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Impianto di Bovolenta - sede legale

Bovolenta plant - registered office

via Sabbioni 2, I-35024 Bovolenta (PD) - Italy

45° 16' 02.49" N, 11° 55' 51.49" E

Impianto di Limena - quartier generale

Limena plant - headquarters

via del Santo 207, I-35010 Limena (PD) - Italy

45° 27' 43.93" N, 11° 15' 12.44" E

Auto: uscita A4 Padova Ovest, direzione Trento/Bassano, prima uscita Limena

By car: exit highway A4 Padova Ovest, way to Trento/Bassano, first exit to Limena



DICHIARAZIONE DI CONFORMITA'
DECLARATION OF CONFORMITY
DECLARATION DE CONFORMITE
DECLARAȚIE DE CONFORMITATE



ELECTROVAREM 3L

PRESSOFLUSSOSTATO CON VASO DI ESPANSIONE INTEGRATO
ELECTRONIC PUMP CONTROLLER WITH PRESSURE TANK BUILT IN

ISTRUZIONI D'USO

INSTRUCTION

INSTRUCTIONS D'UTILISATION

INSTRUCȚIUNI DE FOLOSIRE

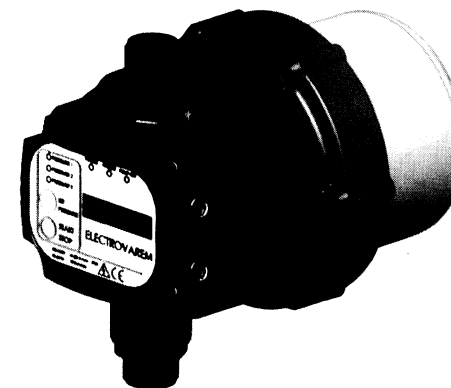
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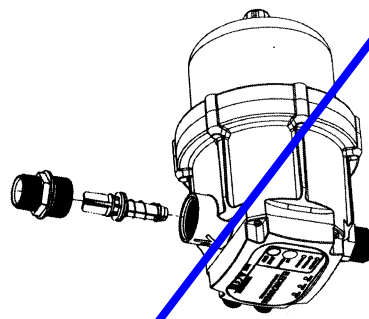
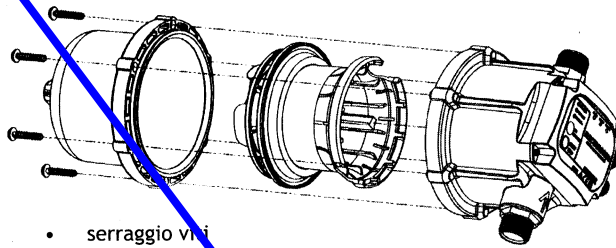
Aggiornato 20/01/2016

Copia conforme all'originale

Codice: CE030 - (Revisione 0)



- Membrana (figura 1)
- valvola non ritorno (figura 2)



- serraggio viti
- coperchio: 2 Nm
- flangia: 12 Nm

GARANZIA

Utilizzare esclusivamente pezzi originali Electrovarem, se si montano altri accessori il diritto alla garanzia per difetti del prodotto decade.

SOLUZIONE PROBLEMI:

- ON-OFF frequenti: verifica della precarica del vaso rispetto alla prevalenza della pompa; regolare la precarica come da tabella:

prevalenza pompa (bar)	3	4	5	6
precarica (bar)	1,0	1,5	2,0	2,5

- Marcia a secco: verificare aspirazione e adescamento della pompa
- Pompa non parte aprendo rubinetti: alzare la p minima
- Pompa va sempre: valvola di non ritorno ostruita

SMALTIMENTO:

Smaltimento dell'imballaggio: il materiale dell'imballo è in cartone riciclabile, si consiglia di conservare l'involucro per poter trasportare l'apparecchio anche in un secondo momento.

Smaltimento rifiuti apparecchiature elettriche ed elettroniche (RAEE): Decreto legislativo 14 marzo 2014 N° 49 smaltimento di rifiuti di apparecchiature elettriche ed elettroniche.



Il simbolo del cassonetto barrato (solo per paesi UE) indica che il prodotto alla fine della propria vita deve essere raccolto separatamente dagli altri rifiuti urbani misti. L'utente dovrà conferire l'apparecchiatura nei centri di raccolta differenziata dei rifiuti elettrici oppure riconsegnarla gratuitamente al venditore al momento dell'acquisto di una nuova apparecchiatura di tipo equivalente in ragione di uno ad uno.

Declaration of conformity

Varem S.p.a. - via del Santo, 207 - 35010 LIMENA (PD) - declares, under its own and sole responsibility, that the tanks with **ELECTROVAREM** electronic pump controller manufactured by it, bearing the CE marking and accompanied by this declaration, comply with essential safety requirements established by the Directives 2014/30/EU, 2014/35/EU and 2011/65/EU by the European Parliament and by the Council of the European Union respectively with reference to the following standards: EN61000-6-3 and EN61000-6-1, EN60730 parts 1/A2, EN50581.

Limena 20-01-2016

True copy of the original CE030 (first issue, Limena 20-01-2016)



Safety guidelines and warnings:

Improper use of ELECTROVAREM can result in personal injury or property damage. Before operating the device, carefully read the instructions for use, as they contain important guidelines for connection to the water and power supplies and for use and maintenance. Compliance with these instructions prevents personal danger and material damages.

Safety:

- After connection to the power supply DO NOT remove any parts of ELECTROVAREM or carry out any maintenance operations; the device must be disconnected from the power supply before carrying out any operations on ELECTROVAREM.
- The device is supplied with pre-charge pressure; do not disassemble any pressurized parts without ensuring that the pre-charge pressure is zero.
- The hydraulic system is kept under pressure by ELECTROVAREM; discharge the pressure from the system (turn on a tap with ELECTROVAREM switched off) before carrying out any operations on the system.

Recommendations:

- use filtered water without sediment
- not suitable for sewage, sea water or other liquids other than potable water
- comply with the prescribed maximum and minimum temperatures
- install a 10 bar safety valve on the system to prevent damage to pressure parts of the device, with serious risks to humans, animals and property.

Technical specifications:

Voltage: Single phase alternating 230V - ± 10%

Frequency 50-60 Hz

Maximum current 12A (1.5 kW) or 16A (2.2kW)

Protected to IP65

Insulation class 2

Connection to the water supply:

This must be carried out by qualified personnel using best practice in accordance with the national regulations in force.

Electrovarem can be installed in any position (horizontal or vertical); the water flow must comply with the direction indicated by the arrow on the product. Do not use for systems with pressures exceeding 10 bars.

Maximum permissible torque: 15 Nm

Connection to the power supply:

The device must only be connected to the power supply by qualified personnel who are perfectly aware of the general and specific regulations in force in the country of installation and who operate in compliance with these regulations. Varem S.p.A. accepts no liability for damages caused by installation, maintenance or repairs that are not carried out accordingly. Moreover, Varem S.p.A. shall not be liable for damages caused by failure to disconnect the power supply during installation of the device and of the ground wire of the pump. For greater safety we recommend installing a high sensitivity differential circuit breaker ≥ 30 mA upstream of the device. **Never open the casing of the device while it is connected to the power supply.**

During initial installation or maintenance:

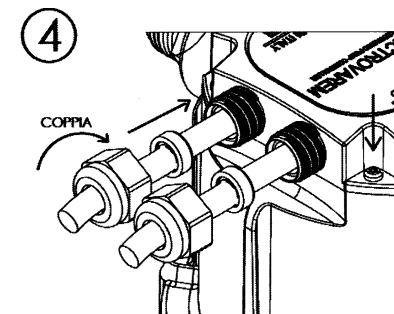
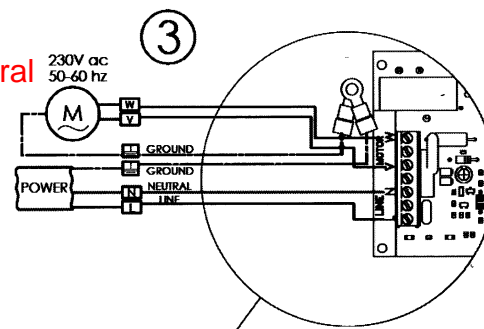
- Makes sure that the power supply on-off circuit breaker is in the "open" position and check that there is no voltage.

The device must be connected using a cable with a cross section of 1.5-2.5 mm² based on the power of the motor and a maximum outer sheath diameter of 8-12 mm. We recommend using a circuit breaker plug with suitable protection systems to facilitate maintenance operations by the technician; if this is not possible, a magnetothermal circuit breaker with contact opening ≥ 3 mm must be installed between the electrical power network and the device.

Make the electrical connections as shown in Figs. 1-2-3-4. Although the device does not require a ground connection, the ground wire of the motor must be connected to the ground wire of the system in the special fixing seat using the terminals and screw provided. The seal must be inserted between the cable gland and the device to ensure protection to IP65.

It is essential to clamp the cable glands with a maximum torque of 3.5 Nm and to ensure that the seal of the cover is housed in its seat before fastening the cover.

W=Hot
V=Neutral



Clamp the cable glands with a maximum permissible torque: 3.5 Nm

Operation:

After connecting ELECTROVAREM to the water and power supply, the orange POWER LED flashes. By pressing the ON button for 3 seconds the device starts up for a few seconds until exceeding the min p set (orange POWER light and green PUMP ON light on). By turning on a tap (in the presence of flow) ELECTROVAREM controls the pump until the flow drops below 1-2 l/min. if the flow is below 1-2 l/m or if there is a leak in the system, ELECTROVAREM switches on the pump to maintain the minimum pressure selected in the system.

- To switch off ELECTROVAREM, press and hold the ON/OFF button for 3 seconds (orange POWER ON LED flashes).
- To change the minimum pressure of the system select the required pressure with the SET PRESSURE switch (pressure 1 is the minimum setting, pressure 3 the maximum); the minimum pressure of the system must in any case be set to a value above the maximum water column of the system (i.e. with a water column of 20 m, the minimum pressure must be set to at least 2.5 bars).

By increasing the minimum pressure, the usable water reserve is reduced, which can vary, with the minimum pressure setting and with the pump head, up to a maximum of 1.5 l.

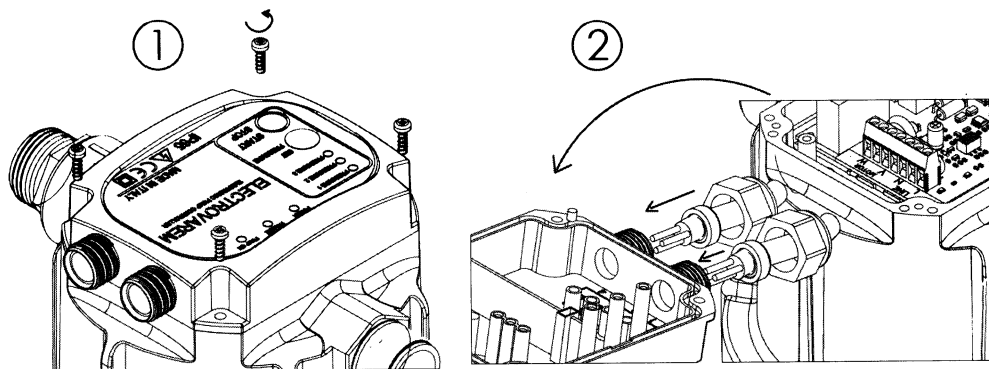
Use and maintenance manual:

1) Operating principle:

The tank with ELECTROVAREM electronic pump controller controls the pump by controlling the flow of water (in priority mode) and the minimum pressure of the system. In the presence of flow (tap turned on), the pump is controlled regardless of the minimum system pressure. In the absence of flow ELECTROVAREM shuts down the pump; if the system pressure drops below the set threshold (leak or small withdrawals), ELECTROVAREM uses its water reserve and then switches on the pump until the pressure returns above the minimum value set.

ELECTROVAREM has the following advantages:

- protection against dry running (the pump is shut down if there is no flow)
- adjustment of the minimum system pressure on the display
- water reserve, with consequent protection against frequent pump START-UP/SHUTDOWN even for small withdrawals and/or due to leaks in the system
- protection against water hammer in the system
- protection against maximum pressure
- protection against lightning and against arcing



- compact, light
- pressure stability

The start-up pressure of the pump is set on the panel using the SET PRESSURE button and is indicated by the corresponding LED lighting up with the thresholds indicated on the label.

It is also possible to vary the 3 start-up pressure thresholds of the pump continuously by varying the air pre-charge of the tank: in fact, this is the same as varying the charge of a spring that opposes the movement of the membrane (pneumatic spring). When the pre-charge is varied, this changes the 3 minimum pressure thresholds that can be set, as indicated in the table:

Precharge	22 psi	30 psi	40 psi
P min 1	1.4 20 psi	1,8 27 psi	2,3 35 psi
P min 2	2 29 psi	2,5 37 psi	3 45 psi
P min 3	2,6 38 psi	3,2 47 psi	4 60 psi
P max	4,3 62 psi	5 74 psi	6 90 psi
APPLICATIONS	pumps up to 6 bar		

Upon reaching the maximum pressure indicated in the table, ELECTROVAREM switches off the pump to prevent overpressures in the system; the pump starts up again automatically at the minimum pressure set. **If the pump shuts down frequently, the pre-charge value must be increased as a function of the pump head (so that maximum pressure is aligned with the maximum pump head). The maximum permissible pre-charge is 3.5 bars. 50 psig**

The ELECTROVAREM internal check valve controls the flow. Below a minimum calibrated flow (1-2 l/min) the check valve switches off the pump; if the pump is blocked or if there is no water supply, the **dry running alarm** cuts in to protect the pump. In this case, ELECTROVAREM automatically makes 3 attempts to restart the pump. If the pump is still running dry after the third attempt, ELECTROVAREM stops the pump permanently.

In the case of frequent start up/shut down (20 times in 30 minutes), with the risk of premature breakage of the pump, the system goes into alarm mode and switches off the pump for 30 minutes to allow the motor to cool down; after this the system starts up again automatically. In this way the system is protected against breakage of the pump in cases of substantial leaks in the system, operating with water withdrawal that is too low or incorrect adjustment of the tank pre-charge (too low in relation to the pump head).

List of alarms:

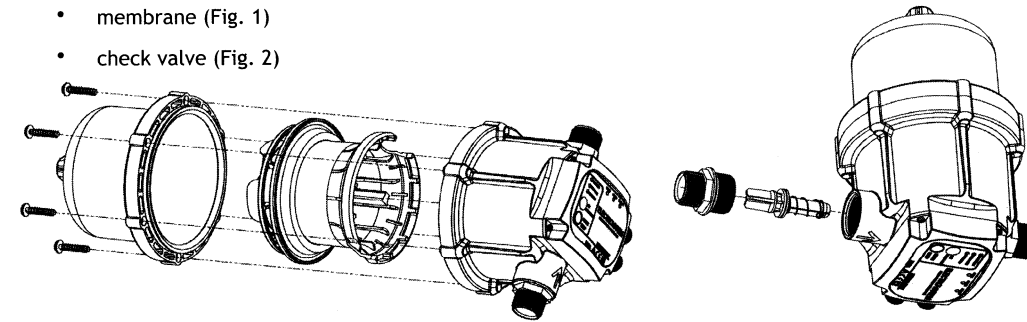
Condition	Indication	start up
FLOW SWITCH BLOCKED (Flow switch ON when Power is switched on)	FAILURE LED (RED) flashes rapidly (0.5 sec)	MANUAL
DRY RUNNING -pump on -flow switch off -minimum pressure for T>7sec	FAILURE LED (RED) on permanently Pre-alarm with slow alternated flashing of the FAILURE and PUMP LED during the timeout of 7 sec.	3 automatic start-ups: 10, 20, 30 minutes after the previous shut down, or manual with Start/Stop button
Frequent start-ups >20 pump start-ups in 30min	FAILURE LED (RED) 2 FLASHES - SLOW PAUSE	Automatic start-up after 30min or manual with Start/Stop button

LOW PRESSURE -pump on -flow switch on -minimum pressure (P set) for T>5 sec.	P1 LED, (GREEN) flashes rapidly (0.5 sec)	Indication only, without pump shutdown
MAXIMUM PRESSURE	PUMP LED FLASHES RAPIDLY FOR 10 SECONDS, FOLLOWED BY PUMP SHUTDOWN	automatic start-up at minimum P
MINIMUM FLOW -pump on -flow switch off -pressure > minimum pressure	PUMP LED FLASHES SLOWLY FOR 5 SECONDS, FOLLOWED BY PUMP SHUTDOWN	automatic start-up at minimum P
STAND-BY (Start pressed for 3 seconds)	POWER ON flashes	MANUAL Start pressed for 3 seconds

List of spare parts:

The screw connection containing the check valve allows maintenance and cleaning. Maintenance must also be carried out on the pneumatic part: the membrane assembly, housing and air valve can be easily replaced by unscrewing the 6 screws that clamp the flange and the metal shell of the tank.

- membrane (Fig. 1)
- check valve (Fig. 2)



In case of removal, comply with the following torques:

- cover: 2 Nm
- flange: 12 Nm

WARRANTY

Only use Electrovarem original spare parts: the use of non-original accessories will render the warranty for product defects null and void.

TROUBLESHOOTING:

- frequent pump START UP/SHUTDOWN: check that the tank pre-charge complies with the pump head; adjust the pre-charge according to the table:

pump head (bar)	3	4	5	6
pre-charge (bar)	1.0	1.5	2.0	2.5

- Dry running: check pump suction
- Pump doesn't start up when taps are turned on: increase the minimum pressure
- Pump runs continuously: check valve blocked