

What's so special about the A11H UPS, and why can Sanyo-Denki claim that it is "Best in Class"

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How can any UPS manufacturer state this claim????

Which UPS manufacturer has the widest voltage input window in the UPS industry?

Sanyo-Denki A11H Series (55V – 150V)

End-User Benefit - with a wider voltage input window the Sanyo-Denki UPS will not cycle the batteries as often thus, leaving you the end-user with maximum battery life.

(NOTE: See attached Test Results Applications 1.0, 1.1, 1.2, 1.3 – Wide Voltage Input testing)

Which UPS manufacturer has the widest frequency window in the industry?

Sanyo-Denki A11H Series (40Hz – 120Hz)

End-User Benefit – a wider frequency window allows for the end-user to use a less expensive generator to sync with the UPS. Less cost to the end-user.

Which UPS manufacturer states that after a problem at the output with the UPS (such as a short circuit) the UPS will automatically return to its online position?

Sanyo-Denki A11H Series

End-User Benefit – If a short circuit occurs, the Sanyo-Denki UPS with DSP technology (Digital Signal Processing) quickly transfer to bypass. Once the fault is cleared the UPS automatically goes back to its original on-line protection.

End-User does not have to send UPS to depot for any “Fuse replacements” or any type of repair. End-User saves time, money, and keeps computers protected. Many UPS units Mean Time To Repair (MTTR) when fuses are blown could result in days before the unit is up and running. The Sanyo-Denki UPS re-stabilizes power in seconds....

With the best leading edge technology can Sanyo-Denki offer a three year warranty?

Yes..... due to superior quality, reliability and leading edge Japanese technology Sanyo Denki America, Inc. stands behind the A11H Series UPS with a FULL three-year warranty including the batteries.

Understanding what the End-User requires.....

When Sanyo-Denki first began looking at the next generation UPS it was a strategy to offer “Unique” technical aspects that would benefit the End-Users.

Sanyo-Denki had to look outside the box to understand the End-User's issues that they were having with their smaller UPS units. So... we took to the street to understand what the End-Users concerns were, and what we needed to do about it.

One of the main problems was the life of the batteries and how they had to replace the batteries every three to six months (or simply replace UPS units.) In understanding this problem Sanyo-Denki designed the “Wide Voltage Input Window” of 55V-150V. This “Unique” input voltage range allows for the UPS to stay “On-Line” even when the incoming power source voltage dips down to 55V. Most (if not all UPS)

normally have to go to battery (cycling the batteries) which is the cause of early battery replacement. Not with the Sanyo-Denki A11H Series. Problem solved.....

Another key issue with End-Users was the ability for the small UPS units to work with small in-expensive generators. Small in-expensive generators do not have any type of “governor” to control the incoming frequency from the generator to the UPS. If the UPS can not “Sync” with the generator, ultimately your batteries will draw down to zero capacity, and the generator means nothing. The key was to have the UPS “Sync” with all types of in-expensive generators. Again, Sanyo-Denki saw this issue and understood what needed to be done. Sanyo-Denki designed the A11H Series to handle wide variations of frequency into the UPS by opening the frequency window from 40-Hz-120Hz. Now End-Users do not have to worry about their generator working with their UPS.

Another key issue was that some customers were not aware of the different “Topologies” available when they were purchasing UPS units. In the industry there are three type of topologies; Off-Line, Line-Interactive and On-Line. I have included test results on Line-Interactive type UPS versus ON-Line. (See Test results 1.0 – 1.2 On-Line / Test results 2.0 – 2.2 Line-Interactive). Though Line-Interactive UPS are less expensive they do not give you the quality and control that a true On-Line UPS gives you.

Another key issue with End-Users is the actual warranty period and what is included with the warranty. The Sanyo-Denki A11H Series offers a True three Year Warranty (including the batteries). In other words, Sanyo-Denki is not only boasting about its technical advantages, it is backing them up with the “Best in Class” warranty.

How many times have you had to replace your batteries within a three year period? Most UPS single phase manufacturer’s only “Warrant” their batteries for two years. Now you the end-user are left to provide the funding for the replacement batteries. Additional cost for batteries is like filling up your car every three to six months. By doing so, the reliability of the UPS is decreased, time unprotected rises, and you never have the easy feeling that your UPS is working for you....

An added feature for POS (Point of Sales) type of applications is for the A11H Series to handle short circuits. In other words, if a short circuit did occur (worst scenario for any UPS) the A11H series would recognize this occurrence and protect your output load. The UPS (due to a fast acting DSP technology) would intercept the fault and move the UPS from On-line to bypass. Once the short is cleared, the UPS will automatically transfer to the on-line condition.

Why is this important?

In many cases, fuses are blown or the relay contact is damaged due to the short circuit. In these cases some units have to be sent to a “Repair depot” for changing of the fuse, and/or the relay. In other words, the POS line is unprotected until a new or refurbished unit arrives. This is not the case with the Sanyo-Denki UPS. Let the fault clear, and even if you have to reset the UPS, it takes less than five minutes.

As mentioned above another feature that our End-Users enjoy is that the Sanyo-Denki A11H utilizes true DSP (Digital Signal Processing) as the control software. An advantage to using this type of technology is that the DSP technology is fast acting. Voltage regulation is also a must with the UPS. With the Sanyo-Denki the voltage regulation is +3%, -3%. (Some competitive units have a +/- 10% voltage regulation).

Keep in mind that this is truly one of the leading technical products in the industry today. For more information go our website (Sanyo-Denki.com or call 630-649-0333)

Note (*) Actual input voltage specification is load specific.

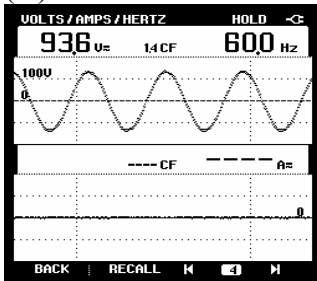
- 55-150V (below 40% load)
- 70-150V (below 80% load)
- 80-150V (80% load or above)

True On-Line Double Conversion type UPS

TEST RESULTS

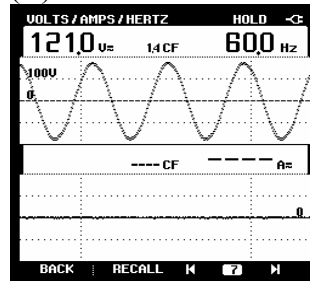
(Controls both Voltage and Frequency)

(A)



Input to UPS (V)

(B)



Output to UPS (V)

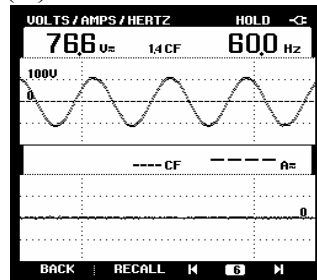
Application Test 1.0

(A) 93.6V input, no use of batteries (95% load)

(B) 120V output (sine-wave)

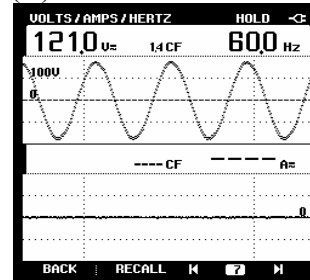
Sanyo-Denki A11H Series supports low voltage (from Power grid) 76V

(A)



Input to UPS (V)

(B)



Output to UPS (V)

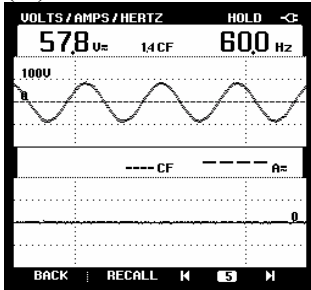
Application Test 1.1

(A) 76.6V input, no use of batteries (70% load)

(B) 120V output (sine-wave)

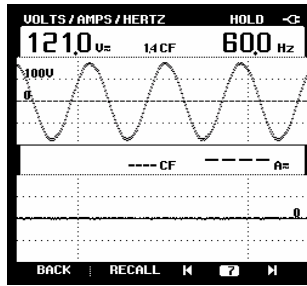
Sanyo-Denki A11H Series UPS supports low voltage (from Power grid) of 57.8V

(A)



Input to UPS (V)

(B)



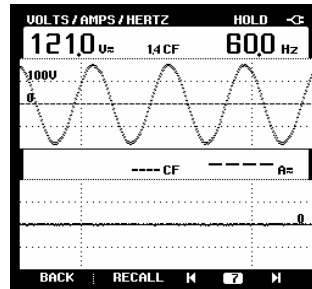
Output to UPS (V)

Application Test 1.2

(A) 57.8V input, no use of batteries (40% load)

(B) 120V output (sine-wave)

No power to UPS



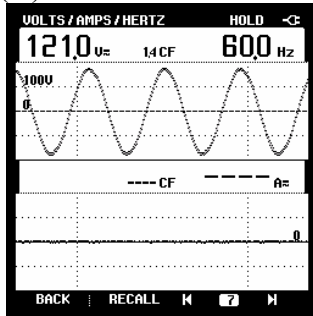
UPS uses batteries to supply true sine-wave output

Application Test 1.3

Line-Interactive Test Results

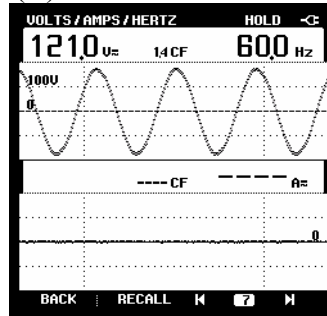
Normal power grid voltage (120V)

(A)



Input to UPS (V)

(B)



Output to UPS (V)

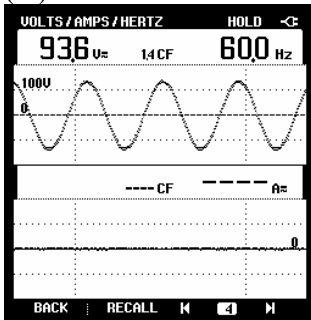
Application Test 2.0

(A) 120V input

(B) 120V output (sine-wave)

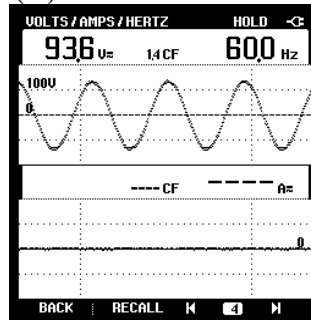
Power Grid (93V)

(A)



Input to UPS (V)

(B)



Output to UPS (V)

Application Test 2.1

Line-Interactive topology does not control the voltage at 93V. Simply rides through.....

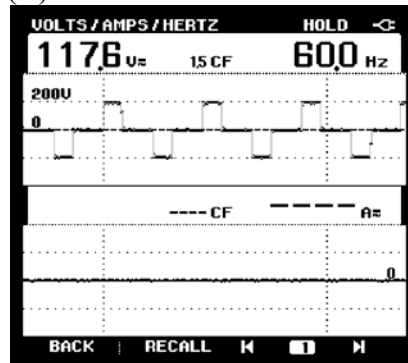
(A) 93.6V input

(B) 93.6V output (NOT 120V)

No Power from grid to UPS

(A)

(B)



Line-Interactive UPS develops a square-wave output.

(A) No power from grid

(B) 117V output (through batteries) creates a square-wave output

Application Test 2.2

Overall.....

The Sanyo-Denki A11H Series is “Best in Class” for leading in technical advantages that benefit the customers from the widest voltage input window in the industry, to the widest frequency window in the industry.