

Additional Installation, Operation and  
Maintenance Instructions



# Genyo plus

Electronic pressure switch

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# 1 Introduction and Safety

## 1.1 Introduction

### Purpose of this manual

This manual provides information on how to do the following in the correct manner:

- Installation
- Operation
- Maintenance.




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### CAUTION:

This manual is an integral part of the unit. Make sure to have read and understood the manual before installing the unit and putting it to use. The manual must always be made available to the user, stored in the proximity of the unit, and well kept.

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### Supplementary instructions

The instructions and warnings of this manual apply to the standard unit as described in the sale documentation. Special version pumps may be supplied with supplementary instruction manuals. For situations not considered in the manual or in the sales document, contact Xylem or the Authorised Distributor.

## 1.2 Safety

### 1.2.1 Danger levels and safety symbols

Before using the unit, the user must read, understand and comply with the indications of the danger warnings in order to avoid the following risks:

- Injuries and health hazards
- Damage to the product
- Unit malfunction.

### Danger levels

Hazard level	Indication
 <b>DANGER:</b>	It identifies a dangerous situation which, if not avoided, causes serious injury, or even death.
 <b>WARNING:</b>	It identifies a dangerous situation which, if not avoided, may cause serious injury, or even death.
 <b>CAUTION:</b>	It identifies a dangerous situation which, if not avoided, may cause small or medium level injuries.
<b>NOTICE:</b>	It identifies a situation which, if not avoided, may cause damage to property but not to people.

## Complementary symbols

Symbol	Description
	Electrical hazard
	Hot surface hazard
	Danger, system pressurized
	Do not use flammable liquids
	Do not use corrosive liquids
	Read the instruction manual

## 1.2.2 User safety

Strictly comply with current health and safety regulations.

**WARNING:**

This unit must be used only by qualified users. Qualified users are people able to recognise the risks and avoid hazards during installation, use and maintenance of the unit.

## Inexperienced users

**WARNING:**

- For EU countries: this product may be used by children aged 8 years and above and persons with reduced physical, sensory or mental capabilities, or who lack experience and knowledge, provided that they are being supervised and have been instructed on how to use it safely, and understand the hazards involved. Children must not play with the product. Cleaning and maintenance must not be carried out by children without supervision.
- For countries outside the EU: this product is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or who lack experience and knowledge, unless they are being supervised and have been instructed on how to use it by a person responsible for their safety. Children should be supervised to ensure that they do not play with the product.

### 1.2.3 Protection of the environment

#### Disposal of packaging and product

Comply with the current regulations on sorted waste disposal.

### 1.2.4 Sites exposed to ionizing radiations



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#### **WARNING: Ionizing radiation hazard**

If the unit has been exposed to ionizing radiations, implement the necessary safety measures for the protection of people. If the unit needs to be despatched, inform the carrier and the recipient accordingly, so that appropriate safety measures can be put in place.

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# 2 Handling and Storage

## 2.1 Handling of the packed unit



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**WARNING:**

Take appropriate measures during transport, installation and storage to prevent contamination from external substances.

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The Manufacturer delivers the unit and its components in a cardboard box.

## 2.2 Unit inspection upon delivery

### 2.2.1 Inspect the package

1. Check that quantity, descriptions and product codes match the order.
2. Check the packaging for any damage or missing components.
3. In case of immediately detectable damage or missing parts:
  - accept the goods with reserve, indicating any findings on the transport document, or
  - reject the goods, indicating the reason on the transport document.

In both cases, promptly contact Xylem or the Authorised Distributor from whom the product was purchased.

### 2.2.2 Unpacking and inspection of the unit

1. Remove packing materials from the product.
2. Check the unit for integrity and to make sure that there are no missing components.
3. In case of damage or missing components, promptly contact Xylem or the Authorised Distributor.

#### Content of the package

- Unit
- Two M20x2.5 cable glands
- Instructions manual.

## 2.3 Storage

### Storage of the packed unit

The unit must be stored:

- In a covered and dry place
- Away from heat sources
- Protected from dirt
- Protected from vibrations
- At an ambient temperature between -25°C and +65°C (-13°F and 149°F), and humidity between 5% and 95%.

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**NOTICE:**

Do not place heavy loads on top of the unit.

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**NOTICE:**

Protect the unit from collisions.

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### **Long-term storage of the unit**

Follow the same instructions for the storage of the packed unit.

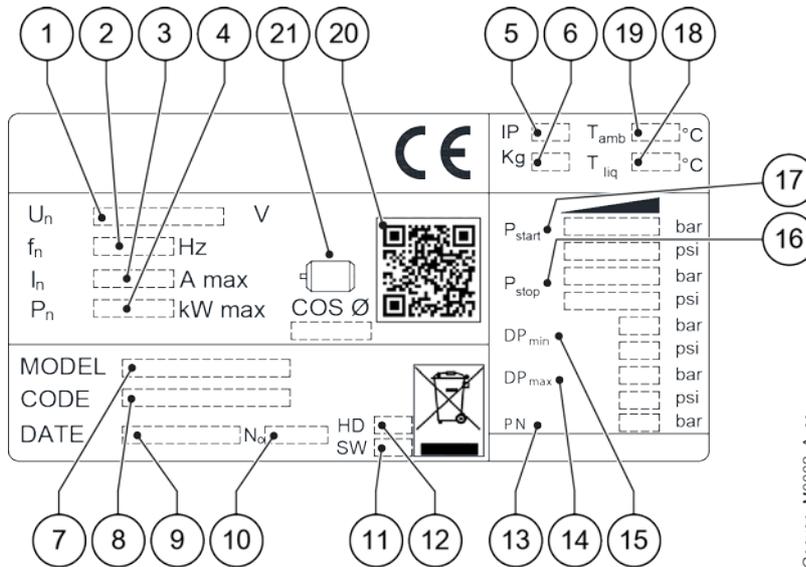
For further information about preparation for long-term storage, please contact Xylem or the Authorised Distributor.

# 3 Technical Description

## 3.1 Designation

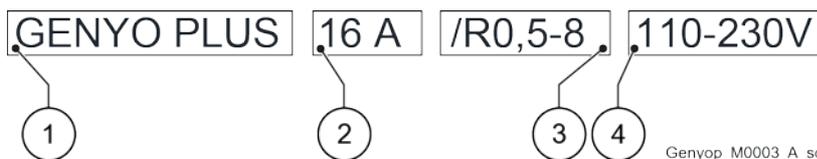
Electronic pressure switch for the supply, control and protection of single-phase pump units.

## 3.2 Data plate



Position number	Description	Position number	Description
1	Power Supply Voltage	12	Hardware version
2	Frequency	13	Maximum liquid pressure
3	Maximum current of the pump unit	14	Maximum differential
4	Maximum motor power	15	Minimum differential
5	Protection degree	16	STOP pressure range
6	Weight	17	START pressure range
7	Model	18	Maximum liquid operating temperature
8	Product code	19	Maximum ambient temperature
9	Manufacturing date	20	QR code (if present)
10	Serial number	21	Minimum cosØ of the motor
11	Software version	-	-

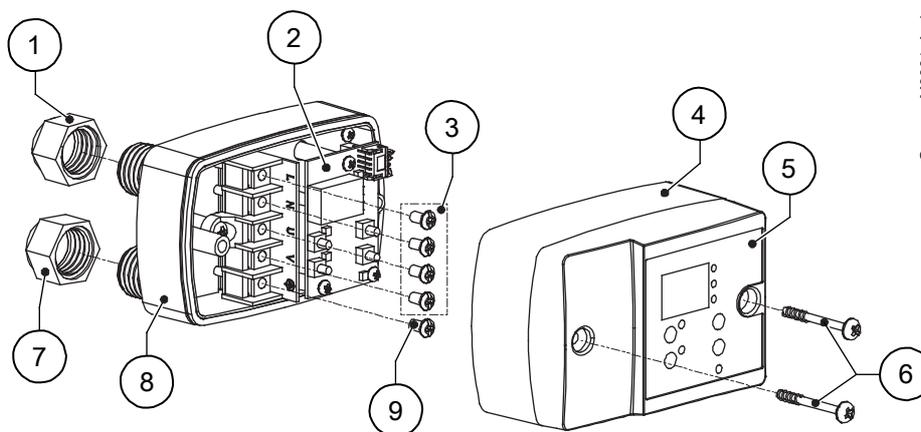
### 3.3 Identification code



Genyop\_M0003\_A\_sc

Position number	Description	Position number	Description
1	Series name	3	Pressure adjustment range, bar
2	Maximum current of the pump unit, A	4	Voltage supply range 50/60Hz, V

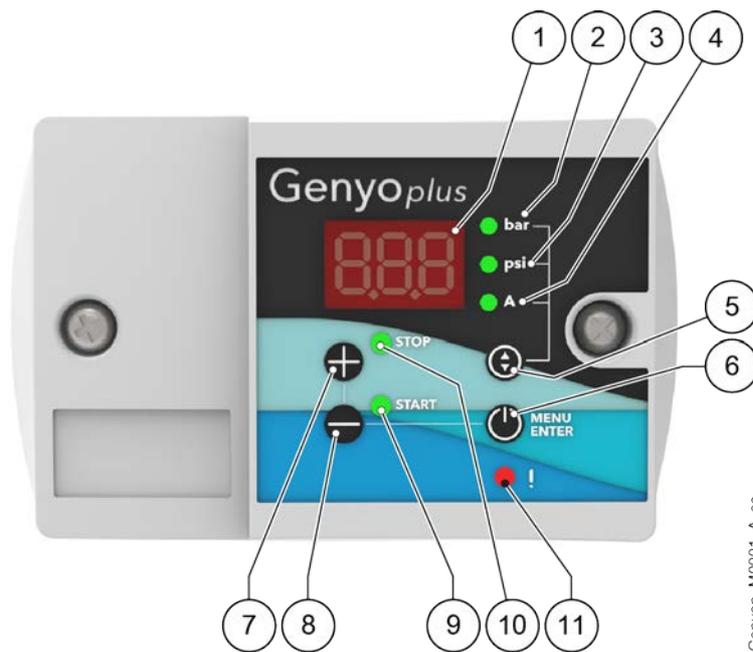
### 3.4 Names of the main components



Genyop\_M0004\_A\_ds

Position number	Description	Position number	Description
1	Cable gland of the $U_{in}$ power supply cord	6	Screws of the cover
2	Electronic circuit boards	7	Cable gland of the $U_{out}$ motor power supply cord
3	Fastening screws of the power supply cords	8	Base
4	Cover	9	Fastening screw of the ground cable
5	Control panel	-	-

### 3.4.1 Control panel



Genyop\_M0001\_A\_sc

Position number	Description
1	Display
2	LED indicator of the pressure (bar) measurement unit, see also LEDs description
3	LED indicator of the pressure (psi) measurement unit, see also LEDs description
4	LED indicator of the current (A) measurement unit, see also LEDs description
5	Button for viewing on the display: <ul style="list-style-type: none"> <li>• pressure in bar, or</li> <li>• pressure in psi, or</li> <li>• absorbed current in Ampere</li> </ul>
6	Button for: <ul style="list-style-type: none"> <li>• selecting the operating mode (automatic or OFF), or</li> <li>• confirming a change, or</li> <li>• accessing the menu</li> </ul>
7	Button for: <ul style="list-style-type: none"> <li>• increasing a value, or</li> <li>• selecting the stop pressure</li> </ul>
8	Button for: <ul style="list-style-type: none"> <li>• decreasing a value, or</li> <li>• selecting the start pressure</li> </ul>
9	Start pressure LED, see also LEDs description
10	Stop pressure LED, see also LEDs description
11	Alarm LED, see also LEDs description

### 3.4.2 LEDs description

Illustration	LED	Unit status	Notes	
  	Off	Unit powered	Operating mode upon initial start-up: OFF. The operating mode then reverts to the one before the energy was disconnected	
 	Off	OFF mode, pump unit stopped		
	Slow flashing	AUT mode, pump unit running	The pressure is shown on the display	
	Steady	AUT mode, pump unit stopped		
	Off	OFF mode, pump unit stopped		
	Slow flashing	AUT mode, pump unit running	The absorbed current of the motor is shown on the display	
	Fast flashing	OFF mode, change of the nominal Ampere value		
	Steady	AUT mode, pump unit stopped		
	Slow flashing	STOP pressure being modified	The display flashes and shows the pressure	
	Steady	STOP pressure set		
	Slow flashing	START pressure being modified		
	Steady	START pressure set		
	Off	No alarm; pump unit running, stopped or in OFF mode		
	Slow flashing	Alarm triggered and automatic reset procedure in progress		
	Fast flashing	Start cycles alarm		
	Steady	Alarm triggered, pump unit locked Alarm switched off: the pump unit can now be started, if it is not already running		

### 3.5 Intended use

- Residential water boosting systems
- Irrigation systems for gardens
- Boosting systems for small commercial buildings.

#### Pumped liquids

- Chemically and mechanically non aggressive
- Non flammable and/or explosive.
- With solid particles a maximum of 1.5 mm (0.06 inches) in diameter
- Clean water.

Observe the operating limits in **Technical Information** on page 31.

## 3.6 Improper use



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**WARNING:**

The unit was designed and built for the use described in **Intended use** on page 12. Any other uses are prohibited, as they could compromise the safety of the user and the efficiency of the unit itself.

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**DANGER:**

It is prohibited to use this unit to pump flammable and/or explosive liquids.

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**DANGER: Potentially explosive atmosphere hazard**

It is prohibited to start the unit in environments with potentially explosive atmospheres or with combustible dusts.

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### Examples of improper use

- Use with liquids not compatible with the construction materials of the unit
- Use with liquids with temperatures higher than those shown in **Technical Information** on page 31
- Use with liquids that are hazardous, toxic, explosive, flammable or corrosive
- Use with sea water
- Use with liquids containing solid particles more than 1.5 mm (0.06 inches) in diameter.

# 4 Installation

## 4.1 Precautions

Before starting, make sure that the safety instructions shown in **Introduction and Safety** on page 4 have been fully read and understood.



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**DANGER:**

All the hydraulic and electrical connections must be completed by a technician possessing the technical-professional requirements outlined in the current regulations.

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**DANGER: Potentially explosive atmosphere hazard**

It is prohibited to start the unit in environments with potentially explosive atmospheres or with combustible dusts.

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**WARNING:**

Always wear personal protective equipment.

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**WARNING:**

Always use suitable working tools.

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**WARNING:**

When selecting the place of installation and connecting the unit to the hydraulic and electric power supplies, strictly comply with current regulations.

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## 4.2 Installation area

- Follow the provisions in **Technical Information** on page 31
- Install the unit in a dry and well ventilated area
- Place the unit in a raised position in relation to the floor
- Make sure that any leaks will not cause flooding to the installation area or submerge the unit
- In case of installation of the unit outdoors, ensure appropriate protection against snow, rain and direct sunlight.

## 4.3 Hydraulic connection



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**WARNING:**

Piping must be sized to ensure safety at the maximum operating pressure.

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**WARNING:**

Install appropriate seals between the connections of the unit and the piping.

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### 4.3.1 Guidelines for hydraulic connection

Refer to the representative hydraulic diagrams; see the figures below.

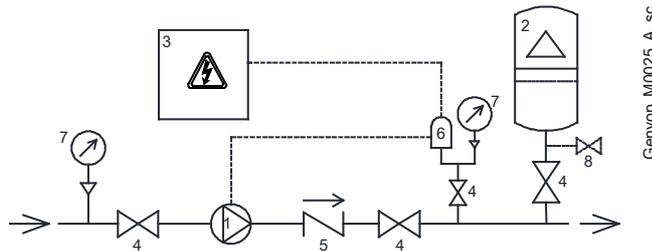


Figure 1: Installation with single pump unit

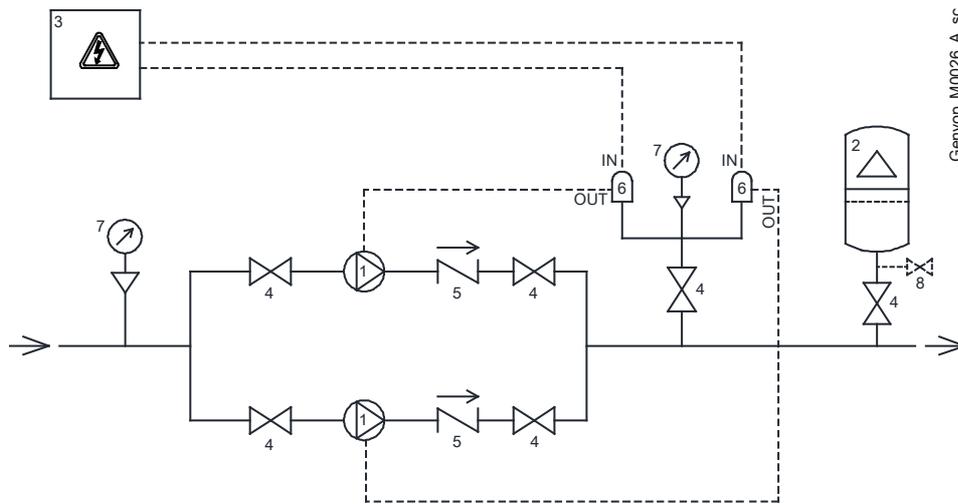


Figure 2: Installation of the booster set

Position number	Description	Position number	Description
1	Pump unit	5	Check valve
2	Diaphragm pressure tank $\geq 24$ l (6.3 US gal)	6	Genyo plus unit
3	Electric panel	7	Pressure gauge
4	On-off valve	8	Drain tap

1. Remove any welding residues, deposits and impurities in the pipes that could damage the unit.
2. Install an on-off valve between the piping and the unit.
3. Install an on-off valve on the suction side and another on the delivery side of the pump unit.
4. Install a check valve between the unit and the pump unit.
5. Install a pressure gauge for the unit.
6. Install one or more diaphragm expansion tanks to limit the number of starts of the pump unit.

### 4.3.2 Assembly



**CAUTION: Danger, system pressurized**

Before starting work, close the on-off valves on the suction and delivery sides or empty the system.

Screw the unit on the piping, putting sealant on the thread.



#### Mounting positions



### 4.4 Electrical connection



**DANGER:**

All the hydraulic and electrical connections must be completed by a technician possessing the technical-professional requirements outlined in the current regulations.



**DANGER: Electrical hazard**

Before starting work, check that the unit is unplugged and that the pump unit, the control panel and the auxiliary control circuit cannot restart, even unintentionally.

#### 4.4.1 Ground




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**DANGER: Electrical hazard**

Always connect the external protection conductor (ground) to the ground terminal before attempting to make any other electrical connections.

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**DANGER: Electrical hazard**

Connect the unit and any electric accessories to a socket with protection conductor (ground).

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**DANGER: Electrical hazard**

Check that the external protection conductor (ground) is longer than the phase conductors; In case of accidental disconnection of the unit from the phase conductors, the protection conductor must be the last one to detach itself from the terminal.

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**DANGER: Electrical hazard**

Install suitable systems for protection against indirect contact, in order to prevent lethal electric shocks.

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#### 4.4.2 Guidelines for the electrical control panel

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**NOTICE:**

The electric panel must match the ratings on the unit data plate. Improper combinations could damage the motor.

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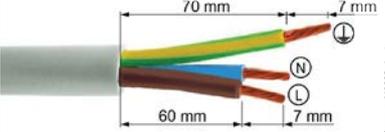
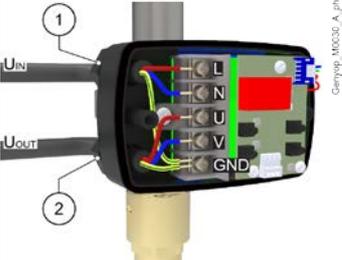
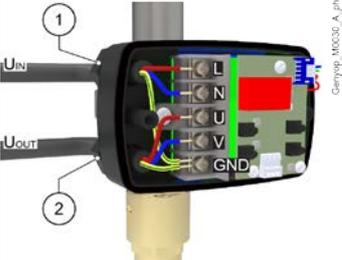
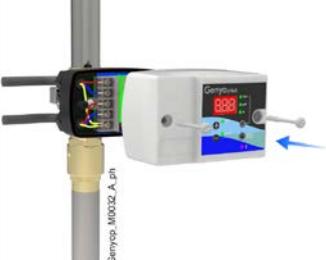
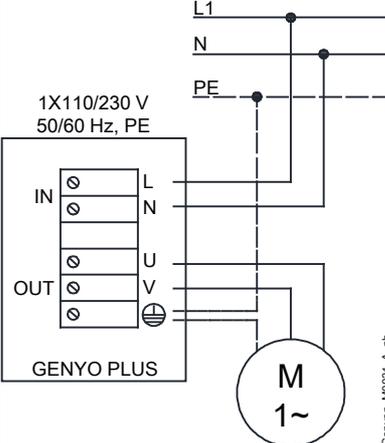
Install an overload circuit breaker with C-type curve and  $I_{cn} \geq 4.5 \text{ kA}$ , or other equivalent device, to protect the system against overloads and short circuits.

The unit has software that protects the pump unit against overloads and short circuits, see also **Programming** on page 24.

#### 4.4.3 Guidelines for electrical connection

1. Use a 3G1-1.5 multi-core power supply cord.
2. Check that:
  - The mains voltage and frequency match the specifications on the data plate
  - The power supply cord is protected from high temperatures, vibrations, collisions and abrasions.
3. Check that the power supply line is provided with:
  - A short circuit protection device of appropriate size
  - A mains disconnection device with contact opening distance ensuring complete disconnection for overvoltage III category conditions
  - An RCCB earth leakage switch with tripping current  $\leq 30 \text{ mA}$ .

Power supply connection of the unit

Phase	Action	Illustration
1	Undo the screws to remove the cover.	
2	Unsheathe the conductors.	
3	Insert the Uin power supply cord in cable gland 1.	
4	Insert the Uout motor power supply cord in cable gland 2.	
5	Insert the cores of the conductors in the respective holes and tighten the screws. Tightening torque: 1.2 Nm (10.6 lbf-in).	
6	Put the cover back in place, refastening the screws. Tightening torque: 1.5 Nm (13.3 lbf-in).	
7	Connect the unit to the mains power supply referring to the diagram.	
8	Tighten cable glands 1 and 2. Tightening torque: 4 Nm (35.4 lbf-in).	

# 5 Use and operation

## 5.1 Precautions




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**WARNING:**

Make sure that the drained liquid cannot cause damage or injuries.

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**WARNING: Electrical hazard**

Check that the unit is properly connected to the mains power supply.

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**WARNING:**

It is prohibited to put combustible materials near the unit.

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## 5.2 Initial start-up and basic settings

Upon initial start-up:

- Set the nominal absorbed current of the motor, see **Setting the current** on page 20
- Set the P START and P STOP pressure values, see **Setting the P START and P STOP pressure values** on page 21
- Open the on-off valve on the delivery line
- Start the pump unit in AUT mode
- Close the valve: the P STOP pressure is reached and the pump unit stops.

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**NOTICE:**

A correctly loaded diaphragm pressure tank must be installed, see **Hydraulic connection** on page 14.

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**NOTICE:**

If the current is not set:

- The unit remains in OFF mode
  - It is not possible to activate AUT mode
  - The overcurrent, short circuit and lack of water protection devices are deactivated.
- 

### 5.2.1 OFF mode

OFF mode, pump unit stopped.

Action	Illustration
Press once to stop the pump unit	

### 5.2.2 AUT mode

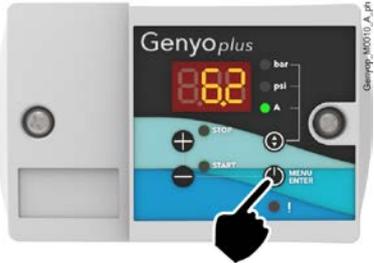
AUT mode, starting of the pump unit and instant visualization of the pressure and current.

Phase	Action	Illustration
1	To view the pressure with the unit OFF: press once and Aut appears, followed by the instantaneous pressure value (bar or psi)	
2	Press several times to view, in alternation, the pressure (bar or psi) or the instantaneous current (A)	

### 5.2.3 Setting the current

Set the nominal absorbed current of the motor upon initial start-up or when the default parameters are loaded or the unit is replaced.

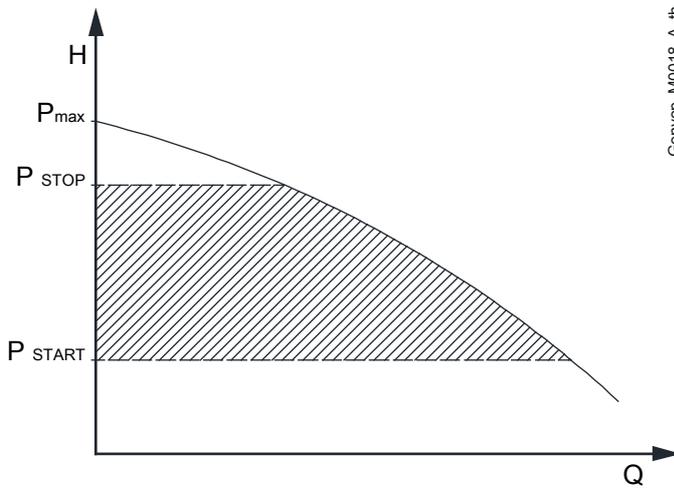
Phase	Action	Illustration
1	With the unit in OFF mode, press several times to view the instantaneous current (A)	
2	Press once: the display flashes and shows the current value	
3	Edit the value	

4	Confirm	
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### 5.2.4 Setting the P START and P STOP pressure values

Set the P START and P STOP pressure values upon initial start-up or after modifying the conditions of installation.

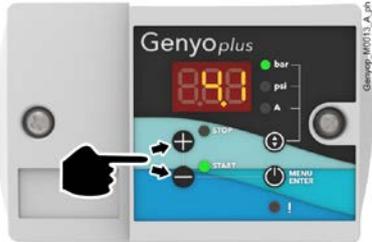
The calibrated P START and P STOP pressure values are shown in the diagram.



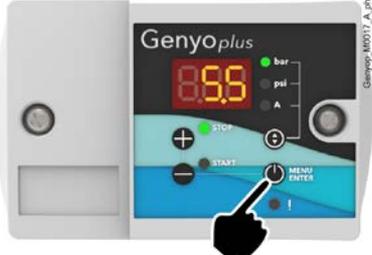
Note:  
 $P_{START} - P_{STOP} \geq 0.1 \text{ MPa} / 1 \text{ bar} (14.5 \text{ psi})$ .

#### Setting the P START

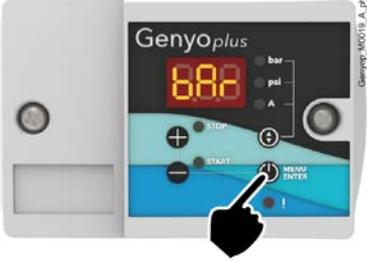
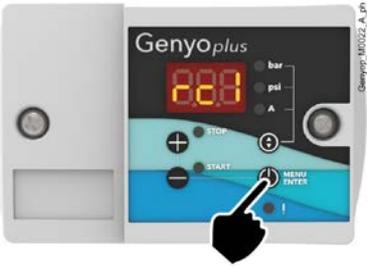
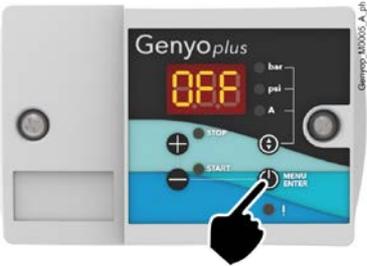
Phase	Action	Illustration
1	With the unit in OFF or AUT mode, press several times to view the pressure (bar or psi)	
2	Press once: the display flashes and shows the P START value	

3	Edit the value	
4	Confirm	

Setting the P STOP

Phase	Action	Illustration
1	With the unit in OFF or AUT mode, press several times to view the pressure (bar or psi)	
2	Press once: the display flashes and shows the P STOP value	
3	Edit the value	
4	Confirm	

### 5.2.5 Visualization and setting of the parameter menu

Phase	Action	Illustration
1	Press once	
2	Press and hold for a while to enter the parameter menu; see Programming on page 24.	
3	Press several times to select the parameter to be edited	
4	Edit the parameter value	
5	Confirm	
6	Press and hold for a while to exit the parameter menu	

# 6 Programming

## 6.1 Precautions

Before starting, make sure that the instructions shown in **Introduction and Safety** on page 4 have been fully read and understood.

### NOTICE:

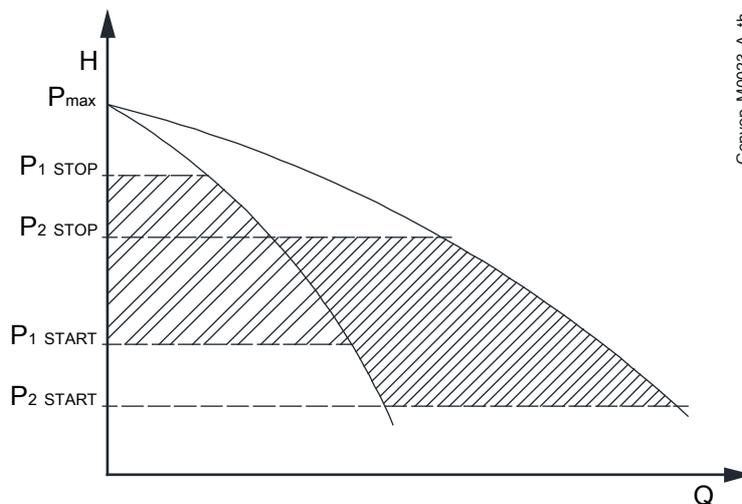
Make sure you have read and understand the following sections to avoid incorrect settings that could cause malfunctions.

## 6.2 Functional parameters

N°	Description	Parameters	Default	Unit of measurement	Notes
1	Unit of measurement for pressure	<ul style="list-style-type: none"> <li>bar</li> <li>psi</li> </ul>	bar	-	-
2	Protection of maximum number of starts of the motor	<ul style="list-style-type: none"> <li>rc0, disabled</li> <li>rc1, with alarm triggered, start is delayed by 5 s to protect the pump unit</li> <li>rc2, with alarm triggered, the pump unit stops</li> </ul>	rc2	-	-
2.1	Time delay between 3 consecutive starts	<ul style="list-style-type: none"> <li>r01 = 1 s</li> <li>..</li> <li>r99 = 99 s</li> </ul>	r03	s	Can be activated with parameter 2 set to rc1 or rc2
3	Display on standby	<ul style="list-style-type: none"> <li>Sb0, disabled</li> <li>Sb1, enabled</li> </ul>	Sb0	-	For energy saving When the parameter Sb1 is set and no buttons are pressed for 10 s, -- appears on the display
4	Type of electric contact for motor control	<ul style="list-style-type: none"> <li>nc, normally closed</li> <li>no, normally open</li> </ul>	nc	-	Example: if NC is set and the pressure reaches the P START value, the contact closes and the pump unit starts

### 6.3 Operating parameters

N°	Description	Parameters	Unit of measurement	Default	Notes
5	Operation with single pump unit or with booster set	<ul style="list-style-type: none"> <li>U00, single pump unit</li> <li>U01, master pump unit of the booster set</li> <li>U02, slave pump unit of the booster set</li> </ul>	-	U00	-
5.1	Difference in pressure between P1 START and P2 START, or between P1 STOP and P2 STOP	<ul style="list-style-type: none"> <li>D0.5 = 0.5 bar (psi)</li> <li>..</li> <li>D1.5 = 1.5 bar (psi)</li> </ul>	bar / psi	D0.5	<ul style="list-style-type: none"> <li>Can be activated with use of the booster set (parameter 5 set to U01 or U02)</li> <li>The value must be the same for both unit U01 and unit U02</li> </ul> See figure 3.
6	Delay time till starting of the pump unit	<ul style="list-style-type: none"> <li>ct0 = 0 s</li> <li>..</li> <li>ct9 = 9 s</li> </ul>	s	ct0	<ul style="list-style-type: none"> <li>Delay time till starting of the pump unit when the pressure reaches the P START value</li> <li>Can be activated with use of single pump unit (parameter 5 set to U00)</li> </ul>
7	Delay time till stopping of the pump unit	<ul style="list-style-type: none"> <li>dt0 = 0 s</li> <li>..</li> <li>dt9 = 1 s</li> </ul>	s	dt0	Delay time till stopping of the pump unit when the pressure reaches the P STOP value



Genyop\_M0023\_A\_th

Figure 3: Diagram of the pressure depending on the booster set

## 6.4 Parameters for lack of water

N°	Description	Parameters	Unit of measurement	Default	Additional notes
8	The ART function	<ul style="list-style-type: none"> <li>Ar0, disabled</li> <li>Ar1, enabled</li> </ul>	-	Ar0	ART automatic restart function in case of triggering of the A01 lack of water or A11 minimum pressure alarm: see The ART function on page 26
9	A01 lack of water alarm	<ul style="list-style-type: none"> <li>nf0, disabled</li> <li>nf1, enabled and pump unit STOP</li> </ul>	-	nf1	If nf1 is set, activation of the ART function: see The ART function on page 26
9.1	Delay time till triggering of alarm A01	<ul style="list-style-type: none"> <li>r01 = 1 s</li> <li>..</li> <li>r5.0 = 5 min</li> </ul>	s / min	r05	Can be activated with parameter 9 set to nf1 Example: r2.5 = 2 min and 50 s
10	A11 minimum pressure threshold	<ul style="list-style-type: none"> <li>P0.0 = disabled</li> <li>..</li> <li>P8.0 = 8 bar (psi)</li> </ul>	bar / psi	0.0	<ul style="list-style-type: none"> <li>Alarm A11 is triggered if the pressure does not reach the set value</li> <li>If not set at 0.0, activation of the ART function: see The ART function on page 26</li> </ul>
10.1	Delay time till triggering of alarm A11	<ul style="list-style-type: none"> <li>t01 = 1 s</li> <li>..</li> <li>t5.0 = 5 min</li> </ul>	s / min	t05	Example: t1.5 = 1 min and 50 s

## 6.5 Other parameters

N°	Description	Parameters	Unit of measurement	Default	Notes
11	A02 overcurrent alarm	<ul style="list-style-type: none"> <li>c10 = 10%</li> <li>..</li> <li>c30 = 30%</li> </ul>	%	c20	Percentage of overload of the current absorbed by the motor for triggering the overcurrent alarm
12	Loading the default parameters	<ul style="list-style-type: none"> <li>rS0 = NO</li> <li>rS1 = OK</li> </ul>	-	rS0	-

## 6.6 The ART function

If the alarms A01 and/or A11 are triggered, an attempt is automatically made to restart the pump unit:

- After 5 minutes
- If the alarms persist, every 30 minutes over the next 24 hours.

If the alarms continue to persist, the pump unit remains off with the LED (11) on.

Note: the alarms can be reset at any time by pressing the MENU/ENTER button (6).

## 6.7 The function of the booster set

A booster set consists of two GENYO plus units connected to two identical pump units, referred to as master and slave.

The units protect the pump units operating in cascade mode and with alternating start sequence. If the pressure decreases, the master unit starts first.

For setting a booster set:

1. Insert the pressure values of the master and slave pump units:

- P1 START = P2 START
- P1 STOP = P2 STOP.

Note: the difference between P START and P STOP must be  $\geq 0.1$  MPa / 1 bar (14.5 psi).

Minimum P START = pressure of the parameter 5.1 + 0.5 bar (7.3 psi).

2. Enter the parameter menu, see **Visualization and setting of the parameter menu** on page 23.
3. Set parameter 5:

N°	Master pump unit	Slave pump unit	Unit of measurement
5	U01	U02	-

4. Set the parameters 5.1 and 7:

N°	Master pump unit	Slave pump unit	Unit of measurement
5.1	D0.5=0.5 .. D1.5=1.5	D0.5=0.5 .. D1.50=1.5	bar / psi
7	dt0=0 .. dt9=9	dt0=0 .. dt9=9	s

Note: parameters 5.1 and 7 must be the same for the master and slave pump units.

5. Exit the parameter menu.
6. Check that the pressure is at zero.
7. Set AUT mode to start the pump units and calibration of the system (10 cycles).
8. The alarms A01 and A11 could be triggered during this phase: press the MENU/ENTER button (6) to reset them.

# 7 Maintenance

## 7.1 Precautions

Before starting, make sure that the instructions shown in **Introduction and Safety** on page 4 have been fully read and understood.



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**WARNING:**

Maintenance must be done by a technician possessing the technical-professional requirements outlined in the current regulations.

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**WARNING:**

Always wear personal protective equipment.

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**WARNING:**

Always use suitable working tools.

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**WARNING:**

In the case of liquids that are excessively hot or cold, pay attention to the risk of injury.

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**DANGER: Electrical hazard**

Before starting work, check that the unit is unplugged and that the pump unit, the control panel and the auxiliary control circuit cannot restart, even unintentionally.

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## 7.2 Maintenance every 3 months of operation

1. Check the integrity of the power supply cord; if the cable is damaged contact Xylem or the Authorised Distributor for its replacement.
2. Carefully clean the unit.

## 7.3 Spare parts ordering

Identify the spare parts with the product codes directly on the site [www.lowara.com/spark](http://www.lowara.com/spark). Contact Xylem or the Authorised Distributor for technical information.

# 8 Troubleshooting

## 8.1 Precautions




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**WARNING:**

Maintenance must be done by a technician possessing the technical-professional requirements outlined in the current regulations.

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**WARNING:**

Observe the safety requirements in **Use and operation** on page 19 and in **Maintenance** on page 28.

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**WARNING:**

If a fault cannot be corrected or is not mentioned, contact Xylem or the Authorised Distributor.

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### 8.1.1 Alarms

When an alarm is triggered, an identification code appears on the display and the LED (11) shines.

If more than one alarm is triggered, the most recent one appears last in chronological order on the display.

#### Resetting an alarm

Under certain circumstances it can be necessary to reset an alarm:

Press the MENU/ENTER button (6), or

1. Disconnect the power supply.
2. Wait 1 minute.
3. Turn on the power supply.

## 8.2 Alarm A01, lack of water via the software

LED	Cause	Solution
Steady	<ul style="list-style-type: none"> <li>• Lack of water</li> <li>• Pump unit stopped</li> </ul>	<ol style="list-style-type: none"> <li>1. Check the flow of water</li> <li>2. Reset the alarm</li> </ol>
Slow flashing	<ul style="list-style-type: none"> <li>• Lack of water</li> <li>• ART function activated</li> </ul>	<p>If the alarm is triggered during initial start-up:</p> <ol style="list-style-type: none"> <li>1. Reset the alarm</li> <li>2. Close the valves</li> <li>3. Repeat the start procedure</li> <li>4. Check that the pump unit stops</li> </ol>

## 8.3 Alarm A02, overcurrent

LED	Cause	Solution
Steady	The absorbed current of the motor exceeds the value of parameter 12	<ol style="list-style-type: none"> <li>1. Check the set nominal current against the value on the motor rating plate</li> <li>2. Check the condition of the windings of the motor</li> </ol>
Slow flashing	<ul style="list-style-type: none"> <li>• The absorbed current of the motor exceeds the value of parameter 12</li> <li>• ART function activated</li> </ul>	<ol style="list-style-type: none"> <li>3. Check the power absorption</li> <li>4. Check the cross-section of the power cord</li> <li>5. Check the length of the power cord: if it is &gt; 30 m (98 ft), increase the set nominal current by 10%</li> </ol>

## 8.4 Alarm A04, start-ups too frequent

LED	Cause	Solution
Fast flashing	<ul style="list-style-type: none"> <li>The motor starts up too frequently</li> <li>Three consecutive start-ups in a set period of time less than that in parameter 2.1</li> </ul> <p>Note:</p> <ul style="list-style-type: none"> <li>If parameter 2 = rc1, starting of the pump unit is delayed by 5 s</li> <li>If parameter 2 = rc2, the pump unit stops</li> </ul>	<ol style="list-style-type: none"> <li>Replace the diaphragm tank</li> <li>Check calibration of loading the diaphragm tank</li> <li>Edit the P START and/or P STOP pressure values</li> <li>If the booster set is configured, edit the difference in pressure between P START and P STOP</li> </ol>

## 8.5 Alarm A05, pressure sensor faulty

LED	Cause	Solution
Steady	Defective sensor	Contact Xylem or the Authorised Distributor

## 8.6 Alarm A11, minimum pressure

LED	Cause	Solution
Steady	Pressure below the minimum threshold	Check setting of parameter 10
Slow flashing	Pressure below the minimum threshold	
	ART function activated	
	No flow of water	Check the water level and pressure
	Incorrect priming, there are air bubbles in the suction pipe or in the pump unit	Repeat the priming procedure, refer to the manual of the pump unit
	Discharge pipe leaking	Eliminate the leaks
	Incorrect working curve, flow rate greater than the maximum permitted flow rate	Decrease the flow rate
	Pump unit faulty	Send the pump unit to an authorised workshop for testing
Motor (coil) faulty	Repair or replace the motor	

## 8.7 Low pressure, booster set mode

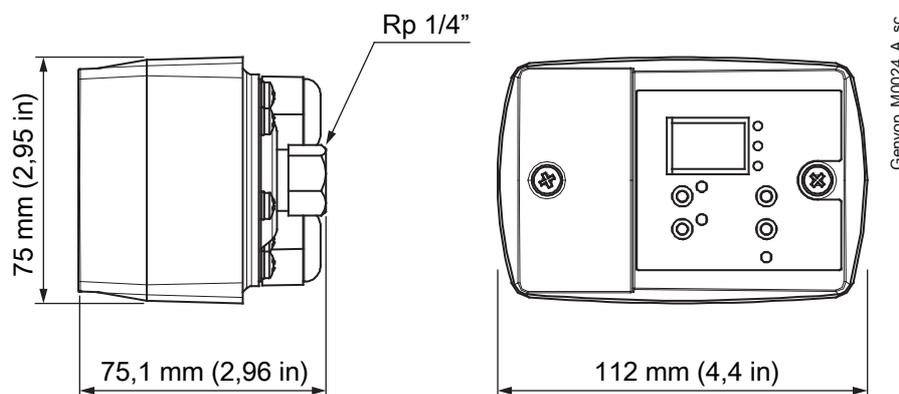
Cause	Solution
An pump unit is not in operation	<ul style="list-style-type: none"> <li>Check setting of parameter 5.1</li> <li>Send the pump unit to an authorised workshop for testing</li> <li>Repair or replace the motor</li> </ul>
Discharge pipe leaking	Eliminate the leaks
Incorrect priming, there are air bubbles in the pump unit	Repeat the priming procedure, refer to the manual of the pump unit

# 9 Technical Information

## 9.1 Operating data and conditions

Data	Description
Input frequency	50/60 Hz $\pm$ 2
Main supply	L - N
Nominal input voltage	110 to 230 VAC $\pm$ 10%
Maximum absorbed current AC in continuous duty S1	16 A, $\cos\phi \geq 0.6$
Electric motor nominal power	0.37 to 2.2 kW
START pressure	0.05 to 0.7 MPa, 0.5 to 7 bar (7.3 to 102 psi)
STOP pressure	0.1 to 0.8 MPa, 1 to 8 bar (14.5 to 116 psi)
Maximum differential	0.75 MPa, 7.5 bar (109 psi)
Minimum differential	0.05 MPa, 0.5 bar (7.3 psi)
Maximum pressure PN	0.8 MPa, 8 bar (116 psi)
Fluid connection	Rp 1/4"
Weight	0.4 kg (0.88 lb)
EMC (Electro Magnetic Compatibility)	See Declarations on page 33.
Protection class	IP 55, protect the product against rain and direct sunlight
Relative air humidity, place of operation and storage	5% to 95%
Storage temperature	-25 to 65°C (-13 to 149°F)
Ambient operating temperature	0 to 50°C (32 to 122°F)
Water temperature	0 to 40°C (32 to 104°F)

## 9.2 Dimensions



# 10 Disposal

## 10.1 Precautions



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**WARNING:**

The unit must be disposed of through approved companies specialised in the identification of different types of materials (steel, copper, plastic, etc.).

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## 10.2 WEEE 2012/19/EU (50 Hz)



(IE) (MT) (GB) INFORMATION TO USERS pursuant to art. 14 of the Directive 2012/19 / EU of the European Parliament and of the Council of 4 July 2012 on waste electrical and electronic equipment (WEEE). The crossed bin symbol on the appliance or on its packaging indicates that the product at the end of its useful life must be collected separately and not disposed of together with other mixed urban waste. Appropriate separate collection for the subsequent start-up of the disused equipment for recycling, treatment and environmentally compatible disposal helps to avoid possible negative effects on the environment and on health and favors the re-use and / or recycling of the materials it is composed of the equipment.

Waste from private household: Please contact your municipality, or local authority, for all information regarding the separate collection systems available in the area. The retailer is obliged to collect the old equipment free of charge when buying new equipment of an equivalent type, for the purpose of starting the correct recycling / disposal.

WEEE other than WEEE from private households: The separate collection of this equipment at the end of its life is organized and managed by the producer. The user who wants to get rid of this equipment can then contact the producer and follow the system that it has adopted to allow the separate collection of equipment at the end of life, or select a supply chain independently authorized to manage.

(IE)

Producer of EEE as per Directive 2012/19/EU

Xylem Water Solutions Ireland Ltd - 50 Broomhill Close - Airton Road - D24 Tallaght - Dublin 24

(MT)

Producer of EEE as per Directive 2012/19/EU

-

(GB)

Producer of EEE as per Directive 2012/19/EU

Xylem Water Solutions UK Ltd - Millwey Rise Industrial Estate - Axminster - Devon EX13 5HU

# 11 Declarations

## 11.1 EU Declaration of Conformity (n. 38)

1. (LVD/EMCD) Apparatus/Product model:  
see product rating plate  
(RoHS) Unique identification of the EEE:  
No Genyo plus
2. Name and address of the manufacturer:  
Xylem Service Italia S.r.l.  
Via Vittorio Lombardi 14  
36075 Montecchio Maggiore VI  
Italy
3. This declaration of conformity is issued under the sole responsibility of the manufacturer.
4. Object of the declaration:  
Genyo plus control device (electronic pressure switch) for single-phase pump units (see product rating plate)
5. The object of the declaration described above is in conformity with the relevant Union harmonization legislation:
  - 2014/35/EU Directive of 26 February 2014 (electrical equipment designed for use within certain voltage limits) and subsequent amendments,
  - 2014/30/EU Directive of 26 February 2014 (electromagnetic compatibility) and subsequent amendments,
  - 2011/65/EU Directive of 8 June 2011 (restriction of the use of certain hazardous substances in electrical and electronic equipment) and subsequent amendments
6. References to the relevant harmonized standards used or references to the other technical specifications, in relation to which conformity is declared:
  - EN 60730-1:2011, EN 60730-2-6:2016
  - EN 50581:2012
7. Notified body: -
8. Additional information: -

Signed for and on behalf of: Xylem Service Italia S.r.l.

Montecchio Maggiore, 16/07/2019

Amedeo Valente  
(Director of Engineering and R&D)



rev.00

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# 12Warranty

## 12.1 Information

For information on the warranty refer to the documentation of the sale contract.



# Xylem |'zīləm|

- 1) The tissue in plants that brings water upward from the roots;
- 2) A leading global water technology company.

We're a global team unified in a common purpose: creating innovative solutions to meet our world's water needs. Developing new technologies that will improve the way water is used, conserved, and re-used in the future is central to our work. We move, treat, analyze, and return water to the environment, and we help people use water efficiently, in their homes, buildings, factories and farms. In more than 150 countries, we have strong, long-standing relationships with customers who know us for our powerful combination of leading product brands and applications expertise, backed by a legacy of innovation.

**For more information on how Xylem can help you, go to [www.xylem.com](http://www.xylem.com)**



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[www.xylem.com/brands/lowara](http://www.xylem.com/brands/lowara)

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