

Operating Manual for

GEWAS 191 N and

GEWAS 191 AN



1 Scope of supply:

- 1 x control device GEWAS 191 N or GEWAS 191AN
- 1 x water sensor GWF-1S
- 1 x solenoid GMV 191 12VDC
- 1 x sieve insert
- 1 x rubber sealing



2 Specifications

Power supply:	220/240V 50/60Hz (controlling device)
Power consumption:	approx. 3 VA
Control output:	by socket outlet in device housing (only for GEWAS 191 AN) (at GEWAS 191N the outlet is direct connected to the plug)
Switching voltage:	is equivalent to the supply voltage
Switching current:	max. 16 A (resistive load)
Solenoid:	max. working pressure: 6bar servo controlled (pressure difference infeed/outfeed >0,5 bar)
Dimensions:	control device: 126 x 79 x 54 mm (L x W x D) solenoid: 82 x 52 x 41 mm
EMC:	The device corresponds to the essential protection ratings established in the Regulations of the Council for the Approximation of Legislation for the member countries regarding electromagnetic compatibility (89/336 EWG).



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3 Installation and commissioning

a.) Installation of solenoid

- Lock water feed lines.
- Insert sieve insert.
- Connect solenoid with wingnut to the water feed by means of a right-hand turn.
- Check for leakage by opening the water feed.
- Screw water connection tube to the outlet side of the solenoid (use existing sealing ring or make sure that tube itself is properly sealed!).

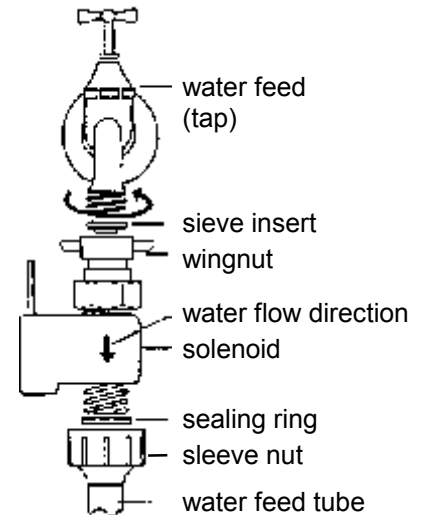
If the installation has been carried out correctly the wingnut can be tightened by hand.

In case of leakage check if sealing has been inserted and if all sealing surfaces are clean; also check if the installation has been carried out correctly. If necessary repeat installation process.

Note: *If Your water feed tube has an unusual long sleeve nut, it may be that the nut touches the solenoid housing before the connection is closed tightly.*

In such case use a thicker sealing ring or add the additional rubber sealing included in delivery.

Advice for commissioning: The solenoid will not be opened unless it has been connected to the activated control device.



b.) Installation of control device and water sensor

- Make it a rule to read the operating and maintenance advises before starting-up the device
- Place water sensor at desired position and fix it, if necessary.
- Connect water sensor and solenoid to the control device.
- Open water feed line unless you have already done so.
- Plug in control device into a socket outlet with earthing contact.
=> Device is now active, the solenoid is open.
- Check water connection for leakage.
- Connect device which is to be switched off in case of alarm to the socket outlet with earthing contact of the control device.

! Well done, your GEWAS device is now ready for use!

4 Function

If the water film at the water sensor exceeds 0.5 mm the control device automatically triggers an audible alarm and switches off the solenoid.

The GEWAS 191 AN also switches off the device connected to the control device.

To remove the alarm disconnect control device for a short time.

Note: The alarm will also be activated if the water sensor has been disconnected.

Alarm / operating signals

- | | |
|---|--|
| audible alarm at 1s interval: | alarm condition |
| audible alarm, short signal every 10s: | solenoid is not connected or defective |
| solenoid continuously switches on and off | insufficient power supply |
| audible alarm at 2.5s interval | insufficient power supply |

What to do in case of an alarm

- The control device can only be switched off by disconnecting it.
- Try to find and remedy fault cause.
- Potential fault causes:
 - The water sensor is defective or has been disconnected.
 - The water sensor contacts are connected (e.g. by means of a piece of metal etc.)
 - There is a water film at the water sensor.
- Reconnect the control device.

5 Operating and maintenance advise

- a.) For reliable operation of the GEWAS the monitored liquid has to have a minimum conductivity of at least 50 $\mu\text{S}/\text{cm}$.
Liquids with lower conductivity (e.g. deionised/demineralised water) a reliable detection is not possible.
- b.) The solenoid is servo-controlled; i.e. the pressure at the infeed side of the solenoid needs to exceed the outlet side pressure by at least 0.5 bar. This condition is fulfilled if the water feed line is open and the water can flow freely at the solenoid outlet. Unless this condition has been fulfilled the solenoid cannot open. In such a case remedy fault cause (e.g. activate water infeed of the device connected), disconnect control device and reconnect again.
- c.) When dead the solenoid will always be closed. In order to guarantee the required sealing properties, you have to make sure that there are no foreign objects (stones, sand etc.) in the solenoid line. We, therefore, recommend to clean the sieve insert of the solenoid regularly.
- d.) In order to ensure long-time and trouble-free operation of the device, the functioning of the device has to be checked at regular intervals (as is the case with any safety device). To do so produce an alarm at least once a month by short-circuiting both water sensor contacts by means of a metal object (e.g. spoon, knife, etc.). Disconnect device and reconnect the device.
The solenoid has to react with a clearly audible "clack" sound. This is to make sure that even if the water is calcareous and even if it is not regularly operated the solenoid is fully operational regardless of the calcareous deposits.
- e.) The control device should not operate without solenoid connected!
If the function of the solenoid is not required the solenoid must still be connected to the control device. The connection of the solenoid to the water feed is not essential then.
- f.) The device has to be treated and handled carefully in accordance with the above specifications (do not throw, bump against, etc.).
- g.) **!!! Never use GEWAS in a humid environment. !!!**

6 Safety regulations

This device was designed and tested considering the safety regulations for electronic measuring devices. Faultless operation and reliability in operation of the measuring device can only be assured if the general safety precautions as well as the device-specific security advises in this users manual are considered at the usage of this device.

1. Faultless operation and reliability in operation of the measuring device can only be assured if the device is used within the climatic conditions specified in the chapter „Specifications“.
2. Standard regulations for operating and safety for electrical, light and heavy current equipment have to be observed, with particular attention paid to the national safety regulations (e.g. VDE 0100).
3. When connecting the device to other devices (e.g. PC) the protective circuit has to be designed most thoroughly. Possibly internal connections in third-party devices (e.g. connection of ground with protective earth) may lead to undesired voltage potentials.
4. If it is supposed that the device can not be prosecuted riskless the device has to be switched off and has to be assured against further usage through labelling.

The operator's safety can be affected by the device if it for example:

- shows visible damage
- does not work anymore like prescribed
- was stored under inappropriate conditions for a longer time

In case of doubt the device should strictly be send to the manufacturer for repairing /servicing it.

5. **Warning:** Do not use this product at safety systems or as an emergency stop device or in any other applications where failure of this product could result in personal injury or material damage. If this advice will be ignored it can result in serious injury or death of persons as well as material damage.

7 Disposal instructions

The device may not be disposed in the regular domestic waste.

Send the device directly to us (sufficiently stamped), if it should be disposed. We will dispose the device appropriate and environmental friendly.