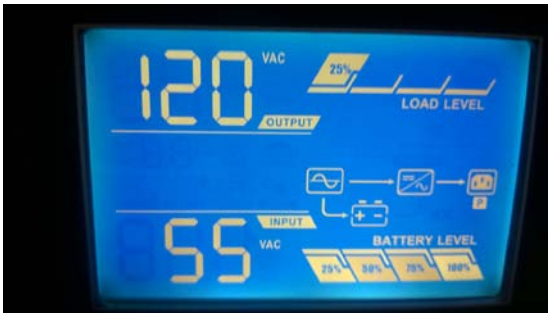
Wilson Engineered Systems – All UPS are not the same!



We recently did some testing of small UPS. These were the Orion Online RT, the Orion Office Pro and the APC SmartUPS. We varied input voltage to each UPS to test voltage regulation in normal operation and to determine when they transfer to battery.

The table below presents the test data recorded. Only the Online RT maintained 120 VAC output when challenged with varying input voltage. The Office Pro and the SmartUPS dropped their output voltage when utility voltage dropped. The voltage drop by these two units was approximately 10% output. When incoming voltage was the ideal 120 VAC all three units produce 120 VAC output.

As to when the units transferred to battery, the Online RT did not use batteries until utility voltage dropped below 55 VAC at no load and 81 VAC with full load. Both the Office Pro and SmartUPS transferred to battery earlier than the Online RT in all situations.

Our conclusion from this test is that important IT loads are better protected by the Online RT model. This suggests network equipment and mission critical loads should use the Online RT design. Less critical loads such as work stations and home computers may be adequately served by the Office Pro and SmartUPS design.

Wilson Engineered Systems focuses on high performance, high reliability UPS and offers the Orion models. For help with your critical power needs, please feel free to contact us for UPS and other critical infrastructure needs.

Test Data Table

UPS Model	Input voltage	Output Voltage		
Normal Operation				
Online RT	120	120		
Office Pro	120	120		
SmartUPS	120	120		
Lowest Voltage w/o use of battery				
Online RT	55	120	No load test	Below 55 VAC transfers to battery
Online RT	81	121	Full load test	Below 81 VAC transfers to battery
Office Pro	90	107	No load test	Below 90 VAC transfers to battery
Office Pro	90	107	Full load test	Below 90 VAC transfers to battery
SmartUPS	82	106	No load test	Below 82 VAC transfers to battery
SmartUPS	82	106	40% load test	Below 82 VAC transfers to battery

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