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Nippon Avionics Co., Ltd.

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New Capacitor Discharge Type Welding Power Supply NRW - DC150

The Second Shot in the Battery Tab Welder Product Line!



NEC Corporation's subsidiary, Nippon Avionics Co., Ltd. (Head office: Tokyo, Japan, hereinafter Avio) has formally released a new precision resistance welder: The NRW-DC150. This is a capacitor-discharge type welding power supply, which is used in the assembly of electronic equipment and components.

<Purpose of Introducing a New Model>

Requirements for modern electronic device production have placed added pressure on the industry to produce at faster rates, keep production under tighter quality control, and handle more diverse materials including aluminum and copper. Resistance welders are well-suited to address these challenges. Avio's current line of precision welders has been well-received by the industry. Following on this success, Avio has enhanced its capacitor discharge type¹ welding power supply, making it even more suited for precision welding of miniature components. This power supply is newly equipped with a dual pulse function, which improves quality and reliability, particularly in regard to battery tab welding. With

the addition of NRW-DC150, together with the recently released hybrid type NRW-PS300, Avio has an impressive range of power supplies for the battery assembly market.

Note 1: A method whereby electric energy is stored in a large capacity capacitor and discharged instantaneously.

<Features of New Product>

Using large-capacity energy storage, with quick release of weld energy (discharge time on the order of a few ms), this power supply brings the following benefits.

- The dual-pulse welding function enhances quality and repeatability in the battery tab welding process. The first pulse can be used to condition the parts and remove contamination. The second pulse then completes the weld. This process can reduce weld splash and provide a high-quality weld joint.
- Suitability for welding difficult material combinations, such as aluminum or copper, and for welding between different metals.
- The new addition of the VS (very short) mode with high peak current helps to make the power supply applicable to a wide range of parts geometries and materials.
- Reduced deformation or burning of parts due to short welding time. This makes the power supply suitable for precision welding of miniature components.
- High speed charging contributes to improved productivity. (Welding speed is 120 times/minute at 75W-S.)
- Compact design with a built-in welding transformer makes it easy to install in the production area.

<Specifications>

Items	Specifications
Type	NRW-DC150
Welding Transformer	Built-in Type
Stored Energy	1-150W.S(0.1Step)
Maximum Output Power	VS Pulse 5500A 2.1ms S Pulse 4500A 3.2ms M Pulse 3600A 4.3ms L Pulse 2600A 6.2ms

Duty Cycle	25W·S 200 shots/min 75W·S 120 shots/min 150W·S 80 shots/min
Dual Pulse Function	Standard Specification
Squeeze time	0.01 ~ 9.99sec
Hold Time	0.01 ~ 9.99sec
Dimensions / mass	W220 × D400 × H347mm / 31kg
Power Source	AC200 ~ 230V ± 10% 1 *Option AC100V

For questions regarding the above, please contact at the below:

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