



UMDA Bulletin

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Individual Highlights:

Messages	2
Current Events	3
GST	4
Industry Report	5
Aegan	6
Semikron	7

UMDA Uniting Power Solution Providers



Sitting (L to R) : Rajaram R, Ramesh S, N G Sabhahit, S Sumath Kumar, M R Rajesh
Standing (L to R) : Krishnamurthy K M, Suresh Y B, Suresh M, Shankar C Nagali, Ramu N, Nataraj K S

The UPS Manufactures and Dealers Association (UMDA) was formed in August 2004 and registered under KSR Act 1960 in January 2005.

UMDA Members are leading manufacturers, dealers, integrators and service providers of Power Electronic Products and Ancillaries - UPS Systems, Servo Stabilizers, Solar Inverters, and other related products and ancillaries like Batteries and Solar Panels.

UMDA plans to expand its activity at the national level for effective representation among various Government Bodies for implementation of policies and issues of technical and commercial importance.

UMDA has been releasing souvenir regularly for the benefit of its members and their associates. There was a need to release a Bulletin to regularly provide updates on various issues like Taxation, Latest trends and Concepts, associated with the Power Industry.

Objectives of UMDA

- To promote unity among power solution providers with the ultimate motive of helping them in promotion of sales and services of their products.
- To represent the UPS community at regional and national levels among Government and other bodies, on all issues of technical, legislation and commercial policy, considering the members interest.
- To circulate periodical Bulletin among all members for the latest updates and news in the industry.
- Technical meetings & exchanges between members to provide information on standards and regulatory bodies.

Message from KASSIA



Prakash N Raikar
President, KASSIA

UPS Manufacturers & Dealers Association having more than 200 members is a voluntary Association of Professionals in the field to share knowledge and experience. The association is having programs to build teamwork and leadership qualities.

UPS is making a positive contribution as a cost cutting technology and is an efficient Productivity Tool.

I am sure the UPS cluster in Karnataka will grow in strength with constant updation and innovation.

I compliment the association for bringing out this publication which I am sure will serve as a source of continuous education.

Message from FKCCI



K. Shiva Shanmugham
Sr. Vice President, FKCCI

I am delighted to note that the UPS Manufacturers & Dealers Association, Bangalore is bringing out a news bulletin on the occasion of All India Members meet to be held on 10th March 2012.

It is noteworthy that the UPS Manufacturers & Dealers Association, Bangalore which was founded in 2004, creates an opportunity for Individual Manufacturers & Dealers to express and share their opinion to improve their Business, Product & Quality, helps in building a team and encourages to improve the power conditioning Industry, thereby rendering yeomen services to its members.

I heartily wish the UPS Manufacturers & Dealers Association, Bangalore continues to render yeomen service to its members.

Message from MSME



S. M. Jamkhandi
*Director
Govt of India
MSME-DI, Bangalore*

I am extremely delighted to learn that your esteemed association is bringing out a UMDA Bulletin with complete and comprehensive technical and legal data pertaining to MSME-sector in the region which will be of invaluable help to all especially the purchasing companies. Availability of the right information at right time in a right way is one of the keys to improve marketing reach and become increasingly competitive for any sector.

This Bulletin will not only help all stake holders but also show case the competitive depth of UPS manufacturers in the region to the outside world. This will also help MSME-sector in this region to develop business and marketing relationship with the remaining part of the country. This Bulletin will also be a 'model' to other industry associations to bring out their data base. There are a very few well-managed Industry Associations in the State, which are capable of taking such pro-active steps and I congratulate your association for being one of them.

I have also come to know that your association has continuously pioneered in the promotion and development of Small Scale Industries. I am happy to be associated with your association in the past and sincerely cherish my support to you in future.

I take this wonderful opportunity to once again convey my sincere good wishes and greetings to the President as well as his team of dedicated members on this occasion and trust that UMDA will achieve many more milestones in the interest of the MSME sector and the Nation.

UPS Day – December 11, 2011

As has always been the tradition, the **6th UPS Day and 19th SD Awards Presentation** was celebrated at Confident Cascade, Bangalore on the second Sunday, December 11, 2011.

Starting with a fun event "Bowl Out" at the stadium, the evening program was followed by unfurling of the UPS Day banner and the release of the SOFTDISK Special Issue with the Solar Pullout.

Representatives of the UPS Industry debated on several important topics on Online reverse auctions, Import Vs local manufacturing, Impetus on research & development.

Awards for Best in Customer Satisfaction, Best Products, and the Top 20 Performers in the UPS Industry were presented to the winners.

SoftDisk's UPS Day has always been known for the unique entertainment it offers. This time too, it was a unique performance of **Karagattam by Mr.K. Suresh**, who figures in the Limca Book of Records. It was wonderful and enjoyed by one and all.

Extensive Networking by the Industry leaders over cocktails and dinner served as an icebreaker for the participants from across the country who were new to the event.

Some of the important issues like Online Reverse Auction will be further debated at length and a suitable memorandum will be released to all organizations which currently deploy such purchase methodology to highlight the drawbacks.

Dr. S. Saikrishnan, Editor of SoftDisk Magazine, is a very respected personality in the UPS Industry and he is the key behind the successful event of bringing the Industry together.

Look forward to the next UPS Day on December 9th, 2012 for another exciting event.



Numeric Sells UPS Business to Legrand

Numeric Power Systems has decided to sell its UPS business to Legrand Group of France for a total consideration of over Rs.800 Crore. Numeric Power has initialed a definitive agreement to this effect with the French Group.

It has also entered into a deal to sell Numeric Lanka Technologies, and Numeric Power System Pte. Limited (Singapore), both fully-owned subsidiaries of Numeric Power Systems, to affiliates of Legrand France S.A.

Addressing presspersons here on Friday, R. Chellappan, Managing Director, Numeric Power Systems, was confident that Legrand would accelerate the growth of UPS business by increasing its product bandwidth, expanding applications and providing access to new geographical markets.

"We felt the business should go a global platform. That's why we sold the business," said R Chellappan, MD of Numeric. "There was no pricing pressure," he said

But an analyst pointed out its existence. Anindya Das, Industry Manager, Energy & Power Systems Practice at Frost & Sullivan, said, "Though Numeric also imports from China and Taiwan, they too have been facing price pressure due to increase in cheap UPS imports from China and Taiwan, mainly in the sub 10kVA range. Although they have been able to maintain topline but bottomlines have taken a hit."

(Source: The Hindu Business Line & The Economic Times)

"We felt the business should go a global platform. That's why we sold the business"

"There was no pricing pressure"

R. Chellappan

GST – Goods and Services Tax

Goods and Service Tax, is a tax on goods and services, which is leviable at each point of sale or provision of service, in which at the time of sale of goods or providing the services the seller or service provider can claim the input credit of tax which he has paid while purchasing the goods or procuring the service.

The whole system is developed in such a way that it avoids the cascading effect and the final consumer bears the burden of all the tax.

The sellers or service providers collect the tax from their customer, who may or may not be the ultimate customer, and before depositing the same to the exchequer, they deduct the tax they have already paid.

This is simply very similar to VAT which is at present applicable in most of the states and can be termed as National level VAT on Goods and Services with only one difference that in this system not only goods but also services are involved and the rate of tax on goods and services are generally the same.

While GST is paid at each step in the supply chain of goods and services, the paying dealers don't actually bear the burden of the tax because GST is an indirect tax and ultimate burden of the GST has to be taken by the last customer.

Generally, export of goods and services are zero-rated and in that case the GST paid by the exporters of these goods and services is refunded.

Apparently the system is very much similar to the present system of VAT but the implementation of this system will certainly have some unique problems compared to VAT.

The GST will work only as a centralised taxation system with collection of all the tax going to the Central Government and then shared by the states. And this will be a big problem when GST will be introduced in India because the country has the federal system of economy in which the states also have the power to collect tax and that is the main base of their economic autonomy.

VAT has also been introduced in our country without abolishing the CST (Central Sales Tax) and even lowering the CST rates have been postponed several times. The basic reason behind this has been that some of the states collecting major share of CST are not ready to compromise with their economic autonomy. VAT principally is also a central tax but in our country it has been introduced with some compromises and states have agreed on it, though with some initial hesitation, because their economic autonomy was not touched. There is psychological difference between the collection of tax by the states themselves and sharing the centrally collected tax.

When GST will be introduced it will replace the Central excise, Service tax, VAT and CST. Till date the Centre has the monopoly power of the tax on services and states have the power to tax the sale of goods. Now the states will have to surrender their power to tax the goods and share the central tax and certainly this will be a very tough bargain for them.

The states are demanding that they should be given power to tax the services also but in GST they will actually lose their power to tax even the goods. The tax will be collected at Central level and then it will be shared by the states.

The larger the own collection of tax, the more difficult it will be for the states to accept the GST. This will be a major hurdle, which the Central Government will have to cross while introducing the GST.

(Source: Internet)

The whole system is developed in such a way that it avoids the cascading effect and the final consumer bears the burden of all the tax

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Indian UPS Industry Analysis – Frost & Sullivan

Escalating Demand across Various End-user Segments Drives Growth in the Indian UPS Market, States Frost & Sullivan

Product Customization will be Key to Surviving in an Intensely Competitive Market

The Indian UPS market is a growing and competitive one where both multinational and Indian suppliers are jostling for space. The competitiveness in the market is intensifying, with barriers to the entry of new participants, especially in the up to 20kVA power range, becoming lower. The biggest challenges faced by UPS manufacturers will be cheap imports from China and Taiwan as well as rising raw material prices.

“The UPS industry is advancing towards providing various value added services such as power quality audit, thermograph survey and remote monitoring services due to the increasing demand from IT/ ITeS, manufacturing as well as government and infrastructure end users,” remarks Frost & Sullivan’s Energy & Power Systems Analyst. “The industry is also moving towards an efficient battery management environment and proper monitoring of batteries, thus extending battery life.”

Sizeable demand from IT/ITes, government and manufacturing sectors is anticipated to drive the UPS market. The penetration of the IT/ITeS sector in tier 2 and tier 3 cities and the computerization initiatives of the Government in various departments will be key to pushing uptake levels.

Customers are increasingly seeking a single-point solution for their total power protection needs. Hence, another trend in the market is that of UPS suppliers upgrading themselves to become total power solutions providers.

Cheap imports from China and Taiwan, paralleled by mounting raw material prices, will pose significant challenges to Indian UPS manufacturers. The increase in battery prices, coupled with rising manpower costs, has resulted in UPS suppliers struggling to maintain their margins.

“There is a considerable amount of price pressure in the UPS market,” cautions the Analyst. “The presence of a large number of unorganized suppliers with lower priced product offerings has resulted in stiff competition in the domestic/SOHO segments, especially in the less-than-1 kVA and 1-5 kVA segments.”

Different end users of UPS have specific applications and, hence, they expect product customization to suit their requirements.

“It will be important for suppliers, therefore, to offer customized solutions to end-user groups,” concludes the Analyst. “This will help them survive and sustain higher growth rates in this fiercely competitive market.”

The Indian UPS market, which is worth around \$528.5 million (Rs.2640 Crores) in 2010-11, is expected to reach around \$828.2 million (Rs.4140 Crores) by 2017-18.

About Frost & Sullivan

Frost & Sullivan is a Growth Partnership Company enabling clients to accelerate growth and achieve best-in-class positions in growth, innovation and leadership. The Company’s Growth Partnership Service provides disciplined research and best-practice models to drive the generation, evaluation, and implementation of powerful growth strategies. Frost & Sullivan leverages 50 years of experience in partnering with Global 1000 companies, emerging businesses and the investment community from more than 40 offices on six continents.

(Source: www.frost.com)

The biggest challenges faced by UPS manufacturers will be cheap imports from China and Taiwan as well as rising raw material prices

“There is considerable amount of price pressure in the UPS market”

New Entrant into the Battery Space - AEGAN

Aegan Batteries Limited was incorporated in 2011.

The company manufactures all types of lead acid batteries for automotive and industrial applications.

The company is manned by professionals, each of whom has been in the battery industry for over two decades. The Aegan plant is at Malur about fifty kilometers from Bangalore, India.

The plant has the latest battery manufacturing equipment imported from the US, Europe and East Asia.

The company also has a sophisticated battery laboratory and test house at the plant. The company is in the process of setting up a R&D center dedicated to research in lead acid batteries.

The company is in the process of acquiring the ISO 9000, ISO 14000 and TS 16494 certification.

Industrial Batteries:

Aegan industrial batteries are made to IS, BS, DIN and IEC standards.

The Aegan standby industrial batteries can be used for various applications in the power and oil & gas sectors, railways, telecommunication sectors, solar process industry, and heavy industries like steel, cement, sugar, etc.

Aegan standby industrial batteries can be used in online and offline UPS systems and with inverters.

Aegan motive power batteries are suitable for all internationally renowned material handling equipment makes.

PowerPro® Range of VRLA Batteries:

Aegan Batteries Limited manufactures a wide range of sealed maintenance free monobloc batteries under the brand name PowerPro®. PowerPro® is designed to withstand deep discharge, overcharge, vibrations and shocks. The batteries are completely sealed, maintenance free, leak proof and usable in any position.

The PowerPro® batteries are made to JIS C8707 specifications.

New Technology Update from Semikron

Goodbye to Bond Wires!

**New packaging technology replaces wire bonding
Double the current density in power semiconductors**

Semikron has developed a revolutionary packaging technology for power semiconductors which does away with bond wires, solders and thermal paste. The new SKiN Technology is based on the use of a flexible foil and sintered connections rather than bond wires, solders and thermal paste. The current density is doubled to 3 A/cm² compared with 1.5 A/cm² achievable with standard wire bond technology. The converter volume can therefore be reduced by 35%.



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3 Level Inverter – Easy Online Dimensioning

Product Manager Alexander Langenbucher and Application Engineer Ingo Staudt, SEMIKRON

In inverter development – whether 2-level or 3-level topology – an important step at the outset is correct dimensioning for module power, cooling system and driver. Due to the greater number of switches in the current path, the 3-level circuit has more commutation possibilities, making it very difficult to calculate power losses. Many manufacturers offer thermal dimensioning for 3-level circuits which does not even touch on the precision of numerical calculations. Semikron, for its part, has added the 3-level topology 3L NPC (Neutral Point Clamped) to its thermal calculation tool SemiSel, which can be used to make the right choice of 3-level modules from 10 kVA - 300 kVA

The first 3-level topology came about almost 30 years ago. Up till now technical developments in this direction have been somewhat sluggish. Owing to its high efficiency, this type of configuration was initially used in high-voltage applications. For some time now, however, 3-level topologies have been used in the markets for uninterruptible power supply systems (UPS) and solar inverters; this is down to the ever increasing demands on these markets for high efficiency factors and high grid quality. Applications with the demand for high switching frequencies can be optimised by implementing 3-level modules. Costly grid side filtering can be reduced thanks to lower output current THD (total harmonic distortion). Permanent noise emission could additionally be reduced especially in office environments. With four semiconductors in the current path, the forward losses of a 3-level inverter are higher than in a conventional 2-level solution. Thanks to the far lower switching losses, however, the overall losses can be reduced by up to 44%, especially at high switching frequencies.

For such applications, where the use of 3-level technology brings about significant benefits, Semikron has built up a wide product range. To enable the customer to select the optimum topology and the right module in terms of power losses and operating temperature, Semikron has implemented the 3-level topology in its simulation program SemiSel.

Wide 3-level product range

3-level technology has been expanded to include higher power classes. Semikron offers 3-level modules for 10 kVA to 300 kVA in various connection technologies. Each module has one 3-level inverter phase leg.

Calculating power losses in a 3-level module

SemiSel is a software program that is used to calculate the operating temperatures of semiconductor modules. This program has been available online since 2001 and has undergone three subsequent updates to include every new Semikron module to calculate the common uncontrolled and half-controlled rectifier topologies, H-bridge and sixpack inverter topologies, step-up and step-down converters, as well as solutions for system and driver selection.

Conclusion

Semikron boasts a wide range of 3-level modules for different connection and assembly technologies for use in 3-level inverters with output ratings of between 10 and 300 kVA. The new SemiSel program delivers fast and reliable results through numerical calculations of the operating temperatures of the semiconductor chips. In this way, inverter manufacturers can quickly decide which topology and which module is the most effective and least expensive solution for their applications.



"The new SemiSel program delivers fast and reliable results. This will help inverter manufacturers to quickly decide on the effective and least expensive solution"

Feature: Dr.Sai Krishnan

Dr. Sai Krishnan, Editor in Chief, Softdisk Magazine after resigning from the post of Scientific Officer from the National Informatics Center, started a magazine along with the Members of Association of Computer Professionals named Softdisk in 1991. It was meant for the Association's internal circulation only.



Dr. Sai Krishnan
Editor in Chief, Softdisk

Recipient of:

- **Bhartiya Jyoti Award** for Enriching Human Life and Outstanding Attainments in 2002
- **UWA Award** for Excellence in Journalism in Power Electronics & Psephology (2005-06)

In 1992, after completing his PhD Degree in "Transient Fault Tolerance Computing" from the US, he decided to take over Softdisk Ownership rights and got it registered with RNI. It has been over 20 years since then.

At that time though UPS was very much an integral part of the computing system, but no magazine in India gave its due and not even the Government, which was treating the UPS under Electrical Equipments Category.

His constant efforts and representations to Union Minister for Commerce and Industry to bring UPS under the IT peripheral category yielded results thereby giving the Offline, Line Interactive UPSs the status of IT Equipment.

Sustained efforts & the voice of magazine which now has a circulation of over 31000 copies per month influenced the government's decision making process.

Currently UPS (Uninterrupted Power Supply System) is classified under Chapter 8504.4029 of Customs Tariff. Basic duty is exempted vide Notfn No:25/2005 Sl. No:4 if used for Computer/Telecom Applications.

"Our fight is still on through representation and follow-ups to the Union Commerce & Industry Minister Mr. Kamal Nath to press the industry's demand to bring the entire range of UPS systems imported to be exempted from duty which will help clear a lot of mess", says Dr. Sai and maintains that the components imported for manufacturing UPS may be exempted from duties to provide level playing ground for Indian and Multinational companies.

Earlier the UPS Industry was scattered and Dr. Sai Krishnan's contribution has been immense in bringing the entire UPS community together.

He has always been innovative in his approach and has devised a scientific method to process data for the SD's Top 10 Awards, SD's Users' Satisfaction Survey ratings and the mid-year analysis of Industry projections for the future. SD's analysis are considered for purchases by the Government and Corporates. Softdisk has been a medium to showcase the Industry players and market trends.

UMDA thanks Dr.Sai Krishnan for his contribution to the UPS Industry in India.

UPS MANUFACTURERS & DEALERS ASSOCIATION (UMDA)

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Feedback

We hope that the contents of this bulletin were of use to you. For any feedback, opinion or suggestions, please e-mail to rajaram.r@eandcpower.com.