



Electrifying the Future

DAY 3 | MONDAY, 12 MARCH 2018

OVERALL SITE PLAN ON PAGE 15

WHICH MIDEL FLUID IS RIGHT FOR YOU?

THE MIDEL RANGE OF NATURAL AND SYNTHETIC ESTER TRANSFORMER FLUIDS



MIDEL eN 1204

MIDEL eN 1204 is the premier natural ester transformer fluid, made from sustainable rapeseed crops.



MIDEL eN 1215

MIDEL eN 1215 is our standard natural ester fluid made from soya.



MIDEL 7131

MIDEL 7131 is the world's leading, readily biodegradable synthetic dielectric fluid, used in power and distribution transformers.

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WHICH MIDEL FLUID IS RIGHT FOR YOU?

THE MIDEL RANGE OF NATURAL AND SYNTHETIC ESTER TRANSFORMER FLUIDS



MIDEL eN 1204

The preferred biodegradable natural ester fluid. MIDEL eN 1204 is the premier natural ester transformer fluid. Made from sustainable rapeseed crops, it is readily biodegradable with superior oxidation performance and low pour point. For the best performance from a natural ester fluid, let's talk about how MIDEL eN 1204 can deliver real benefits for your network.



MIDEL eN 1215

MIDEL eN 1215 is our standard natural ester fluid made from soya. It is best suited for temperate climates in non-free breathing transformers. Its high fire point significantly increases the fire safety of your transformers and can reduce the need for fire protection equipment.



MIDEL 7131

MIDEL 7131 is the world's leading, readily biodegradable synthetic dielectric fluid, used in power and distribution transformers including sealed and free-breathing designs, delivering fire safety, environmental protection and cost savings. First produced in the 1970s, MIDEL 7131 meets the need for a safer alternative to mineral oil. Its success is proven up to 433kV and fills transformers in over 70% of countries worldwide.

LET'S WORK TOGETHER TO PROTECT TRANSFORMERS AND THE PEOPLE, ENVIRONMENT AND BUSINESSES AROUND THEM.

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Electrifying the Future

DAY 3 | MONDAY, 12 MARCH 2018

Smart Solutions

In Tune with the Changing Times

In the last decade and a half, power usage pattern of the country has changed massively. The revolutionary growth of the service sector has ushered in multiple innovations in products targeted to the building sector, influencing L&T's portfolio to a great extent.

Whether it is a switchgear or electric meter, the fast expanding tech environment of India, including both industrial and non-industrial sectors, is continuously in search for smarter products that not only offer accuracy of measurement, but also the convenience of management, competitive cost, guaranteed consistent performance and safety. At ELEC RAMA 2018, L&T Electrical & Automation, a name well-encompassing the vision of Solutions, Service, Savings, Sharing and Sustainability, is showcasing its Smart solutions in the Electrical & Automation space.

At this edition of ELEC RAMA, visitors at L&T stall are witness to the latest solutions in MV & LV space, Power Quality, Energy Management, Metering & Protection, Industrial Automation, Switchgear Selection, Modernization of Existing Installations, SCADA, etc. While focusing on the context of utility and acceptance of Smart Meters in the Indian sub-continent, SC Bhargava, Member – Executive Management Committee & Sr. Vice President (Electrical & Automation), Larsen & Toubro says, "L&T makes about 8 to 9 million meters every year. Presently, the company is catering to an order which would last six to seven more months."

Smart Moves

Drawing attention to the need for smart meters in India, Bhargava explains that they are trying their best to reduce the unlawful use of electricity. The company is of the belief that smart metering solutions can bring a marked difference in DISCOMs' revenue generation. "The ability to monitor remotely that a meter is not reading anything for the last three days can help a utility to enquire the cause. There could also be a possibility of the meter gone out of order. Hence, to make sure that 100 percent of its meters are fully functional, the utility needs to choose the best quality meters," he notes.

Detailing the practice that leads to a high accuracy level of the company's meters, he explains, "Although we make 9 million meters per year, each



SC Bhargava, Member – Executive Management Committee & Sr. Vice President (Electrical & Automation), Larsen & Toubro at the company stall at ELEC RAMA 2018. Behind are visitors showing keen interest in the new dsine DZ range of Moulded Case Circuit Breakers (MCCBs) that packs in more than 150 patents.

meter is calibrated and a record is kept. Anyone can go back to the record and find out the calibration report. Thus, the calibration accuracy of our electronic meters is very high."

Against the Indian backdrop, tampering of energy meters is not a rare case. Explaining L&T's measures to curb the malpractice, Bhargava says, "Smart meters are smart enough to report of any tampering attempts. Thus, any utility using them will benefit to a great extent by exercising control to prevent losses."

Radio Communication

L&T has been working with Tata Power in Mumbai that has installed around 5,000 meters from L&T, which are not exactly smart meters, but those communicate with low power (built-in) radio signals (less than 5W). These meters operate within a self-healing mesh and communicate everything to the utility. After the preliminary success of these meters and

Industry's Most Compact MCCB

With a strong legacy of user-centred innovation, L&T has showcased its new dsine DZ range of Moulded Case Circuit Breakers (MCCBs) that packs in more than 150 patents. The new range marks an important event for electrical system designers, end users, consultants as well as panel manufacturers/ assemblers. The launch of dsine DZ with operational voltages up to 800V AC and significantly higher fault breaking capacities offers possibilities for renewable power generating systems to be designed at higher voltages and thus making power plants more efficient.

having been convinced of their performance, Tata Power has ordered an additional 17,000 such meters. Altogether, L&T has already installed around 20,000 meters with low power radio control in the country. Around 4 lakh such meters are expected to be installed in Maharashtra alone.

◀ From Page 3

The Transition

The growth of the service sector has brought in a massive change in the power usage pattern in India. Around 15 years back, L&T observed a difference in the way electricity was consumed in the country. This drove the company to realign themselves to the changing trends of the times. It realized that the building and the industry had two different kinds of needs. The industry needed a very high profile of short-circuit control etc., whereas the building segment did not need so much accuracy, but sought other types of specifications, aesthetics, etc. Therefore, in the last 15 years, L&T has gradually geared up to cater to the building segment. In L&T's stall this time at ELEC RAMA, around 30 to 35 percent of the products are made for industries, whereas around 65 percent of the products target buildings.



We are trying our best to reduce the unlawful use of electricity. We believe that smart metering solutions can bring a marked difference in DISCOMs' revenue generation."

SC Bhargava
Member – Executive
Management Committee &
Sr. Vice President (Electrical &
Automation) Larsen & Toubro

An Ode to ELEC RAMA

"ELEC RAMA is a great meeting place for the customers, consumers and manufacturers. It is the one place where people can not only look at new products, but can also meet all the makers and their competitors,"



says Bhargava on the show being instrumental in reaching out to the company's right audience.

According to him, ELEC RAMA is an ideal platform for the company to display its new products and disseminate information on the

same. "We are exhibiting all our new products at ELEC RAMA 2018. Here, we get an opportunity to display our new products addressing each industry's need. For example, a person from IT industry or building industry will be shown specific products designed to address their industry's requirements," he says.

"Since this is the age of Data, this time we have focussed on our range of products including Smart meters, Pre-paid meters etc. We are also displaying our entire range of circuit breakers here, which are on an equal footing with global products. It is a wide range suitable for both – small and heavy industries," ends Bhargava.

Larsen & Toubro
www.lntebg.com
Hall & Stall: H2 / A-7

Emerging Technologies

Transforming through disruption

At the eTECHnxt pavilion, brain storming sessions on emerging technologies are simultaneously being conducted with the technology show at ELEC RAMA 2018.

Climate, economic and social changes are making scientists and technologists worldwide take a hard look at traditional methods of power generation, transmission and distribution systems. Small tweakings are no more the order of the day. There's a need to adopt emerging technologies. Moving towards a sustainable future needs combating the ever-growing challenges of global warming, pollution, ozone depletion, and all this calls for adoption of emerging technologies.

Considering the above factors, India has taken up several bold targets to reduce carbon footprints through every possible means including adoption of renewable energy, thus transitioning to e-transportation and so on. However, to attain all these targets successfully, India immediately needs to adopt some



of the emerging technologies. This will, in many cases, reshape the

eTECHnxt comprises a number of sessions to disseminate awareness on the new technologies, their application potentials and the results obtained so far.

existing landscape of the present energy ecosystem.

What can be learnt

ELEC RAMA 2018 is hosting a number of sessions under eTECHnxt to disseminate the new technologies, their application potentials and (in some cases) the results obtained so far. Yesterday, four such sessions were conducted on Digital Transformation of Power Delivery, IoT, AI & Electricity, E- transportation and Energy Storage Systems. In terms of IoT, AI & Electricity, the future of the power ecosystem

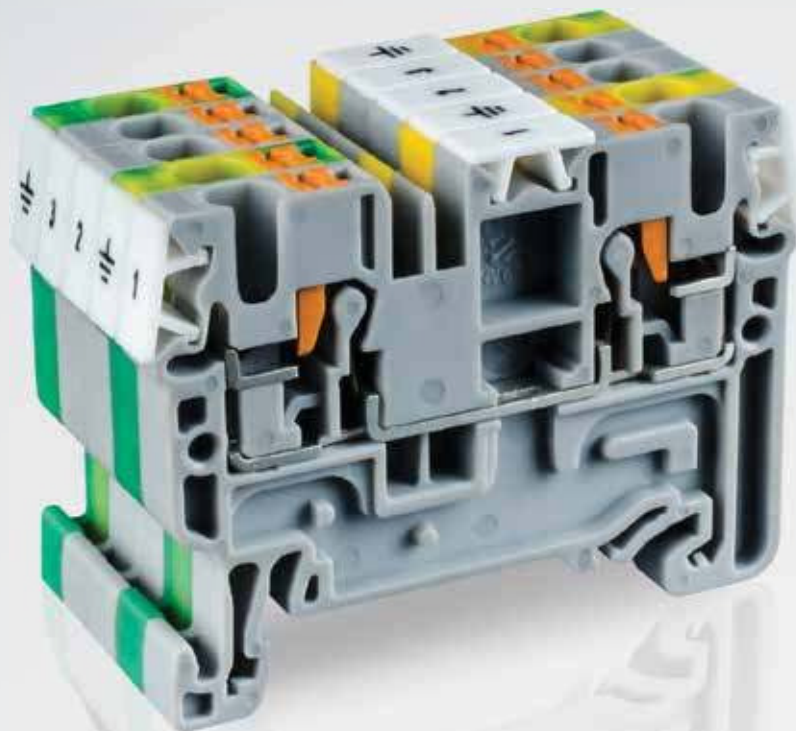
will include more electrification, (Centralized & Distributed) and more digitization.

Eminent field personalities like Prof Dr Michael Weinhold, CTO Energy Management, Siemens; Ahmad Khan, Head, Power Gen Automation, ABB India; Dr Shashi Buluswar, CEO, Institute for Transformative Technologies, India; and Dr Hakan Sundelin, Senior Researcher, Rise Viktoria, Sweden, delivered their presentations in eTECHnxt sessions yesterday.

The sessions will continue till March 14 at eTECHnxt pavilion in Hall 6.



The sessions will continue till March 14 at the eTECHnxt pavilion in Hall 6.



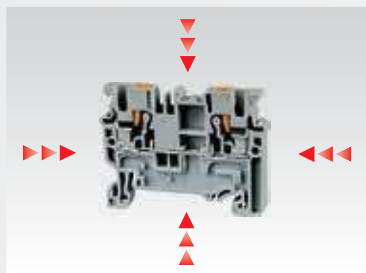
Compact & Feature Loaded

Come meet us at:



10th - 14th March 2018
Hall No.: 2, Stall No.: H2J9

PRODUCT FEATURES



New CP series Terminal Blocks have an extremely compact design. These Terminal Blocks can be used in smaller control cabinets and enclosures.



High quality stainless steel spring clamps provides a gas tight connection. A vibration proof, anti-loosening wire connection is achieved with this pre-stressed spring clamp system. CX series TB's can be used and shorted with CP series as both have same profile.



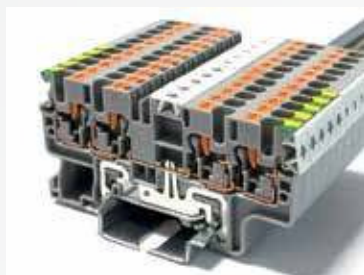
New push in technology jumpers for shorting Terminal Blocks are now available in 2, 3, 4 & 10 pole configuration.



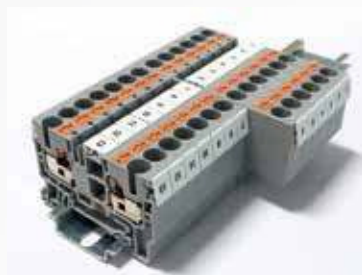
The possibility of using 2 independent rows for bridging enables the creation of various circuit combinations. Shorting links can be marked with a felt tip pen on the recess provided on top, to clearly indicate shorted positions.



A unique design in the plastic housing of the Terminal Block facilitates ease and tool free wire entry. Stripped wire can be simply inserted using push button, lugged wire can be directly inserted to make connections.



Multi connection Terminal Blocks are used for applications involving more than one same potential wires to be connected.



Multi connection Terminal Blocks can be used with 2 conductor feed through TB's and can be shorted together for further distribution as both have same profile shorting channel.



Specific Terminal Blocks in an assembly can be shorted by breaking intermediate contacts from standard shorting link. Shorting links can be marked with felt tip pen on the recess provided on the top to clearly indicate shorting position.

World Utility Summit 2018

Lighting Up Continents

World Utility Summit 2018 witnessed some of the finest talks and discussions from national and international speakers explain how smart generation can be done consistently for decades to come.

The definition of utilities has changed. For those not in the know, it now comes to mean ensuring security of food, water and electricity. The government and large industries are constantly confabulating to assure these needs to citizens.

In view of this changing landscape, the second World Utility Summit 2018 (WUS 2018) kick-started during ELECRAMA 2018 in Greater Noida, with an aim to re-define utilities. Day 1 of the summit, the theme of which is "Utilities of Utilities", featured intense deliberations over electricity, food and water security; regulatory framework; and the challenge of keeping abreast with technologies. WUS 2018 is spread over three days from March 11 to 13. The idea is to bring personnel from electricity, water and gas utilities to discuss with Industries, Consultants, Service Providers, Researchers and Regulators the ways to develop optimal solutions, technology & products, in order to enhance their performance.

In the power sector alone, utilities are accelerating technology innovations. They are embracing smart grid technologies, Internet of things (IoT) and real-time data as a comprehensive approach to ensure their optimization. The innovations will immensely impact the way they deal with their customers, partners and workforces in future, according to leading global energy experts who spoke at the sessions yesterday. How do renewable energy, digital technology and environmental regulations impact utilities? How can utilities keep up with the latest technologies? These and more such topics were only some of the deliberations between industry and thought leaders from around the world.



With an aim to re-define utilities, the second World Utility Summit 2018 was kick-started with the traditional lamp lighting at ELECRAMA 2018.

Benefiting the common man

The forum was inaugurated by the traditional lighting of lamp at the hands of Chief Guest Arvind Singh, IAS, Principal Secretary, Energy – Government of Maharashtra & MD, Maharashtra State Electricity Transmission Company Ltd (MSETCL). He was accompanied by Dr Saifur Rahman, President IEEE Power & Energy Society, USA; Dr Jasper Wieck, Deputy Chief of Mission (DCM) and Head, Department of Economic and Global Affairs, German Embassy, New Delhi; Shreegopal Kabra, President, IEEMA; Vikram Gandotra, Convenor, WUS 2018; Vijay Karia, Chairman, ELECRAMA; and Dr R Nagaraja, Chairman, WUS 2018.

Following a warm welcome by Kabra and a brief overview of WUS by Gandotra, Dr Rahman appreciated the efforts to bring utilities companies together for this critical conversation. He stressed on the important role that smart grid, renewable and energy efficiency will play in the future of utilities. The first plenary session for the day started with a keynote address by

Philippe Joubert, Executive Chair - Global Electricity Initiative, France. Keeping with his interest in sustainability, Joubert presented positive examples of smart water conservation, stressing that business cannot survive in a world that is in shambles. He proclaimed that in a few decades, 70 per cent of world GDP will come from water scarce areas.

This was followed by a panel discussion moderated by Mohinder Gulati, Former Chief Operating Officer, Sustainable Energy for All (UN) and former Adviser, Energy, World Bank. The panel included Jennifer Layke, Global Director, Energy Program, World Resource Institute, USA; Prof Dr Rober Hollaender, Professor of Environmental Technology and Environmental Management - University of Leipzig, Germany; Dr Shilp Verma, Consulting Researcher, IWMI-Tata Water Policy Program; Dr Vaibhav Chaturvedi, Research Fellow - Council on Energy, Environment and Water; and Elad Shaviv, CEO - Israeli Smart Energy Association, Israel.

Some of the points that emerged

from the discussions were the need to survive and thrive in the digital economy. This means continued work on emerging technologies that can create competitive advantages, overcome regulatory hurdles, reduce operating costs and enable transformational business models to energy services providers.

Safeguarding quality

There is also a dire need to convert the current role of utilities to make it future-ready. Technology on display at ELECRAMA provides new tools which help utilities to embrace the change with proper implementation, said the experts. A sound and fair regulatory framework can encourage utilities to invest for change while protecting the interests of end consumers.

Realizing that sector specific regulatory frameworks have evolved over the years for different utilities, the time has come to co-opt best practices across domains to the changing times.

Another panel discussion decided that it needed to work at ensuring transparency, safeguarding quality and delivering cost-effective services to consumers while taking into account the environmental impact and safeguarding interests of all stakeholders.

The final session focussed on the challenge of catching up with technologies even as many technology-driven projects are implemented to provide quality supply and services to consumers.

The last panel discussed technology projects that are user-centric rather than vendor driven and see success and acceptability faster.

Future utilities will embrace Internet of Things (IoT), machine learning, artificial intelligence and plethora of new technologies like blockchain to deliver energy. These developments will bring the much-needed transparency in the system, resulting in better consumer experience and lowering costs.



Dr. Jasper Wieck, Deputy Chief of Mission (DCM) & Head, Department for Economic and Global Affairs, German Embassy, New Delhi addressing the audience.



Eminent industry experts unveiling an information piece at the Summit.

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SumiP, trusted for exemplary fiberglass solutions,
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FIBERGLASS CABLE TRAYS



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| High Impact Strength | Light Weight |
| Corrosion Resistance | Chemical Resistance |
| Non-conductive | Low Maintenance |

FIBERGLASS POLES



Applications

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| • Traffic Signal Poles | • Garden Poles |
| • Platform Poles | • Flood Light Poles |

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- Ingress Protection : IP up to 66
- Impact Resistance: IK up to 10

Other Series



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H1C21

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Fiberglass Products

A Larger Footprint

Mitesh Shah, CMD, SUMIP Composites, has plans to reach out to customers across five continents.

One thing that SUMIP Composites knows is that it needs to continuously look at improving the quality of products along with timely delivery if it needs to continue exporting. Mitesh Shah, CMD, SUMIP Composites, says, "We are emerging as a dominant player in FRP Cable Trays and FRP Poles in India and are looking to capture the Asian market. This is because we would like to be the largest manufacturers in this product category, and events such as ELEC RAMA work well for us since we are looking at global markets."



At ELEC RAMA 2018, we look forward to meeting entrepreneurs who could become our channel partners and take SUMIP products to all the five continents."

Mitesh Shah
CMD
SUMIP Composites Pvt Ltd

SUMIP is showcasing FRP Cable Management Systems, FRP Poles, FRP Enclosures, etc. and is most excited about the launch of its new Utility Pole System at the event.

five continents. We also look forward to meeting existing and new clients," adds Shah.

SUMIP Composites Pvt Ltd
www.sumip.com
Hall & Stall: H1 / C-21

Continental ambitions

SUMIP has different verticals such as Cable trays, Poles, Enclosures and to fulfil the expanded capacity, the focus is to serve customers from various government departments, consultants, industries, EPC companies and channel partners.

Shah says that the company is looking at expanding its sales & distribution network across the globe. "Over the years, ELEC RAMA has become a global platform. We look forward to meeting entrepreneurs who could become our channel partners and take SUMIP products to all the

Industrial UPS

Hitachi's i6et Industrial UPS

The UPS offers key benefits including high-quality power supply, user-friendly operation, industrial flexibility, cost-effective operation, high availability and reliability, and simplified maintenance.

Hitachi i6et industrial UPS has IGBT-based rectifier and IGBT-based inverter with DSP (Digital Signal Processor) technology and bi-directional static switch which offers true online double conversion power protection (VFI, SSI, voltage and frequency independent in accordance with IEC-EN-62040-3). It has built-in galvanic output isolation transformer which helps to protect the load. It is also suitable for nonlinear load of 3:1 crest factor. Hitachi i6et Industrial UPS is available from 30 kVA to 500 kVA for 3 phase to 3 phase. It offers key benefits like high-quality power supply, user-friendly operation, industrial flexibility, cost-effective operation, high availability and reliability, simplified maintenance and many others.



Source: Hitachi Hi-Rel Power Electronics Pvt Ltd

Hitachi Hi-Rel Power Electronics Pvt Ltd
www.hitachi-hirel.com
Hall & Stall: H1 / K-12

Power Management Solutions

Eaton's VS1 Vacuum Circuit Breaker

Anti-rust coating, self-lubrication design, and erosion-proof parts enhance the life of the Vacuum Circuit Breaker and require very low maintenance.

As a global technology leader in power management solutions and with a host of new technologies and solutions, Eaton is responding to some of the most critical electrical power management challenges that the country faces today. Given the urgent need to modernize the country's power distribution infrastructure, Eaton's comprehensive and innovative range of products and services can be used to reliably, efficiently and safely manage power across utility, commercial, industrial and residential markets.

At ELEC RAMA 2018, Eaton is introducing some exciting new technologies, including **Eaton's VS1 Vacuum Circuit Breaker**.

VS1 Vacuum Circuit Breaker

Eaton's VS1 Vacuum Circuit Breaker (VCB) is a medium voltage VCB operating on mature spring operation mechanism and adopting Eaton VI technology. It is a highly reliable

technology that provides operational convenience and easy maintenance.

Ideal for Engineering Programs:

The VS1 stands out as an ideal contact material and shape, ensuring low current carrying value and stable contact resistance. It has an integrated design of the main conductive circuit that has compound isolation material and operating mechanism. It has a compact and logical structure, assuring more reliable and safer operation. The compact design enables the breaker to be installed within almost all switchgears, switching resistive, inductive and capacitive loads in an ideal way. It offers superior cost performance, ideal choice for engineering programs.

Versatile Applications: Anti-rust coating, self-lubrication design, erosion-proof parts enhance the life of the VCB and require very low maintenance. In addition, the epoxy resin insulation cylinder manufactured with APG process can withstand severe environmental



Source: Eaton Technologies Pvt Ltd

impacts, enabling VS1 breakers to be used in all kinds of situations. The utilization of special contact material and primary tulip contact ensures VS1 devices applicable for all medium voltage cases.

High Performance, Low Maintenance: Due to its reliable interlocking and stable performance, it can be applied within most of centrally installed switchgears. In the places where old generation switchgears are used, Eaton's fixed type VS1 breaker can still achieve mechanical interlocking function. Simple structural design of Eaton's VS1 vacuum circuit breaker

minimizes fault occurrence, and simplifies daily maintenance.

Product Specifications: Eaton's VS1 meets IEC, GB and DL standards and is available in the range of 3.2 KV to 12 KV. It majorly comprises of a fixed terminal, an end shield, ceramic envelope, contacts, main shield and bellows. It also has various customization options, like shunt opening release, overvoltage release, under-voltage release, over-current release, closing latch etc. that make equipment more safe and reliable. Key specifications include:

- Very long life ranging from 10,000 times to 50,000 times
- High current breaking capability – up to 80kA
- High insulating intensity
- Low chopping current – < 3 Amp
- Low re-ignition rate – verge to zero for 12kV and less than 1% for 40.5kV
- Low leaking rate – < 0.001%,

Eaton Technologies Pvt Ltd
www.eaton.in
Hall & Stall: H2 / J-18

C&S Electric - Across the Value Chain of Power Management Solutions

Visit
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Stall H2J7K8

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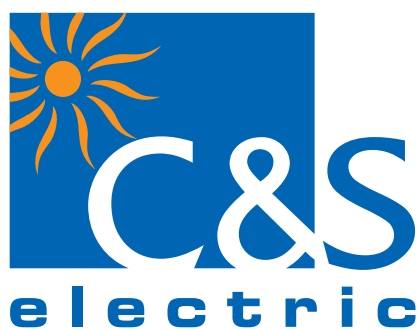
10-14 MARCH 2018
 INDIA EXPO MART
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LV & MV Switchgear

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Distributed Power

LED Lighting



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Power Distribution Components

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Final Power Distribution Components

Miniature Circuit Breakers, Residual Current Circuit Breakers, Distribution Boards, Industrial Plugs & Sockets, Modular Switches & Accessories, Weather Proof Enclosures

Protection & Measurement Devices

Multi Functional Relays, Control and Relay Panels

Low Voltage Switchboards

Modular Motor & Power Control Centers, Intelligent PCCs and MCCs

MV Switchgear

Packaged Substations, Ring Main Units, MV Vacuum Circuit Breakers & Switchboards

Power Busbars

Isolated Generator Busducts up to 800MW, Segregated & Non-Segregated Busducts, Cast Resin Busbars, Air Insulated and Sandwich Busstrunking, Lighting Trunking

LED Lighting

Industrial, Street, Flood, Office & Home Lighting

Distributed Power

Diesel Gensets

Solar EPC



We touch your electricity everyday!

Smart Lighting Solutions

Safer, Cheaper and Smarter

Driven by a vision to create home-grown energy saving solutions, Insilico's IOT based "Smart Light" solution offers to balance power savings and safety in public places. Words from the founders...

Conserving energy in fast developing urban spaces is one of the key challenges for planners and governing bodies. A company from Bangalore has come up with a smart solution that will drastically cut down consumption of electricity by street lights without compromising on safety.

The company

Insilico Tech Services Pvt Ltd is an end-to-end specialized VLSI, Embedded Design and Software services and solutions company. Headquartered in the US, it has operations in India & APAC, Insilico operates in the 'Compute' & 'Connectivity' space.

Sudipto Das, Founder and President, Insilico, says, "We have two business lines: Services and Solutions. We provide services for VLSI and semi-conductor components for companies like Intel, Samsung or Sony who design electronic chips. They outsource some part of the chip design activities to us."



(L-R) Company Founders Parag Bhatnagar, Sr Vice President – Engineering; Sudipto Das, President; Minakshi Sharma, Director – Sales & BD; and Syed Imran, Director – Sales & BD.

Viable social responsibility

"From the services business that we do in VLSI, we raise the funds that will go into our research and development activities," shares Parag Bhatnagar, Founder and Sr Vice President – Engineering, Insilico.

"The company is just eight months old, and while we had the vision to create something for society, we found it difficult to find investors for socially-oriented solutions," explains Minakshi Sharma, Founder and Director – Sales & BD, Insilico, "That's when we came up

with the idea to simultaneously work on the services model and create some funds for R&D."

The smart lighting proposition

Insilico's IoT-based 'Smart Light' creates a huge cost saving potential for lighting in public spaces, particularly street lights by using motion sensing. The concept that allows lighting to be controlled by Artificial intelligence (AI) in private as well as public places was shortlisted for the ELEC RAMA STARTUP AWARDS 2018.

"A lot of electricity is wasted when streetlights are kept on all night, even when there are no vehicles or humans," says Syed Imran, Founder and Director – Sales & BD, Insilico, "Using our technology, the government can save a lot of money while keeping the streets safe and lighting public spaces only when needed."

Insilico Tech Services Pvt Ltd
www.insilicorp.com
Hall & Stall: H6 / S-3

Labelling Systems

Silver Fox's Latest Labelling Solutions Kit

The solution enables the user to print the complete range of Silver Fox labels using one software, one printer, and one ribbon.

Silver Fox manufactures the simplest labelling solution in the world, tested to the highest specifications. This is the first time at ELEC RAMA for the UK-based manufacturer. The company will be launching on the world's stage the latest version 5 of its highly successful Fox-in-a-Box® labelling solutions kit, which



Source: Silver Fox Ltd

enables the user to print the complete range of Silver Fox labels using one software, one printer, one ribbon. Available labels include the industry leading Fox-Flo® UV stable LS0H tie on cable labels; Legend™ heat-shrink - both premium and LS0H; non-shrink tubing; 2 part wire marking; Prolab® raised profile equipment labels; and Endurance® valve tags. Additionally, Silver Fox also has a Laser range of labels that can be printed using a desktop laser printer, utilizing the same Labacus® software, used with the Fox-in-a-Box® printer kit.

Silver Fox Ltd
www.silverfox.co.uk
Hall & Stall: H3 / L-7

Current Sensors

New HCME Current Sensor Series from Harting

Supporting the trends towards miniaturization, Harting's new HCME current sensor series can be directly mounted on busbars. This contributes to shorter installation and an easy pre-assembling of power electronics.

Despite the limited space requirements – the dimensions of the devices are 6 cm of height and 14 cm of width – the HCME current sensors measure high currents up to 5500 A with highly reliable precision. This makes the sensors an ideal component for present day power electronics, characterized by their strong modular and compact design. The sensors utilize the so-called open-loop measurement principle. This provides a direct representation of the primary current with an accuracy of up to ±1%. The sensors can measure direct or alternating currents, even if they have complex waveform, over a frequency range from 0 to 50 kHz. The high immunity to interferences, e.g. caused by the magnetic fields of external current-carrying conductors, constitutes a specific benefit. The wide temperature range from -40°C to +85°C enables the deployment



HCME current sensor

under extreme environmental conditions. The sensors come in standard sizes and their compact design offers a high degree of freedom for integration into individual applications. High reliability and accuracy make the new sensors ideal for use in PV inverters, frequency converters or power supplies for welding applications.

Harting India Pvt Ltd
www.harting.co.in
Hall & Stall: H3 / C-9

Keep your electricity flowing & business growing



Uninterrupted power supply is the goal of every power transmission and distribution company, but many problems lie in the path of achieving it. These problems can lead to unnecessary shutdowns, and can cause huge monetary and man-hour losses. To help power companies achieve highest efficiency, FLIR brings a wide range of thermal imaging cameras and T&M products.



Transformer Thermal Image



Substation Thermal Image

Images for illustration purpose only.



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STALL NO: H2H22 (HALL NO. H2)
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Glimpses from CEO Meet @ELEC RAMA 2018



Source: IEEMA

Communication Systems

Narrowband RF mesh networks for smart metering

Within the energy sector, CyanConnnode's IoT platform enables Advanced Metering Infrastructure (AMI) solutions, providing highly secure communication between utilities and consumers across the globe. The company's innovative communication systems, which enable utilities to remotely monitor and control energy usage, have been selected by UK Smart Metering Implementation Programme as well as utilities in India, Iran, Bangladesh and Europe. Based on narrowband RF mesh networks, CyanConnnode's AMI technology enhances utilities' service delivery, improves business efficiency and saves energy through improved revenue collection and cash flow. Smart metering systems also promote sustainable energy through renewable resources such as solar and wind. Consumers also benefit from CyanConnnode's technology, as it allows them to measure and control their energy consumption, benefit from post-paid and pre-paid



metering (pay as you go), and time of use tariffs for managing when consumers use their white goods. Narrowband technology uses considerably less power and is less spectrum-intensive than technologies using higher frequencies, which provides more capacity at lower cost. CyanConnnode's highly-optimized solutions include hardware, software and network management. By un-

derstanding all the elements of the solution, CyanConnnode is able to increase the performance of the implementation.

Omni IoT

CyanConnnode has the technology and experience to support resilient IoT networks that scale from single application networks to multi-application, multi-network city wide implemen-

tations. CyanConnnode's future-proof technology incorporates all the elements to deliver multi-network, multi-applications IoT solutions on the same network, reducing complexity and integration costs.

CyanConnnode's Omni IoT platform manages multiple applications through one network management system. The innovative platform is communication protocol, network and device agnostic, meaning any device, running any protocol, connected through any network. This provides the flexibility to integrate both legacy and new applications on the same network.

The company has established a strong partner eco-system in India, including multiple meter manufacturers and system integrators, and has an in-country team experienced in dealing with the specific challenges facing the Indian market.

CyanConnnode Pvt Ltd
www.cyanconnnode.com
Hall & Stall: H3 / L-9

Source: CyanConnnode Pvt Ltd

Power Supply

Electronic Relays' DIN Rail Power Supply

DIN Rail Power Supply from ERI is compact, and is protected against over voltage and current.

As a pioneer in India for manufacturing solid state relays, Electronic Relays India (ERI) keeps upgrading its existing product line and adding new products that meet market requirement.

DIN Rail Power Supply is the latest in its stable of products that have the following features:

- Compact design (102 x 39 x 112 mm)
- Fully aluminum body
- Internal heat sink for efficient heat management
- LED status indication for power ON & load trip condition
- Protected against over voltage and current
- Resettable switch
- Looping is possible
- Rated for 2 A/24 V (48 W).



Source: Electronic Relays India Pvt Ltd

Electronic Relays India Pvt Ltd
www.electronicrelaysindia.com
Hall & Stall: H8 / A-69

Do you have any interesting story
to share on your new

product, technology or innovation?

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10 to 40 A (240/480/600 VAC) > 50 Amps with duty cycle



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- Phase Angle Control SSR/Speed control /Temperature control • Motor control

Source: Magic Wand Media Inc



Dubai invites Indian companies for new projects

We have been officially sent by the Government of Dubai post the Prime Minister of India, Mr Narendra Modi's visit to the UAE two weeks ago. We are truly delighted to be here. We are very lucky that 20 agreements have been signed between the two parties. The reason we are here is to invite Indian companies to be part of our achievement and our future projects that are to be delivered within their deadlines.

Saeed Bel Jafra

Sr Manager VIP & Government Relations
MD & CEO's Office, DEWA
Dubai

Source: Magic Wand Media Inc



Solar solutions abound

We need to expand our solar business and cater to residential homes. To this end, I am here to explore solar energy components and solutions. I also wanted information regarding reliable software solutions for energy monitoring of installations at remote locations. I will also be looking for LoRa solutions. Energy storage solutions are on my list as well. ELECRAMA exhibition keeps getting better with the inclusion of new technologies.

Rakesh Gupta

Director
Multi Virt India Pvt Ltd
New Delhi

Thermal Imaging Cameras

Thermography that is Smart & Networked!

For every field of application – in maintenance, production, power generation and transmission or for taking thermal images of buildings – Testo offers the perfectly matching professional thermal imager.

Thermography is indispensable when it comes to non-contact detection of thermal differences.

Thermal imagers are used to discover thermal anomalies during electrical and mechanical maintenance, and also to analyze thermal processes during research & development and during production.

In contracting as well as in the industrial sector, one can profit considerably from the use of a thermal imager by:

- Carrying out status-oriented servicing work and preventing expensive system downtimes;
- Overcoming the limitations of

a pyrometer by measuring not just individual points, but also whole surfaces;

- Dealing with jobs such as preventive maintenance of high-voltage systems, circuit breakers or mechanical components on plants more quickly than before, thus saving time and money;
- Always providing the best quality and ensuring the satisfaction of one's management or customers – for example by testing and impressively presenting the faultless fitting or the functionality of the system.

Convincing features for efficient thermography

• High resolution and image quality

Up to 320 x 240 pixels with testo SuperResolution, even up to 640 x 480 pixels. Image quality and resolution are ideal for all applications in both contracting and industry.

• Connection to App and other Testo measuring instruments.

These enable one to create and send compact reports on site with the testo Thermography App. It is easy to transfer the measurement values of the testo 605i hygrometer and the clamp meter testo 770 wirelessly to the imagers in order to identify mould/humidity related danger or to complement thermal images with current/voltage values. For example – in solar panels.

• Automatic setting of emissivity

The testo ϵ -Assist function automatically sets the emissivity and temperature of the measurement object, thus facilitating precise thermography.

• Objectively comparable images

testo ScaleAssist adapts the thermal image scale to the inner and outer temperatures of the measurement object and the difference between them. This ensures comparable and error-free thermal images of the thermal insulation behaviour of a building.

Work smart and networked

testo thermal imager 872 can also be connected to the testo Thermography App. The App, available for iOS and Android, turns the user's smartphone into a second display and a remote control for the thermal imager and serves to create compact reports quickly on site, to save them online and send them by e-mail. Apart from this, the App offers useful tools for fast analysis on site – for example for inserting additional measurement points, determining the temperature development via a line or adding comments to a thermal image. One of its useful features is that with the App, one can transmit thermal images live to one's smartphone/tablet, and can use it as a second display.

Connectivity with testo Hygrometer and testo Clamp Meter

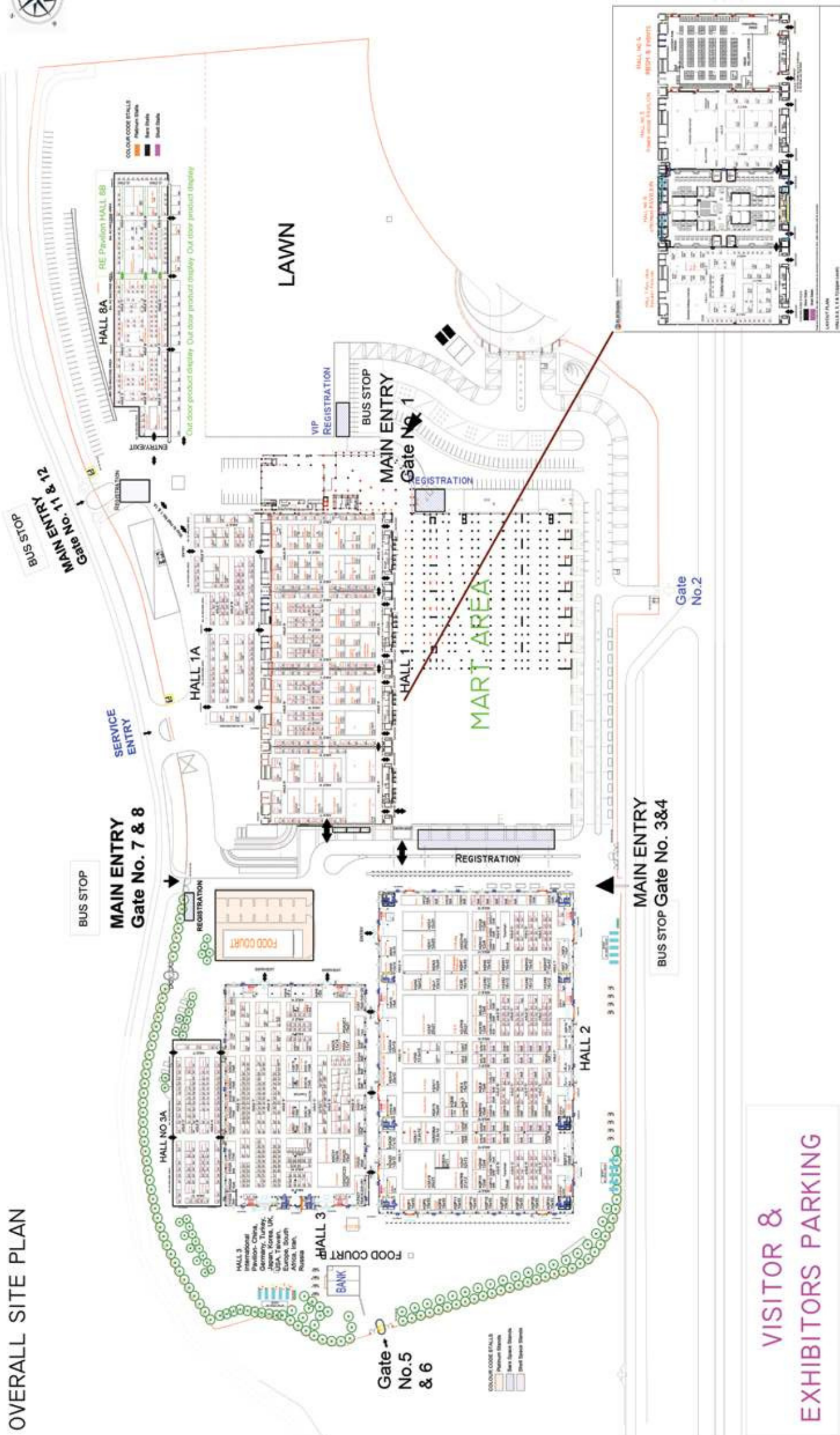
testo 872 thermal imager can be additionally connected wirelessly with the thermohygrometer testo 605i and the clamp meter testo 770-3. The measurement values of both compact measuring instruments are transmitted to the imagers by Bluetooth. This allows fast and clear identification of where exactly the thermography is to be done in any given climatic condition or at what load a switching cabinet is running.



Source: Testo India Pvt Ltd

Testo India Pvt Ltd
www.testo.com
Hall & Stall: H1 / P-18

OVERALL SITE PLAN



VISITOR & EXHIBITORS PARKING

OVERALL LAYOUT PLAN OF INDIA EXPO CENTER
Hall no1, 1A, 2, 3, 3A, 4

Organizer reserves the right to amend the
same as necessary from time to time.

05.02.2018

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