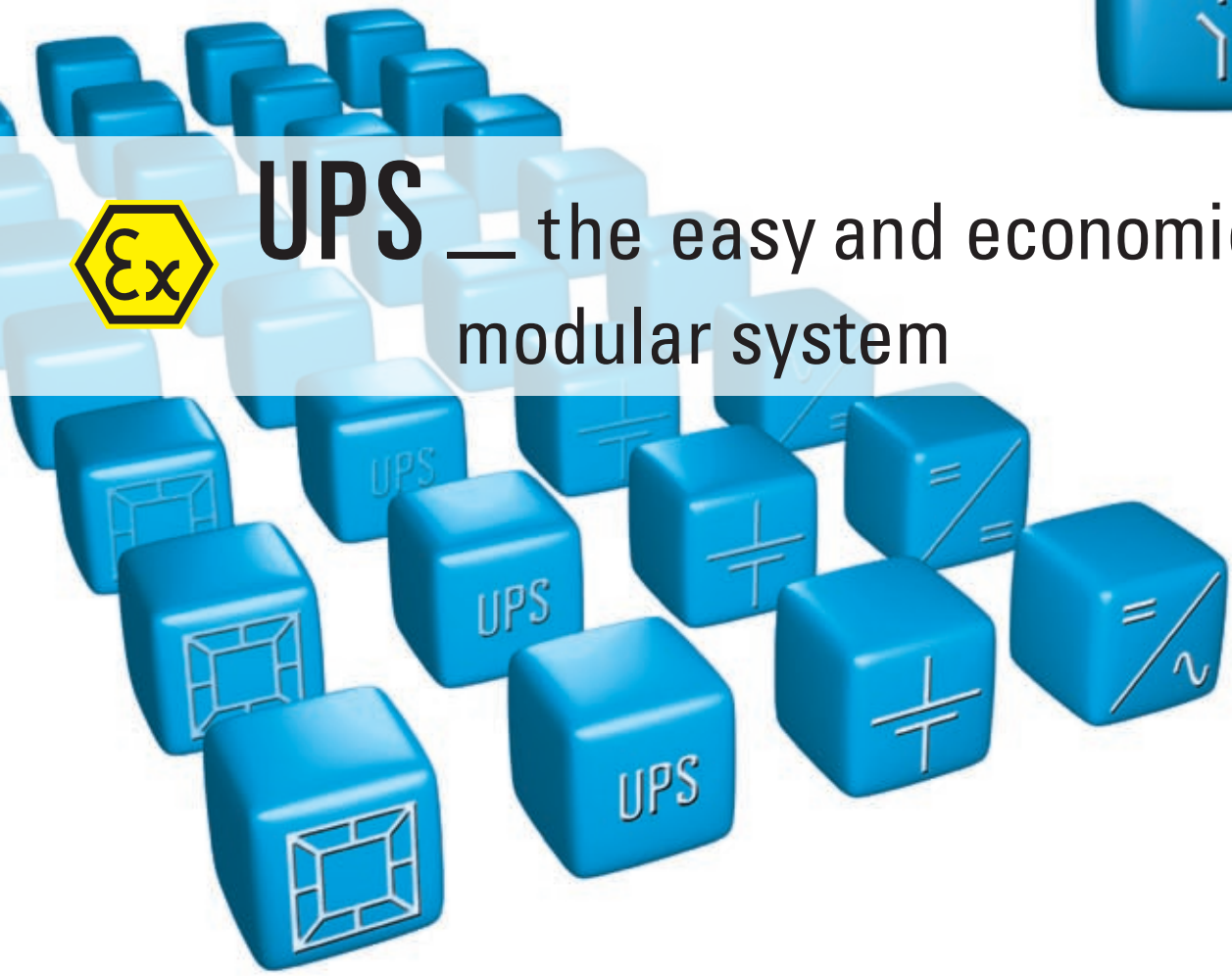


UPS — the easy and economical modular system





Ex-USV-Guard



the modular system with safety control

The new R.STAHL-USV modular system offers tailor-made and economical UPS solutions for hazardous areas. According to the ATEX directives and the relative standards, special requirements apply to the charging of batteries in the hazardous area. In order to assure the explosion protection it is necessary to control the parameters for operation of batteries and chargers in addition to the settings on the charger. The new Ex-USV-Guard controls the function of the charger and the batteries according to the ATEX directive. In the market this unique function provides the safety of the installation.



- > optimal adaptation possible with only a few components
- > can be expanded as required
- > quick exchange of individual modules
- > straightforward project planning and calculation
- > modules can be used in any combination



100%

- > 100% process safety
- > permanent high-grade power supply
- > maximum reliability and safety for machines, data and products



- > project planning of your customised system solution
- > competent technical support prior, during and after purchase
- > quick availability worldwide
- > service (local service, hotline)



- > maximum safety in explosion-protected area
- > design complies with standards (especially operation and monitoring of batteries)



- > solutions for the most extreme environmental conditions (i.e. heat, cold, humidity or marine atmosphere)



modular

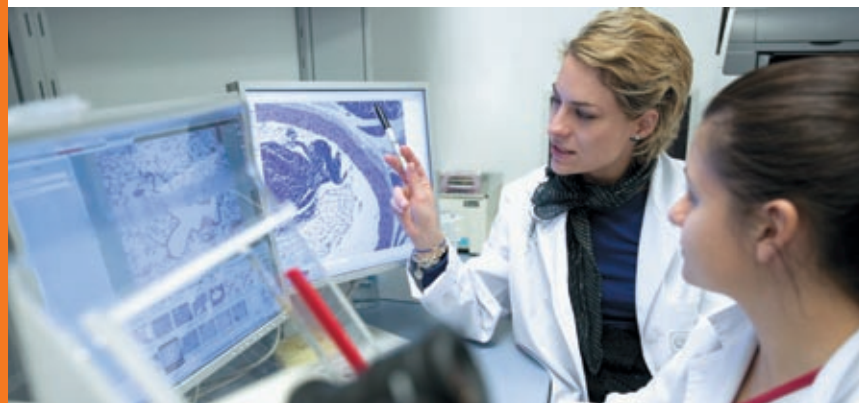
R. STAHL offers you solutions tailored to your requirements. The individual modules can be combined as required, resulting in easy and economical solutions. We can offer you a customised system solution to meet your specifications.

99.996 %

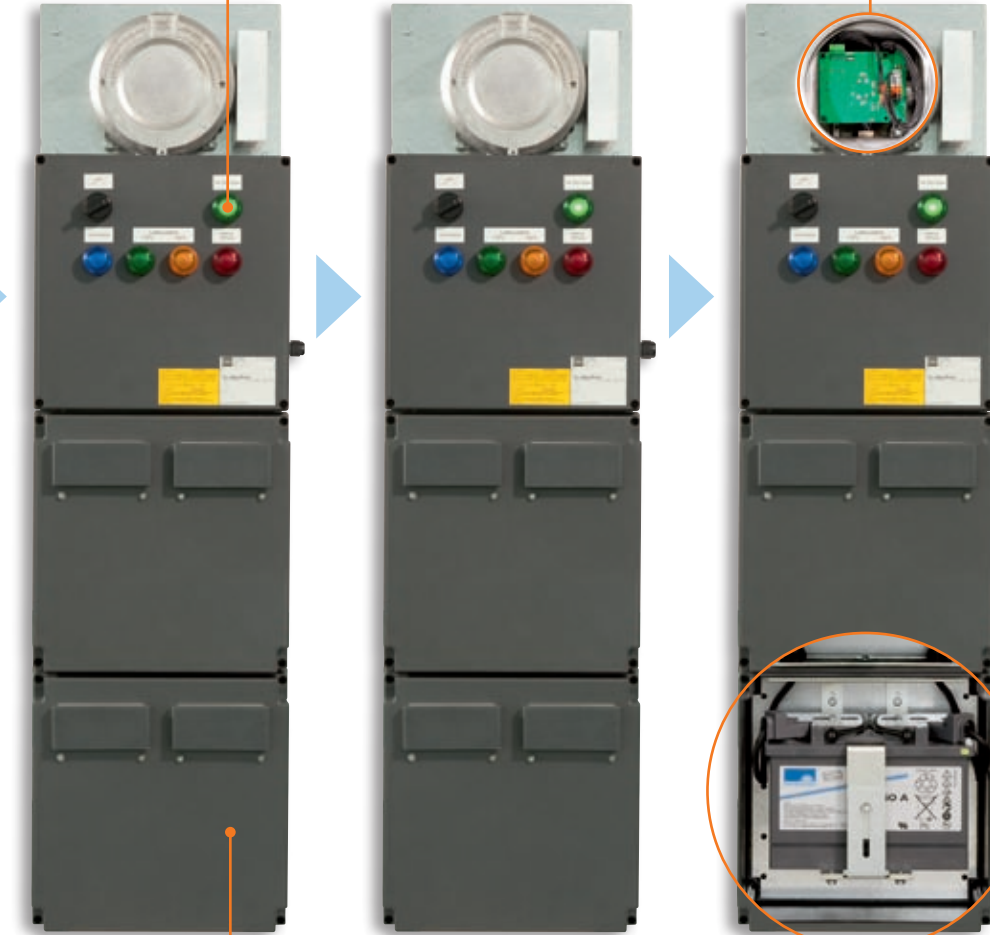
99.996% uninterrupted supply - this equates to a power cut of 24 minutes per year!
Power cuts or major changes in voltage lasting only milliseconds can lead to malfunctions of important systems with far reaching consequences: Downtimes, loss of data, damage to machinery and time-consuming production restarts. Solutions for uninterrupted power supply (UPS) are used wherever maximum availability is of the essence: controls which must not fail, an unmanned oil rig which has to function regardlessly.

Critical consumers _ UPS for maximum safety

- > measuring, control and monitoring systems (i.e. pipeline monitoring and control)
- > plant and process controls as well as sensors
- > telecommunication installations
- > safety and security technology, monitoring and alarm systems, illumination of obstacles
- > unmanned platforms
- > plants in remote areas
- > process automation (process control technology, remote control installations, process protection)



Power supply provided to the charger



Ex-UPS-Guard
Monitors explosion protection for batteries and UPS controller in accordance with IEC/EN 60079 ff



Central UPS module
connects and controls the components in the system
> intelligent charging and monitoring of the batteries
> optimised for installation in Ex d enclosures
> cold-plate cooling of the power electronics

Inverters

- > load ratings 3 - 3000 VA



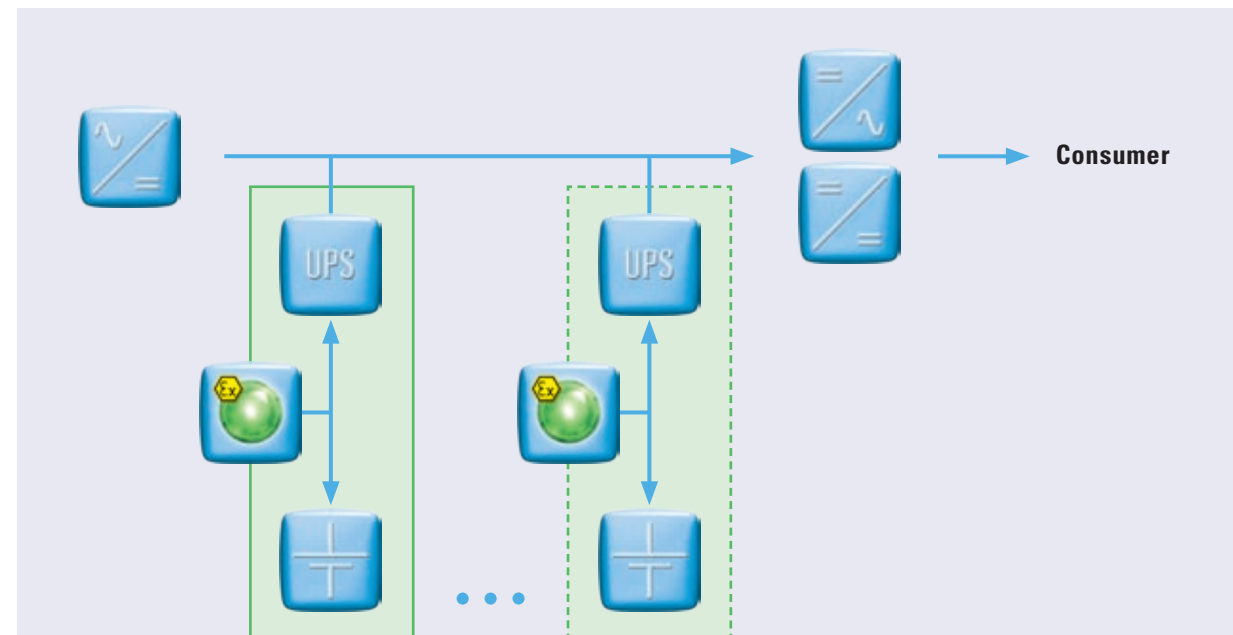
DC/DC converter



Energy distribution

- Protection against
- > overload
 - > short circuit
 - > indirect contact

Modular design of an explosion-protected R. STAHL UPS



Enclosure
Choice of various explosion protected enclosure series, i.e. GUBox enclosure with Ex e connection chamber



Battery bank
Energy store to provide power for a predetermined period of time during power cuts
> different types of batteries: lead acid, NiCd, NiMH
> up to 2800 Ah/24V DC



Advantages of UPS for controlling machines in an explosion-protected area

- > Power supply by UPS in case of voltage drops or power cuts
- > avoids damage to equipment, downtimes and product rejects due to short-term interruptions
- > allows controlled and safe shutdown of plants in case of prolonged interruptions
- > ensures problem-free restart

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Ex-UPS-Reference projects	Project 1	Project 2	Project 3	Project 4	Project 5	Project 6
Normal operation						
Main supply	400/230 V AC	400/230 V AC	24 V DC	24 V DC	24 V DC	230 V AC
Output voltage	48 V DC	24 V DC	24 V DC	24 V DC	24 V DC	230 V AC
Output current	10 A	310 A	25 A	20 A	10 A	8 A
Battery operation						
Output current	10 A	160 A	25 A	20 A	10 A	8 A
Autonomy time (back-up time)	90 min	180 min	180 min	30 min	90 min	60 min
Ambient temperature	-20...+40°C	-20...+40°C	-20...+40°C	-20...+40°C	-20...+40°C	-20...+50°C
Battery type	Lead-Acid	NiCd	NiMH	NiMH	Lead-Acid	Lead-Acid
Capacity C ₂₀	32 Ah	800 Ah	100 Ah	40 Ah	60 Ah	140 Ah

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