autopilot ECLIPSE F60 Digital Environmental Controller User Manual
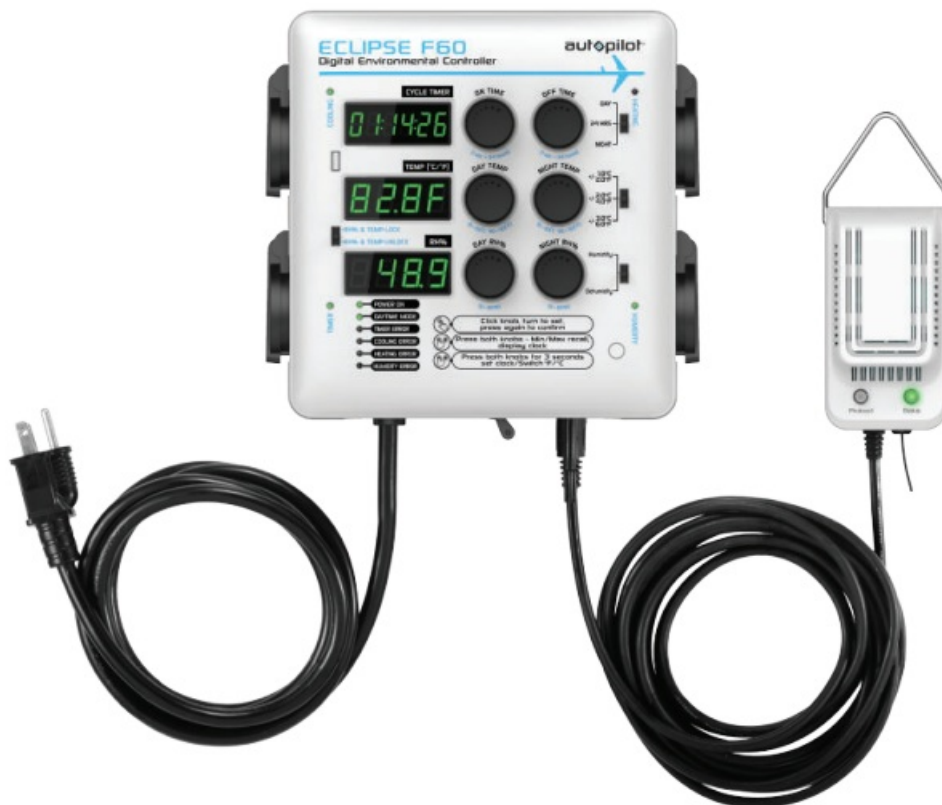
ECLIPSE F60 (Digital Environmental Controller)

Contents

OVERVIEW

Thank you for purchasing the Autopilot ECLIPSE F60 (APE4100) Digital Environmental Controller.

The ECLIPSE F60 offers integrated digital command of critical grow room conditions. Autopilot takes full atmospheric control and lets you get back to growing. The F60 precisely controls temperature, humidity and any device requiring a timed on/off function. Its three large LED displays make monitoring and adjusting these environmental conditions a breeze. Three screens continuously display current temperature, humidity and the cycle timer countdown. Its LED lights indicate active modes and inform the user of any errors. The Eclipse F60 Digital Environmental Controller is easy to program and operate while showcasing total transparency of environmental conditions 24 hours a day.

The ECLIPSE F60's enclosure features three separate power outlets for external control of cooling (AC or exhaust fan), heating, humidity (humidifier or dehumidifier) and a fourth outlet equipped with a digital cycle timer that controls any device requiring a timed on/off function such as water pumps, exhaust fans or CO_2 devices. These outlets feature heavy duty protective covers that prevent atmospheric moisture from entering the device through any unused outlets. Rubber feet have also been added to the back of the unit for added protection when mounted.

This controller's sensitive and intelligent remote combination probe is armed with a photocell for day/night detection and measures temperature and relative humidity levels. The probe can be placed up to 15 feet from the controller, and has been designed to resist EMI/EFI from electronic ballasts. The controller itself comes equipped with wall anchors and optional U-brackets for tent mounting.

User-friendly push button functions are identified on three large LED screens that continuous display cycle timing, temperature, and relative humidity for complete transparency of atmospheric conditions. A built-in data logger records minimum and maximum temperature and humidity levels.

For information on additional Autopilot products please visit AutopilotControllers.com.

NOTE:
After turning on the power to the unit, it will take five minutes for the sensor to warm up.

NOTE:
This controller has a 14.5A maximum load. For higher amperage devices such as A/C units, it is recommended to use a power expander.
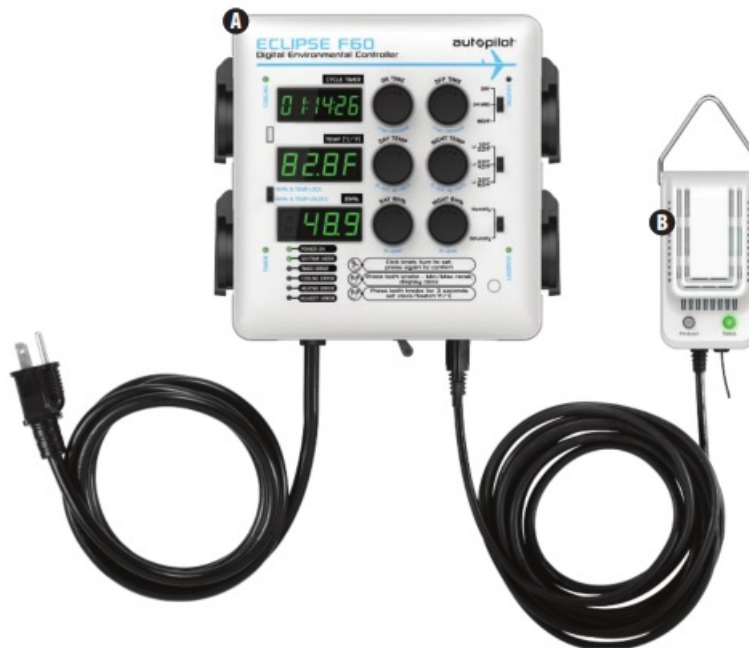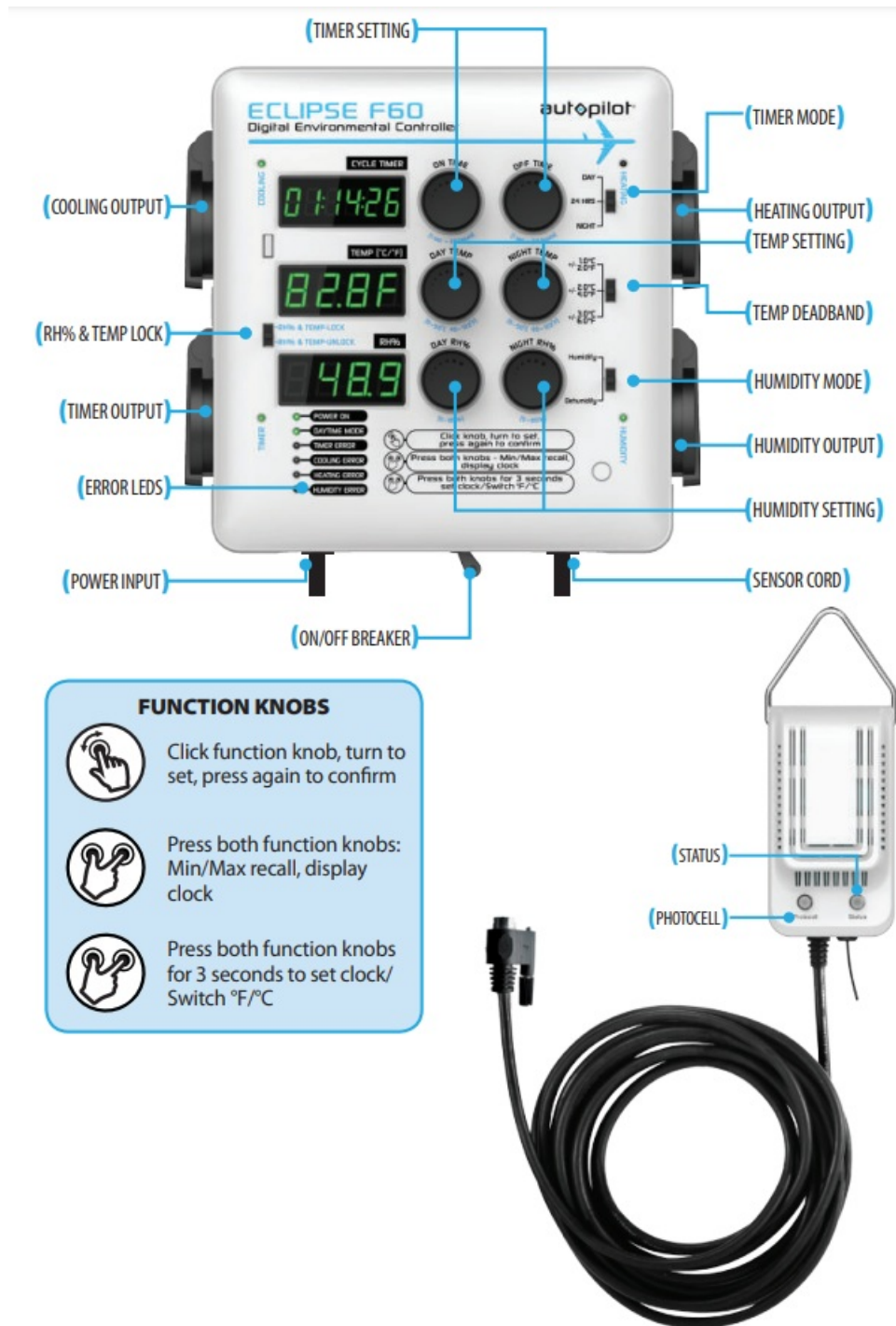

TOOLS NEEDED (FOR OPTIONAL MOUNTING)

Phillips
Screwdriver

PARTS LIST (WHAT'S IN THE BOX)

A- Controller Unit
B – Sensor Unit
C – Mounting Hardware (for walls)
D – Mounting Hardware (for grow tents)

LED DISPLAY & CONTROL SURFACE

TIMER SETTING
TIMER MODE
COOLING OUTPUT
HEATING OUTPUT
TEMP SETTING
RH% & TEMP LOCK
TEMP DEADBAND
HUMIDITY MODE
TIMER OUTPUT
HUMIDITY OUTPUT
ERROR LEDS
HUMIDITY SETTING
POWER INPUT
SENSOR CORD
ON/OFF BREAKER
STATUS
PHOTOCELL

ECLIPSE F60
Digital Environmental Controller
autopilot

CYCLE TIMER   ON TIME   OFF TIME
01:14:26
DAY / 24 HRS / NIGHT
TEMP [°C/°F]   DAY TEMP   NIGHT TEMP
82.8F
RH% & TEMP-LOCK
RH% & TEMP-UNLOCK   RH%   DAY RH%   NIGHT RH%
48.9

POWER ON
DAY/TIME MODE
TIMER ERROR
COOLING ERROR
HEATING ERROR
HUMIDITY ERROR

FUNCTION KNOBS

Click function knob, turn to set, press again to confirm

Press both function knobs: Min/Max recall, display clock

Press both function knobs for 3 seconds to set clock/ Switch °F/°C

OPERATING INSTRUCTIONS

CYCLE TIMER SETTINGS
ON TIME: Click the ON TIME knob and turn to set your desired on time point. Set the hour setting first, then press again to set minutes, and finally seconds. Save the setting by pressing again.
OFF TIME: Set off time by the same process, using the OFF TIME knob.
Timer Modes
DAY mode: The outlet is only energized when the photocell senses light.
24 HOURS mode: The outlet is energized during day and night (during lights-on and lights-off). The setting should be entered from day/night mode.
NIGHT mode: The outlet is energized only when the photocell senses that the room is dark.
TEMPERATURE SETTINGS
DAY TEMP SETTING: There is a Day Cooling set point and a Day Heating set point.

1. To set the Day Cooling, Click the DAY TEMP knob. "COOL" will be displayed. To change the setting, turn the

    DAY TEMP function knob to select your desired temperature. Click again to accept the new setting.

HUMIDITY & TEMPERATURE (RH% & TEMP) LOCK/UNLOCK SWITCH

LOCK: This setting locks both the temperature and humidity outlets together making them operate simultaneously. Example: if the sensor detects a reading outside of the programmed Temperature setting the unit will activate both Temperature and Humidity outlets at the same time. Use this setting if using an exhaust fan for both temperature and humidity control.

UNLOCK: Each device is controlled independently. Use this setting if using different devices to control Cooling and Humidity.

HUMIDITY SETTINGS

Click each knob (DAY RH%/NIGHT RH%) and turn to set the day/night humidity limit. Click each respective knob once again to confirm the setting.

HUMIDITY DEADBAND (HYSTERESIS)

This unit has a 5% relative humidity non-adjustable deadband.

HUMIDITY MIN/MAX RECALL

Press the DAY RH% and NIGHT RH% knobs simultaneously to recall the humidity min/max record.

HUMIDITY MODE

Set the Humidify/Dehumidify mode switch to control either a humidifier or dehumidifier.

TEMP DEADBAND OPTIONS

2/4/6°F (1/2/3°C)

DAYTIME MODE LED/ERROR LEDs/ERROR DISPLAY MESSAGES

The LED labeled DAYTIME MODE will illuminate when the controller is operating in daytime mode (i.e., the photocell is receiving light).

S_SR: If this error message is being displayed, check the sensor's connection to the controller.

OUTP: If the controller does not detect even a slight change in humidity or temperature levels within a 2-hour period, the screen will flash this error code accompanied by illumination of either the COOLING ERROR, HEATING ERROR, or HUMIDITY ERROR LED. Press either of the corresponding knobs (either of the TEMP or RH% knobs) to reset the error.

There are also four error LEDs on the bottom left of the controller. These lights will identify which environmental factor the controller is reporting an error on.

MOUNTING INSTRUCTIONS

SECURE UNIT TO A WALL

Secure the controller to the wall using the included mounting clips and screws.
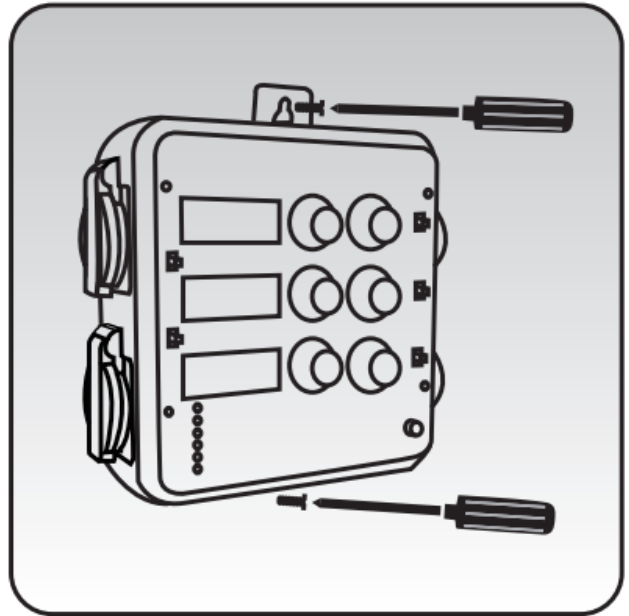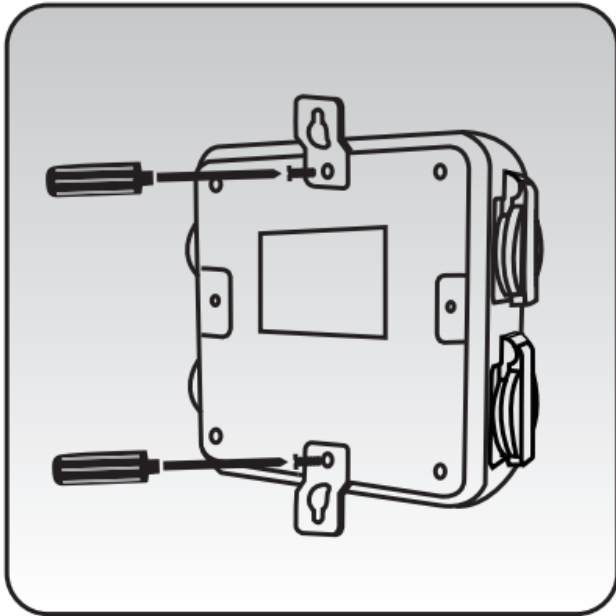
SECURE UNIT TO A GROW TENT

Secure the controller to one of the grow tent's vertical support rods with the included U-bolt brackets.

1. Install on the inside of grow tent.
2. Install on the outside of grow tent (note that this method requires puncturing four holes through the grow tent wall to allow the threaded ends of the U-bolts to emerge through the grow tent's fabric wall)..
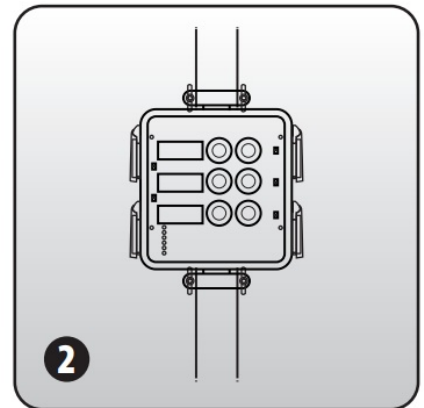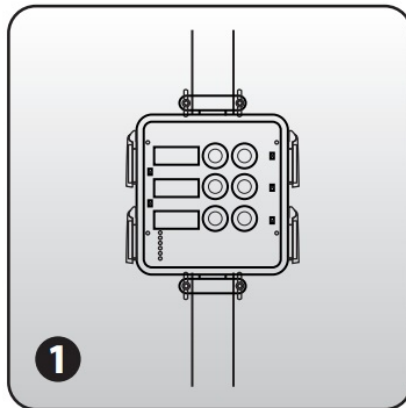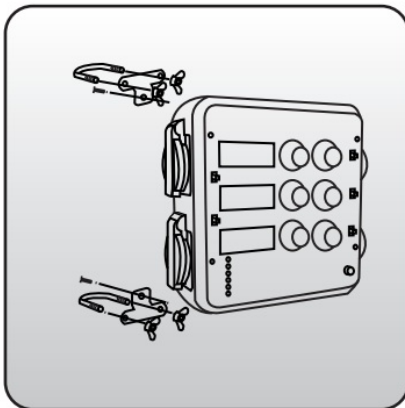
GENERAL WARNINGS

1. Save the instructions. These safety and operating instructions must be kept in a safe place for future reference.
2. Heed all warnings. All warnings on this product and in the instructions must be observed closely.
3. Follow all instructions. All operating instructions must be followed.

4. If the instructions as provided by the manufacturer are not followed, damage to the product itself may result.

5. Install your controller at least eight feet away from any devices that produce large amounts of electronic noise, such as electronic ballasts or ozone generators.
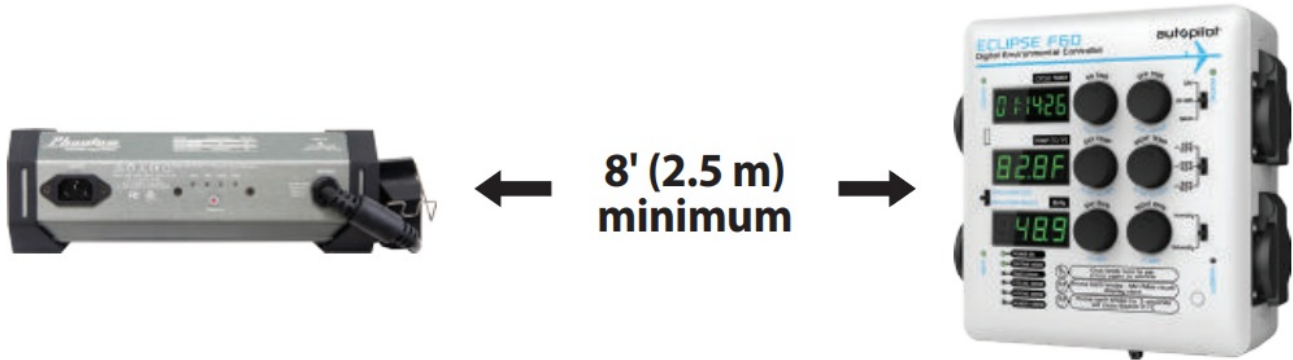
6. Do not exceed the maximum power rating (120V/14.5A in) and do not plug in a device/devices requiring more than the max output current (14.5A).

7. Insert only NEMA 1-15P and NEMA 5-15P plugs into the receptacle on this device. Do not insert any other type of plug into it.

8. Do not use this controller near water. It is neither waterproof nor shockproof.

9. Do not use the device near any heat source.

10. Install this controller at least 8′ away from any devices that produce large amounts of electronic noise, such as electronic ballasts or ozone generators.

11. This product is a Safety Class I Controller. Its main plug should only be inserted into power outlets that are properly grounded.

SULFUR VAPORIZER WARNING
If a sulfur vaporizer is used, first remove the remote sensor unit from the affected area or turn the controller off and cover the remote sensor probe with a protective plastic bag. Remove the bag before turning the power back on. Failure to protect the sensor while using a sulfur vaporizer will result in damage to its infrared component and will void the warranty.

SPECIFICATIONS

Max amperage	14.5 amps @ 120VAC 60 Hz
Power cord length	6.5'/2 m
Sensor cord length	15'/4.5 m
Temp setting	Adjustable 40-122°F (5-50°C)
Temp deadband (hysteresis)	Adjustable 2/4/6°F (1/2/3°C)
Temp accuracy	± 2°F/± 1°C
Humidity setting range	5%-95% rH
Humidity accuracy	± 3% rH
Humidity deadband (hysteresis)	5% rH
Timer setting range	1 second to 24 hours
Timer mode	Day/Night/24 hours
Altitude	up to 6500′ 2000 m
Operating temperature	32°F to 122°F
Maximum relative humidity	80%
Pollution Degree	2
IP degree	IP 20
Weight	3.5 lbs/1.6 kg
Dimensions	8.0″ x 3.3″ x 7.5″/202 x 85 x 191 mm

Indoor Use Only

WARRANTY

LIMITED WARRANTY

Hydrofarm warrants the APE4100 to be free from defects in materials and workmanship. The warranty term is for 2 years beginning on the date of purchase. Misuse, abuse, or failure to follow instructions is not covered under this warranty. Hydrofarm's warranty liability extends only to the replacement cost of the product. Hydrofarm will not be liable for any consequential, indirect, or incidental damages of any kind, including lost revenues, lost profits, or other losses in connection with the product. Some states do not allow limitation on how long an implied warranty lasts or the exclusion of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

Hydrofarm will, at our discretion, repair or replace the APE4100 covered under this warranty if it is returned to the original place of purchase. To request warranty service, please return the APE4100 , with original sales receipt

and original packaging, to your place of purchase. The purchase date is based on your original sales receipt.

Documents / Resources

	autopilot ECLIPSE F60 Digital Environmental Controller [pdf] User Manual ECLIPSE F60 Digital Environmental Controller, ECLIPSE F60, Digital Environmental Controller, Environmental Controller, Controller