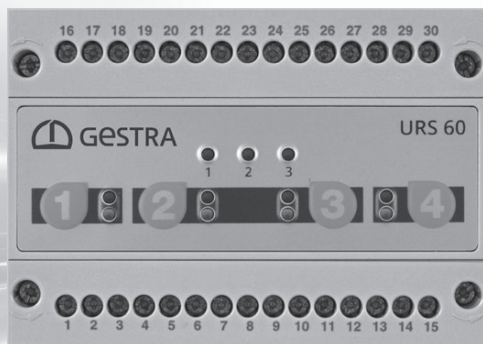




# Safer, More Efficient Steam Production

GESTRA SPECTOR*connect*



Engineering steam performance

# SPECTORconnect

Safer, more efficient steam production

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### Intelligent, global monitoring

An extensive and adjustable data connection enables global system monitoring. Simple graphics, historic data and alarms provide clear information about the steam generation process.

### Always state of the art

SPECTORconnect satisfies the requirements of the latest standards for safe steam boiler operation.

### One unit, several functions

All the important functions necessary for efficient system operation have been integrated in a single unit, saving installation time and cutting costs.

### Reliable service interval monitoring

The plant operator is informed when components require a service or the system is going outside its normal operating range.

### Constantly low energy consumption – Reduced process costs

Temperature-compensated measurement and control of conductivity in the steam drum itself reduces the blowdown volume to an absolute minimum.

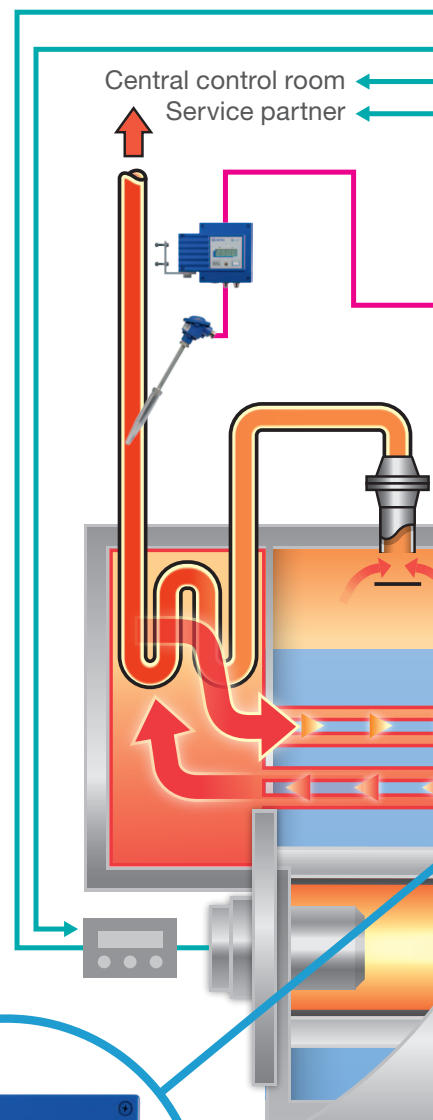
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## Market and usage

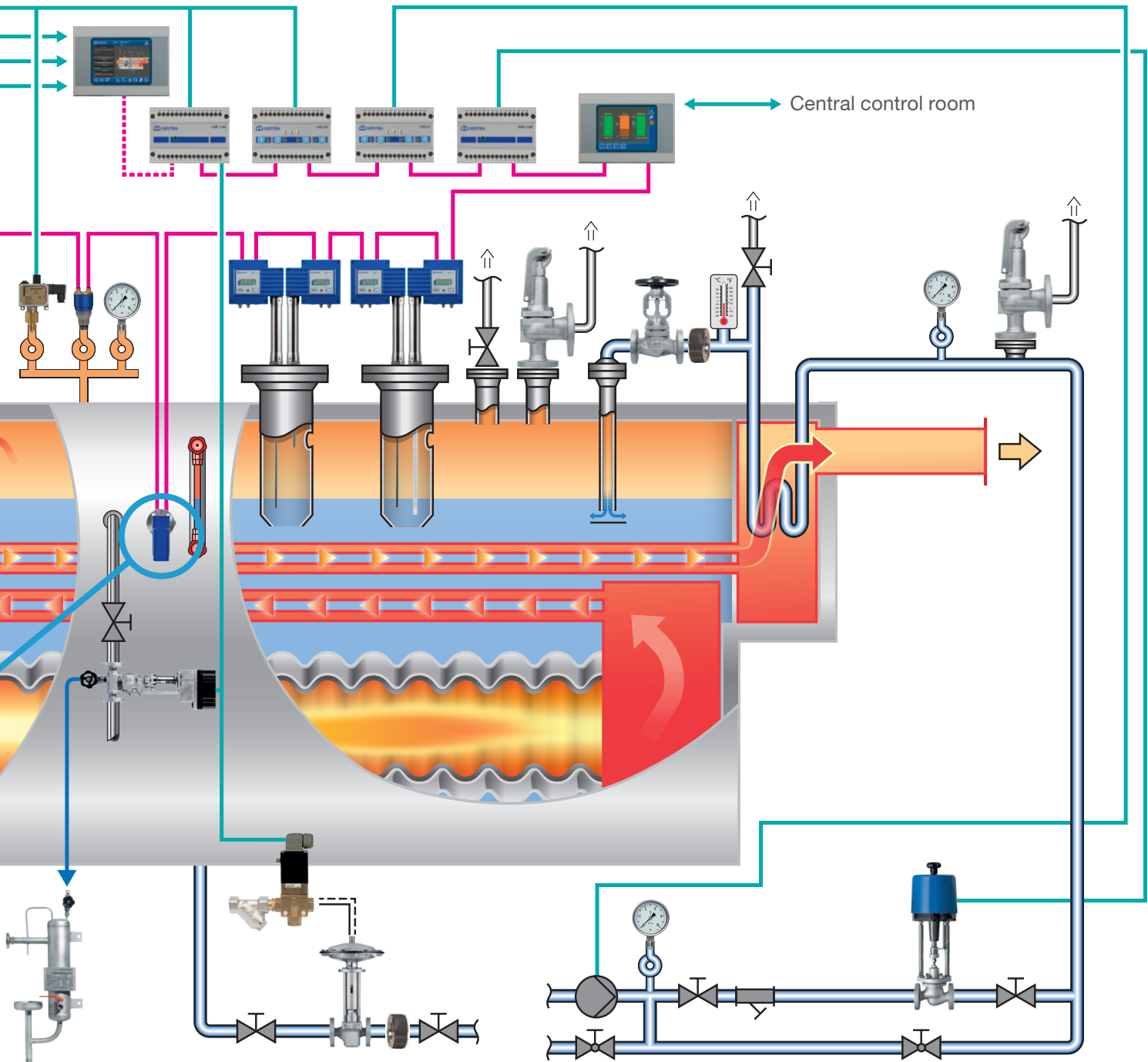
The SPECTORconnect system is used for steam and hot water boiler systems to TRD 604, EN 12952 and EN 12953.

Development has consistently focused on safety, enabling a SIL 2/3 rating to be achieved for conductivity limiting as well.

The URB 60 display unit functions as a data interface and supports various data protocols.



Conductivity sensor LRG 16-60



# Technical data

## **SPECTORconnect system overview**

- Largely compatible with old systems
- SPECTORconnect uses the same bus protocol as predecessor systems
- Universal 24V DC power supply
- Automatic sensitivity adjustment up to 0.5 µS/cm
- Sensors with local display and setting options
- Conductivity and level controller with PI characteristic
- Option of three-component controller with actual value input for steam and water volume
- Simple, logical operation using common symbols and icons
- Separate display and operator terminal with interface function
- Available as a continuous or three-component controller
- Limiter systems with SIL 2/3 certification
- Conductivity limiter to VdTÜV WÜ 100 (bulletin on water monitoring facilities) and SIL 2

## **Universal safety switch URS 60/61 (SIL 2/3)**

- The new universal safety switch is certified to SIL 3 in accordance with EN 12952/53.
- The switch is self-monitoring, performs periodic self-tests and has two channels.
- Data can be processed from up to four safety-oriented sensors.
  - Two low water level electrodes NRG 16-60
  - High water level electrode NRG 16-60
  - Temperature transmitter TRV 5-60
  - Conductivity sensor LRG 16-60
- The adjustable conductivity limit value is set on the display or on the sensor.

## **Safety water level limiter NRG 16-60 (SIL 3)**

- The safety water level limiter is self-monitoring, performs periodic self-testing and has two channels.
- Status signals can be retrieved and equipment settings undertaken on the integrated display.
- There is no need to open the housing.
- Connection via a pre-assembled cable with M12 connectors.

## **Safety temperature transmitter TRV 5-60 (SIL 3)**

- The new safety temperature transmitter has a SIL 3 rating in accordance with EN 12952/53.
- The system is self-monitoring, performs periodic self-tests and has two channels.
- The equipment works in conjunction with a Pt 100 temperature sensor.
- The actual temperature is displayed continuously and the target temperature at the touch of a button.

## **Safety conductivity sensor LRG 16-60 (SIL 2)**

- The conductivity sensor can be used for control and for safely cutting off the heating.
- When combined with the URS 60/61 safety switch, the sensor also becomes a limiter.
- The actual value is continuously shown on the integrated display.
- Status messages can be retrieved and equipment settings undertaken.
- There is no need to open the housing.
- Connection via a pre-assembled cable with M12 connectors.

## **Capacitance level controllers NRR 2-60 / 2-61**

- The controllers of this series work in conjunction with the NRG 26-60 capacitance sensor.
- The series also offers a continuous control output for pneumatic valves or speed-controlled pumps (NRR 2-61).
- The unit is optionally available as a three-component controller.
- Simple, menu-guided operation is via a separate touch panel (URB 60).
- In addition to set points and actual values, trend values, error messages and limit values are also displayed.
- 100% measuring range adjustment is possible from a water level of just 25%.
- The system already incorporates an actual value current output for remotely displaying the level.

## **Conductivity controller LRR 1-60**

- The LRR 1-60 controller works in conjunction with an LRG 16-60 or LRG 16-61 conductivity electrode, depending on the measuring range.
- The controllers have been optimised for operation with continuous blowdown valves from the BAE 46/47 or 210 series.
- All units feature an actual value current output as standard, and come with a blowdown timer and standby input.
- As with the level controller, operation is via a separate touch panel (URB 60).
- In addition to set points and actual values, trend values, error messages and limit values are also displayed.
- What's more, the URB 60 offers various data transfer protocols for communication with higher-level systems.

## **GESTRA AG**

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