

PILOT

The most compact and
cost-effective solution
for the full protection
of a pump



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PILOT is an electronic device for the control of single-phase and three-phase motors (pumps) that provides protection against:

■ **Surges, phase loss, excessive number of starts**

The backlit LCD displays the running current, and PILOT stops the pump if the maximum value set by the user is exceeded. The maximum number of pump starts is also user selectable, and PILOT will stop the pump's operation if this value is exceeded.

■ **Dry running**

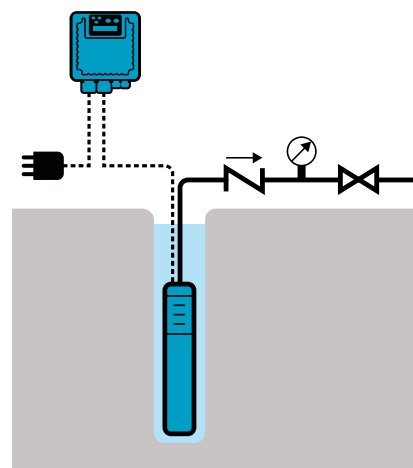
PILOT provides a display of the power factor value (P.F. or $\cos\phi$) and allows the user to set a minimum threshold value for normal operation. PILOT will stop the pump below this

value to protect against dry running.

PILOT will make up to 5 automatic restart attempts following an alarm condition, at time intervals set by the user. PILOT stores the number of pump starts and total running hours in memory. The alarm history is also stored to assist with servicing.

The body is constructed entirely of aluminium, making PILOT extremely solid and easily cooled. The IP55 protection makes it possible to install PILOT even in humid and dusty environments.

PILOT, in combination with a VASCO - VArIable Speed COntroller inverter, will start and stop D.O.L. pumps while providing them with full protection.



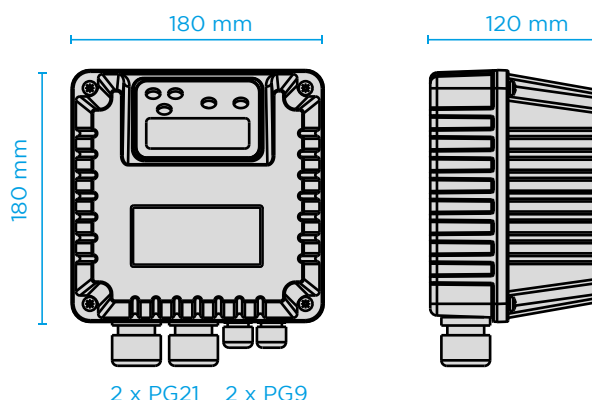
Technical specifications

Model	Voltage $\pm 10\%$ VAC	Max current A	Weight Kg
PILOT 112 - 115V	1 x 115	12	2
PILOT 112 - 115V	1 x 115	18	2
PILOT 112 - 230V	1 x 230	12	2
PILOT 118 - 230V	1 x 230	18	2
PILOT 312 - 230V	3 x 230	12	2,2
PILOT 325 - 230V	3 x 230	25	2,4
PILOT 330 - 230V	3 x 230	30	2,4
PILOT 312 - 400	3 x 400	12	2,2
PILOT 325 - 400	3 x 400	25	2,4
PILOT 330 - 400	3 x 400	30	2,4
PILOT 312 - 460	3 x 460	12	2,2
PILOT 325 - 460	3 x 460	25	2,4
PILOT 330 - 460	3 x 460	30	2,4

Capacitor not included in the single-phase models (available upon request)

General specifications

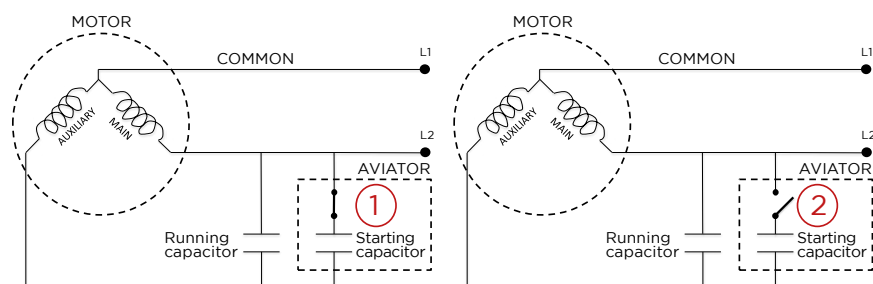
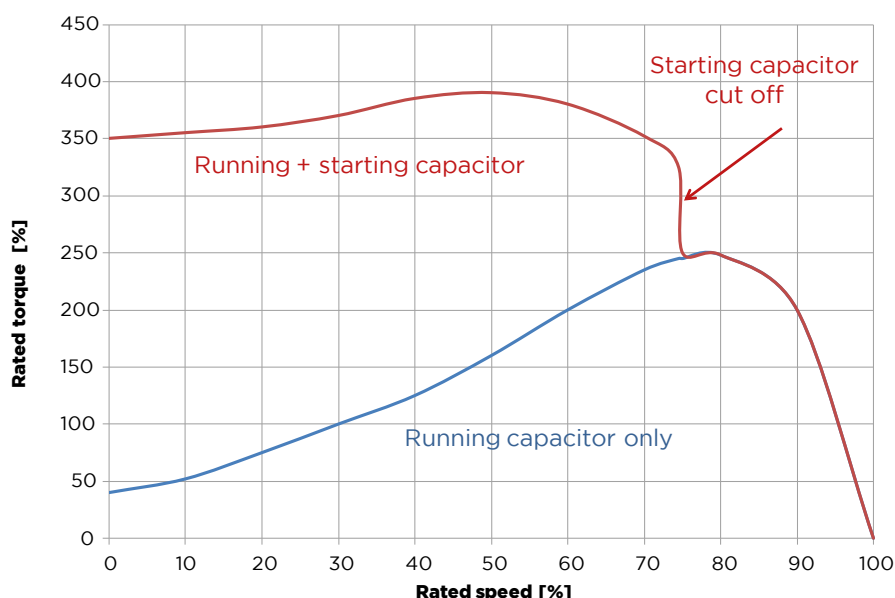
- Rated frequency: 50 - 60 Hz (+/- 2%)
- Max working temperature: 40°C (104 °F)
- Max altitude at nominal current: 2000 m
- Protection degree: IP55
- Settable alarm signal output N.O. or N.C.
- 2 digital inputs, configurable N.O. or N.C. , for motor run/stop



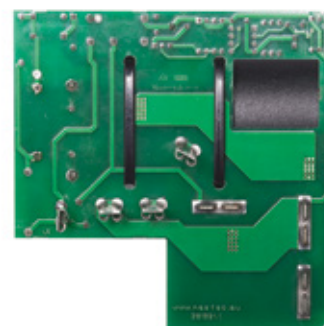
AVIATOR

Single-phase motors may have difficulty starting, especially when there is a high voltage drop. AVIATOR electronic board increases the starting torque of the motor in a simple and economical way to ensure the starting of the motor in any situation.

AVIATOR, available as an accessory for the PILOT 118, is equipped with specific contacts allowing it to be fitted directly onto the power board of the PILOT 118. The starting capacitor provided by the AVIATOR board is connected in parallel to the running capacitor, but only in the starting phase. When the motor is running the AVIATOR will disconnect the starting capacitor.



Model	Motor power kW	Starting capacitor uF
AVIATOR 1	0,37 - 0,55	53 - 64
AVIATOR 2	0,75 - 1,1	108 - 130
AVIATOR 3	1,5 - 2,2	189 - 227



In traditional boosters the starting relay is triggered by the voltage value across the starting coil which disconnects the starting capacitor after the motor has started. The limitations of this system are that different relay models are required depending on the motor used, supply frequency, maximum voltage of the starting coil and the on/off voltage of the starting capacitor. This requires a large stock of voltage relays specific to each motor and each manufacturer.

With the Nastec solution the control circuit of the PILOT constantly measures all the electric motor parameters and disconnects the starting capacitor only when necessary. This means that AVIATOR, in conjunction with PILOT 118, can operate any single-phase motor from any major manufacturer, all that is required is to select the right value of starting capacitor for the size of motor.

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