



## Electronic Controller Skid 2 ÷ 4 Vacuum Pumps

Logik 112 is an electronic controller developed for the operation of a vacuum pumps system (2 ÷ 4 units). The controller manages the pumps in a smart way, putting in operation the units strictly necessary according to the vacuum demand and the working set, taking always under control starts/hours and working hours of each single pump connected to the system.

This operating principle matches the best efficiency of the system to energy saving. Easy to install and set, through the wide back-light graphic LCD Logik 112 allows to monitor in real time the status of the plant thanks to alarms and maintenance messages.

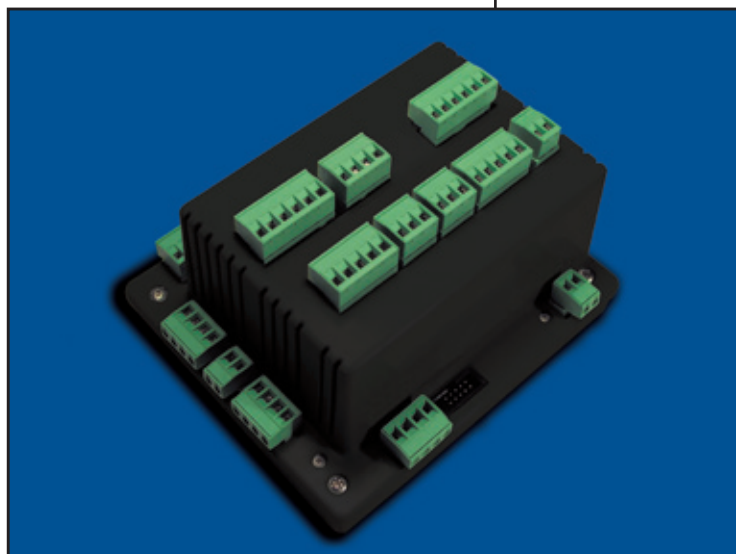
Control panel: visualization through back-light graphic LCD (128x64 dots)



• Alarms and maintenance led

• Visualization:  
Vacuum, pumps in operation,  
temperatures and alarms

CPU INTO ELECTRICAL BOARD





- Conformity to EC regulation:  
Low tension: 2006/95/EC  
EMC: 2004/108/EC
- Composed by CPU and Control Panel connected via serial cable RS232
- Inputs and outputs via terminal-block board to wires.
- Black auto-extinguishing boxes in ABS:  
IP64 for the Control Panel and IP20 for the other parts.
- Working temperature:  $-5^{\circ}\text{C}$  ( $23^{\circ}\text{F}$ )  $\div$   $50^{\circ}\text{C}$  ( $122^{\circ}\text{F}$ ), 90% RH (non condensing).
- Storage temperature:  $-30^{\circ}\text{C}$  ( $-22^{\circ}\text{F}$ )  $\div$   $70^{\circ}\text{C}$  ( $158^{\circ}\text{F}$ ).

#### Control panel

##### Visualization through:

- Back-light graphic LCD (128 x 64 dots)
- Messages selectable in: Italian – English
  - no. 2 leds (alarms – maintenance)
  - no. 6 key buttons
  - no. 1 buzzer
  - no. 1 serial port RS232 for connection to CPU

##### CPU basic for the operation of 2 pumps

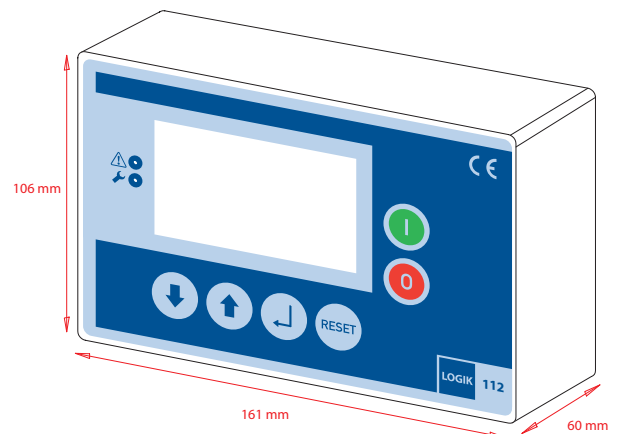
- Power supply: 12 Vac  $\pm$  10% 50 $\div$ 60 Hz.
- no. 2 serial ports RS232:
  - 1) connection to control panel
  - 2) connection to GSM Unit
- no. 1 time-keeper with buffer battery
- no. 1 Eeprom
- no. 7 analog inputs:
  - no. 2 inputs for oil temperature probe of each pump connected
  - no. 1 inputs for ambient temperature probe
  - no. 1 input for pressure transducer 0  $\div$  1 bar (absolute)
  - no. 1 input for pressure transducer at disposal
  - no. 2 inputs for Ampere transducers, top range 50 A. for current control of each pump connected
- no. 1 digital input for detection expansion board for the operation of 3 / 4 pumps
- no. 6 opto isolated digital inputs 24 Vac for detection
  - IN 1 = emergency stop button
  - IN 2 = remote start/stop
  - IN 3 = level switch pump 1
  - IN 4 = level switch pump 2
  - IN 5 = at disposal
  - IN 6 = setting 3  $\div$  4 pumps
- no. 5 outputs via relay with contacts 2 A. 24 Vac, 300.000 cycles electrical life:
  - RL1 = contactor pump 1
  - RL2 = contactor pump 2
  - RL5 = fan contactor
  - RL6 = at disposal
  - RL7 = alarm

##### Expansion board for 3/4 pumps operation

- no. 4 analogic inputs:
  - no. 2 inputs for oil temperature probe of each pump connected
  - no. 2 inputs for Ampere Transducers, top range 50 A. for detection of current of each pump connected
- no. 2 opto isolated digital inputs from 24 Vac for detection:
  - IN 7 = level switch pump 3
  - IN 8 = level switch pump 4
- no. 2 outputs via relay with contacts 2 A. 24 Vac, 300.000 cycles electrical life:
  - RL3 = contactor pump 3
  - RL4 = contactor pump 4
- The controller switches OFF due to micro interruption longer than  $\sim$  300 m.s..

##### ACCESSORIES:

- no. 1  $\div$  4 temperature probes KTY 13.5 (according to units connected) with black cable TPE, llength 2.5 m, working range  $-10^{\circ}\text{C}$   $\div$   $130^{\circ}\text{C}$ , resolution  $1^{\circ}\text{C}$ , precision  $\pm 1^{\circ}\text{C}$ .
- no. 1  $\div$  4 Ampere transducers, top range 50 A.
- no. 1 pressure transducer 4-20 mA, 2 wires, working range 0  $\div$  1000 mbar (absolute), resolution 1 mbar, precision  $\pm 1$  mbar, connection male  $\frac{1}{4}$  Gas niched brass, connector Din 43650.
- no. 1 temperature probe KTY 13.5 with black cable TPE, length 2.5 m, working range  $-10$   $\div$   $130^{\circ}\text{C}$ , resolution  $1^{\circ}\text{C}$ , precision  $\pm 1^{\circ}\text{C}$ .

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