

HC1

Pump Controller



Automatic Device for electric pump integral control.

The HC1 are a compact device for the automatic control and protection of electric pumps, its patented system includes special electronic sensor of flow and pressure, integrated in electronic circuit that guides the electric pump operation and keeps pressure and flow accordingly. Moreover, it has a safety system to avoid the dry-running operation.

The HC1 replace the system of hydro-sphere, pressure-switch, check-valve and level switches, with the advantage of smaller dimensions and periodic maintenance elimination. The unit automatically starts the electric pump when any point of use is open and stop it –after a 10 seconds programmed time– when closing the consumption point.

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Operating characteristics

- No maintenance.
- Installation time saving.
- Protection against water hammer effect.
- Compact and reduced dimensions.
- Removal of protecting devices (level switches).
- Avoids the pump oversizing using integrately their flowpressure curve.
- Integrated protection system which stops the pump in case of dry-running operation.
- Control panel:
 - Yellow Led POWER.
 - Green Led ON.
 - Red Led FAILURE.
 - Tactile push button for manual start.
- Electronic circuit group with protection cover easily replaceable.
- Small reserve against leaks in the installation.
- Other options like pressure gauge, connecting cables, adjustable starting pressure.
- EMC and electrical safety certified.
- ART function (Automatic Reset Test). If the device has been stopped due to the action of the safety system against dry operation, the ART tries to connect the pump, with a programmed periodicity because the water supply could have been restored.

Technical specifications

HC1

Start pressure

1,5 - 3,5 bar

Power

1,5 kW

Voltage

~1x120 V
~1x230 V

Frequency

50/60 Hz

Max peak of current

16(8) A

Protection degree

IP65

Maximum temperature

60 °C

Maximum pressure

10 bar

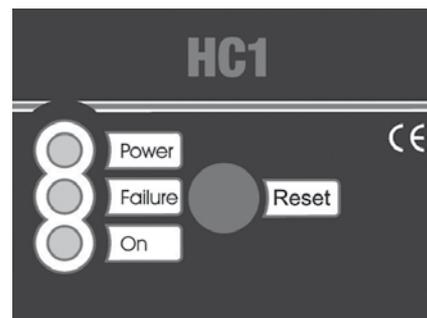
Maximum flow

10.000 l/h

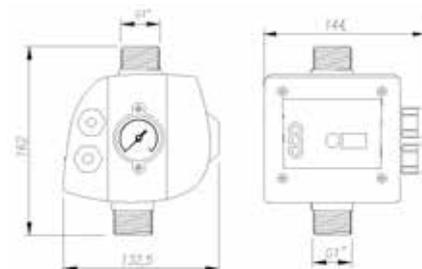
Net weight (without cables)

0,719 Kg

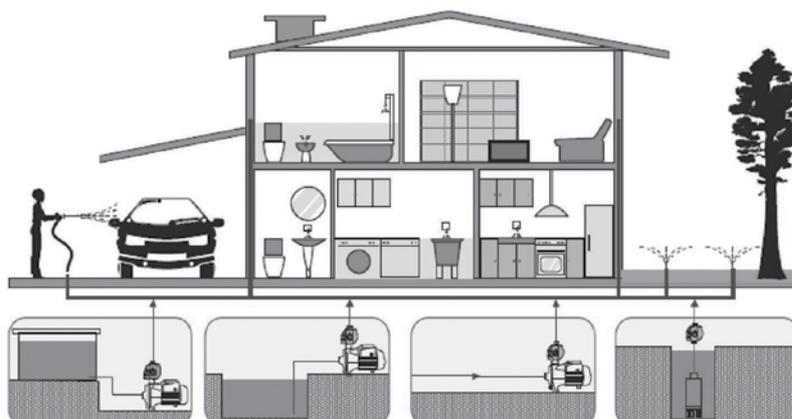
Control panel



Dimensions



Installation



HC2

Electronic Pressure Switch



Electronic pressure switch

This HC2 is an electronic pressure switch with an integrated digital pressure gauge. It can manage the start and stop of single-phase electric pumps up to 3 HP (2,2 kW). Cut-in and cut-out pressure implementation can be set easily and accurately through user friendly control panel. Wiring is carried out identically to a conventional electromechanical switch. It can operate as a differential pressure switch or as an inverted pressure switch.

HC2 includes also instantaneous current lecture and it can be mounted individually or in groups of 2 pumps synchronized and operating in cascade mode with alternated sequence of operation. This version controls and manages the over-current, the dry-running protection of the pump and fast cycling protection. The HC2 includes an output for alarms.

Dimensions



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Operating characteristics

- ART function (Automatic Reset Test). If the device has been stopped due the action of the safety system against dry operation, the ART tries to connect the pump, with a programmed periodicity because the water supply could have been restored.
- Sleep mode with low power consumption.
- Inner pressure transmitter.
- Integrated pressure gauge with bar and psi instantaneous display.
- User friendly control panel with 3-digits display, led-lights and pushbuttons.
- Dry-running protection by current.
- Rapid-cycle alarm: when the hydropneumatic tank has lost the air and frequent start-stops are produced an alarm is activated and is delayed the start.
- Overload alarm.
- Manual start.
- Operation modes: differential, inversed differential and synchronized.
- EMC certified and Electrical Safety certified.
- RoHs and WEEE compliant.

Technical specifications

HC2

Power supply voltage

~1 x 110-230 Vac

Frequency

50/60 Hz

Max. current

16 A

Maximum pump power

2,2 kW (3 HP)

Starting pressure range (cut-in)

0,5 ÷ 7 bar

Stop pressure range (cut-out)

1 ÷ 8 bar

Maximum differential

7,5 bar

Minimum differential (adjustable)

0,5 ÷ 1,5 bar

Factory setting (cut-in/cut-out)

3 / 4 bar

Protection degree

IP55

Max. water temperature

50 °C

Max. environment temperature

60 °C

Net weight (without cables)

0,28 kg

Inlet thread

G1/4" F / NPT1/4" F

Control panel



- 3 digits display:
 - Operating mode: Instantaneous pressure.
 - Set mode: Cut in and cut out pressure.
- Bar-psi led-lights (green):
 - Operating mode: Bright bar or psi.
 - Pump on: Flashing bar or psi.
- Star-Stop led-light (green):
 - Bright: displayed Pressure start or Pressure stop.
 - Flashing: Setting Pstart or Pstop.
- Push Buttons ▲▼: Increase or decrease configuration parameters.
- ENTER push-button:
 - Manual start and stop.
 - Confirm configuration value.
- “A” led-light (yellow):
 - Bright: Displayed instantaneous current consumption of the pump.
 - Flashing: Setting maximum current of the pump.
- Alarm led-light 🔔: dry-run, over current, fast cycling
- “A” push-button: set and display current intensity.

HC3

Electronic Pressure Switch



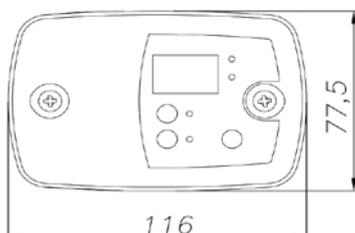
Electronic pressure switch with dry contact output for control panels

HC3 is an electronic pressure switch with integrated digital pressure gauge. It can manage the start and stop of single-phase electric pumps up to 3 HP (2,2 Kw). Cut-in and cut-out pressure implementation can be set easily and accurately. Wiring is carried out identically to a conventional electromechanical switch.

Its dry contact output it's ideal for transmitting an open/close signal to an external control panel.

This unit also includes a volt free contact for monitoring the alarms displayed in the screen.

Dimensions



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Operating characteristics

- Dry contact output for control panels.
- ART function (Automatic Reset Test). If the device has been stopped due the action of the safety system against dry operation, the ART tries to connect the pump, with a programmed periodicity because the water supply could have been restored.
- Sleep mode with low power consumption.
- Inner pressure transmitter.
- Integrated pressure gauge with bar and psi instantaneous display.
- User friendly control panel with 3-digits display, led-lights and pushbuttons. - Manual start.
- Two operation modes:
 - Differential.
 - Inversed differential.
- EMC certified and Electrical Safety certified.
- RoHs and WEEE compliant. RoHs and WEEE compliant.

Technical specifications

HC2

Power supply voltage

~1 x 48-230 Vac / Vdc

Frequency

50/60 Hz

Max. current

16 A

Output

dry-contact

Starting pressure range (cut-in)

0,5 ÷ 7 bar

Stop pressure range (cut-out)

1 ÷ 8 bar

Maximum differential

7,5 bar

Minimum differential

0,5 ÷ 1,5 bar

Factory setting (cut-in/cut-out)

3 / 4 bar

Protection degree

IP55

Max. water temperature

40 °C

Max. environment temperature

50 °C

Net weight (without cables)

0,4 kg

Inlet thread

G 1/4" F

Control panel



- 3 digits display:
 - Operating mode: Instantaneous pressure.
 - Set mode: Cut in and cut out pressure.
- Bar-psi led lights (green):
 - Operating mode: Bright bar or psi.
 - Pump on: Flashing bar or psi.
- Star-Stop Led (green):
 - Bright: displayed Pressure start or Pressure stop.
 - Flashing: Setting Pstart or Pstop.
- Push Buttons ▲▼: Increase or decrease configuration parameters.
- ENTER push-button:
 - Manual start and stop.
 - Confirm configuration value.
- Alarm led-light Δ: dry-run, fast cycling, pressure sensor.