# HSR
Hydrophore Sequencing Relay

- ■ HSR2 : 2 Outputs
- ■ HSR3 : 3 Outputs
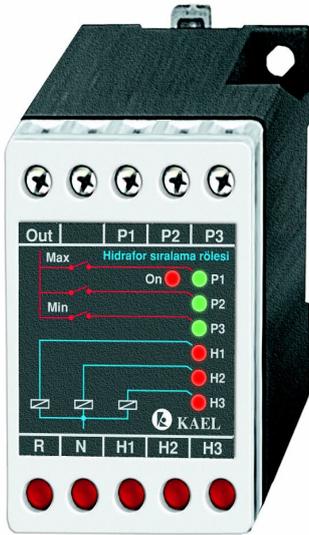
Connection Schemeı:
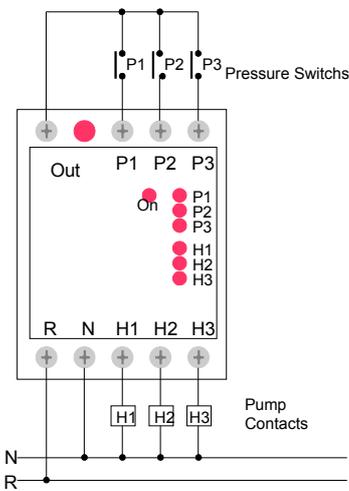
General
This product is developed for hydrophore pump systems that contain 2 or 3 to make the pumps work in sequence and with equal time periods. HSR2 is designed for systems that contain 2 pumps, HSR3 is designed for 3 pumps.

Operation Principle
HSR3 :commands the pressure switchs that are connected to the pressure tank (P1,P2,P3). The upper and buttom openning values are as follows.
P1 max.≥P2max.≥P3max.

P1min.＞P2min.＞P3min.
Hydrophore sequencing relay HSR, depending on the pressure swtiches that it commands, accepts P1 to be the highest pressure switch, then P2 and then P3 to be the lowest pressure switch and though it takes pumps in sequence when the pressure in the tank decreases startting from the highest to the lowest .
When only P1 pressure switch is on, the device turns on the pump output H1 (if already on then it takes the next one) and for the following next 10 minutes (as long as P1 is on it keeps this possition) .After 10 mintues if P1 is still on then the device turns off H1 and turns on H2. Same way after 10 minutes if P1 is still on then the device turns off H2 and turns on H3. This way the deivce sequences the use of the pumps and divide the time between them. The device remembers the sequence and takes always the following pump.
When P1 is off, the hydrophore output which is on goes off too, and next time when P1 goes on the device takes the next output (pump) . For example: if H1 was switched off after P1 switch was off, next time when P1 switch goes on the device takes the nest output H2 on.
If P2 switch goes on while P1 is on then the device takes n the next pump that is not already on. The pumps then are shared in time the same way two by two. As long as P1 and P2 are on, the pumps will work as H1-H2, H2-H3, H3-H1 for 10 min for each couple. If P2 goes off, the device turns off the pump is row and works as mentioned above with one pump. While P1 and P2 are on, if P3 goes on too then the device takes the three pumps H1, H2 and H3 until P3 is off. When the pressure switches go off the device turns off the pump that is in the row sharing time between the pumps again as mentioned before.
If P2 goes on before P1 (P1 maybe out of order) then the device will start turning H1 on.

Technical Data

Rated Voltage	: 220/230 Vac
Operating Range	: (0,8 – 1,1)x Un
	(Un nominal voltage)
Frequency	: 50 Hz.
Pressure switch output	: Out
1.pressure switch input	: P1
2.pressure switch input	: P2
3.pressure switch input	: P3
Pump contact outputs	: H1,H2,H3
Contact Current	: Max.3 Amp/240Vac
Power Consumption	: < 5VA
Device Protection Class	: IP20
Terminal Protection Class	: IP00
Ambient Temperature	: -5 C....+50 C
Humidity	: %15....%95 (without condensation)
Connection Type	: Vertical mounting on box or on rail
Dimensions	: 112x75x50 mm

**It's strictly advised to well examine technical data of device and fully match connection diagram.
Do not apply any energy to the Out, P1, P2, P3 inputs otherwise the device or system may be harmed.**

The device's working principle is shown in the diagram below: