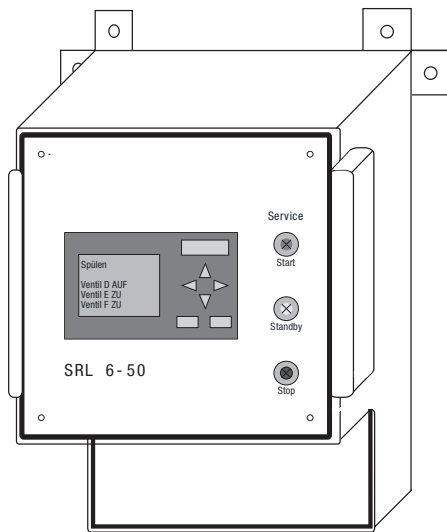




SRL 6-50

Logic Unit SRL 6-50

Description

If the level electrode (high or low level limiter) is installed in an isolatable level pot outside the boiler, make sure that the level pot is drained and the connecting lines are rinsed at regular intervals.

For this purpose the connecting lines must be shut off and opened at regular intervals and by opening and closing the drain valve the lines and the level pot will be rinsed.

The logic unit is designed to be used in conjunction with level switch NRS 1-50 (water level limiter) or level switch NRS 1-51 (high level alarm) to monitor the correct timing and sequence of valve operations.

During the rinsing process the level switch jumpers the level electrode, thus preventing the safety or control circuit from opening. The level switch - controlled by the logic unit - also monitors the rinsing and bypass time.

Function

The logic unit monitors the following times and process sequences:

Interval time: This is the time interval at which, depending on the operating mode (24h / 72h boiler operation without constant supervision), the connecting lines have to be rinsed.

During operation the **standby time** is started after the interval time has elapsed and the interval time is reset to its initial value (24h/72h).

During the standby time the connecting lines must be rinsed.

Synchronizing: When valve D or E closes the **purging time** starts and the interval time is reset to 24h/72h. The purging time can start any time. The purging time can also start after the stand-by time has elapsed.

After the purging time has started the stand-by input of the level switch NRS 1-50, NRS 1-51 will also be activated.

During the purging time all valves must be opened and closed in a fixed sequence. The logic unit polls the limit switches to obtain data on the valve positions and the level electrode for information on the water level (low level if electrode is exposed).

If valves D and E are open after the rinsing process and valve F closed and the level electrode for low water (low level) is submerged again, the stand-by input of the level switch will be deactivated.

The stand-by time of the level switch is limited to a maximum of 5 minutes. If the stand-by input is not deactivated by the logic unit during this time, the level switch will open the safety or control circuit.

Directives and Standards

LV (Low Voltage) Directive and EMC (Electromagnetic Compatibility)

The equipment meets the requirements of the Low Voltage Directive 2014/35/EC and the EMC Directive 2014/30/EC.

ATEX (Atmosphère Explosible)

According to the European Directive 2014/34/EC the equipment must not be used in potentially explosive areas.

Technical data

Supply voltage

24 VDC, + / -20 %, 0.1 A

External fuse

0.5 A (semi-delay), without external circuit elements (indicators)

Power consumption

4 VA

Technical data - continued -

Inputs:

Wiring of limit switches, level switches NRS 1-50, NRS 1-51

5 volt-free contacts of the limit switches of the valves
1 volt-free contact of the level switch NRS 1-50, NRS 1-51
1 signal input for switching between water level limiter and high level alarm

Outputs:

4 volt-free change-over contacts, 8 A 250 V AC / 30 V DC
cos ϕ = 1 (IEC 61810)

for messages:

Stand-by ON/OFF

(at level switches NRS 1-50, NRS 1-51)

Stand-by time (start) running,

Purging time (standby) running

Deactivated (stop)

Times:

Interval time

1 - 9999 hours, adjustable

Stand-by time

1 - 99 hours, adjustable

Purging time

5 minutes, 10 seconds, factory set

Other time settings on request

Equipment design:

Indicators and adjustors

1 indicating & operating display,

1 green LED indicating standby-time (start),

1 amber LED indicating purging time (standby)

1 red LED indicating deactivation (stop)

Housing

Case for wall mounting with see-through lid, hinge and latch

Housing material: ABS, polycarbonate

Cable entry / electrical connection

1 14pole spring-loaded terminal strip,

conductor size 2.5 mm²

cable gland with integrated

cable clamp 1 x M16 x 1.5

1 M12 female connector for sensor, with 8 poles

Protection class

2 (completely insulated)

Protection

IP 65 to EN 60529

Weight

approx. 1.3 kg

Further conditions:

Ambient temperature

when system is switched on: 0 ° ... 55 °C

during operation: -10 ... 55 °C

Transport temperature

-20 ... +80 °C (<100 hours), defrosting time of the de-energized equipment before it can be put into operation: 24 hours.

Storage temperature

-20 ... +70 °C, defrosting time of the de-energized equipment before it can be put into operation: 24 hours.

Relative humidity

max. 95 %, no moisture condensation

Site altitude

max. 2000 m

Logic Unit
SRL 6-50

Important Notes

The enclosure of the logic unit SRL 6-50 is designed for wall mounting and should be installed close to the external level pot.

To connect the limit switches please provide a terminal box (protection IP 65) close to the level pot.

To connect the terminal box and the logic unit please use the supplied connecting cable and wire the terminals in accordance with the wiring diagram.

For the supply of the logic unit with 24 V DC use a safety extra-low voltage (SELV) power supply unit that must be electrically isolated from dangerous contact voltages and must meet at least the requirements on double or reinforced isolation acc. to DIN EN 50178 or DIN EN 61010-1 or DIN EN 60730-1 or DIN EN 60950 (safe isolation).

We recommend to use the same safety power supply unit in order to supply the logic unit SRL 6-50 and the level switches NRS 1-50, NRS 1-51 with 24 V DC.

Fuse the logic unit with an external 0.5 A semi-delay fuse (see "Technical Data").

Order & Enquiry Specification

GESTRA Logic unit type SRL 6-50,

Interval timeh
Standby timemin

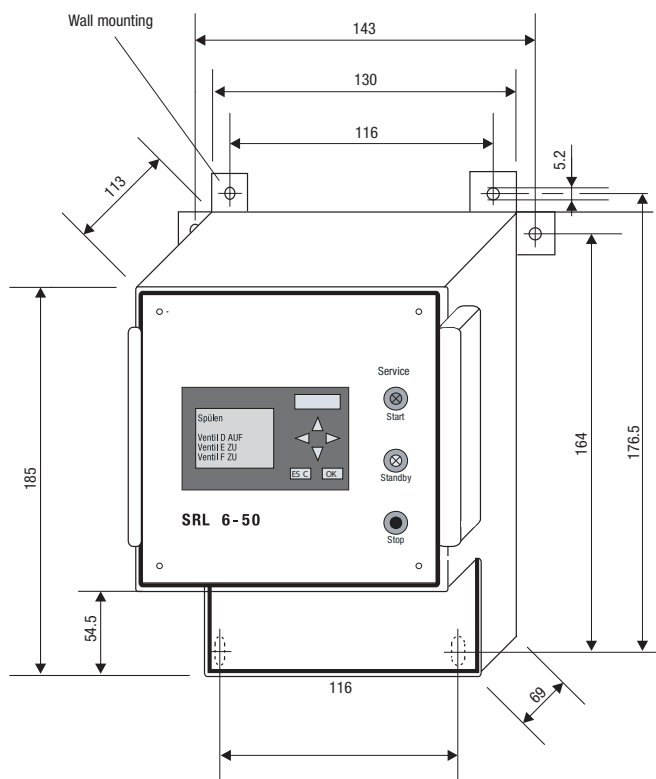
Associated Equipment

- Water level limiting equipment: level electrode NRG 1x-50 together with level switch NRS 1-50
- High level alarm: level electrode NRG 1x-51 together with level switch NRS 1-51
- Level pot MF xxxx for level electrodes
- 2 Shut-off valves GAV xxx-II
- 1 Drain valve GAV xxx-II

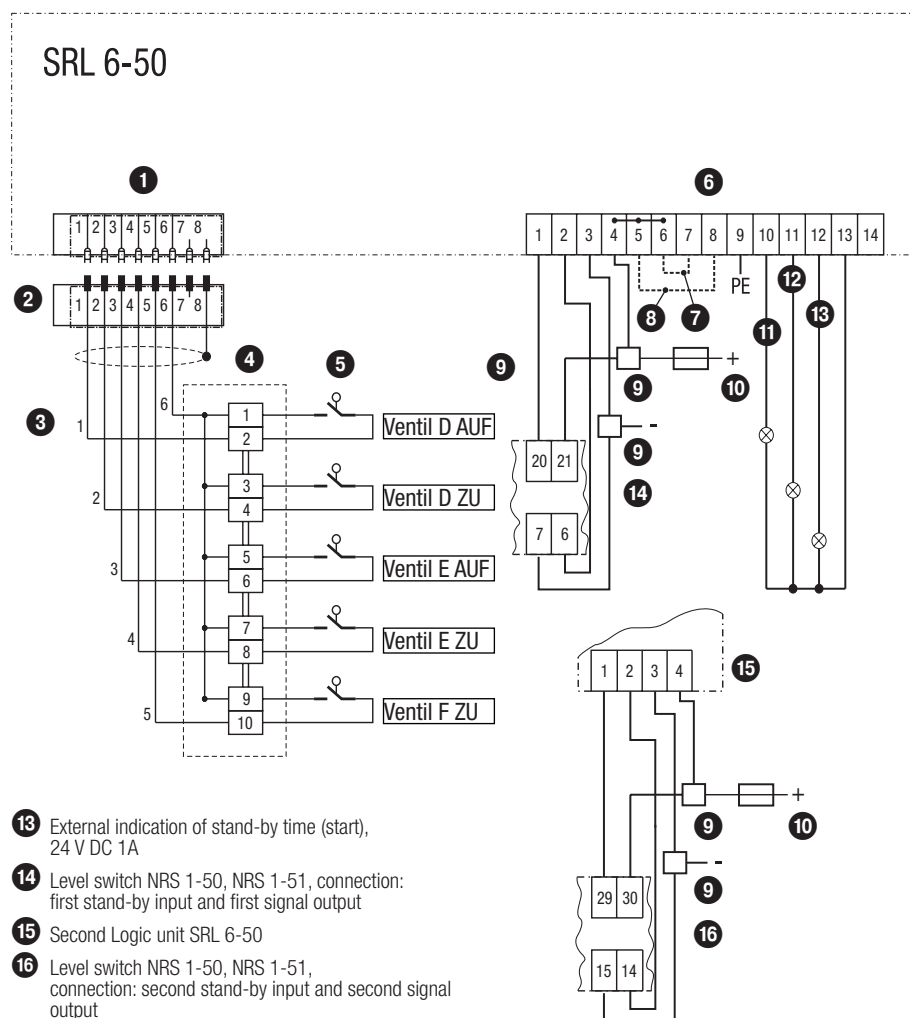
Key

- 1** M 12 female connector for sensor, with 8 poles
 - 2** M 12 male connector for sensor, with connecting cable
 - 3** Conductor marking at one end
 - 4** Terminal box (provided on site), installed close to the level pot
 - 5** Limit switch of valve
 - 6** 14poles spring-loaded terminal strip, conductor size 2.5 mm²
 - 7** External bridge on terminals 6/7 for high level alarm (level electrode NRG 1X-51)
 - 8** External bridge on terminals 5/8 for water level limiter (level electrode NRG 1X-50) in hot-water installations
 - 9** Terminals in control cabinet for providing the supply voltage and for connecting the logic unit and the level switch
 - 10** Connection for supply voltage 24 V DC with 0.5 A semi-delay fuse provided on site (see "Technical Data")
 - 11** External indication of deactivation (stop), 24 V DC 1A
 - 12** External indication of purging time (standby), 24 V DC 1A
 - 13** External indication of stand-by time (start), 24 V DC 1A
 - 14** Level switch NRS 1-50, NRS 1-51, connection: first stand-by input and first signal output
 - 15** Second Logic unit SRL 6-50
 - 16** Level switch NRS 1-50, NRS 1-51, connection: second stand-by input and second signal output

Dimensions



Electrical Connection



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