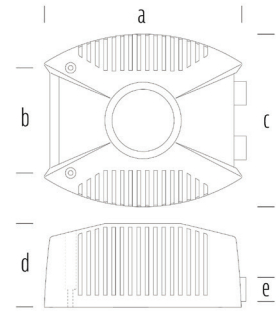


Aquatran AQO Power Transformer 12VAC & 24VAC Instruction Manual



	a	b	c	d	e
50W-100W	165	78	145	80	20
200W	133	74	112	65	20

Part Numbers:

**AQO12-050, AQO12-100, AQO12-200,
AQO24-050, AQO24-100, AQO24-200**

Please read through these instructions carefully before commencing installation.

If in doubt please contact place of purchase or Aqualux Lighting direct on **+612 94547900 / sales@aqualux.com.au**

1 | Specifications

Part No.	AQO12-050	AQO12-100	AQO12-200	AQO24-050	AQO24-100	AQO24-200
Output Voltage +/- 5%	12V	12V	12V	24V	24V	24V
Power VA Watts	50	100	200	50	100	200
Input Voltage	230-240V a.c. 50Hz					
Thermal Overload Protection	Yes - Self Resetting. AQO will function once fault is removed					
Supply Cable	2 Core 1.0 mm ² Circular Flexible Heavy-Duty Cable, 1.8 m long					
Output Cable	Figure 8, 8mm ² Heavy-Duty Garden Lighting Cable, 1.0m long, with conduit sleeves					
IP Rating	IP67					
Approval	NSW22116					
Warranty	10 Years					

2 | Steps for Selection Power, Lights & Cable

STEP 1

Choose your lights

- Check compatibility with either 12VAC or 24VAC.
- Note: A key advantage of 24V systems is lower amps and hence smaller cable size & less voltage drop. Aqualux recommends 24V systems where possible.

STEP 2

Choose a transformer

- Choose either 12VAC or 24VAC to suit your lights.
- Note: You cannot always mix and match 12VAC & 24VAC products. Some lights will accept one or the other. Some will accept both. Ensure all your lights are compatible with the chosen voltage.
- Add up all the wattages of your lights and select the next highest rating for your transformer.

STEP 3

Choose a cable

- Choice of cable size depends on the total load (watts), total run length & system voltage (12V or 24V)
- For assistance ask your reseller or installer.

3 | Things to Consider Before Installation

- When installing 12V or 24V garden lights a transformer is required to reduce the 240V mains voltage to the Safety Extra Low Voltage (SELV) 12V or 24V.
- Check specification of light fittings first to ensure compatibility with either 12V or 24V AC and select AQO accordingly. The AQO is an SELV AC Power Transformer. If your light/bulb states AC/DC this is suitable for use with an AQO. Do not use lights that are labeled DC ONLY.
- Selecting AQO - Add up all the wattages of your lights and select the next highest rating for your transformer. For example if you have 12 lights that rated 24V & 5W each.
 - $12 \times 5 = 60$
 - Select AQO24-100
- Placing a 60W load on a 100W AQO is not a problem. Your power consumption will only be 60W.
- Always choose a transformer that has a higher wattage than the total load of all lights put together.
- Installing your transformer outdoors - The AQO transformers are rated to IP67 which means they are suitable for burial in your garden should this be desired. They also have mounting holes for fixing to a wall. WARNING, the AQO has a high IP rating however your power point may not.
- AQO transformers are fitted with an internal "self resetting thermal fuse" which will shut down the transformer when significant overheating occurs. Once the fault has been removed and/or the unit has cooled, the transformer will automatically restart.
- DO NOT hot plug luminaires. This means always performing installation of lights / cabling when AQO is off.

4 | Installation

Ensure the AQO is disconnected from mains power.

STEP 1

Connect your trunk line to the AQO 8mm² output cables.

Connect the trunk line to the transformer by twisting wires together and then soldering (desirable). These connections should be sealed with resin filled heat shrink caps. Ensure no copper wire remains exposed once the seal is finished.

STEP 2

Extend the trunk line along the desired layout through the garden.

Position lights along the trunk line at the desired intervals.

STEP 3

Connect the garden light that will be positioned the furthest away from the transformer first.

Turn ON the power and test that the light is working. Turn OFF the power and connect each of the remaining lights to the cable.

Note: SELV AC does not have polarity so you do not need to worry about which cable is joined to which however the two cables on the trunk line must never be connected (this will create a dead short and cause your AQO to shut down).

We recommend leaving connections unsealed in a safe & dry position while you are installing your lights. Only seal up cable joins after the system is tested and working properly.

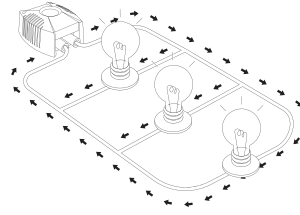
STEP 4

Before covering the cable, turn ON the power and check that all lights are working.

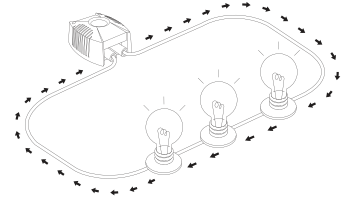
If any lights are flickering or seem dull go back and check that all lamp and cable connections are firm.

5 | Wiring

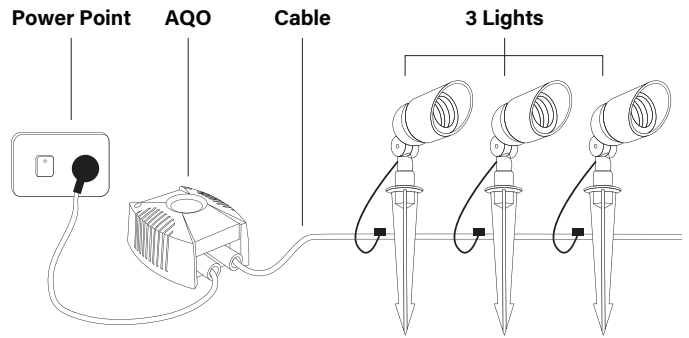
✔ Correct Parallel Wiring



✘ Wrong Series Wiring



6 | Installation Example



7 | Troubleshooting

Problem	Explanation	Possible Solution
Lights are dim	This occurs with any garden light set-up and is referred to as "Voltage Drop". Each light connected to the cable will reduce in brightness in relation to the number of lights preceding it and by the distance, it is away from the transformer.	<ol style="list-style-type: none"> Do not exceed the rating of your transformer. Limit the number of lamps on long runs of cable. Use the shortest length of cable you can or divide lights evenly using two or more lengths of cable. Use thicker cable.
Transformer switches off	Possible Cause - excessive current, AQO transformers are fitted with "Self Resetting Thermal Overload Device" which automatically switches OFF the power supply, if an overload or short circuit occur	<ol style="list-style-type: none"> Reduce the number of lights you have attached to the cable so that it does not exceed the rating of the transformer. Check globes, connectors or transformer connections for any poor connections. If fault occurs after a period of normal operation check cable and connections for signs of interference. Rodents may chew on accessible cables causing electrical short. Movement of soil or similar may also cause problems.

Product Notes

- This product must be installed and used as per these instructions.
- This product contains no serviceable parts and no attempt should be made to repair it. If the product is faulty it should be discarded.
- This product is not suitable for installation in hazardous and/or corrosive areas.
- Electrical installations periodically receive transient over-voltages. This product has been designed to minimize the effect of such voltages on connected equipment. It may not give full protection for extreme over-voltage transients such as those resulting from a close lightning strike.
- The "self resetting thermal fuse" is designed to respond to significant overload events such as a complete dead short in the cabling or a catastrophic failure in a light. In certain circumstances damaged cabling can lead to a "partial" short which will cause cabling to heat up but not enough to trip the self resettable fuse. It is important all installations are secure and free from potential interference from external sources such as rodents, soil and/or rock movements, shovels, etc.

Warranty

Telectran / Aqualux warrants this product for a period of 10 years from the date of purchase. These goods come with guarantees that cannot be excluded under the Australian and New Zealand Consumer Laws. You are entitled to a replacement or a refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

Customer Service

For all Customer Service and Technical Support please call Monday to Friday during business hours.

Aqualux Lighting / Aquatran Power
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