

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property

Organization

International Bureau

(43) International Publication Date

02 February 2023 (02.02.2023)



(10) International Publication Number

WO 2023/009014 A2

(51) International Patent Classification:

Not classified

(21) International Application Number:

PCT/OM2022/050006

(22) International Filing Date:

28 June 2022 (28.06.2022)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

OM/P/2021/00292 26 July 2021 (26.07.2021) OM

(72) Inventor; and

(71) Applicant: **AL KAABI, Said** [OM/OM]; Liwa Road,
North Al Batinah, 266 (OM).

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IQ, IR, IS, IT, JM, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, ZA, ZM, ZW.

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

Published:

- without international search report and to be republished upon receipt of that report (Rule 48.2(g))
- in black and white; the international application as filed contained color or greyscale and is available for download from PATENTSCOPE

(54) Title: SAFE WATER CONTROLLER DEVICE

(57) Abstract: This device works on the technique of reducing the current from 220 volts to 12 volts so that it can control the electric float or water compressor device and operate the motor by using RELAY or a contactor so that there is not the slightest risk of 12 volts entering the electric buoy or the water compressor device so that The current existing one uses a current of 220 volts and when there is a malfunction in the float or the water compressor device, the leakage leaks through the water, which poses a danger to human life, as well as the two-connection switch allows for inspection when there is a malfunction quickly without the need to separate the wires and manual examination.



WO 2023/009014 A2

Description

Title of Invention: SAFE WATER CONTROLLER DEVICE

Technical Field

[0001] Electrical safety. the device is protects from electric shock.

Background Art

[0002] The principle of the working mechanism of the two devices (electric buoy and water compressor) is that they close and connect the electrical circuit of the water motor through the use of a power line carrying a current of 220 volts AC, but when any malfunction occurs in these two devices, water leaks inside them and here lies the danger as the water is a conductor of electricity and electrocution can occur to a person, forbidding By God, since the power line carries a current that can cause electric shock, as well as when there is a malfunction in the electric buoy, the electric compressor device, or the motor, it is not possible to differentiate the location of the fault until after the wires are unplugged and each device is checked separately.

Summary of Invention

[0003] This device works on the technique of reducing the current from 220 volts to 12 volts so that it can control the electric float or water compressor device and operate the motor by using RELAY or a contactor so that there is not the slightest risk of 12 volts entering the electric buoy or the water compressor device so that The current existing one uses a current of 220 volts and when there is a malfunction in the float or the water compressor device, the leakage leaks through the water, which poses a danger to human life, as well as the two-connection switch allows for inspection when there is a malfunction quickly without the need to separate the wires and manual examination.

[0004] This device works on the technique of reducing the current from 220 volts to 12 volts so that it can control the electric float or water compressor device and operate the motor by using RELAY or a counter so that there is not the slightest risk of 12 volts entering the electric buoy or the water compressor device so that The current existing one uses a current of 220 volts and when there is a malfunction in the float or the water compressor device, the leakage leaks through the water, which poses a danger to human life, as well as the two-connection switch allows for inspection when there is a malfunction quickly without the need to separate the wires and manual examination.

Technical Problem

[0005] **The principle of the working mechanism of the previous two devices is that they close and connect the electrical circuit of the water motor through the use of a power line carrying a current of 220 volts AC, but when any malfunction occurs in these two devices, water leaks inside them and here lies the danger as the water**

is a conductor of electricity and electrocution can occur to a person, forbidding By God, since the power line carries a current that can cause electric shock, as well as when there is a malfunction in the electric buoy, the electric compressor device, or the motor, it is not possible to differentiate the location of the fault until after the wires are unplugged and each device is checked separately

Solution to Problem

[0006] What is new is that we install a device that controls the opening and closing of the electric circuit of the water motor through the electric buoy or the electric water compressor using a current of 12 volts DCV or less. If there is a malfunction, it is possible to diagnose the location of the malfunction by pressing a button that gives electricity directly to the motor without passing through the electric compressor or the electric buoy

Advantageous Effects of Invention

[0007] When using the invention, we protect humans from the leaking current in the water before there are human losses, as the device converts the used energy into safe energy.

Brief Description of Drawings

[0008] The main device consists of several dependent devices, which are lamps that show (the arrival of the current, the operation of the reducer, and the current exit of the motor or the motor to be operated), a power reducer device from 220 AC volts to 12 DC volts or less, and a device that connects the current when fed with a current of 12 volts or Less (relay) and switches.

How to install the internal connections of the device:

We connect the points (A,B,H) from the input current No. 1 to the same points in the two devices No. (2 and 3), and we connect the point A from the input No. 1 to the point A in the devices No. (8 and 10) and we connect the two points (B, H) From Entrance No. 1 to the same points in Exit No. 9, we connect point B from devices No. (8 and 10) to point A in exit No. 9, we connect point C from device No. 3 to point B in device No. 4 and to point H in device No. 5 , and at point A at exit No. 6, we connect the point I from device No. 3 to point A with lamps No. (4 and 7) and by point I with device No. 8, we connect point B from device No. 5 to point B in device No. 6.

How the device works:

[0009] When the current enters from the entrance No. 1 up to the lamp No. 2, the lamp lights up as an indication of the current entry, then the device No. 3 reduces the current to 12 DCV and the lamp No. 4 lights up indicating the work of the electric reducer, then the hot current is transmitted from the reducer No. 3 to the device No. 8 directly , While the cold current passes from the reducer to the outlet of the electric buoy or the electric

water compressor and then back to the electric switch and then to device No. 8 where when the current reaches device No. 8, the device connects the main current coming from entrance No. 1 to the motor to be run directly , And the electric switch No. 5 can be used to run the motor directly when there is a malfunction in the electric buoy or the water compressor device. In addition, the electric switch No. 10 can be used when there is a malfunction in the device, as it connects the current directly from the main entrance No. 1 to the exit No. 9.

Explanation of the drawing board:

- [0010] 1- mains input
 2- A guide lamp that shows the arrival of the electric current to the device
 3- A reducer from 220 AC Volt to 12 DC Volt
 4- A guide lamp that shows the continuity of the electric reducer
 5- A two-way switch to turn on the current on automatic mode or direct mode as needed
 6- The outlet of the electric buoy or the water compressor device, according to what is intended to be used
 7- A guiding lamp that shows the flow of current to the motor to be started (it only works when the current is opened to the motor)
 8- A device that opens and closes the electric current when fed with another 12 DC volt current
 9- The motor output to be operated
 [0011] 10- An electric switch to operate the direct current when there is a malfunction in the device.

Fig.1

[0012] [Fig.1]

Description of Embodiments

- [0013] Safe water controller device where the main device consists of several dependent devices, which are lamps that show (the arrival of the current, the operation of the reducer, and the current exit of the motor or the motor to be operated), a power reducer device from 220 AC volts to 12 DC volts or less, and a device that connects the current when fed with a current of 12 volts or Less (relay) and switches
 [0014] How to install the internal connections of the device:
 We connect the points (A,B,H) from the input current No. 1 to the same points in the two devices No. (2 and 3), and we connect the point A from the input No. 1 to the point A in the devices No. (8 and 10) and we connect the two points (B, H) From Entrance No. 1 to the same points in Exit No. 9, we connect point B from devices No. (8 and 10) to point A in exit No. 9, we connect point C from device No. 3 to point B in

device No. 4 and to point H in device No. 5 , and at point A at exit No. 6, we connect the point I from device No. 3 to point A with lamps No. (4 and 7) and by point I with device No. 8, we connect point B from device No. 5 to point B in device No. 6.

[0015]

[0016] How the device works:

[0017] When the current enters from the entrance No. 1 up to the lamp No. 2, the lamp lights up as an indication of the current entry, then the device No. 3 reduces the current to 12 DCV and the lamp No. 4 lights up indicating the work of the electric reducer, then the hot current is transmitted from the reducer No. 3 to the device No. 8 directly , While the cold current passes from the reducer to the outlet of the electric buoy or the electric water compressor and then back to the electric switch and then to device No. 8 where when the current reaches device No. 8, the device connects the main current coming from entrance No. 1 to the motor to be run directly , And the electric switch No. 5 can be used to run the motor directly when there is a malfunction in the electric buoy or the water compressor device. In addition, the electric switch No. 10 can be used when there is a malfunction in the device, as it connects the current directly from the main entrance No. 1 to the exit No. 9.

[0018]

Examples

[0019]

Industrial Applicability

[0020] Where to use the device:

The device can be used in all places that contain water and liquid tanks and water and liquid compressors such as:

- 1- houses
- 2- shops
- 3- Residential buildings
- 4- Residential complexes
- 5- Companies
- 6- desalination plants
- 7- The places where the electric buoy and the water compressor are used

[0021]

Reference Signs List

[0022]

Reference to Deposited Biological Material

[0023]

Sequence Listing Free Text

[0024]

Citation List

[0025]

Patent Literature

[0026] PTL1:

Non Patent Literature

[0027] NPL1:

Claims

- [Claim 1] Safe water control device where the main device consists of several dependent devices, which are electric lamps, a reducer from 220 or 110 AC volts to 12 volts, a device that connects the current by feeding it with another current of 12 volts, manual electrical switches, inlets and outlets of the current.
- [Claim 2] Safe water control device according to claim 1 where,
When the current enters from the entrance No. 1 up to the lamp No. 2, the lamp lights up as an indication of the current entry, then the device No. 3 reduces the current to 12 DCV and the lamp No. 4 lights up indicating the work of the electric reducer, then the hot current is transmitted from the reducer No. 3 to the device No. 8 Directly while the cold current passes from the reducer to the outlet of the electric buoy or the electric water compressor Then it returns to the electric switch and then to device No. 8, where when the current reaches device No. 8, the device connects the main current coming from the entrance No. 1 to the motor to be run directly, and the electric switch No. 5 can be used to start the motor directly when there is a malfunction in the electric buoy Or a water compressor device. In addition, the electrical switch No. 10 can be used when there is a malfunction in the device, as it connects the current directly from the main entrance No. 1 to the exit No. 9.
Thus, the current used in the electric buoy or the water compressor is 12 volts OR LESS, which does not pose a danger to humans when there is a malfunction and the current leaks into the water.

[Fig. 1]

