NEOLYSIS PRIVATE SYSTEM PRIVATE SYSTÈME D'NEOLYSIS SISTEMA NEOLYSIS PRIVADO NEOLYSIS SISTEMA PRIVATO NEOLYSIS PRIVATE SYSTEM NEOLYSIS SISTEMA PRIVATE



Model.

NEO-12 NEO-24 NEO-32

NEO-12 PH NEO-24 PH NEO-32 PH

NEO 12 + NEO 24 + NEO 32 +





EN

INSTALLATION AND MAINTENANCE MANUAL MANUEL D'INSTALLATION ET D'ENTRETIEN MANUAL DE INSTALACION Y MANTENIMIENTO MANUALE DI INSTALLAZIONE E MANUTENZIONE EINBAU-UND BETRIEBSANLEITUNG MANUAL DE INSTRUÇOES E MANUTENÇAO

Vers.04112013

ENGLISH

IMPORTANT: The instruction manual you are holding includes essential information on the safety measures to be implemented for installation and start-up. Therefore, the installer as well as the user must read the instructions before beginning installation and start-up. Keep this manual for future reference.



Disposal of waste electrical and electronic domestic systems in the European Union.

All the products marked with this symbol indicates that the product shall not be mixed or disposed with your household waste at their end of use. It is responsibility of the user to eliminate this kind of wastes depositing them in a recycling point adapted for the selective disposal of electrical and electronic wastes. The suitable recycling and treatment of these wastes contributes in essential way to the preservation of the Environment and the health of the users. For further information regarding the points of collection of this type of wastes, please contact to the dealer where you acquired the product or to your municipal authority.

For optimum performance of the Neolysis Treatment System, we recommend you to follow the instructions given below:

1. CHECK THE CONTENTS OF THE PACK:_

You should find the following elements inside the box:

- Power supply.
- UV Reactor.
- pH sensors and ORP sensors (only on NEO-XX +).
- Calibration Solutions pH 7.0 (green) / pH 4.0 (red) / ORP 470 mV. (only on NEO-XX PH and NEO-XX +).
- Probe holder (only NEO-XXPH and NEO-XX +).
- CEE22 M connector metering pump connection.
- Equipment Manual.

2. GENERAL FEATURES: ___

The germicidal effects of ultraviolet light (UV) with wavelengths around 260 nm are well known for over 100 years. Its use has been increasing in recent years as it presents a number of advantages over chemical disinfection systems, since virtually UV light no alters the physical and chemical composition of water, it is very effective against any type of microorganism (algae, bacteria, viruses, fungi, yeasts, etc.) further minimizing the risks of handling and dosing of potentially hazardous chemicals. Moreover, UV treatment reduces the levels of combined chlorine in water, thereby producing significant water savings by reducing the volume and frequency of renewal of pool water.

The NEO treatment system in addition to maintaining a certain level of chlorine in pool water, ensure the sanitary quality of pool water. The NEO treatment system will operate when the pool recirculation (pump and filter) is operational.

The NEO treatment systems are designed and manufactured with the latest technology in UV treatment of water, thus ensuring continuous operation and minimal maintenance.

- o Versions available in Polyethylene.
- o Electronic ballast with integrated control.
- Versions available with integrated pH/ORP control (NEO+ models).
- Operating hour counter.
- Input for external flow switch
- HO low-pressure lamp.
- o Dose : 30 mJ/cm^2 .
- o Lamp lifetime: 13.000 hours (depending on the number of ignitions).

2.2. SAFETY WARNINGS AND RECOMMENDATIONS:

Do not use this system to a different application for which it was designed.

The equipment should be assembled and handled by truly qualified people.

Current electrical and accident prevention regulations should be followed.

Under no circumstances will the manufacturer be held responsible for the assembly, installation or start-up, nor any handling or fitting of components unless they are carried out on its premises.

Neolysis® treatment systems operate at 230 VAC / 50-60Hz. Do not attempt to alter the system to operate at a different voltage.

Check all the electrical connectors are well tightened to avoid false contacts and their consequent overheating.

Neolysis® treatment systems have a protection degree that not allows outdoor installation. They should never be installed in places susceptible to flooding.

Prior to the installation or replacement of any system component make sure it has been previously disconnected from the mains, and there is no water flow through it. Use only spare parts supplied by Idegis.

Never remove the lock nut of the quartz sleeve when the water is recirculating through the UV reactor as it could be expelled and causing damage.

The UV light generated by this equipment can cause serious damage if the eyes or skin are exposed directly to the lamp. Never connect the system when the lamp is out of reactor.

Do not handle the UV lamp until completely cold.

Always handle the UV lamp with gloves, as fat and other impurities deposited on the surface may reduce its performance and durability. In case you have to clean the lamp surface use a soft cloth soaked with alcohol.

Keep this Operation Manual.



3. DATASHEET:



PANELES DESCRIPTIVOS/ PANELS DESCRIPTIONS

- 1. Escala de producción (%). **Production Scale (%).**
- 2. Teclas ♦ aumentar / disminuir producción. Keys ♦ increase / decrease output.
- 3. Indicador control cubierta automatica activado Indicator of activated automatic cover control.
- 4. Test de salinidad
- Salinity test 5. Indicadores auto-limpieza (polaridad directa/inversa).
- Self-cleaning indicators (direct/reverse polarity). 6. Indicador control ORP activado (modo auto).
- Indicator of activated ORP control (auto mode). 7. Indicador de Alarma de FLUJO
- Indicator of Flow alarm. 8. Indicador de alarma de celula pasivada.
- Indicator of electrode passivation alarm. 9. Indicadores de salinidad alta y baja.
- Indicators of high and low salinity.
- 10. Escala de salinidad (Cualitativa). Salinity scale (qualitative).

- 11. Teclas para modo calibracion (pH y ORP).
- Keys for calibration mode (pH and ORP). 12. Tecla para programar el valor de pH/ORP deseado. Key for pH/ORP setpoint programming.
- 13. Indicador de alarma pH/ORP bajo (pH <6.5, mV< 650) Indicator of low pH / ORP alarm.
- 14. Indicador de alarma pH/ORP alto (pH >8.5, mV> 850) Indicator of high pH / ORP alarm.
- 15. Pantalla de indicación del valor de pH/ORP del agua. Display of water pH / ORP.
- 16. Pantalla de indicación del valor de pH/ORP programado. Display of the pH / ORP setpoint.
- 17. Pantalla de info/config del sistema zero salt electrolisis Display of system info/config zero salt electrolysis
- 18. Pantalla de información del sistema UV **Display of system information UV**
- 19. Alarma de lampara Lamp alarm.
- 20. Tecla INFO
- **INFO** Key
- 21. Alarmas.
- Alarm.

-	Neolysis Seri	es	Referencia-Referen	ice	Producción-Production	Piscina-Poo
Ĩ	Electrolysis UV	Electrolysis UV	Electrolysis UV + pH	Electrolysis UV + pH/ORP	Neolysis	Up to Hasta
4		NEO-12 57744	NEO-12 pH 57747	NEO-12 pH/ORP 57750	12 gr Cl₂/hr + 48W UV	50 m ³
THE	Electrolysis UV + pH	NEO-24 57745	NEO-24 pH 57748	NEO-24 pH/ORP 57751	24 gr Cl₂/hr + 56W UV	80 m ³
2	18	NEO-32 57746	NEO-32 pH 57749	NEO-32 pH/ORP 57752	32 gr Cl₂/hr + 56W UV	120 m ³
- The second sec						

Electrolysis UV + pH/ORP

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eolysis Control		(Modelo / Model)					
Descripción/Description	12	24	32					
Tensión de servicio / Input voltage		230 VAC 50/60 Hz.						
Consumo / Consumption (A ac)	0.8 A	1.1 A	1.5 A					
Fusible / Fuse (5x20 mm)	2 AT	3 AT	4 AT					
Salida / Output (A dc)	2 X 6 A	2 X 12 A	2 X 16 A					
Producción / Production (gr Cl ₂ /hr)	1012	2024	2532					
m ³ Piscina / Pool (+ 25°C)	50	80	120					
Salinidad (baja sal) / Salinity (low salt)	< 2gr/L	(rango operativo / operative ra	ange: 1-4gr/L)					
Temperatura ambiente / Room temperature		max. 40°c						
Envolvente / Enclosure	ABS							
Inversión polaridad / Polarity reversal	2h,3h y test (menu config.) / 2h,3h and test (config menu)							
Control producción / Production control	0-100% (11 niveles de producción) / 0-100% (11 production levels)							
Detector de flujo (gas) Flow Sensor (gas)	menu config. : activo-inactivo. Led flow config menu: enabled-disabled. Led flow							
Detector flujostato Flow-switch sensor	Menu Config. Config Menu: e	: activo-inactivo. Led flow. Se nabled-disabled. Led flow. Se	e nsor no incluido ensor not included					
Control Producción por cobertor Production Control for cover	Menu Config. 9 estados (Config.menu 9 levels	(1090%), (0,NC,NO). Contacto libr s (1090%), (O,NC,NO). Potential-fr	re de tensión. Led COVER. ree input. COVER Led.					
Control Producción Externo External Production Control	Menu Config. 2 estad Config.menu 2 k	dos (0, set%), (O,NC). Contacto libre evels (0, set%), (O,NC). Potential-fre	e de tensión. Led ORP. æ input. ORP Led.					
Diagnos. Electrodos / Check cell function	Led C	heck Electrodes / Check Electrodes	ctrodes Led					
Paro seguridad pH / Pump Stop	Si, co	nfig soft 199min / Yes, soft co	nfig 1 99min					
Test salinidad (cualitativo) / Salinity test (qualitativa)	ative) Tecla test, 7 nive	les conductividad / Key test, 7	conductivity levels					
Indicador Alarma sal / Salt alarm indicators	Alta	Alta y baja. 2 Leds / High and low. 2 LEDs						
Menú Conf. Sistema / Setup menu	Dis	Display informativo / Information display						
Control remoto (cable) / Remote control (cable) Opcional (H	al (Hasta 50 metros) / Optional (Up to 50 meters)						
Modbus (compatible)		Opcional / Optional						



Célula de Neolysis		Modelo / Model						
Descripción/Description	12	24	32					
Electrodos (titanio activado autolimpiante) Electrodes (self-cleaning titanium activated)		LS : 4.000 - 5.000 hr						
Caudal mín. / Flow min. (m³/h)	2	4	6					
Número de electrodos / Number of electrodes	7	9	9					
Material - Conex. a tubería / Line connection	Polietileno / Polyethylene - R-Hembra / Thread Female 2"							
P(Kg/cm ²) & T (°C) Max.		3Kg/cm ² & 15 - 40°C max						
Potencia UV/UV-C / Rated UV/UV-C	48W/13 W	56W/18W	56W/18W					
Lamparas-Horas / Lamps-Hours	1/13.000hrs							
Fusible / Fuse (UV) (6x32mm)	0,6 AT							



Controlador de pH and ORP / pH an	d ORP Controller	(Modelo / Model
Descripción / Description		AP NEO pH & pH/ORP
Rango de media / Measure range	- 9.9 (pH) / 0 - 999 mV (ORP)	
Rango de control / Control range	7.0 -	7.8 (pH) / 600 - 850 mV (ORP)
Precisión / Precission		± 0.1 pH / ±1 mV (ORP)
Calibración / Calibration	Automática mediante dise	oluciones patrón / Automatic with calibration solution
Salidas control (pH) Control outputs (pH)	Una salida 230 V One output 230 V	/ 500 mA ac máx (conexión bomba dosific.) / 500 mA ac max (dosing pump connection.)
Sensores pH/ORP pH/ORP sensors	Cuerpo epoxy 12x150r Epoxy body12x150m	nm, electrolito solido. Rango 0-12 pH, 0-1000 mV m, solid electrolyte. Range 0-12 pH, 0-1000 mV



Portasondas / Electrode Holder Incluido / included (AP NEO pH & pH/ORP

Dimensiones / Dimensions

medidas aproximadas



Diagrama de instalación / Installation Diagram





4. INSTALLATION:_

4.1. Reactor Neolysis®

Always install the Neolysis® system VERTICALLY on a solid and rigid surface (floor) as shown in the recommended installation diagram (Fig. 1). In order to guarantee a good state of conservation, the Neolysis® system must be installed in a dry and well ventilated place at the engine room and never should be installed outdoors.

Beware of corrosive atmosphere formation due to pH decreasing solutions (specially, those ones based on hydrochloric acid "HCI"). Do not install the Neolysis® system near to any stores of these chemicals. We strongly recommend the use of chemicals based on sodium bisulphate or diluted sulphuric acid.

The reactor of the Neolysis® systems is made within which is housed the UV lamp. The Neolysis® system should always be installed behind the filtration system, and before any other device in the installation such as heat pumps, control systems, dosage systems, salt electrolysis systems, etc.

The installation of the UV system should allow easy access to the UV lamp by the user. The location of the Neolysis® system must have an effective height that allows the complete removal of the UV lamp from the sleeve (about twice the total height of the unit).

It is highly recommended to install the Neolysis® system in a place of the pipe that can be easily isolated from the rest of the installation by two valves, so that the tasks of maintenance can be carried out with no need of partial or total draining of the swimming pool. Where the system is installed on a by-pass (recommended option), a valve to regulate the flow must be introduced.

The water inlet should be provided at the bottom of the unit thus ensuring that the reactor is always flooded, and therefore, the lamp is completely submerged.

4.2. Electrical installation

The Neolysis® system must be connected to the electrical control box of the pool, so that the pump and the Neolysis® system are turned on (and off) simultaneously.



Remember

The equipment should be assembled and handled by truly qualified people.

Current electrical and accident prevention regulations should be followed.

Do not alter with the power supply to operate at another voltage different than that shown on the label on the side of the unit.





Head screws to release equipment and access to the area contacts. (4 screws)



NEO source power wire Cable entry hole NEO Power Supply





POWER WIRE CONNECTION DETAIL NEO





4.4. Installation of the pH / ORP sensors (only in NEO-XX PH and NEO-XX +).

- 1. Insert the pH / ORP sensors into their corresponding places of the holder (Fig. 12)
- 2. To that purpose, loosen the connection screws and insert the sensor into the holder.
- 3. The sensors must be installed in the holder so that it is guaranteed that the sensors located in their ends are always submerged in the water circulating through the pipe.
- 4. Always install the pH / ORP sensors vertically or with a maximum inclination of 40° (Fig. 13).



4.5. Installation of the external flow detector (OPTIONAL)

- 1. Glue the sensor holder to a section of the pipe at the entrance to the electrolysis cell. It should always be installed in a horizontal position relative to the ground (see Fig. 4), so that the threaded inlets (1/2" 3/8") are always accessible for the later installation of the dosage pump injector and the ground connection (optional).
- 2. Install the flow detector (flow switch) supplied vertically in the sensor holder supplied with the equipment (Fig. 2b).
- 3. There is an arrow on the head of the flow detector. Make sure that this arrow is parallel to the pipe shaft and pointing in the direction that the water flows (Fig. 3b).
- 4. Do not install the flow detector near magnetic objects. They could affect the operation of the magnetic device it contains and reduce its reliability.



Fig. 2b

With tube::



Fig. 4b







Fig. 5b

4.6 Control inputs (Look on the head plate of the reactor)

Besides basic operations, the NEO system has two inputs for voltage-free contacts, enabling the connection of additional external controls. They are located on connectors **[CN5, CN6]** of the unit's main circuit, in the system control box (Fig. 5).



[FS] EXTERNAL FLOW DETECTOR CONTROL: input for potential-free contact. When the contact connected to this input is opened (detector external flow at rest), the system disconnects the lamp, and in the case of the UV LP+ models will disconnect also the integrated pH/ORP controllers. Connect the external flow detector wiring to the respective input **[FS]** on the unit's main control card.



[TEMP] Input for temperature probe: NTC probe input (4K7 @ 25°C). If you connect an NTC temperature sensor to this input, the system automatically displays the value of water temperature on the screen.

4.7. Control inputs of the power supply (Look on the board power supply)

Besides basic operations, the NEO Series electrolysis system has three inputs for voltage-free contacts, enabling the connection of additional external controls. They are located on connector **[CN7]** of the power card (Fig. 17).



Fig. 17

The logic associated to these three inputs can be programmed during the system configuration process

[FS] OPTIONAL EXTERNAL FLOW DETECTOR CONTROL (not included with the equipment): input for potential-free contact. When the contact connected to this input is open (external flow detector at rest), and the [FS] is configured as [FS1c], the electrolysis system switches off due to the flow alarm. Connect the external flow detector wiring to the respective input [FS], placed in the [CN7] connector, on the unit's power card.



Fig. 18

[CO] AUTOMATIC COVER CONTROL: input for potential-free contact. Depending on the status of the contact connected to it on the automatic cover's electric panel, this input enables you to programme a reduction of the equipment's output current to a percentage of its nominal value.





Fig. 20

4.8. Installation of the removable control terminal

In the Neolysis® series systems it is possible to establish a remote control of the electrolysis salt system installed in the swimming pool by means of a control wall terminal installation. The interconnection between the power supply and the control terminal can be executed through a 6-conductor signal cable connected to the respective connectors in power and visualization cards. The cable length will be determined by the customer's requirements but must be always lower than 40 meters. The terminal is 10,5 Vac auto-supplied by the communication bus, so it doesn't need any additional supply.

The wall terminal doesn't require any special maintenance procedure, with the exception of these maintenance recommendations:

- Use a slightly moisten cloth to clean it.
- o Don't use aggressive cleaning products (bleach, sprays, solvents, alcohol, etc.)

The remote control is designed to be installed on a rigid wall. Its IP-65 degree allows the outdoor installation. Nevertheless, it's recommended not to expose the terminal to the solar rays. In order to install the remote control, follow the instructions shown below:

- 1. Remove the power supply cover by unscrewing the fixation screw (Fig. 11-1) and sliding upwards and outwards (Fig. 11-2). Then turn the cover to the left (Fig. 11-3) and disconnect the communications bus (A) from power and visualization cards (Fig. 11-4).
- 2. Unscrewing its four fixation screws (Fig. 11-5).
- 3. Assemble the control terminal (Fig. 11-6).

OPTION A: installation using the original cable ref. NEO-020-XX (XX indicates the cable length in meters).

OPTION B: installation using a standard 6-conductor signal cable (each conductor must have a 0,22 mm² minimum cross section).

In both cases the maximum possible length is 40 meters. Nevertheless, using an Unshielded Twisted Pair (UTP) (Category 5e unshielded) allows interconnection distances until 60 meters.

- 4. For this purpose, put the new communications cable (A) through the cable gland situated in the terminal base and connect it in either one of the two connectors of the visualization card (CN1A, CN2A) [OPTION A], or in the connector CN-5 [OPTION B]. Combine the visualization frontal and the terminal base using the four screws supplied.
- Put the free end of the communications cable through the AUX 2 hole situated on the power supply base (Figs. 11-7, 11-8) and connect it in the connector CN10A/CN11A [OPTION A] or in the connector CN-20 [OPTION B] in the power card (Fig. 11-9). Replace the cover in the power supply (Fig. 11-7).
- 6. Fix the wall fixation (see section 8) in the chosen installation point and hang the control terminal on it.



4.9. Connection PoolStation



4.10. Start-up

1. Make sure the filter is clean to 100%, and that the pool and the installation does not contain copper, iron and algae.

2. The analytical condition of the water is very important to ensure that the Neolysis® system works with the highest levels of effectiveness. Before starting the system check that the following parameters are within the recommended levels:

- Iron: less than 0.3 mg./l.
- Hardness: less than 120 mg./l.
- Turbidity: less than 1 NTU.
- Manganese: less than 0.05 mg./l.
- TSS: less than 10 mg./l.
- UV Transmittance: higher than 75%.

If the levels of any of these parameters exceed the recommended values is recommended to do a proper pre-treatment to correct them...

3. Balance the pool water. This allows us to obtain a more efficient treatment with a lower concentration of free chlorine in the water, and a longer operating of the lamp in addition to a lower calcium scaling on the quartz sleeve.

- a) pH must be in the range 7.2-7.6
- b) Alkalinity must be in the range 60-120 ppm.

4. Check that all hydraulic connections are properly assembled and that there are no leaks in any of them.

5. Connect the system using the main switch [2] on the rear side of the unit.

Â

Remember

Always connect the unit to a circuit protected by a RCD.



Never look directly at the UV lamp when it is on.

6. Let recirculate the water at least for a few minutes to evacuate air and any dirt that might be inside the UV reactor.

5. OPERATION:

5.1. UV System

The UV system automatically powers the lamp once it is connected by the switch located on rear side of the control panel of the unit (Fig. 7). After a few seconds, once the system detects that the lamp is ignited, the led "lamp" [3] on the control panel of the unit will stay on. The main screen [1] will show at all times the number of hours of lamp operation.



Hours of operation

Temperature (°C)

If you have installed a temperature probe NTC in the [CN5] input of the unit, the main screen [1] will also show the temperature of the water.

By pressing the "prog" [4], the main screen [1] will show the number of ignitions "ignitions" of the lamp.



5.1.1. Alarms

Whenever the system detects a problem in the power supply circuit of the UV lamp, the alarm led [2] lights on the control panel of the unit.

• LAMP

If the lamp does not start at the preset time, the main display [1] will show the message "NO RADIATION".



• OPTIONAL EXTERNAL FLOW DETECTOR (FLOW SWITCH)

If during the configuration process of the system a flow detector (flow switch) is connected to the **[CN6]** input at the system control board (by default, this input is provided bridged), the system automatically disconnects the lamp flashing the message **"noFLO"** in the system information display **[1]**.



The system automatically restarts once the water flow through the flow switch is restored.



Remember

Whenever the lamp is replaced you must reset the hour meter of the system. To do so, connect the system with the main switch [2] keeping pressed the "prog" key [4] on the control panel until you see the message "RESET" on the main screen [1].

5.2. Electrolysis system

5.2. System on stand-by

The system goes into "STAND-BY" when the "-" [1] key is pressed until the "0%" light blinks. When this occurs, there is no production in the electrolysis cell.



5.2.1. System configuration

The DOMOTIC Series system can be reconfigured through a menu accessed from the control panel. The system has to be switched off, as described in point 5.1, in order to access this menu. Once the system has been switched off, press the " \checkmark " [1] key for a few seconds until the system information screen [11] displays "CONF". To enable selection of each menu option, keep the "SALT TEST" [9] key pressed for approximately 1 second. Select the desired parameter using the " \checkmark " [1] / " \checkmark " [14] keys and validate by pressing the "SALT TEST" [9] key for one second again (see Fig. 23). The configuration process enables you to establish the following operative parameters:



(1) <u>WARNING:</u> only use this mode for check tasks, for short periods of time, as it could damage the electrodes. This mode is cancelled when the system is switched off. (2) Factory defaults.

⁽³⁾ Factory default value in DOM-XX PLUS systems.



Fig. 23 System programming flow-sheet.

5.2.2. Production level selection

To select the desired production level, press the " \neg " [1] / " \wedge " [14] keys until the production level light blinks. The system information screen [11] will display the value of the production scale light [4]. The system will set its production to the desired level after a few seconds.





In normal conditions, the production value [4] should be the same as the programmed value. However, if the salt level in the water is outside the permitted range ("HIGH SALT" [7] or "LOW SALT" [6] alarms on), or there is a problem in the electrolysis cell ("ELECTRODES" [13] alarm on), the production value [4] could be lower than the programmed and displayed value [11].

WINTER Mode: during periods of low water temperature select a production level [1] in the 50-60% range.

5.2.3. Salinity test

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The DOMOTIC Series systems have an integrated system to detect the salinity level of pool water. To run the test, press the **"SALT TEST"** [9] key. During the test, the production light will range from 20%-80% of the salinity scale [5], alternately displaying **"SALT"** and **"TEST"** on the system information screen [11]. Once the test is completed, the light will blink for a few seconds on the scale [5] on the detected salinity value (see Fig. 25). The equipment will return to normal operating mode after a few seconds.



Fig. 25

The system might show lower than actual salt levels if the temperature falls beneath 20°C (68 °F).

5.2.4 Integrated pH controller (modelos NEO-XX PH y NEO-XX +)

The integrated pH / ORP controller is supplied with a default factory calibration and programmed with the following parameters:

SETPOINT pH="7.2" / ORP="700 mV"

IMPORTANT: In order to have a correct regulation of the pH value, the Total Alkalinity of the pool water <u>must</u> be maintained in the range ppm CaCO₃. Use a pool water test kit to check the Total Alkalinity and adjust manually if necessary.

CONNECTION OF THE PH / ORP SENSORS (models NEO-XX PH and NEO-XX +)

Connect the pH / ORP sensor provided with the unit to the corresponding BNC connectors located in the unit's base (Fig. 26).

CONNECTION OF THE DOSAGE PUMP

The DOMOTIC Series systems (NEO-XXPH and NEO-XX +) have a connector on their base for connecting a dosage pump to control the pH of the water in the pool. The dosage pump can be connected through the CEE22 connector supplied for that purpose with the equipment (Fig. 26).



5.2.5 pH Setpoint programing

Keep the "SET" [20] key pressed until the screen [18] displays the desired pH value within the 7.0 - 7.8 range. Release after selection.





5.2.5 ORP Setpoint prorgaming (only in models NEO-XX +)

Keep the "SET" [26] key pressed until the light displays the desired ORP value within the 600 - 850 mV range. Release after selection.



5.2.7 Safety stop configuration of the dosage pump (PUMP-STOP FUNCTION)

The integrated pH controller has a security system (PUMP-STOP FUNCTION) acting on the dosage pump which allows to avoid the following situations:

- Damages caused by the dry operation of pump (depleted pH-minus product).
- Over-dosage of pH-minus product (damaged or aged sensor).
- PH regulation problems due to high alkalinity in the water (newly filled pool, high carbonate levels).

When the PUMP-STOP FUNCTION is enabled (factory default), the system stops the dosage pump after a programmed time without having reached the pH setpoint.



Fig. 27c.

The PUMP-STOP FUNCTION is factory set to 60 minutes. To change this value, follow the next procedure.



Fig. 27d.

6. Alarms:

HIGH SALT LEVEL

If too much salt has been added, the production level will automatically fall beneath the selected level. The "HIGH SALT" [7] light will stay on. In this case, empty part of the pool (10%, for instance) and add fresh water to reduce the salt concentration. To precisely measure the salt level, we recommend the use of a portable salinity-temperature meter

LOW SALT LEVEL

If there is less than the recommended salt content in the pool, the selected output level cannot be reached. The **"LOW SALT" [6]** light will stay on. In this case, measure the salt level in the water and add the required amount of salt. The common salt (NaCl) used for electrolysis should not contain additives (anti-caking agents, iodine) and must be suitable for human consumption. The system may indicate a low salt level if the temperature falls beneath 20°C (68 °F). To precisely measure the salt level, we recommend the use of a portable salinity-temperature meter.



WATER LEVEL IN CELL/FLOW DETECTOR (GAS)

If an air or gas bubble forms at any time at the top of the electrolysis cell and the FLOW DETECTOR is not submerged, the system will automatically switch off production, with the **"FLOW"** [12] light blinking and **"FLO"** displayed on the system information screen [11]. The system automatically resets when water flows through the cell again or the bubble disappears.



1. Submerged gas detector. System running.

.

2. Gas detected. Insufficient flow. System off.



OPTIONAL EXTERNAL FLOW DETECTOR / FLOW SWITCH (not included with the equipment)

During the system configuration process (point 5.2), the input for the external flow switch is activated (factory-programmed default value), the system will automatically switch off production, with the **"FLOW"** [12] light blinking, and **"FLO"** displayed on the system information screen [11]. The system automatically resets whenever water starts to flow through the flow switch again.



1. Activated flow detector (contact closed). System running.

2. Flow detector at rest (contact open). System off.

Fig. 30

ELECTRODES

The Neolysis® Series system has a light indicating malfunction of the electrolysis cell electrodes [13]. This usually occurs at the end of the electrodes 'useful life, when they lose their power. However, although this is a self-cleaning system, this malfunction could also be due to excessive scaling on the electrodes when the system operates with hard water with a high pH value.



Fig. 31

• PH / ORP OUT OF RANGE (only in models NEO-XX PH and NEO-XX +)

The integrated pH/ORP control system has two ALARM lights which come on whenever a pH value of less than 6.5 "LOW" [19] or more than 8.5 "HIGH" [16] is detected, or ORP falls outside the 600 mV "LOW" [25] - 850 mV "HIGH" [22] range. When the regulator detects an active pH alarm, it opens the control output of the dosage pump (pH).

7. MAINTENANCE:_

7.1. Maintenance of the electrolysis cell

The electrolysis cell must be kept in suitable conditions to ensure a long lifetime. This salt chlorination unit has an automatic electrode cleaning system that helps to prevent scale build-up on the electrode surface. If the salt chlorination system is operated in accordance with these instructions, and in particular if the pool water balance is kept within the recommended parameters, it should not be necessary to manually clean the electrodes. However, if the pool water and the salt chlorination system are not maintained in line with these instructions then it may be necessary to manually clean the electrodes. If electrodes following the procedure outlined below:

- 1. Cut off the 230 Vac unit's supply.
- 2. Unscrew the closing nut located at the end where the electrodes are located, and remove the electrode package.
- 3. Use diluted hydrochloric acid (a part of commercial acid in 10 parts of water), submerging the electrode package in the prepared solution for no more than 10 minutes.
- 4. NEVER SCRAPE OR SWEEP THE CELL OR THE ELECTRODES.

The electrodes of a salt chlorination system comprise of a titanium sheet coated with a layer of noble metal oxides. The electrolysis processes that take place on their surface produce a progressive wearing down - the electrodes do have a finite life. In order to optimise electrode lifetime, please consider the following aspects:

- 1. Although all Neolysis® series salt electrolysis units are SELF-CLEANING, a prolonged operation of the system at pH values over 7.6 in waters of high hardness can produce scale formation on the surface of the electrodes. Scaling on the electrodes surface will progressively deteriorate the coating, causing a decrease of lifetime.
- 2. Manually cleaning/washing the electrodes (as described above) will shorten their life.
- 3. Prolonged operation of the system at salinities lower than 3 g/l (3000 ppm) will cause a premature deterioration of the electrodes.
- 4. Frequent use of copper based algaecides will promote the formation of copper deposits on the electrodes, progressively damaging the coating. Remember that chlorine is the best algicide.

7.1.2. <u>Calibration of the pH sensor (only in NEO-XX PH and NEO-XX + models)</u>

The integrated pH-controller has two calibration modes of the pH-sensor: "FAST" and "STANDARD". We recommend carrying out it at least once a month during the period of use of the swimming pool.

1. "FAST" MODE

"FAST" MODE allows the calibration of the pH-sensor when there are small reading deviations with no need to extract the sensor from the installation or to use calibration solutions.

PROCEDURE:

- 1. Be sure the point of insertion of the pH-sensor is flooded, and the pump is in recirculation.
- 2. Using a pH-test kit, measure the water pH of the swimming pool.
- 3. Press the "CAL" [17] key for approx. 5 seconds until the equipment beeps and release the key. The pH [18], screen will blink "7.0".
- 4. Keep the **"SET"** [20] key pressed until the pH-value previously measured in the water with the pH-test kit appears. Once reached, loosen and press **"CAL"** [17] key. If no error has been detected, the system will have been calibrated.



Fig. 32

2. "STANDARD" MODE

"STANDARD" MODE allows the precise calibration of the pH-sensor using two calibration solutions of pH 7.0 and 4.0, however this method requires that the **pH-sensor is removed from the installation**.

PROCEDURE:

IMPORTANT: before closing the by-pass valves, stop the system from control panel (see Section 5.1).

1. Extract the pH-sensor from the holder and wash it with tap water.



- 2. Press the "CAL" [17] key the equipment beeps and <u>without releasing the key</u>, press "SET" [20] for a few seconds until the pH screen [15] displays a blinking "7.0".
- 3. Gently shake the sensor to remove any possible drops of water and insert in the standard pH=7.0 solution (green). Gently shake for a few seconds and press "CAL" [17]. Once stabilised, the screen [15] will display a blinking "4.0".



Fig. 34

- 4. Remove the sensor from the calibration solution and rinse it with tap water.
- 5. Shake the sensor smoothly so that any drops of water that may be adhered to the plastic body are removed and introduce it in the calibration solution pH=4.0 (red colour). Shake smoothly for a few seconds and press "CAL" [17] key. Once the measurement has stabilised, the pH-controller will automatically leave the calibration mode and will be operative.



ERROR MESSAGES:



If the calibration process is interrupted for whatever reason, the pH-controller will automatically leave the calibration mode if the intervention of the user is not detected in a few seconds. In this case, "E1" indication in the display **[15]** will appear.



If the pH value during the calibration process is very different from the expected one, (e.g., defective sensor, etc.), display **[15]** will indicate **"E2"**, not allowing calibration.



If the pH measure is unstable during the calibration process, code **"E3"** will appear in display **[15]**. In addition, the pH-sensor calibration will not be allowed.

3. Calibration of the ORP sensor (only in NEO -XX + models)

The calibration frequency of the controller will be determined in each particular application. Nevertheless, we recommend to make it at least, once a month during the use period of the pool. The ORP controller has an automatic calibration system for the ORP sensors based on the utilisation of a 470 mV reference solution.

PROCEDURE:

IMPORTANT: before closing the by-pass valves, stop system from control panel (see Section 5.1).

1. Extract the ORP sensor from the holder and wash it with tap water.



Fig. 36

- 2. Press "CAL" [23] key for a few seconds, until the ORP display [24] blinks and indicates "470".
- 3. Shake the sensor smoothly so that any water drops that may be adhered to the plastic body are removed and introduce it to the calibration solution (470 mV). Shake smoothly for a few seconds and press "CAL" [23] key. If the process has concluded satisfactorily, a long "beep" will be listened and the controller will be calibrated and ready to operate.





ERROR MESSAGES



If the calibration process is interrupted for whatever reason, the ORP controller will automatically leave the calibration mode if the intervention of the user is not detected in a few seconds. In this case, **"E1"** indication in display **[21]** will appear.

If the ORP value during the calibration process is very different from the expected one, (e.g., defective sensor, etc.), display [21] will indicate "E2", not allowing calibration.



If the ORP measure is unstable during the calibration process, code **"E3"** will appear in display **[21]**. In addition, the sensor calibration will not be allowed.

pH / ORP sensors maintenance

- 1. Ensure that the sensor membrane remains moist all the time.
- 2. If the sensor in not going to be used for a long period, keep it submerged in a pH=4.0 conservation solution.
- 3. To clean the sensor, avoid the use of abrasive materials that can scratch the sensor surface.
- 4. The pH/ORP sensor is a consumable part and will need to be replaced over a period of time.

7.1.3. REPLACEMENT AND CLEANING THE LAMP U.V

How to remove.... (1/3)



How to install.... (1/3)





How to install.... (2/3)





Cleaning of the quartz sleeve

You should check at least once a year that the quartz sleeve does not contain any kind of deposit on its surface (lime, iron, manganese, organic matter, etc.). To do this, disconnect the system and remove the lamp as described in Section

8. TROUBLESHOOTING: _

Any action required to solve possible problems in the equipment should always be performed with the equipment disconnected from the mains. Any problem not indicated in the following list should be solved by an IDEGIS technician.

PROBLEM	SOLUTION
Production indicator always indicates "0" at all production levels	Check electrodes. Verify connections between power supply and the electrolysis cell. Check salt concentration.
The power supply is not turned on.	Check the system is properly connected to 230 V/50-60 Hz in the command box of the pump. Check th estate of teh fuse located at the bottom of the power supply.
Free chlorine levels in the water are very low.	Check that the system produces chlorine in pool jets. Verify that the water Chemicals parameters (pH, combined chlorine, isocyanuric acid, etc.) are correct. Increase filtering time. Add chlorine stabilizer (cyanuric acid) until a concentration of 25 - 30 g/m ³ is achieved.
pH/ORP controller always show extreme values, or readings are unstable.	The cable of the pH/ORP sensor is damaged. Clean the contacts or replace the cable. The pH/ORP sensor has an air bubble in the membrane area. Hold the sensor in vertical position.Shake it lightly until the bubble moves up. Sensor fault. The connection cable is too long or it is too near to sources of electrical interference (motors, etc.). Replace the sensor. Locate the unit nearer to the sensor.
Impossible calibration of the pH/ORP sensor	Polluted or expired calibration solution. Blocked sensor membrane. Check the membrane is not damaged. Clean the sensor with diluted acid in water, shaking it lightly. Sensor fault. Replace the sensor.
Slow response of the pH/ORP sensor	Sensor electrostatically charged. During the calibration phase, the sensors should not be dried with paper or cloth. Clean it exclusively with water and shake it lightly. Insufficient renovation of the analyzed water (no flow through the sample point). Ensure that the tip of the sensor is submerged in the water at the sample point, and that no air bubbles are present.



POWER SUPPLY

ID	CODE	DESCRIPTION	NEO 12	NEO 24	NEO 32	NEO 12 PH	NEO 24 PH	NEO 32 PH	NEO 12 PLUS	NEO 24 PLUS	NEO 32 PLUS	NUM.
1	DOM00-13	Power supply cover	Х	х	Х	Х	Х	Х	Х	Х	Х	1
2	DOM10-03	Power card AC-12	Х									1
2	DOM18-03	Power card AC-22		Х								1
2	DOM25-03	Power card AC-30			Х							1
2	DOM40-03	Power card AC-7										1
2	DOM10-04	Power card AC-12/PH				Х						1
2	DOM18-04	Power card AC-22/PH					Х					1
2	DOM25-04	Power card AC-30/PH						Х				1
2	DOM40-04	Power card AC-7/PH/ORP										1
2	DOM10-05	Power card AC-12/PH/ORP							Х			1
2	DOM18-05	Power card AC-22/PH/ORP								Х		1
2	DOM25-05	Power card AC-30/PH/ORP									Х	1
2	DOM40-05	Power card AC-7/PH/ORP										1
3	DOM00-14	Wall fixation	Х	Х	Х	Х	Х	Х	Х	Х	Х	1
4	DOM00-03	Cable gland M20	Х	Х	Х	Х	Х	Х	Х	Х	Х	1
5	DOM00-04	CEE22 F connector external pH pump				Х	Х	Х	Х	Х	Х	1
6	DOM00-05	Electrolysis display card	Х	Х	Х							1
6	DOM00-15	Electrolysis/pH display card				Х	Х	Х				1
6	DOM00-26	Electrolysis/PH/ORP display card							Х	Х	Х	1
7	DOM10-02	Power transformer 190 VA	Х			Х			Х			1
7	DOM18-02	Power transformer 370 VA		Х			Х			Х		1
7	DOM25-02	Power transformer 480 VA			Х			Х			Х	1
7	DOM40-02	Power transformer 490 VA										1
8	DOM00-07	External heat sink	Х	Х	Х	Х	Х	Х	Х	Х	Х	1
9	DOM00-16	Internal controllers structure	Х	Х	Х	Х	Х	Х	Х	Х	Х	1
10	DOM00-09	Fuse holder	Х	Х	Х	Х	Х	Х	Х	Х	Х	1
11	DOM00-10	Internal BNC cable				1	1	1	2	2	2	
12	DOM00-11	CEE22 M connector external pump				Х	Х	Х	Х	Х	Х	1
13	DOM00-17	Frontal cover of the control terminal	Х	Х	Х	Х	Х	Х	Х	Х	Х	1
14	DOM00-18	Power supply cover fixation screw	Х	Х	Х	Х	Х	Х	Х	Х	Х	1
15	DOM00-19	Fixation screw embellisher	Х	Х	Х	Х	Х	Х	Х	Х	Х	1
16	DOM00-20	Power card-display card	Х	Х	Х	Х	Х	Х	Х	Х	Х	1
L												



SENSOR HOLDER

ID	CODE	DESCRIPTION	NEO 12	NEO 24	NEO 32	NEO 12 PH	NEO 24 PH	NEO 32 PH	NEO 12 PLUS	NEO 24 PLUS	NEO 32 PLUS	NUM.
1	R-127	Sensor holder				х	х	х	Х	Х	Х	1
2	R-035	pH-minus injection valve 3/8" *				Х	Х	Х	Х	Х	Х	1
3	R-028	Connector PE 12 mm				1	1	1	2	2	2	
4	H-035	pH sensor				Х	Х	Х	Х	Х	Х	1
5	R-127-01	Plug M25 H				Х	Х	Х				1
6	R-025	Calibration solution pH 7.0 (green)				Х	Х	Х	Х	Х	Х	1
7	R-026	Calibration solution pH 4.0 (red)				Х	Х	Х	Х	Х	Х	1
8	R-027	Calibration solution ORP (470 mV)							Х	Х	Х	1
9	RX-02	ORP EX sensor							Х	Х	Х	1

* not included with the equipment

ELECTROLYSIS CELL

ID	CODE	DESCRIPTION	NEO 12	NEO 24	NEO 32	NEO 12 PH	NEO 24 PH	NEO 32 PH	NEO 12 PLUS	NEO 24 PLUS	NEO 32 PLUS	CANT
1	R-015-04	Electrodes M8 Nylon nut	х	х	х	х	х	х	х	х	х	1
2	R-015-02	1 mm thickness PP M8 washer	Х	Х	Х	Х	Х	Х	Х	Х	Х	1
3	R-015-03	Electrodes PP divider	Х	Х	Х	Х	Х	Х	Х	Х	Х	1
4	R-015-01	Electrode-holder PP M8 screw	Х	Х	Х	Х	Х	Х	Х	Х	Х	1
5	R-303	Contact protection cover	Х	Х	Х	Х	Х	Х	Х	Х	Х	1
5	R-015-07	Contac protection cover DOM-42										1
6	R-301	Cell	Х	Х	Х	Х	Х	Х	Х	Х	Х	1
6	R-010	Cell DOM-42										1
7	R-015-05 DOM	DOMOTIC electrode-holder	Х	Х	Х	Х	Х	Х	Х	Х	Х	1
7	R-015-05 BIP	DOM-42 electrode-holder										1
8	R-302	Cell threaded ring	Х	Х	Х	Х	Х	Х	Х	Х	Х	1
8	R-015-06	Cell threaded ring DOM-42										1
9	R-300	Cell joint	Х	Х	Х	Х	Х	Х	Х	Х	Х	1
9	R-015-08	Cell joint DOM-42				Х			Х			1
10	R-058	DOMOTIC Series 10 electrodes	Х			Х			Х			1
10	R-059	DOMOTIC Series 18 electrodes		Х			Х			Х		1
10	R-060	DOMOTIC Series 25 electrodes			Х			Х			Х	1
10	R-204	DOMOTIC Series 40 electrodes										1
11	R-010-01	Top embellisher ring	Х	Х	Х	Х	Х	Х	Х	Х	Х	1
12	R-010-02	Cell outlet embellisher ring	Х	Х	Х	Х	Х	Х	Х	Х	Х	1





OPTIONAL DETACHABLE TERMINAL (not included with the equipment)

ID	CODE	DESCRIPTION	NEO 12	NEO 24	NEO 32	NEO 12 PH	NEO 24 PH	NEO 32 PH	NEO 12 PLUS	NEO 24 PLUS	NEO 32 PLUS	NUM.
1	DOM00-021	Сар	Х	Х	Х	Х	Х	Х	х	х	х	1
2	DOM00-022	Visualization box base	Х	Х	Х	Х	Х	Х	Х	Х	Х	1
3	DOM00-023	Cable gland M12	Х	Х	Х	Х	Х	Х	Х	Х	Х	1
4	DOM00-024	Wall fixation	Х	Х	Х	Х	Х	Х	Х	Х	Х	1
5	DOM00-025	3x8 mm fixation screw	Х	Х	Х	Х	Х	Х	Х	Х	Х	4
6	DOM00-025	Screw joint	Х	Х	Х	Х	Х	Х	Х	Х	Х	4

Standard working voltage 230V AC - 50/60 Hz. Cable: 3 x 1.0 mm², leng. 2 m. NEO Series 12 0.8 A NEO Series 24 1.1 A NEO Series 32 1.5 A Fuse NEO Series 24 3.15A T (5x20 mm) NEO Series 24 3.15A T (5x20 mm) NEO Series 32 4A T (5x20 mm)	Control syste • Mic • Me ope • Con for of t cor • Cel levy
Output voltage Cable $3 \times 4 \text{ mm}^2$, leng. 2 m. NEO Series 12 12 A (2x6 A) NEO Series 24 24 A (2x12 A) NEO Series 23 32 A (2x16 A)ProductionNEO Series 12 10 - 12 g./h. NEO Series 24 20 - 24 g./h. NEO Series 32 25 - 32 g./h.Minimum recirculation flow NEO Series 24 4 m ³ /h. NEO Series 22 5 - 32 g./h.Minimum recirculation flow NEO Series 24 4 m ³ /h. NEO Series 24 7 model NEO Series 24 Minimum recirculation flow NEO Series 24 7 model NEO Series 24 7 model NEO Series 24 NEO Series 24 7 model NEO Series 24 7 model NEO Series 24 7 model NEO Series 24 Net weight (packaging included) NEO Series 24 11 Kg. NEO Series 24 13 Kg. NEO Series 24 13 Kg. NEO Series 24	Interventering
NEO Series 32 15 Kg.	So

FEATURES:

em

- licroprocessor.
- lembrane keypad with control keys and peration indication leds.
- Control I/O: 3 inputs (potential-free contact type) or monitoring the external flow switch, the state f the automatic cover and ORP/residual chlorine ontroller.
- ell output: production control (11 discrete vels).
- integrated pH controller (only NEO -XX PH and IEO-XX +).
 integrated ORP controller.
 only in NEO-XX + models).

	Automatic polarity switch	
Working temperature		
Ē	From 0°C (32°F) to +40°C (104°F)	
(Cooling: natural convection	
Material	-	
F	Power supply / wall terminal	
(o ABS	
E	Electrolysis cell and sensor-holder	
(Polyethylene 	
pH sensor (NEO-XXPH and NEO-XX +)		
	Sody: plastic (blue)	
F	Range 0 -12 pH	
9	Solid electrolyte	
ORP sensor (NEO-XX + models)		
E	Body: plastic (red)	
F	Range 0 - 1000 mV	
S	Solid electrolyte	

11. WARRANTY CONDITIONS:

11.1. GENERAL ASPECTS

According to these provisions, the seller guarantees that the guaranteed product is in perfect condition upon delivery.

11.1.1. Total Warranty Period is 3 YEARS, except for the following components: a. LAMP: 13.000 hours or 1.000 ignitions.

- b. ELECTRONIC BALLAST: 2 YEARS.
- c. PH/ORP SENSORS: 6 MONTHS.

11.1.2. The Warranty period will be calculated as of delivery to the purchaser.

11.1.3. Should the Product be faulty and the seller is notified during the Guarantee Period, he shall repair or replace the Product at his own cost wherever he sees fit, unless this is either impossible or out of proportion.

11.1.4. When the Product cannot be repaired or replaced, the buyer may request a proportional price reduction or, if the fault is important enough, rescission of the sales contract.

11.1.5. Parts replaced or repaired pursuant to this warranty shall not extend the warranty period of the original Product, although they shall have their own warranty.

11.1.6. For this warranty to be effective, the buyer shall accredit the date of acquisition and delivery of the Product.

11.1.7. When the buyer alleges a fault in the product over six months after its delivery, he shall accredit the original and existence of the alleged fault.

This Warranty Certificate does not limit or prejudge consumer rights pursuant to national legislation.

11.2. SPECIFIC CONDITIONS

11.2.0. For this warranty to be effective, the buyer must closely follow the manufacturer's instructions included in the documentation supplied with the product, as applicable to each product range and model.

11.2.1. Whenever a schedule is defined for the replacement, maintenance or cleaning of certain product parts or components, the warranty shall only be valid when said schedule has been correctly followed.

11.3. LIMITATIONS

11.3.1. This warranty shall only be applicable to sales to consumers, with consumer being defined as a person who purchases the product for other than professional purposes.

11.3.2. No warranty is applicable to normal wear or the product, parts, components and/or fungible or consumable materials (except the electrode).

11.3.3. The warranty does not cover cases in which the product: (i) has been incorrectly treated; (ii) has been inspected, repaired, maintained or handled by an unauthorised person; (iii) has been repaired or maintained with non-original parts, or (iv) has been incorrectly installed or started up.

11.3.4. When a faulty product results from incorrect installation or start-up, this warranty shall only be applicable when the installation or start-up forms part of the product contract of sale and had been performed by the seller or under the seller's responsibility.

11.3.5. Damage or faults due to any of the following causes:

- Operation at a pH of more than 7.6.
- Use of explicitly unauthorised chemicals.
- Exposure to corrosive environments and/or temperatures of less than 2°C (36°F) or more than 40°C (104°F).

I.D. ELECTROQUIMICA, S.L.

EN PRODUCTS F PRODUITS E PRODUCTOS I PRODOTTI D PRODUKTE P PRODUTOS	UV TREATMENT SYS SYSTÈME DE TRAIT SISTEMA DE TRATA SISTEMA DI TRATTA UV-BEHANDLUNG-S SISTEMA DE TRATA	STEMTEMENT UVNEO-12NEO-12PHNEO-12+MIENTO UVNEO-24NEO-24PHNEO-24+MENTO UVNEO-32NEO-32PHNEO-32+SYSTEMMENTO UVNEO-32NEO-32PH
DECLARATION EC OF CONFORMITY The products listed above are in compliance with: Low Voltage Directive 73/23/EEC and 93/68/EEC. Electromagnetic Compatibility Directive 89/336/EEC and 92/31/EEC.		DÉCLARATION CE DE CONFORMITÉ Les produits énumérés ci-dessus sont conformes à: La Directive des Appareils à Basse Tension 73/23/CEE et 93/68/EEC. La Directive de Compatibilité Électromagnétique 89/336/EEC et 92/31/EEC.
DECLARACION CE DE CONFORMIDAD Los productos arriba enumerados se hallan conformes con: Directiva de Equipos de Baja Tensión 73/23/CEE y 93/68/EEC. Directiva de Compatibilidad Electromagnética 89/336/EEC y 92/31/EEC.		DICHIARAZIONE CE DI CONFORMITÀ I prodotti di cui sopra adempiono alle seguenti direttive: Direttiva per gli Apparecchi a Bassa Tensione 73/23/CEE e 93/68/EEC. Direttiva di Compatibilità elettromagnetica 89/336/EEC e 92/31/EEC.
KONFORMITÄTSERKLÄF Die oben aufgeführten Produkte sind ko Richtlinie für Niederspannungsanlagen 93/68/EEC. Richtlinie zur elektromagnetischen Kon 89/336/EEC und 92/31/EEC.	RUNG CE onform mit: 73/23/CEE und npatibilität	DECLARAÇÃO CE DE CONFORMIDADE Os produttos relacionados acima estão conformes as: Directiva de Equipamentos de Baixa Tenção 73/23/CEE e 93/68/EEC. Directiva de Compatibilidae Electromagnética 89/336/EEC e 92/31/EEC.
Signature / Qualification: Signature / Qualification: Firma / Cargo: Firma / Qualifica: Unterschrift / Qualifizierung: Assinatura / Título:	I.D. ELECTF Pol. Ind. Atala E-03114 AL	ROQUIMICA, S.L. ayas, Dracma R-19 LICANTE. Spain. Gaspar Sánchez Cano Gerente 01-09-2010

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