

**5KVA to 10KVA** 1Ø In/1Ø Out    **10KVA to 30KVA** 3Ø In/1Ø Out

## Uninterruptible Power Supply Systems

DSP Controlled IGBT On-Line Technology



### HIGHLIGHTS

- DSP Control: 20 million data instructions/sec
- Unsurpassed reliability
- Wide input range
- High input power factor
- Life enhance battery charger
- Intelligent temperature controlled topology
- High output efficiency
- Green mode operation
- Smart fan speed regulator
- Artificial intelligence algorithms for enhanced reliability and performance
- Low output harmonic distortion
- DSP controlled static by-pass
- zero transfer time
- User friendly graphic LCD display
- RS232 and relay interface for communication
- Management and monitoring software for all operating systems.
- SNMP support
- Standards: Safety...EN 50091-1  
EMC.....EN 50091-2  
Protection class...IP20

- The **DSP PRO** Series of UPS from APLAB makes use of the State of the Art DSP Technology that ensures superior technical performance by processing 20 million instructions of data per second and thus responding to load current disturbances for non-linear loads very rapidly.
- Its full load efficiency is more than 91%. DSP PRO goes in the *Green Mode* when it increases to 97% and helps in energy conservation.
- Less than 2% total Harmonic Distortion in the Output ensures high quality of power to sensitive loads. This also helps to extend the life of connected equipment by upto 33%.
- If one of the several independent loads fed by the **DSP PRO** UPS gets short-circuited, the UPS acts as an ideal current source to blow the fuse of the short-circuited load immediately. This ensures a constant undisturbed power supply to the other loads.
- The UPS also acts as an ideal current source when feeding loads that introduce high "Inrush" currents. Therefore, when a new non-linear-reactive load is connected to the output, the **DSP PRO** UPS will continue

to feed the "Inrush" currents via the inverter instead of switching to by-pass.

- In **DSP-PRO** batteries are charged through a regulated independent bus bar. A smart temperature dependent algorithm for charging of the battery enables the Neo-Charger to charge batteries without being affected from fluctuations in input voltage and output current. Automatic Battery Test feature allows the user to monitor it on line.
- DSP monitors heat dissipation from devices and heat sinks and controls the fan speed. This also decreases the acoustic noise level.
- In the event of an overload, the DSP also determines the transfer time to by-pass based on fuse characteristics and helps the inverter to continue to feed the loads as long as possible before switching to by-pass.
- A user interface, consisting of a LCD display, LED's and entry pad, is provided on the front panel.
- Advanced communication via the RS232 and relay interface is also a standard feature. Furthermore, the SNMP adaptor helps remote monitoring and control of the UPS.

### TECHNICAL SPECIFICATIONS

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TYPE		DP1105	DP1106	DP1107	DP1110	DP3110	DP3115	DP3120	DP3130	
<b>POWER (KVA)</b>		5	6	7.5	10	10	15	20	30	
<b>INPUT</b>	Nominal Voltage	220V				380V/400V/415V 3Ø Neutral				
	Minimum Voltage	80V				140V 3Ø N				220V 3Ø N
	Min Voltage (at Full Load)	157V			176V	260V 3Ø N				315V 3Ø N
	Maximum Voltage	280V				480V 3Ø N				465V 3Ø N
	Frequency	45 – 65Hz				45Hz – 65Hz				
	Power Factor	>0.99				> 0.97				
	Input Current Harmonics	<6%								
<b>OUTPUT</b>	Nominal Voltage	220V/230V (adjustable)				220V/230V Adjustable				
	Wave Form	Sinusoidal				Sinusoidal				
	Total Harmonic Distortion	<2.5(Line Load), <3.6% (Non-Line)				<3%				
	Frequency	50Hz				50Hz				
	Frequency Tolerance	0.005% (free running)								
	Voltage Regulation (Static)	1%				1%				
	Crest Factor	3 : 1				3 : 1				
	Overload	>60s (at 150% load)				> 30s (at 150% load)				
	Total Efficiency	>91%				> 91%				>86%
	Green mode efficiency (Eco)	>97%								
<b>BATTERY</b>	Type	Maintenance Free Dry Type				Maintenance Free Dry Type				
	Number of Batteries	20	20	20	32	32	32	32	26	
	Battery location	Built-in	Built-in	Built-in						
	Average Back up time (at nominal load)	upto 20 minutes	upto 15 minutes	upto 10 minutes	upto 10 minutes					
	Recharging Time	<4h/8h				< 4h				
	Discharging Current Wave	<10%				<10%				
Others	Temperature compensated battery charging, artificial intelligence based capacity indication, cut off voltage according to changing load, battery bus independent of Load				Temperature compensated battery charging, artificial intelligence based capacity indication, cut off voltage according to changing load, battery bus independent of load					
<b>GENERAL</b>	Protection	Over load/Short circuit, DC Over/Under voltage and Over heat				Overload/Short circuit, Over/Under voltage and Over heat				
	Indication	Line on, Battery on, Mains abnormal, Load on Inv., Load on Aux., and Inv. trip				Line on, Battery on, Mains abnormal, Load on Aux. and Inv. trip				
	Metering	Input volt., Batt. volt., Output volt., Bal. batt. autonomy, Output freq. and Load power (%)				Input volt., Batt. volt., Output volt., Bal. batt. autonomy, Output freq. and Load power(%)				
<b>BY-PASS</b>	Voltage Tolerance	10% (Adjustable)				10% (Adjustable)				
	Frequency Tolerance	3Hz (Adjustable)				3Hz (Adjustable)				
	Transfer Time	Instantaneous				Instantaneous				
<b>PC INTERFACE</b>	Communication	RS232 Isolated according to EN60950				RS232 Isolated according to EN60950				
<b>ENVIRONMENT</b>	Temperature	0 – 40°C				0 – 40°C				
	Recommended Temp. to Extend Battery Life	20 – 25°C				20 – 25°C				
	Humidity	<95%				<95%				
	Audible Noise at 1mtr	50dBA				55dBA				
<b>PHYSICAL</b>	Net weight	50kg			55kg	55	180	185	230	
	Dimensions (mm)	270W x 710D x 685H				270x670x700	430x820x1170		650x820x1500	
<b>STANDARDS</b>	Safety	EN50091-1				EN50091-1				
	EMC	EN50091-2				EN50091-2				
	Protection Class	IP – 20				IP – 20				

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