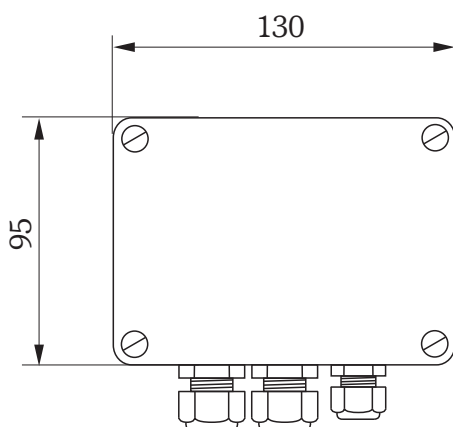


## AOS 1000 safety processing unit

- safety category 2
- optoelectronic safety edges
- resistive safety edges with 8.2kOhm
- test input
- reversal contact
- 3 LED-indicators

The AOS 1000 was developed as an all-purpose control unit for optoelectronic safety edges including our OS series and compatible systems and 8k2 safety edges.

The AOS 1000 can easily be integrated into the control system as a safety device.



### Technical data

Power supply	230V/50Hz ±10%
Power consumption	max. 3W
Degree of protection	IP 66
Switching current	max. 4A
Size	130x120x58mm
Weight	0.4kg
Operating temperature	-10...+55°C
Storage temperature	-20...+70°C

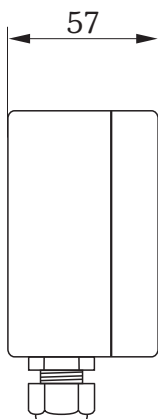
### Declaration of conformity

These devices comply with the standards listed below:

EMC directive 89/336/EEC  
EN 61000-6-2 and EN 61000-6-4

Low voltage directive 73/23/EEC  
EN 60335-1

Standard for "Safety in use of power operated doors"  
EN 12453



### Ordering details

type	operating voltage	order number
AOS 1230	230VAC	1.113 750
AOS 1024	24VDC	1.113 751



## General

The safety control unit AOS 1000 was designed exclusively for use at automatic gate systems. The operation of the AOS 1000 is permitted only with its covers and safeguards as provided. Attention has to be paid to the correct fit of the screwed cable glands. Unused cable glands have to be replaced with blind plugs.

In principle, only qualified employees may work on electrical systems. You must evaluate the work assigned to you, recognize possible sources of danger and take suitable safety precautions.

Any modifications to the device are prohibited. During installation, initial operation, maintenance and inspection of the AOS 1000 the safety and accident-prevention-regulations valid for the specific individual case must be observed.

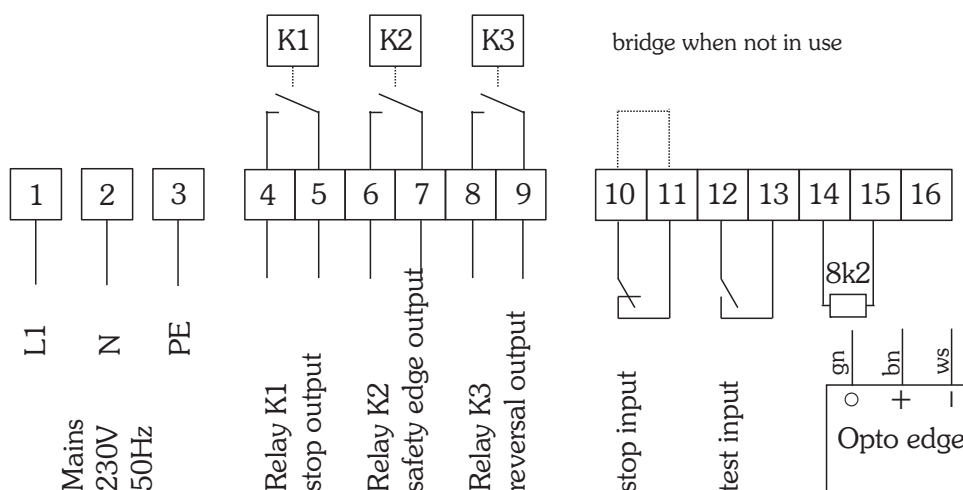
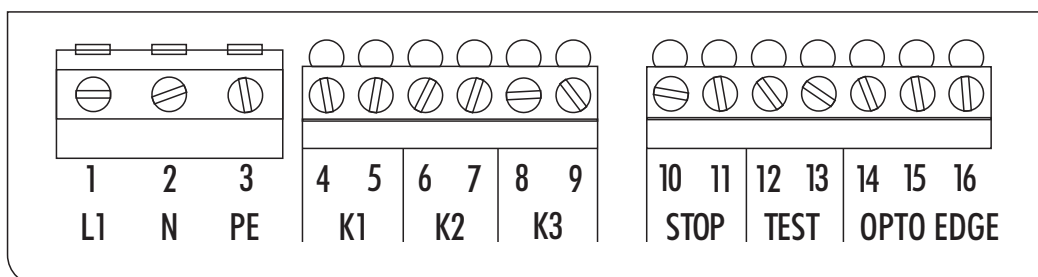
## Application area

Automatic gate systems with an optoelectronic safety edge Witt OS or compatible system or a resistive safety edge with 8.2kOhm terminating resistor.

## Function

The AOS 1000 offers three potential-free relay outputs, which are tied into the wiring of the gate systems. Given that the variety of the wirings to be found on the market do not allow any general scheme, the function of the individual relays and inputs is explained here. The integration to a wiring is possible without problems with the help of this functional description.

## Terminal assignment



## **Contact assignment**

### ***Relay K1 clamp 4/5 - input stop clamp 10/11***

The contact of K1 follows the stop input. Stop input closed - > contact K1 closed. This relay contact is attached in series with all other safety devices which result in a stop (so-called stop chain, such as crank-handle switch or thermoswitch).

Normally open contacts can be attached as for example slip door switch at the input stop. Several contacts are connected in series. The input works with 24VDC.

### ***Relay K2 clamp 6/7 - input safety edge clamp 14/15/16***

The contact of K2 follows the safety edge input. If the safety edge is not activated and the operation is all right, the relay contact K2 is closed. This relay contact has to be connected in a way that a closing movement of the gate systems is prevented or stopped.

Optoelectronic safety edges of the Witt OS or compatible systems and 8.2kOhm safety edges can be attached at the safety edge input. Only one type at a time may be attached.

The optoelectronic safety edge has to be chosen with help of the sliding switch J1. The setting is labeled directly at the switch. The described function of relay K2 is for 180s after release of the test input. In this way the absence of the periodic test is recognized. This function can be bridged by attachment of J4.

### ***Relay K3 clamp 8/9***

The contact of K3 causes a reversal signal. If the attached safety edge is triggered the relay contact K3 switches after the adjusted waiting time. This relay contact K3 is connected in such a way, that an opening command is given. This opening command makes sure that an obstacle which triggered the safety edge will be released.

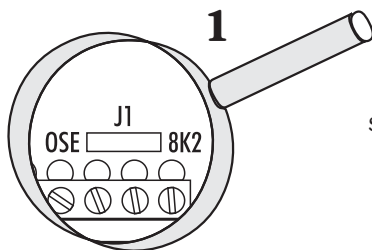
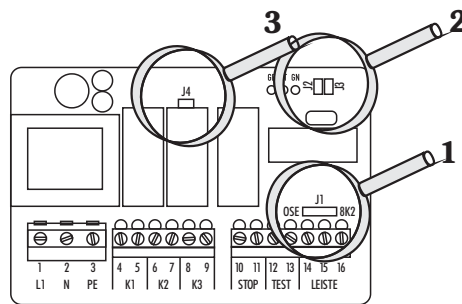
If necessary, a pre-limit switch can prevent reversing, when the safety edge touches down on the ground. This pre-limit switch contact is attached in series with the relay contact K3. The contact must open, shortly before the gate touches down on the ground.

### ***Input test clamp 12/13***

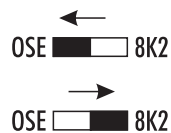
The input test starts a self-test of the device and the safety edge processing. This test must be carried out periodically. To ensure this, a potential-free switch in the gate control unit or a potential-free limit switch should be attached to the gate plate.

The test should always be started in the end position OPEN. During the test the yellow LED should light up. Should this LED not cease, then a fault was spotted. In this case, the device and the safety edge must be checked by a qualified employee.

At the regular maintenance works, the proper operation of the test-process has to be checked. For that purpose put the gate systems into test position. The yellow LED must light up twice briefly during the test.

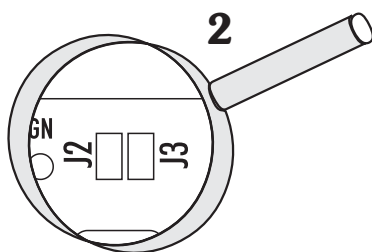


**J1**  
safety edge  
selection



Optoelectronic safety edge  
Witt OS or compatible system

safety edge with 8.2kOhm  
terminating resistor

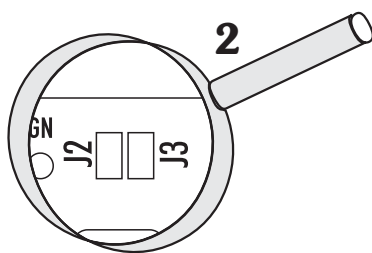


**J2**  
switching  
delay



J2 closed = 50ms delay

J2 open = 15ms delay

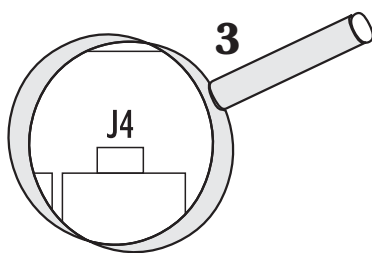


**J3**  
test  
input



J3 closed = normally closed contact at  
test input

J3 open = normally open contact  
at test input

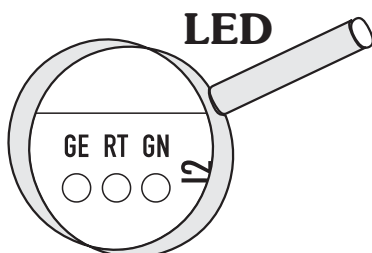


**J4**  
forced  
testing



J4 closed = testing not required

J4 open = forced testing enabled



**LED**

GN - LED green RUN

RT - LED red error

GE - LED yellow TEST

operating voltage is correct,  
stop-input is closed

blinking: safety edge ist active or defect  
continuous: test failed

self testing is running or failed