

GESTRA Steam Systems

Product Range B1

Industrial Controller
KS 90

KS 90

Description

The industrial controller type KS 90 is suitable for individual closed-loop control circuits and for automating industrial processes. The KS 90 is designed as a limit-value switching controller for use in conjunction with a compact-type conductivity electrode LRGT 16-1 and type approved by TÜV (German Technical Supervisory Association) and EC.

A self-tuning feature is included as standard. The configuration and parameterization data are stored in an EEPROM. The user-friendly two-line alphanumeric LED display is menu driven and enables easy configuration and parameterization of the universal controller KS 90 on site and in accordance with the respective operating conditions and requirements.

Design

Plug-in controller in accordance with DIN 43700 for installation in control cabinets and panels. Cut-out size 45^{+0.6} x 92^{+0.8}.

Wiring via flat-pin terminals, 1 x 6.3 or 2 x 2.8 mm to DIN 46244.

For lines ≤ 2.5 mm².

Approvals

GL 33254-06 HH
TÜV WÜL 01-003
EG BAF-MUC 0104105620001

Function

Switching Controller

3-position stepping controller

The industrial controller KS 90 features a self-tuning function for calculating the optimum process control parameters.

Technical data

Inputs

Controller input

1 analogue actual value, 4-20 mA

Voltage/Current

	D. C.
Input resistance	15 Ω IEC 60381-1
Measuring range	4-20 mA

Output

Relays

Two volt-free NO relay contacts:

Relay 1 and 2; configurable as three-position stepping controller.

Switching capacity: 250 V, 3 A, resistive

Alarm/Limit values

One volt-free NO relay contact for upper limit value; configurable as absolute measured value alarm.

Switching capacity: 250 V, 3 A, resistive

Displays

LED display: alphanumeric 2-digit red LED multi-functional display plus LED status displays for alarm/switching status.

Settings

Menu-driven parameter setting and operation via keypad.

Housing

Installation: Panel mounting

Dimensions: 48 x 96 x 111 mm

Weight: 0.45 kg

Protection: IP 54 (front)

IP 20 (enclosure)

IP 00 (connections)

Supply voltage

Voltage range: 115/230 V AC, 50/60 Hz / 24 V AC optional

Power consumption: max. 7 VA

Admissible ambient temperature: 0 °C to 55 °C

Permissible temp. for storage: - 20 °C to 70 °C

Relative humidity: ≤ 75 %, no condensation

Wiring

See wiring diagram.



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Important Notes

Measuring sensors should always be connected with screened lines. Ensure interference suppression by providing the loads connected to the relay contacts with suitable RC combinations.

ATEX Directive 94/9/EC

The equipment must **not** be used in explosion-risk areas!

Order & Enquiry Specification

Stock code: 2661444
 Ref. #: 147123
 Controller type: KS 90
 Protection: Front IP 54, Enclosure IP 20
 Displays: 4-digit display indicating actual value and setpoint

4 LEDs (yellow/green/red) indicating the status of alarm 1 and valves OPEN/CLOSED.

Universal input 1: Standard signals 4 – 20 mA

Output: 3 relays as volt-free make contacts. Configurable as three-position stepping controller and 1 Max alarm. Incl. manual/automatic switch-over

Supply voltage: 115/230 V AC, 24 V AC optional

In conjunction with LRGT 16-1

Power supply unit "Power 0.5"

Stock code: 3373041
 with enclosure for mounting on support rail, 22.5 x 80 x 91 mm

Input: 230 V, 50 Hz
 Output: 24 V DC / 500 mA
 Protection: IP 20

When ordering please state

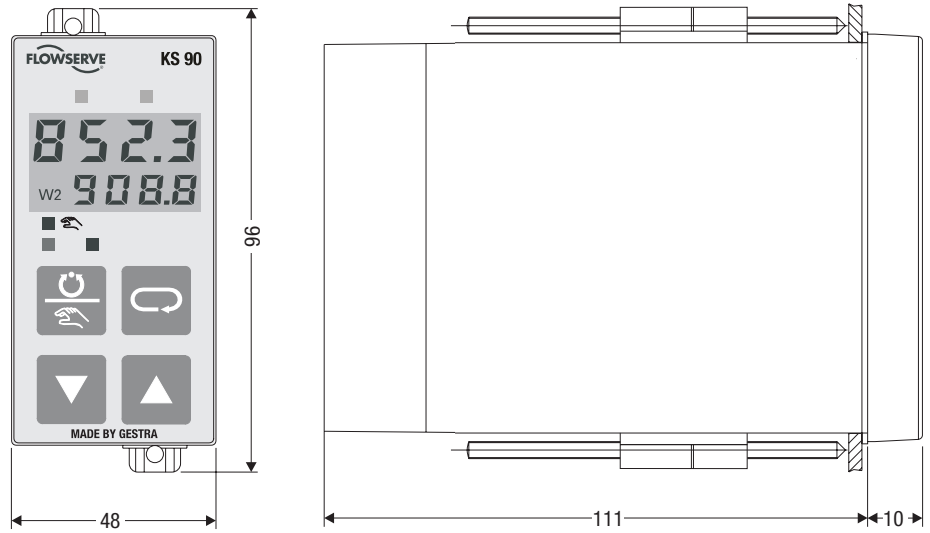
Test certificates can be issued on request, at extra cost: Please note that all inspection requirements have to be stated with the order. After supply of the equipment certification cannot be established. For tests and inspection charges please consult us.

Ancillary Equipment

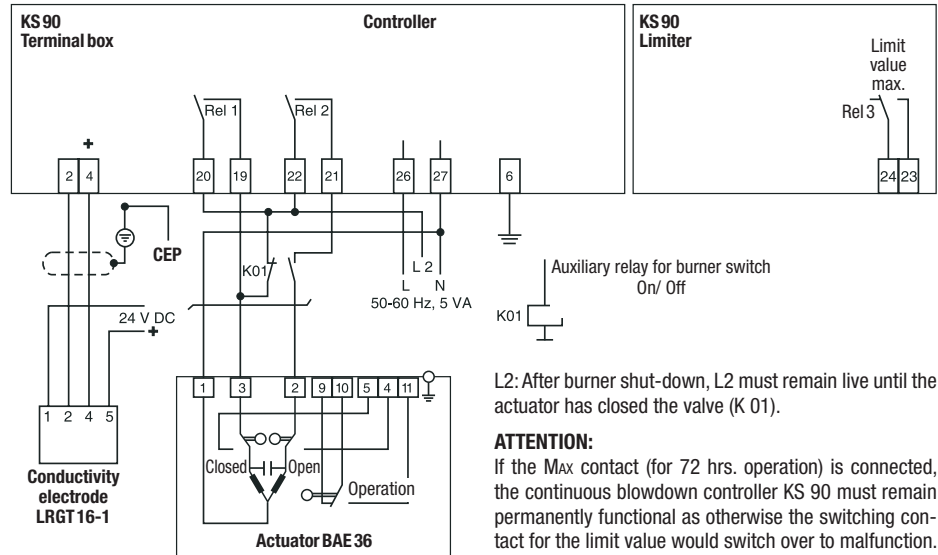
- Conductivity transmitter LRGT 16-1, LRGT 16-2
- Power supply unit "Power 0.5"
- Continuous blowdown valve BAE 46, BAE 47, BAE 210, BAE 211

Supply in accordance with our general terms of business.

Dimensions



Wiring Diagram



L2: After burner shut-down, L2 must remain live until the actuator has closed the valve (K 01).

ATTENTION:

If the Max contact (for 72 hrs. operation) is connected, the continuous blowdown controller KS 90 must remain permanently functional as otherwise the switching contact for the limit value would switch over to malfunction. If the valve is to be closed at burner standstill periods during modulating burner operation mode make sure that an additional auxiliary relay is provided on site. (K 01)

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