

User Instructions for TWF0400, TWF0500, TRF0600, VWS400, VWS500

PLEASE READ BEFORE USE

1. INPUT RATINGS

Input Voltage nominal :	TWF0400, VWS400	100 to 240Vrms
	TWF0500, VWS500	115/230Vrms
	TRF0600	230Vrms
Input voltage limits	85 to 264Vrms.	
RMS Input current	6A max. @ 100Vrms input, 3A max. @ 240Vrms input.	
Input turn on surge current	10A maximum, hot or cold start.	
Frequency	50 to 60 Hz nominal.	
Fuse	Non-customer replaceable internal 7A 250V time lag fuse. Manufacturer : Littlefuse, part number 3AG-315-007.	
Temperature	TWF0400H54, VWS400N	Max operating temp 60°C
	TWF0400H27, VWS400L	Max operating temp 50°C
	TWF0500, TRF0600 VWS500	Max operating temp 50°C

Operation up to a maximum of 70°C possible (contact factory for details)

2. OUTPUT RATINGS (refer to data sheet)

This information is specifically detailed on the serial number label attached to the power supply casework.

3. WARNINGS

Hazardous voltages are present within the PSU.

The output power of the units can exceed 240VA.

-- Energy Hazard --

When installing this component power supply, it is necessary to ensure that the additional installation requirements of IEC950 / EN60950 are met.

This product is classified as CLASS 1 equipment. This means that a safety earth connection must be connected to the input of the power supply. This is either by the 3 way H-type DIN41612, IEC connector, or the alternative screw terminal input block.

This product contains an integral fan. The fan blades are accessible, so avoid contact with this area when the fan is rotating.

4. THE CE MARK

This power supply is CE marked to the European Low Voltage Directive (LVD) 73/23/EEC amended by 93/68/EEC, relating to the Safety of Electrical Equipment.

This power supply is designed for incorporation within apparatus.

For user safety, the enclosing apparatus must protect the user against accidental contact with any electrical hazard, cooling fans etc., associated with the power supply.

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5. DEFINITION OF USE

This component power supply, also known as an OEM (Original Equipment Manufacturer) power supply, is designed to be incorporated into other equipment. It is not intended for free standing use or to be accessible to the final user of the equipment.

The enclosure of the end user equipment will need to provide protection against personal contact with live parts, Screening of radiated electromagnetic interference, Attenuation of conducted interference, Protection against electrostatic discharge (ESD) and Protection against accidental contact with the fan, and any other requirements of the relevant safety standards.

6. INSTALLATION

Input Connection

The TWF0400/VWS400 is intended for use with a supply of 100 to 240Vrms nominal voltage range. The TWF0500/VWS500 is intended for use with a supply of 115v or 230Vrms nominal voltage. The TRF0600 is intended for use with a supply of 230Vrms nominal 50 to 60Hz nominal frequency range. The Live, Neutral and Earth connections are made by a front panel mounted DIN 41612 connector, IEC plug or a screw terminal input block, dependant on which model is supplied.

Input Connectors

Hotplug Connector	Use 3 way 15A DIN41612 (Part No 09062032811)
IEC plug	Use an IEC Socket, which complies with BS4491.EN60.320
Screw terminal block	Mains cabling rated at 10 amps or more is recommended.

Connect as follows	Connect live to the terminal marked L
	Connect neutral to the terminal marked N
	Connect safety earth to the terminal marked 

Output Connection

General

Please ensure that appropriate gauge equipment wire is used in the connection of the outputs. This is essential to minimise wire heating, and to ensure optimum load regulation.

Output Connectors	TWF range	DIN 41612 Modular H Body 2 Way plug.
	VWS range	Beau Eurostyle 86 series 6 way.
Output Signals	TWF range	DIN 41612 32 Way 1/2B body plug.
	VWS range	Molex 7478 type pin wafer 10 way.

Remote Sense

Remote sense is a facility that improves regulation by sensing load voltage, and using this to compensate for voltage drop in the load leads. For convenience, local sense links are fitted as standard.

Output Adjustment

Each output is fitted with an adjustment potentiometer. Please note that these are factory set (with the remote sense connected), but can be adjusted to give slightly higher or lower voltages. If they are adjusted too high, then there is the risk of the power supply outputs turning off, due to the over voltage protection (OVP) circuitry operating.

Series and Parallel operation

Please contact the factory for details.

7. MOUNTING

The PSU can be mounted in any orientation, but there are a number of points to note:

The fan inlet must be provided with a free flow of air as close to ambient temperature as possible. If there is an application where the inlet air is above 50°C contact factory for derating levels.

The use of four fixings is recommended to attach the VWS range of power supplies to the end user casework.

It is important that the correct length of fixing screw is used in the PSU fixings. Either M4 ISO or 8-32 UNC-2B screws can be used, with a screw penetration of 2.5mm (0.1 inch) min, to 6mm (0.234 inch) maximum.

8. APPLICATION OF POWER

At turn on, within 1.5 seconds, the fan should **always** start up, and the output should also be present. Presence of output is confirmed by a Green LED, or the lack of a fail LED on certain models.

9. APPARENT NON FUNCTIONING OF THE PSU.

If the PSU does not operate, please check the following: Is the input voltage correct? Is there a wiring fault in the output connections (e.g. cross connection or shorts)? Is the ambient temperature too high (over temperature red led on)? Has the load developed a fault or is it drawing too much current? Are any output voltages set too high (over voltage protection red led on)? Is the unit disabled by a connection to the inhibit pin?

10. INTERNATIONAL SAFETY APPROVALS

CE marked.

Approval to EN60950, CSA 22.2 No 950-95. UL1950 (NRTL/C).

Please contact the factory for up to date information.

11. WARRANTY

All APC products are warranted against faulty manufacture and faulty components for a period of twelve months from the date of purchase. See conditions of sale for full details.