



# The KARI float switch

*The only float switch in the world  
with four switch points in a single float*



# The world's most versatile float switch



*The KARI float switch is the world's most versatile float switch. Unlike the other products on the market, the KARI float switch comes with a four-point level switch. The KARI float switch not only serves as an alarm system for a pre-determined liquid level but can also be used to control the filling and emptying of a tank. You can set the threshold values yourself easily, with no need for any additional devices. The KARI switch is available in several models, covering a wide variety of purposes and applications. We are also happy to customise a float switch to meet your specific needs.*



## Several level switches in a single float

KARI float switches are unique cable-suspended control devices used to sense liquid levels in, for example, wells and pump systems. These are the most versatile float switches on the market. The KARI float switch allows you to set alarms for low and high levels, while also controlling the functioning of the pump – all with just one float. Thanks to the KARI float switch's revolutionary design, there is no need to install several single-point float switches in one tank and risk them getting tangled up as the liquid level rises and falls.

## Top-quality products with experience spanning five decades

Thanks to our extensive experience, KARI float switches are reliable and offer consistent top-notch quality. Their long service life makes KARI float switches environmentally friendly. Our clients are particularly pleased with our float switch's durable design, which provides up to 30 years of continuous use. Each KARI float switch is individually inspected and tested.

## Compact design and high reliability

KARI float switches consist of a free-floating switch enclosure to which a protected multi-conductor cable is attached. A control weight fixed to the cable keeps it immersed in the liquid, causing the switch to tilt in line with fluctuations in the liquid level.

## A large and reliable float

The large float casing houses several microswitches that control the various float-switch functions in accordance with the angle of the float. As the liquid level rises and falls, the microswitches open and close contacts to adjust the signal current.

## Easy-to-adjust switch activation levels

The KARI float switch's stop, start, and level-alarm functions are easy to control by adjusting the length of the cable and changing the position of the weight.

## A wide range of standard models, plus bespoke solutions

We offer you more than 30 standard KARI float-switch models to choose from, with anywhere from one switch function to four: low and high level alarms and control functions for stopping and starting.

We can also design a customised float switch to meet your specific needs, such as a greater switching differential or a higher maximum operation temperature than offered by our standard models.

### High level alarm

A high level alarm is issued or valve discharging initiated when, for example, the pump is out of order.

### Start

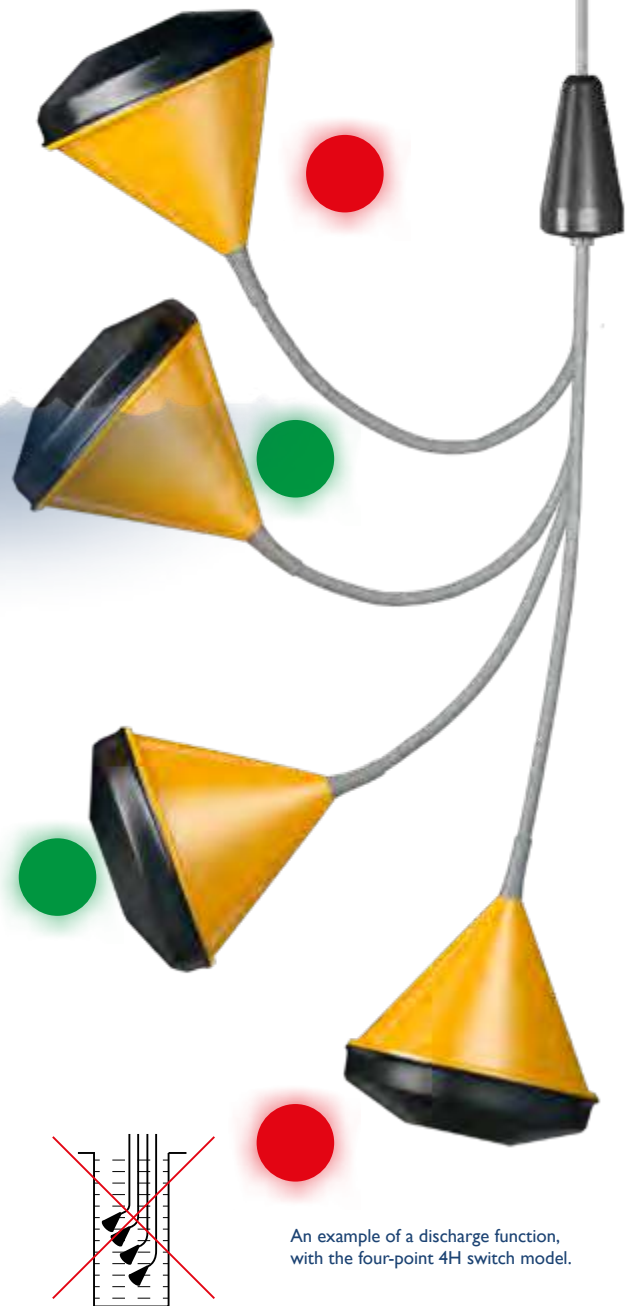
The liquid level is high. The switch turns on the pump.

### Stop

The liquid level reaches the pre-determined lower limit. The pump is turned off.

### Low level alarm

A low level alarm is issued or valve charging initiated when, for example, the pump is out of order.



An example of a discharge function, with the four-point 4H switch model.



## Cables delivered on the basis of dimensions, application, and liquid

Instead of being standard solutions, the cables for KARI float switches are always delivered to match the liquid and the tank dimensions. This ensures a problem-free, long service life for the float switch, even when used with corrosive liquids. Using our databank, we can select the optimal cable type for each application.

- PVC-coated cable for normal use
- Rubber cable for low temperatures and applications causing mechanical strain
- Thermoplastic polyurethane (TPU) cable for applications in which resistance to oil is required
- Teflon (PTFE) cable for demanding chemical applications
- Special cables, including halogen-free, silicone, and PUR cables

# Reliable operation in all conditions

*The KARI float switch is the largest float switch on the market. Thanks to its conical shape and low weight in relation to its size, the KARI float switch offers excellent buoyancy and problem-free operation in all conditions. In addition to wells, pumping solutions, and tanks, it is well suited to monitoring and controlling the level of wastewater, liquids generated in industrial processes, and liquids that cover a wide viscosity range.*



**The KARI float switch prevents tank overflow**



**Choose an environment-friendly solution without mercury or lead**

The unique KARI float switch does not contain any mercury or lead, making it suitable for applications wherein the liquid must not be exposed to these toxic substances.

When you choose a KARI float switch, you can be sure the product meets all environmental requirements both during long-term use and after disposal.



## The large float casing performs well even in the most demanding of conditions

The light weight of the float switch coupled with the large float casing results in excellent buoyancy, ensuring correct functioning also in demanding conditions, including challenging wastewater applications, where smaller float switches fail to deliver results. We also produce small float switches, recommended for clean water, urban runoff, and liquid chemicals that do not contain solid material.

## No unnecessary on/off control functions wear the system out

In maintenance of the liquid level, the KARI float switch can be used efficiently to control two levels, unlike single-point switches, which switch on and off at the same threshold level. The KARI switch distinguishes between the pump's separate on and off liquid-level points, which helps to prolong the pump's service life.

## The switch is ideal for safe work with hazardous substances

Thanks to its EXi safety relay, the KARI float switch is ideal for working with hazardous and inflammable liquids.



# The high-quality KARI float switch – from Finland, with expertise

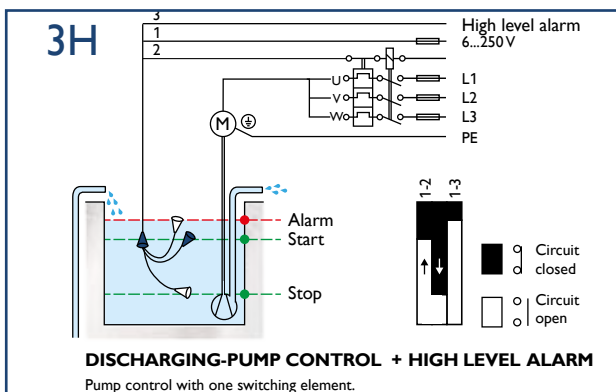


Our quality control is based on the ISO 9001 quality management system. Each product is subjected to a full operation test. All KARI float switches also meet both US and Canadian national safety standards.



RoHS

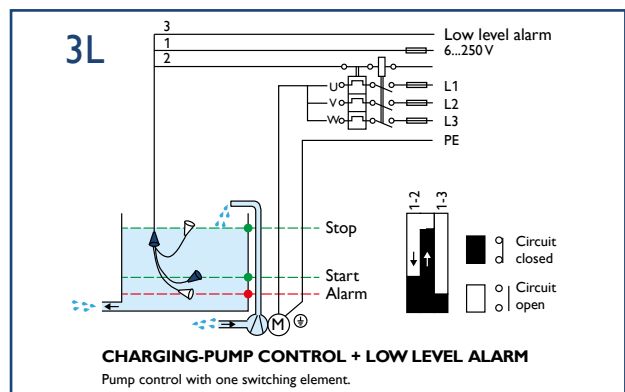
## KARI float switch, model 3H



### Emptying control + high level alarm

The pump is switched on when the liquid level rises to the pre-determined high point and remains on until the low level has been reached again. If the pump fails to turn on or its supply is not adequate, the float switch sounds an alarm when the liquid level rises to the high level point.

## KARI float switch, model 3L



### Filling control + low level alarm

The pump is switched on when the liquid level falls to the pre-determined low point and remains on until the high level has been reached again. If the pump fails to turn on or its supply is not adequate, the float switch sounds an alarm when the liquid level falls to the low level point.

## Why choose the KARI float switch?

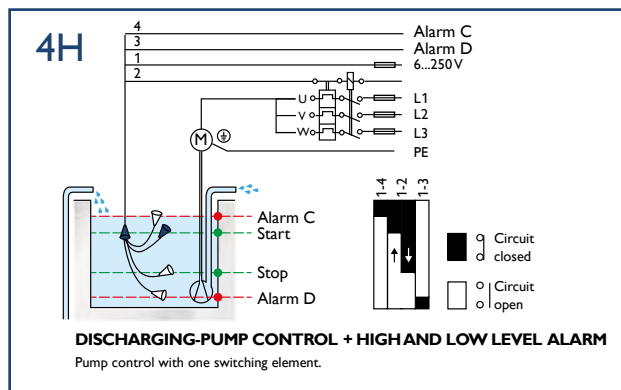
- A simple structure and reliable operation
- Cost-efficiency
- Several level switches in a single float
- Easy-to-adjust switch operation levels
- Suitability for demanding applications and the majority of liquids
- A wide range of standard products, plus bespoke solutions
- Various cable options, available for a wide variety of applications and liquids
- Cable lengths tailored to meet the client's specific needs
- Easy installation
- An environmentally friendly solution without mercury or lead
- Safe use also with hazardous liquids
- No need for maintenance
- A longer pump service life, as the pump is not switched on and off unnecessarily
- A full operation test for all switches
- Top-quality products created through experience spanning five decades

KARI FLOAT SWITCHES – STANDARD MODELS		MODEL		
TYPE	APPLICATION	M Ø 76 mm	C Ø 99 mm	S Ø 170 mm
1H	High level alarm or electromagnetic valve control	▲	▲	▲
2H	Discharging-pump control or prevention of pump operations when no liquid is present	▲	▲	▲
2Y	Discharging-pump control or prevention of pump operation when no liquid is present		▲	▲
3H	Discharging-pump control + high level alarm		▲	▲
3Y	Discharging-pump control + high level alarm		▲	▲
3HE	Discharging-pump control + isolated high level alarm		▲	▲
3YE	Discharging-pump control + isolated high level alarm			▲
4H	Discharging-pump control + high and low level alarm			▲
4Y	Discharging-pump control + high and low level alarm			▲
1L	Low level alarm or electromagnetic valve control	▲	▲	▲
2L	Charging-pump control	▲	▲	▲
2A	Charging-pump control		▲	▲
3L	Charging-pump control + low level alarm		▲	▲
3A	Charging-pump control + low level alarm			▲
3LE	Charging-pump control + isolated low level alarm		▲	▲
3AE	Charging-pump control + isolated low level alarm			▲
4L	Charging-pump control + high and low level alarm			▲
4A	Charging-pump control + high and low level alarm			▲
1C	As an alarm device, change-over switch	▲	▲	▲
2HL	High and low level alarms, suitable for such uses as alarm functions for an expansion tank.		▲	▲

Each product has an electrical number and LVI product codes with which it can be uniquely identified.

The standard cable length is five metres, but other lengths are available on request.

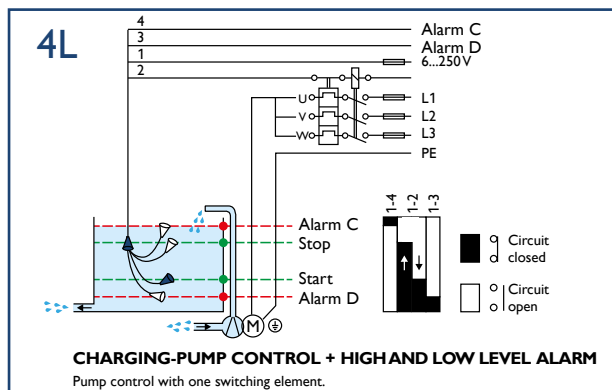
### KARI float switch, model 4H



#### Emptying control + high level alarm

The pump is switched on when the liquid level rises to the pre-determined high point and remains on until the low level has been reached again. The switch also issues both low and high level alarms.

### KARI float switch, model 4L



#### Filling control + low and high level alarm

The pump is switched on when the liquid level falls to the pre-determined low point and remains on until the high level has been reached again. The switch also issues both low and high level alarms.



Kari-Finn  
Koneharjuntatu 1  
15850 LAHTI  
Tel. +358 3 876 810  
info@kari.fi  
www.kari.fi

### Almost 50 years of experience in product development

Kari-Finn Oy developed its first float switch back in 1965. Since then, we have designed, tested, and manufactured millions of float switches, for a wide variety of operating environments. Thanks to our research work and feedback from customers, we have been very successful in developing our product line.

### International success in innovation and export since 1977

The KARI float switch was awarded a gold medal at the Brussels International Exhibition of Invention and a medal of the City of Brussels for an extensively exported product already in 1977. At that time, exports covered all countries in Europe, the United States, South Africa, and Japan. Later on, exports reached every continent.



● Representatives      ● Head office

