

SELECTION GUIDE



finder[®]

SWITCH TO THE FUTURE

Devices for controlling liquid levels



The Finder 72 Series range of Level control relays and float switches

Liquid level relays for the control of a wide range of conductive liquids - including foodstuff using probes made of appropriate materials. Float switches offer liquid level control solutions in applications as diverse as black water, white/clear water to liquid foodstuff - conductive or non-conductive.



Made in Italy



**Quality in design
and manufacture**
ISO 9001:2015
ISO 14001:2015



**Quality
materials
throughout**

Agriculture

Level control for irrigation channels and systems.

Level control for water tanks, reservoirs or underground wells.

Level control for sewage tanks or mixing plants

Residential and commercial sectors

Level control for pools, fountains and aquariums.

Food

Condensation control for refrigerated cabinets.

Liquid level detection of drinking water, beer, wine, coffee, fruit juices, etc..

Water treatment and distribution

Pump level control.

Control of filling and emptying of tanks.

Control of filling and emptying of water

purified in cities, industrial waters and sewage.

Controlling the supply of hot water heated by solar energy.



Applications everywhere!







Level control relays for conductive liquids

Types 72.01 and 72.11 are suitable for the level control of conductive liquids.
 2 electrodes for control about a single level, or 3 electrodes for control between minimum and maximum limits.

- Emptying or filling functions
- Control about a single level or between Min./Max. limits
- LED indicator, of contact status
- 1 CO (SPDT) 16 A - 250 V AC
- 35 mm rail (EN 60715) mount
- Positive logic output
- Nominal voltage AC or DC
- Special version for low loads down to 5 V, 1 mA
- Reinforced insulation between supply/contacts/electrodes (6 kV - 1.2/50 μ s)



Type	72.01	72.11
Filling function	✓	✓
Emptying function	✓	✓
Sensitivity	5...150 k Ω / 5...450 k Ω (adjustable)	150 k Ω (fixed)
Run-on time	0.5 - 7 seconds	fixed 1 second
LED indicator	✓	✓
Contact configuration	1 CO (SPDT)	1 CO (SPDT)
Rated current/Maximum peak current	16/30 A	16/30 A
Nominal voltage AC (50/60 Hz)	24, 110...125, 230...240, 400 V	24, 110...125, 230...240 V
Nominal voltage DC	24 V	24 V
Insulation: supply/contacts/electrodes	6 kV	6 kV
Electrical life at rated load	100 000 cycles	100 000 cycles
Ambient temperature	- 20...+60°C	- 20...+60°C
Functions	FL = Level control by Filling, Long (7 s) run-on delay EL = Level control by Emptying, Long (7 s) run-on delay FS = Level control by Filling, Short (0.5 s) run-on delay ES = Level control by Emptying, Short (0.5 s) run-on delay	F = Level control by Filling, Run-on time fixed at 1 s E = Level control by Emptying, Run-on time fixed at 1 s
Approvals		

Types of liquids

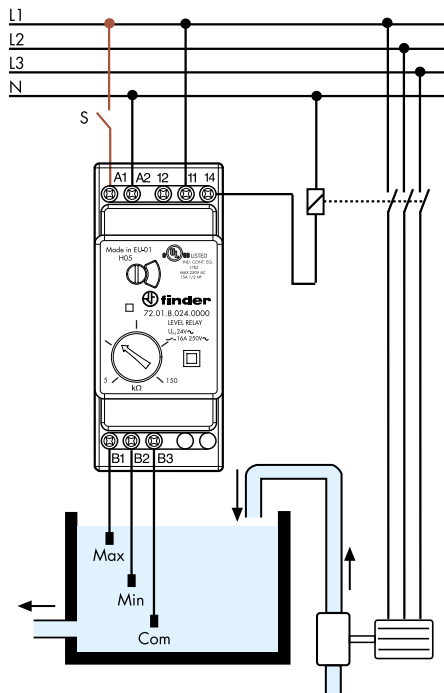


Suitable liquids
- Potable water
- Well water
- Water (general use)
- Rainwater
- Sea water
- Sewage
- Wine
- Liquid fertilizer
- Milk, Beer, Coffee
- Liquids with low-percentage alcohol

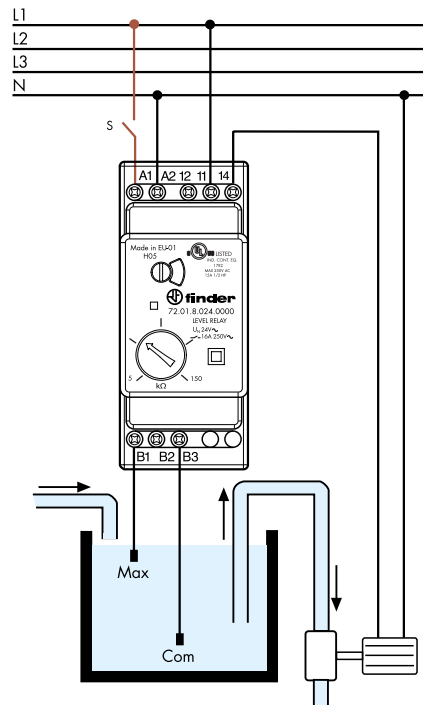


Un-suitable liquids
- Demineralised water
- Fuels
- Oil
- Liquids with high-percentage alcohol
- Liquid gas
- Paraffins
- Ethylene glycol (aircraft wing defrosting)
- Paint

Filling functions (FL/FS)
Example with 3 electrodes



Emptying functions (EL/ES)
Example with 2 electrodes



Product code	Description	Nominal voltage
72.01.8.024.0000	Sensitivity range adjustable (5...150)kΩ	24 V AC
72.01.8.024.0002	Sensitivity range adjustable (5...450)kΩ	24 V AC
72.01.8.125.0000	Sensitivity range adjustable (5...150)kΩ	110...125 V AC
72.01.8.240.0000	Sensitivity range adjustable (5...150)kΩ	230...240 V AC
72.01.8.240.0002	Sensitivity range adjustable (5...450)kΩ	230...240 V AC
72.01.8.240.5002	Sensitivity range adjustable (5...450)kΩ, per bassi carichi	230...240 V AC
72.01.8.400.0000	Sensitivity range adjustable (5...150)kΩ	400 V AC
72.01.9.024.0000	Sensitivity range adjustable (5...150)kΩ	24 V DC
72.11.8.024.0000	Sensitivity fixed 150 kΩ	24 V AC
72.11.8.125.0000	Sensitivity fixed 150 kΩ	110...125 V AC
72.11.8.240.0000	Sensitivity fixed 150 kΩ	230...240 V AC
72.11.9.024.0000	Sensitivity fixed 150 kΩ	24 V DC

Probes and accessories for liquid level control

A wide and diverse range of electrodes allow the Types 72.01 and 72.11 level control relays to work in many diverse applications.

Normally 2 electrodes are used for the control about a single level, although 3 probes can be used for level control between “Minimum” and “Maximum” levels.

It is possible to use the tank itself as the common electrode (terminal B3), if it is made of a conductive material.

If two different levels are required to be set-up within the same tank, it is possible to do this by simply utilising two level control relays.





Type 072.01.06 - Cable length: 6 m (1.5 mm²)
Type 072.01.15 - Cable length: 15 m (1.5 mm²)
Suspended electrode for conductive liquids. Suitable for level monitoring in wells and reservoirs not under pressure. All materials used are compatible with food processing applications.



Type 072.02.06 - Cable length (blue colour): 6 m (1.5 mm²)
Suspended electrode for swimming pools with high levels of chlorine, or in salt-water pools with high levels of salinity.
 High quality electrode material: stainless steel (AISI 316L) with high corrosion resistance.
 Max. liquid temperature +100°C.



Type 072.31
Suspended electrode for wells and tanks.
 High quality electrode material: stainless steel (AISI 316L) with high corrosion resistance.
 Plastic parts made of polypropylene for good resistance to aqueous solutions of inorganic salts, acids, alkaline solutions, alcohol, some oils and washing solutions.
 Physiologically harmless and therefore particularly suitable for use in the food and pharmaceutical sectors.
 Max. liquid temperature +80°C.



Type 072.51
Electrode holder suitable for metal tank with G3/8" fitting. The tank can be used as the common electrode and electrically wired to the common terminal B3 of the 72.01 / 11 relay by utilising the threaded part and fixing nut as a terminating point.
 The total length of the probe is obtained by connecting an appropriate number of 072.500 electrodes.
 High quality electrode material: stainless steel (AISI 304) with high corrosion resistance.
 Max. liquid temperature +100°C.



Type 072.53
Electrode holder with three poles, for overhead mounting in wells and tanks.
 The total length of the probes is obtained by connecting an appropriate number of 072.500 electrodes.
 High quality electrode material: stainless steel (AISI 303) with high corrosion resistance.
 Max. liquid temperature +70°C.



Type 072.503
Electrode separator (for three pole electrode holder 072.53).
 Use to avoid electrodes touching where otherwise they might sway due to their length.

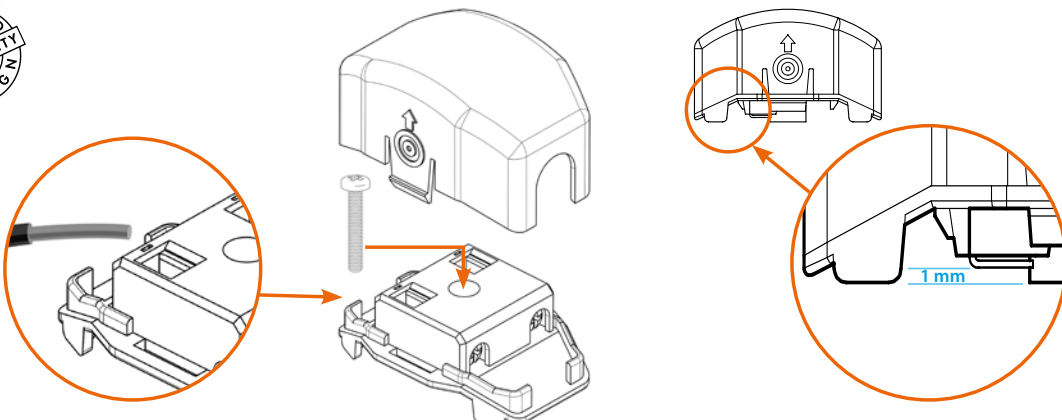


Type 072.500 - Electrode - 475 mm long, M4 thread, stainless steel (AISI 303)
Type 072.501 - electrode connector, M4 thread, stainless steel (AISI 303).
 Multiple electrodes may be interconnected to provide required length.

Illustration of interconnection of electrodes.



Type 072.11
Floor water sensor, flood warning. Designed for the detection and signalling of the presence of floor surface water and for the detection of condensation (for example in refrigerated cabinets).

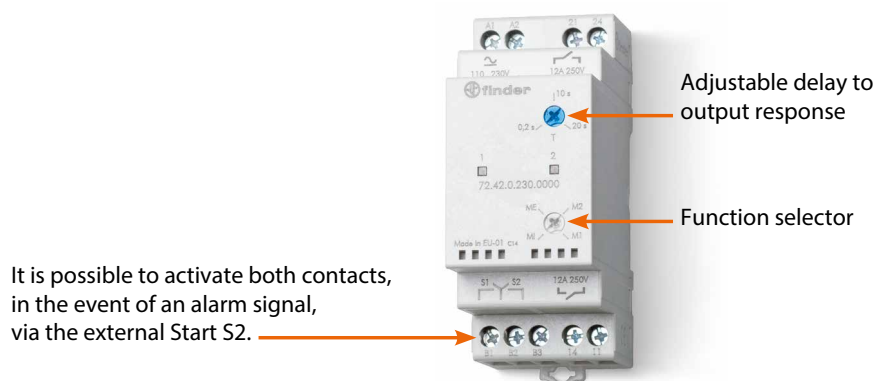




Priority change relay

This relay Type 72.42 is recommended to equalise the wear in equipment, such as pumps, compressors, air conditioning, etc., when the plant comprises two units, one of which is spare.

- 2 independent NO output, 12 A - 250 V AC
- 4 functions
- 2 independent control signals, insulated from supply
- Nominal voltage AC and DC
- 35 mm rail (EN 60715) mount



It is possible to activate both contacts, in the event of an alarm signal, via the external Start S2.

Type	72.42
Minimum impulse duration	50 ms
Power-on activation time	≤ 0.7 seconds
LED indicator	✓
Contact configuration	2 NO (DPDT)
Rated current/Max. peak current	12/20 A
Nominal voltage AC/DC	24, 110...240 V
Rated power in stand-by	0.12 W (24 V AC/DC) , 0.18 W (110...240 V AC/DC)
Rated power with 2 active relays	1.1 W/1.7 VA (24 V AC/DC), 1.5 W/3.9 VA (110...240 V AC/DC)
Insulation: supply/contacts/electrodes	6 kV
Electrical life at rated load	100 000 cycles
Ambient temperature	- 20...+50°C
Functions	MI = Outputs alternate on successive applications of supply voltage ME = Outputs alternate on successive applications of control signal S1 M1/M2 = In case of a load malfunction, it is possible to force the operation of a specific output
Approvals	CE EAC

Typical applications



Autoclave or
pressurised plant



Refrigeration Units



Compressors

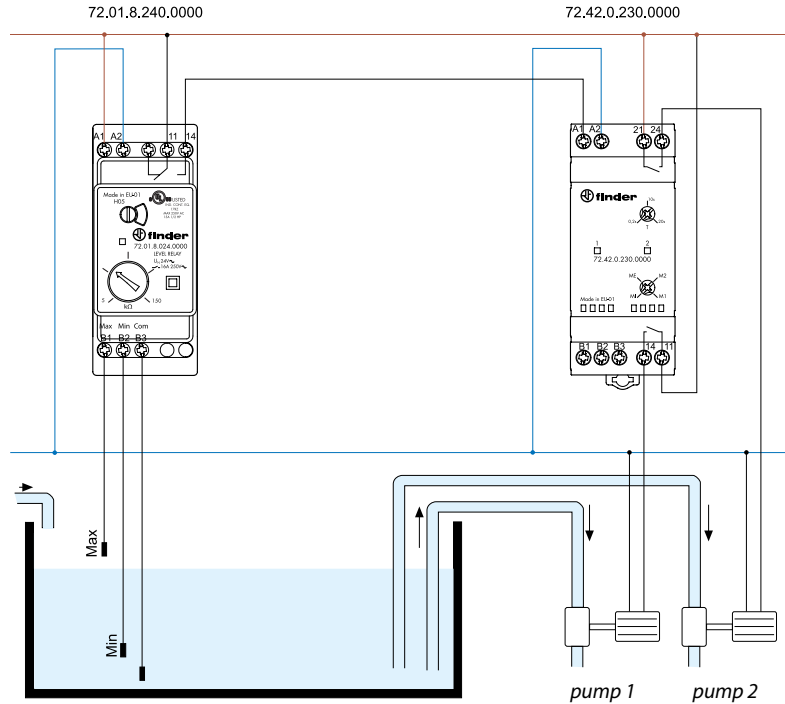


Flood control systems

Examples for the management of two pumps

Function (MI)

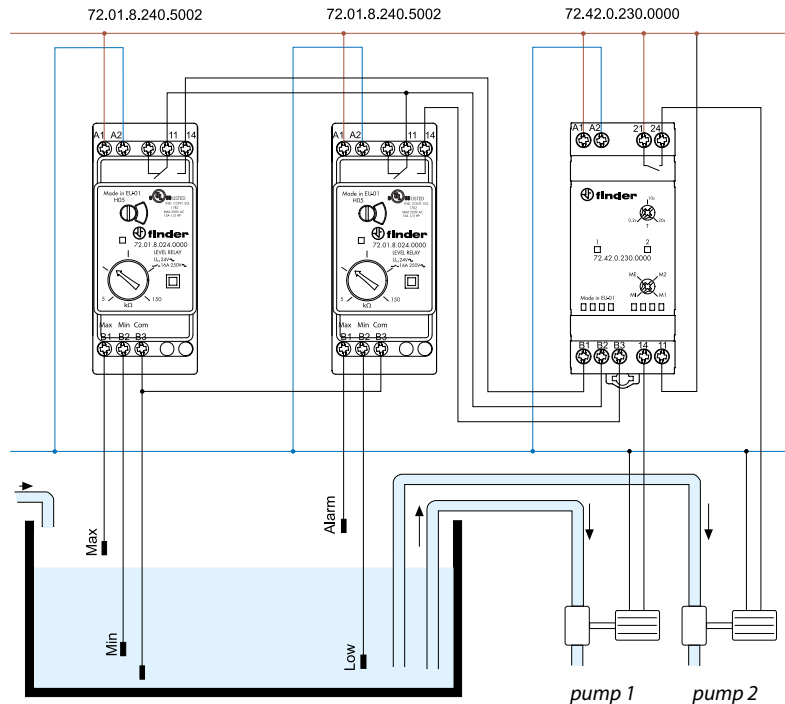
This shows the 72.42 Priority change relay working in conjunction with a single 72.01 level controller. Under normal conditions the liquid level is expected to remain within the range shown as Min to Max. In this case the function of the 72.42 will be to alternate the duty between both pumps, to even wear across both pumps. There is no provision to run both pumps simultaneously.



Function (ME)

This shows the 72.42 Priority change relay working in conjunction with two 72.01 level controllers. Under normal conditions the liquid level is expected to remain within the range shown as Min to Max. In this case the function of the 72.42 will be to alternate the duty between both pumps, to even wear across both pumps. Should the liquid level rise above the Alarm level then the function of the 72.42 will call for the simultaneous operation of both pumps, by virtue of the signal to terminal B3 from the Alarm/Low level controller.

Note: due to the low level of 72.42 control signals, it is suggested to use level controller 72.01.8.240.5002 because of its superior low load switching capability.




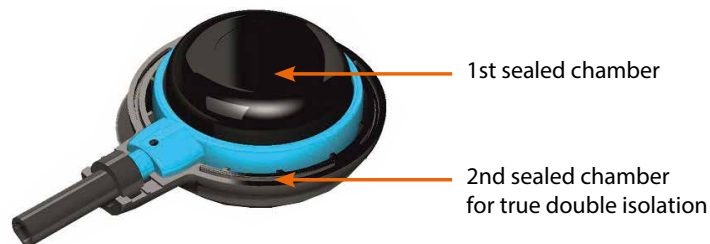
Product code	Description	Nominal voltage
72.42.0.024.0000	Priority change relays	24 V AC/DC
72.42.8.230.0000	Priority change relay	110...240 V AC/DC



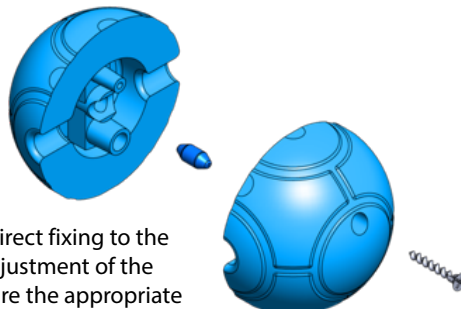
Float switch for clean/white water

Float switch with 2 watertight chambers Type 72.A1, suitable for automatic pumping, professional plumbing systems and waste water. Counterweight (230 g) with cable grip, included.

- Resistant to high pressures
- Emptying or filling functions
- Cable length 5 m, 10 m, 15 m or 20 m
- Cable material: NEOPRENE H07 RN F approved (TÜV) 
(Available in PVC - no agency approvals).



Counterweight (230 g) for Type 72.A1.
Included in the package.

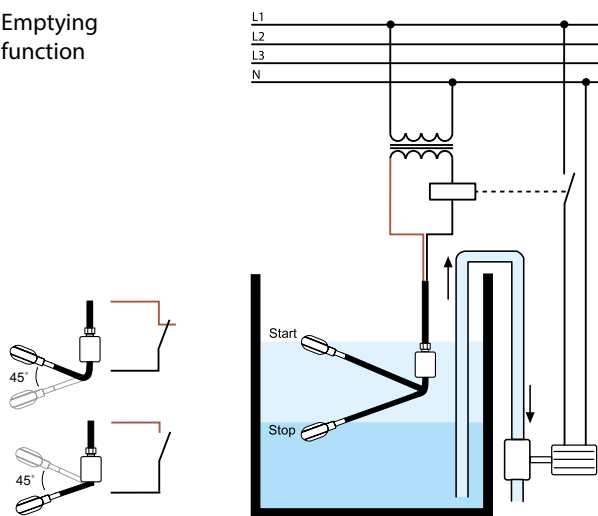


Easy to install. Direct fixing to the cable to allow adjustment of the level and to ensure the appropriate excursion of the float - even in the case of turbulent water.



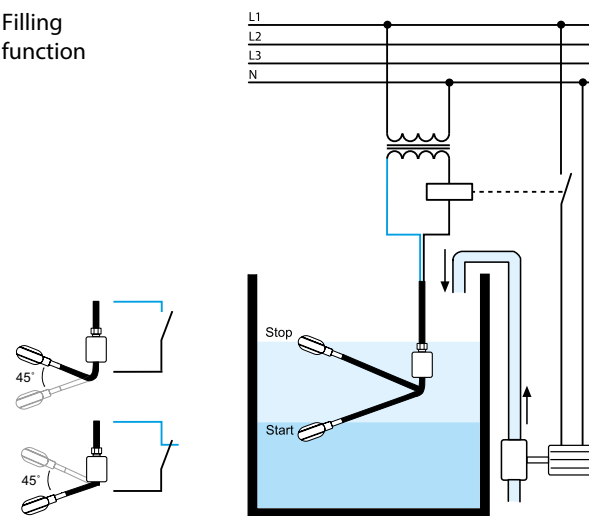
Type	72.A1.0000.xxxx
Contact configuration	1 CO (SPST)
Rated current	10 A (8 A)
Rated voltage	250 V AC
Protection degree	IP 68
Max liquid temperature	+ 50 °C
Max depth	40 m
Functions	emptying, filling
Cable material	PVC - H07 RN F
Body material	Polypropylene
Approvals (according to type)	CE EAC

Emptying function



When black and brown wires are used, the circuit opens when the float is down and closes when the float is up.

Filling function



When black and blue/grey wires are used, the circuit opens when the float is up and closes when the float is up.

Product code	Description
72.A1.0.000.0501	Float switch, cable length 5 m in neoprene (H07 RN F)
72.A1.0.000.1001	Float switch, cable length 10 m in neoprene (H07 RN F)
72.A1.0.000.1501	Float switch, cable length 15 m in neoprene (H07 RN F)
72.A1.0.000.2001	Float switch, cable length 20 m in neoprene (H07 RN F)
72.A1.0.000.0500	Float switch, cable length 5 m in PVC
72.A1.0.000.1000	Float switch, cable length 10 m in PVC
72.A1.0.000.1500	Float switch, cable length 15 m in PVC
72.A1.0.000.2000	Float switch, cable length 20 m in PVC



Float switch for liquid foodstuff and potable water

Float switch with 2 watertight chambers Type 72.A1 ACS, for liquid foodstuff and potable water. Supplied with counterweight in stainless steel AISI 316.

Made from non-toxic materials suitable for permanent immersion in drinking water.

Ideal for:

- aqueducts - drinking water fountains - drinks and food products
- aquariums - fish hatcheries - swimming pools

This version permits use in water with:

Sodium Chloride - Salt Water: max 50%

Sodium Hydrate - Caustic Soda: max 40%

Sodium Hypochlorite - Bleach: max 15%

- Emptying or filling functions
- Cable length 5 m, 10 m, 15 m or 20 m

ACS certified
(Attestation de Conformité Sanitaire)



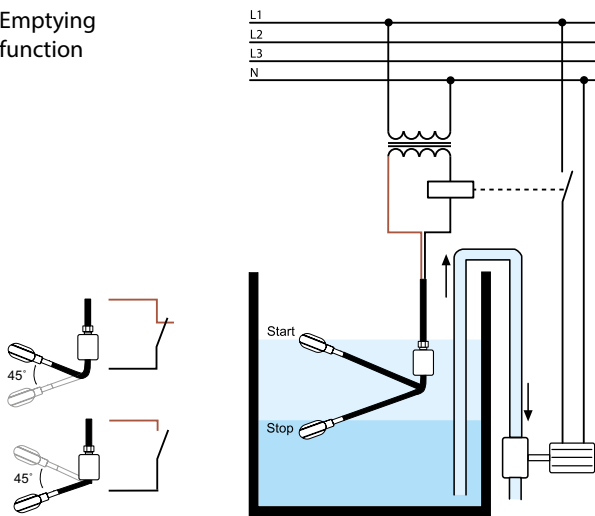
Counterweight (300 g)
in Stainless steel AISI 316





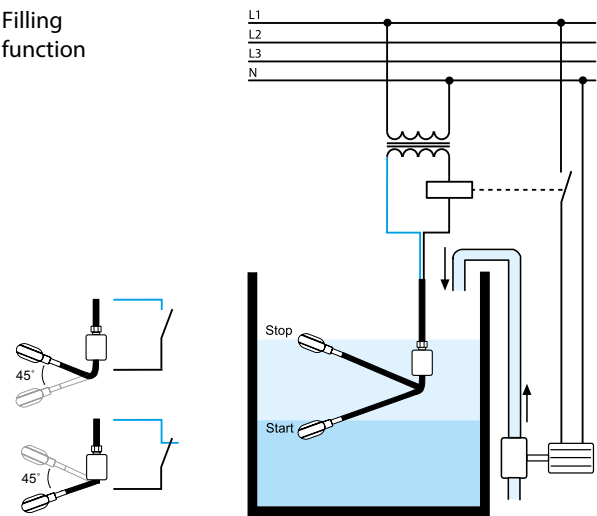
Type	72.A1.0000.xx02
Contact configuration	1 CO (SPST)
Rated current	10 A (8 A)
Rated voltage	250 V AC
Protection degree	IP 68
Max liquid temperature	+ 40 °C
Max depth	40 m
Functions	emptying, filling
Cable material	PVC ACS Certified version + AD8
Body material	Polypropylene
Approvals	CE ACS

Emptying function



When black and brown wires are used, the circuit opens when the float is down and closes when the float is up.

Filling function



When black and blue/grey wires are used, the circuit opens when the float is up and closes when the float is down.

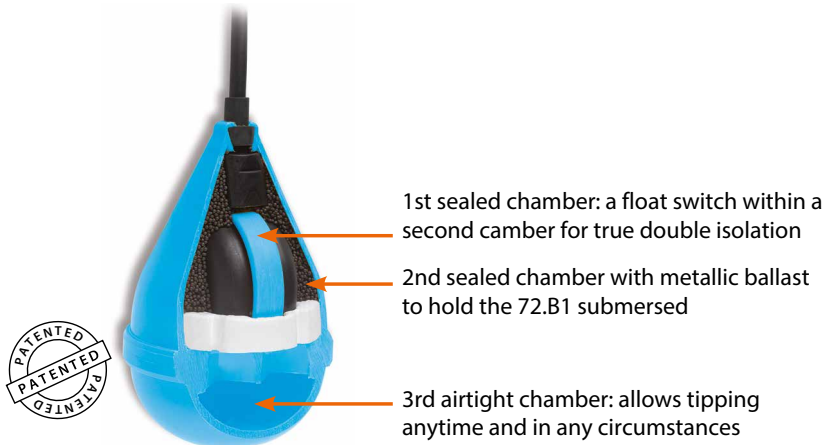
Product code	Description
72.A1.0.000.0502	Float switch, cable length 5 m, ACS
72.A1.0.000.1002	Float switch, cable length 10 m, ACS
72.A1.0.000.1502	Float switch, cable length 15 m, ACS
72.A1.0.000.2002	Float switch, cable length 20 m, ACS



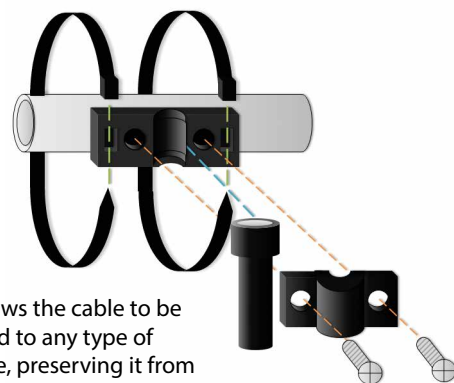
Float switch for black water

Float switch with 3 watertight chambers Type 72.B1, for black water systems, drainage plants and pumping stations. Supplied with fixing kit.

- Resistant to high pressures
- Emptying or filling functions
- Cable length 5 m, 10 m, 15 m or 20 m
- Cable material: NEOPRENE H07 RN F approved (TÜV) 
(Available in PVC - no agency approvals).



Fixing KIT for Type 72.B1.
Included

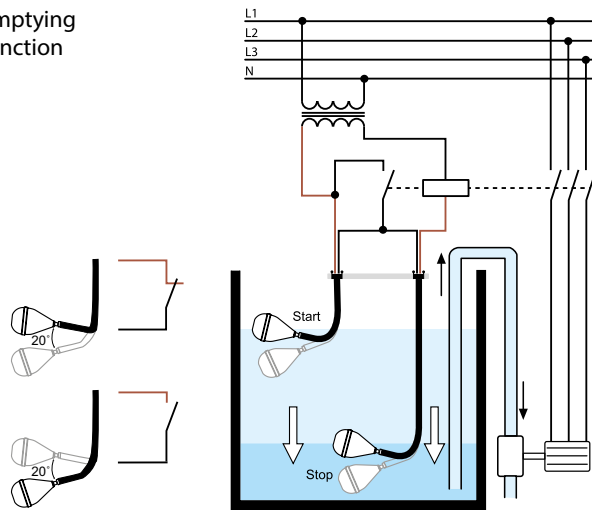


Allows the cable to be fixed to any type of pipe, preserving it from deterioration or damage



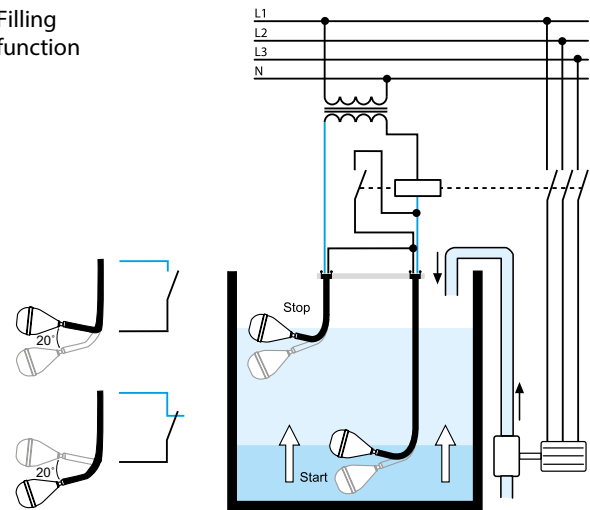
Type	72.B1.0000.xxxx
Contact configuration	1 CO (SPST)
Rated current	10 A (8 A)
Rated voltage	250 V AC
Protection degree	IP 68
Max liquid temperature	+ 50 °C
Max depth	20 m
Functions	emptying, filling
Cable material	PVC - H07 RN F
Body material	Polypropylene
Approvals (according to type)	CE ENEC

Emptying function



When black and brown wires are used, the circuit opens when the float is down and closes when the float is up.

Filling function



When black and blue/grey wires are used, the circuit opens when the float is up and closes when the float is down.

Product code	Description
72.B1.0.000.0501	Float switch, cable length 5 m in neoprene (H07 RN F)
72.B1.0.000.1001	Float switch, cable length 10 m in neoprene (H07 RN F)
72.B1.0.000.1501	Float switch, cable length 15 m in neoprene (H07 RN F)
72.B1.0.000.2001	Float switch, cable length 20 m in neoprene (H07 RN F)
72.B1.0.000.0500	Float switch, cable length 5 m in PVC
72.B1.0.000.1000	Float switch, cable length 10 m in PVC
72.B1.0.000.1500	Float switch, cable length 15 m in PVC
72.B1.0.000.2000	Float switch, cable length 20 m in PVC

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