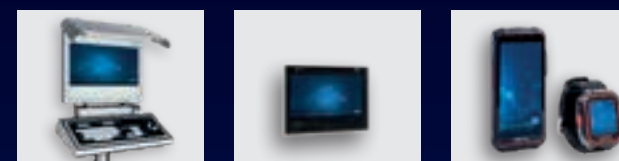
SHARK operator station for outdoor applications   Panel-mount device ORCA 12"   5G smartphones, smartwatches

CAMERA AND CCTV SOLUTIONS

YOUR ONE-STOP SUPPLIER FOR EX CCTV SYSTEMS
An effective surveillance system needs more than just cameras. Only complete solutions which are perfectly matched to individual requirements can guarantee reliable surveillance and a maximum of security.

- Camera portfolio comprising premium compact, AFZ, PTZ, and thermal imaging cameras as state-of-the-art IP versions.
- Full HD, ONVIF S, WDR, DEFOG, PoE and video analysis functions.
- Configuration options with redundant client/server structures, switches etc. for a customised CCTV system (also adaptable to fit in with existing video surveillance solutions).
- Can be operated in temperatures from -40 °C to +75 °C.

Full HD AFZ camera

Compact camera   PTZ camera with dynamic masking   Thermal imaging camera with radiometry function

NETWORK PRODUCTS

The integration into networks in hazardous areas Zone 1, 2 or Division 1, 2 will play a major role in the implementation of the Industrial Internet of Things in process automation. R. STAHL already offers solutions today for the systems of tomorrow:

- Wireless solutions for the application of WiFi, BLE, RFID and other technologies.
- Ethernet switches for optical data transmission with "op is".
- Network installation with copper and fibre optic cables in Zone 1 via "op pr" splice boxes or Ex e Ethernet terminals.
- PROFIBUS DP and Modbus RTU in hazardous areas with "i" copper and "op is" FO cables.
- Ethernet-APL field switches with intrinsically safe APL2-WISE connections.

Wireless

Ethernet   Network installations   Fieldbuses

SYSTEMS AND SOLUTIONS

System solutions for LNG tankers

Solution for up to 150 analogue or 300 digital signals, for Zone 1 with ATEX, IECEx and for ship building – as a compact cabinet solution with double doors in various sizes, with ideal mounting system for the specific EMC requirements onboard ships.

Ex p system solutions with pressurized enclosure

Direct conversion of industrial applications into explosion-protected control systems. Tried-and-tested, cost-efficient solution for applications such as machine control systems – worldwide application.

Thin Clients in a pharmaceutical plant

The HMIs are designed as Thin Clients here – for the remote control of PCs or virtual workstations via Ethernet and WiFi, for example. They are suitable for the pharmaceutical, life-sciences and fine chemicals industries, cleanroom and GMP/ GAMP compliant, and, together with RFID readers, fulfil the requirements according to 21 CFR Part 11.

Plant-specific CCTV systems

Our surveillance solutions can be individually tailored for your system. Ranging from the preventive detection of hazardous situations, thermal imaging and dynamic masking to object recognition and tracking, we offer a whole host of options. The alarm scenarios can be individually configured so that the risk of human error is practically eliminated.

System solution wireless, Ethernet and FO

R. STAHL enables you to operate WiFi access points of your choice in hazardous areas.
- Antennae of your choice.
- Compact or with room for future expansion.
- Simple connection of Ethernet and power supply.
- Easy replacement of device.

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AUTOMATION LEVEL

SAFETY BARRIERS	ISOLATORS	REMOTE I/O	ETHERNET & FIELDBUS	NETWORK PRODUCTS	SYSTEMS & SOLUTIONS	HMIs	MOBILE SOLUTIONS	CAMERA SYSTEMS
INTRINSPAK	ISpac	IS1+						

ZONE 2

Ex (ATEX)

Exp

ZONE 1

Ex (ATEX)

CONTROL STATION

GROUNDING MONITORING

IS wireless

FIELD DEVICE LEVEL

SIL Safety Integrity Level IEC 61508 IEC 61511 · HART COMMUNICATION PROTOCOL · PROFINET · PROFIBUS · ethernet-apl™ · F FOUNDATION · NOA · UNIVERSAL AUTOMATION.ORG · EtherNet/IP · Modbus TCP · OPEN PROCESS AUTOMATION™ · OPC UA · FDT · Onvif®

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