



# UPS MAINTENANCE

## TIME TO GIVE YOUR UPS A BIT OF TLC?



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*Leo Craig of Riello UPS Ireland Ltd explains why regular maintenance is key to getting the most out of your UPS systems and outlines what a service visit should cover.*

**U**ninterruptible power supplies (UPS) are the unsung heroes ready to kick in and reduce the risk of damaging IT, equipment, and system downtime in the event of an electricity supply problem.

But a UPS is a complex piece of machinery in its own right. While wear and tear is inevitable over time. To get the best out of your critical power protection system you need to look after it. How well you maintain your UPS has a direct impact on its reliability, performance, and lifespan.

New UPS are covered by warranties, indeed, much of the Riello UPS Ireland range comes with a 5-year warranty as standard. But a warranty only offers a 'best endeavour' response, it's not a guarantee of a speedy solution if there's an issue.

That's why most mission-critical sites such as data centres or hospitals opt for the safety net of an ongoing maintenance plan spelling out guaranteed Emergency Response Times for engineers to attend site.

Such agreements also typically include at least one planned preventive maintenance visit (PMV) a year. Even for a UPS that isn't covered by a contract, regular service visits are highly recommended.

Think of them as the equivalent of an annual 'health check' for your car or boiler – it offers extra peace of mind that everything's working as it should.

### Competence Is Key

Before we tackle the ins and outs of a PMV, it's vital to establish that the engineer working on your unit is fully trained and competent. A general maintenance or electrical engineer is unlikely to have sufficient product-specific knowledge.

Don't forget human error is the most common cause of downtime – an engineer who isn't familiar with your UPS could unwittingly throw an incorrect switch, and then you're left facing unplanned downtime.

That's why at Riello UPS Ireland we introduced a Certified UPS Engineer Programme covering both our in-house engineers and personnel from authorised service partners. All engineers must successfully complete comprehensive training on commissioning, maintaining, and servicing the UPS, then they receive a unique ID to prove their competence.

Always ask for proof your engineer is trained for the specific manufacturer and model. Be aware it's not unusual for sub-contractors to be substituted in at the last minute if the original engineer becomes unavailable.

### A To Z Of A PMV

A PMV typically kicks-off with a visual inspection of the unit and components for signs of wear and tear, as well as checking batteries for swelling, corrosion, or leakage.

Next up is a check of all the electrical connections, such as the circuit breakers, transformers, PCBs, fans, capacitors, and communications slots. Many maintenance providers use thermal imaging here as any increase in heat is a tell-tale sign of a loose connection.

Engineers should also check battery terminal connections to make sure they're at the correct torque setting.

Downloading of historical operating and alarm logs is next, along with a series of mechanical tests of the UPS's functionality to determine whether it runs properly across a range of operating modes.

At this stage, mission-critical sites such as data centres may incorporate more thorough testing, for example, using a load bank to interrogate the UPS and batteries at various loads without putting the critical load at risk.

A PMV should also assess the installation environment and whether there's anything that could speed up the rate of component deterioration such as dust, excessive heat or humidity, or poor ventilation.

Engineers will then install any necessary firmware updates, as having the latest software can have a big impact on the overall performance and efficiency of the UPS.

After completing all the tests and updates, the engineer will complete a detailed service report and provide a rundown of recommended remedial actions, including which consumables might require replacing.

### Prevention Better Than Cure

Taking a preventive rather than reactive approach to maintaining your UPS is far more cost-effective in the long-term.

So even though most UPS batteries have a 5 or 10-year design life, it's accepted best practice to proactively replace them in service year 3-4 (for 5 year) or 7-8 (for 10 year) as it reduces your risk of failure.

It's advisable to take a similarly pre-emptive approach to replacing other key components such as capacitors and fans ahead of their end of service life too.

Adopting a proactive approach to maintenance helps extend the lifespan of your UPS, lowering your total cost of ownership (TCO). It also means you're far less likely to experience downtime or be forced into the more expensive option of replacing an entire UPS.

# 5 Year Warranty



**5 year warranty** as standard on all  
UPS models up to and including 3kVA