

STRIVING TOWARDS SUCCESS





Vision	2
About Us	3
What We Do	4
What We Offer	6
AEG	7
EDITELEKTRONIK	11
BELDEN	17
JRC	21
ORTEA	23
ENERSYS	25
Siemens	26
BASOR	27
STINGER	31
PLC Automation	35
Grid Maintenance Station	39
Insulations Electrical Systems and Automations	40
Fire Fighting Equipment Installation	41
Security Surveillance Systems	42
Plumbing and Sanitary Contracting	43
Air Conditioning, Ventilations and Air Fabrication	44
Sanitary Installation and Pipes Repairing	45
District Cooling Contracting	46
Major Work Power Solution	47

# WHAT'S SVISION

To be the number one company in power and safety solutions, representing AEG, EDITELEKTRONIK, BELDEN, JRC, ORTEA, ENERSYS, BASOR, STINGER, the best global brands around the world. Innovate, integrate and comprehensively implement technology solutions throughout the life cycle of client's business.



We are a global service providers for AEG, EDITELEKTRONIK, BELDEN, JRC, ORTEA, ENERSYS, BASOR, STINGER.

With roots in innovative technology, spanning over decades, our partner network branches provide easy solutions for our clientele. Our services ensure efficiency in power availability, system up time for enterprise-wide networks, mission critical telecommunications systems and industrial manufacturing processes.





We offers comprehensive product solutions including: UPS Systems, AC/DC inverters, rectifiers, power management software, acute harmonic conditioners and surge suppressors based with AEG, EDITELEKTRONIK, BELDEN, JRC, ORTEA, ENERSYS, BASOR, STINGER and end-to-end infrastructure solutions.

We ensures that users of AEG, EDITELEKTRONIK, BELDEN, JRC, ORTEA, ENERSYS, BASOR, STINGER technologies benefit from lifetime support by taking advantage of Total Quality Management and Power Services Programs. As we take a comprehensive approach to your needs, We aim to ensure you maintain safe, efficient and environment friendly standards that meet or exceed international expectations.

AEG, EDITELEKTRONIK, BELDEN, JRC, ORTEA, ENERSYS, BASOR, STINGER extension of (Around the World) network partners are spread across 100 countries providing us with both economies of scale and a range of quality innovative products. Our stability to tap into this vast global network allows us to rapidly provide solutions to our clients' urgent problems as well as assist them in expanding their infrastructure without any hitches.

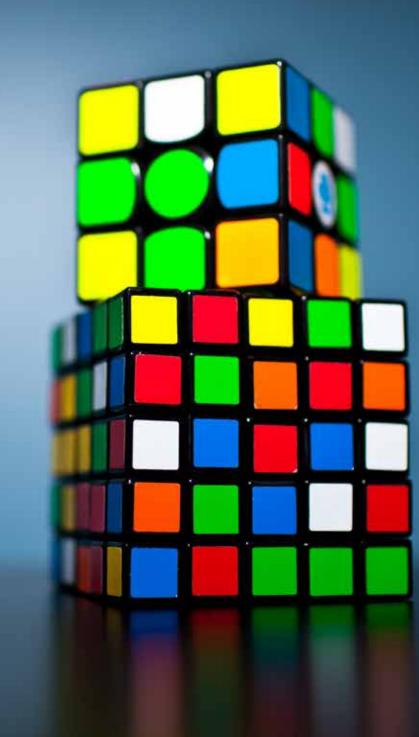
Telecommunication sector has taken advantage of our exclusive distribution rights for DC/AC composite solutions by using these in over 4000 installations.



# TRANSFORMING INDUSTRIAL STANDARDS

# WHAT **SOFFER**

- UPS requirements
- Rectifiers and Inverters
- Sealed Laid Acid and Gel Maintenance
- Free Batteries
- Stabilizers
- Transformers
- Power Factor Correction Systems
- 132 KV Grid Stations, Installation and Handling
- Turnkey Electrical and Mechanical Projects
- SS Cable Mesh and Hot Dip Galvanized Ladder
- Fire Detection and Suppression System
- CCTV and Security Surveillance Systems
- Electric Security Fence
- Industrial Cleaning Equipment
- District Cooling Contracting
- Sanitary Installation and Pipes Repairing
- Generator Rental Service



# **AEG** PERFECT & FUNCTION

#### **3-PHASE UPS SYSTEMS**

For Industrial & IT Applications

For over decades, AEG Power Solutions has successfully designed and manufactured uninterruptible power supply (UPS) systems, with over 70 technology patents registered in energy conversion. The expertise built over years in providing premium quality solutions to secure highly reliable power even in the harshest environment positions uniquely our 3-phase UPS range.



#### PROTECT 433

Multi purpose high power UPS

The Protect 4 is a highly reliable solution with a very long track record in system availability and use, providing safe and uninterrupted power back-up. It is a compact ready to install unit, with a maximum single unit capacity of up to 600 kVA, ensuring the safe operation of your critical loads. Protect 4 is designed to meet the toughest application requirements and offers high reliability with efficient 12 pulse rectifier technology for sinusoidal input current and for reduced input current harmonic distortion (THDi).



# PROTECT 8 S14Industrial UPS with galvanic isolation at output line

10 - 60 kVA

UPS systems from AEG Power Solutions ensure the continuous availability of all global industrial requirements in oil & gas, petrochemical, power generation, transportation and other heavy industries. The state-of-the-art, double-conversion topology and design of the Protect 8 is flexible, meets practically all conceivable customer requirements and is suitable for use in harsh environments.



### **PROTECT PLUS M600**

Modular 3-phase UPS up to 900 kVA

Protect Plus M600 is the modular UPS system that combines high AC/AC efficiency values with a compact footprint and a flexible and scalable architecture, able to reach up to 900 kVA.

It is designed specifically for data centers, transportation, retail and light industrial applications as well as all other critical applications where power reliability is essential and power consumption is an important variable.



# **AEG**

### **PROTECT FLEX**

modular industrial UPS with 10-160 kVA Parallel capability up to 160 kVA

Protect Flex is based on a new concept of UPS systems that combines a modular architecture based on 10 and 15 kVA/kW hot-swappable power modules with a customizable set of options. The system is an industrial-grade fully modular UPS, flexible and highly cost-effective. It can cope effectively with harsh environmental conditions, with an IP43 rating protection. Protect Flex is designed to maximize savings in terms of footprint and power installed (kVA)



#### **PROTECT Conline UPS**

1 - 10 kVA 1-phase/1-phase

Protect C is a VFI / double conversion online UPS suitable for safe supply of application-critical loads in the IT environment such as workstations, servers, storage systems and sensitive switching and control systems. With the lag increased to 0.9 the demand of higher performance active loads was taken into account. The ECO and frequency inverter operation modes highlight the requirements for a modern versatile UPS. Protect C series is also available on request as a rack mount version as well as one with longer battery backup time.



## **UPS SYSTEMS**

Single-Phase Uninterruptible Power Supplies

AEG PS' range of UPS systems contains uninterruptible power supplies in all power classes with 1-phase output power. These UPS are specifically adapted to the requirements of an IT environment. Here, an uninterruptible power supply is essential to ensure a smooth operation and sufficient data protection. With UPS systems, computers and servers are protected against insufficient power quality and shut down running processes in a controlled way during any power cuts.



### **PROTECT PLUS M400**

1/1, 3/1 or 3/3 phase modular UPS with 10-40 kVA

Protect Plus M400 is a modular on-line (VFI-SS-111) UPS system with a high operating AC/AC efficiency and compact footprint. The UPS system is designed to protect critical data and IT infrastructures with the ultimate on-line power protection. The Protect Plus M400 is based on a 2U high 10kVA/kW power module that can be housed in one of two frame sizes (20 kVA or 40 kVA)



# **AEG**

#### **PROTECT B / NAS**

Line-interactive UPS 500 - 1500 VA

Protect B is a UPS specially designed to provide power backup for small and medium enterprises and home businesses and is perfect for protecting ATMs, 3D printers, workstations, PCs, and other IT applications. The systematically refined hardware design with battery-saving charging electronics guarantees many years of use. The UPS front panel makes it easy to replace the batteries.



### **PROTECT A**

Line-interactive UPS 500 / 700 / 1200 / 1600 VA

Avoid irreparable damage to your data and system that can cause significant financial loss caused by over voltage or power surges. With easy installation, the compact uninterruptible power supply, Protect A will assure device protection and provide several minutes of runtime in case of mains power failiure. It is ideal for office, network and telecom peripherals.



### **PROTECT B PRO**

Line-interactive Rack/Tower-UPS, 750 - 3000 VA

With its high power factor of 0.9, Protect B Pro is one of the most efficient power supply systems with VI protection technology. Its battery management system enables extended battery lifetime as there is a decrease of pole corrosion. Communication options including programmable potential-free contacts, emergency power off switch, RS232, USB and an extension slot that can be used in parallel mode;



### **PROTECT ALPHA**

450 - 1200 VA 1-phase/1-phase

Protect Plus M600 is the modular UPS system that combines high AC/AC efficiency values with a compact footprint and a flexible and scalable architecture, able to reach up to 900 kVA.

It is designed specifically for data centers, transportation, retail and light industrial applications as well as all other critical applications where power reliability is essential and power consumption is an important variable.



# **AEG**

### **PROTECT PV**

630-880 kVA/ 3 Phases

The Protect PV solar inverter product line delivers solutions for utility-scale applications on industrial roofs and ground mount installations. Thin-film modules can be used efficiently as the Protect PV has a power stack with advanced measuring and control technology enabling input voltages of up to 1000 VDC. With an efficiency factor of 98.85% according to the European standard 50530, the Protect PV.880 well exceeds expectations for its power class.



#### **PROTECT SC UL**

Bi-Directional Energy Storage Power Converter up to 850 kVA

Protect SC is a bi-directional power converter from AEG Power Solutions with IGBT technology. The converter is the core element of any battery energy storage system as it charges and discharges batteries to store or provide power according to the application requirement (frequency control, peak shaving, energy shifting), or voltage control. Protect SC provides an outstanding conversion efficiency factor for both the charging and discharging phases.



### **DC UPS & RECTIFIER SYSTEMS**

For decades AEG Power Solutions has designed and manufactured first choice reliable rectifiers, chargers and DC power supply systems to meet the requirements of all types of industrial applications, operating in the toughest environments. Heavy duty design, proven microprocessor-controlled thyristor technology increases the availability, building block modular design and outdoor specific options are part of the characteristics of our comprehensive DC UPS series which can run on nickel-cadmium or lead-acid batteries.



### PROTECT RCS SPRE-TPRE

Thyristor-based 3- & 1-phase rectifier and charger system

The Protect RCS DC system has been developed and designed to provide high reliability power supply and battery charging capability. The Protect RCS DC system is a thyristor-controlled rectifier, suitable for charging nickel-cadmium or lead-acid batteries while supplying DC loads. It can also be used without batteries as a direct power supply.





#### 50000 kVA to 100 KVA AUTOMATIC VOLTAGE STABILIZER PARALLEL REDUNDANT - VOR-3P50000

What is the Parallel Redundant Voltage Stabilizer?

VOR is an AC optimisation and regulation unit which supplies continuous, safe and constant voltage to the critical industrial machines and equipments. It adjusts the unstable grid voltage to the rate which is calculated according to the facility's unique conditions.

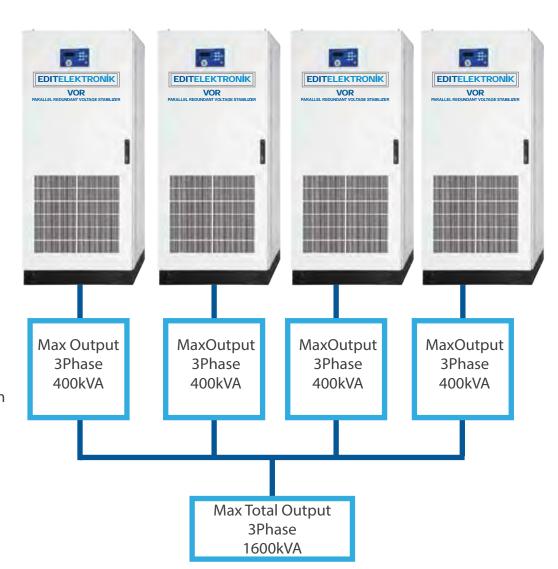
- According to adjusted low current Level; energy saver pass to standby mode when the current level goes under adjusted level.
- According to adjusted voltage range; when the energy saver's all three phase are in that range, energy saver pass to standby mode because there is no need the regulation.
- ➤ The purpose in this situation to prevent the unnecessary stabilizer energy consumption. When energy saver goes to standby mode whole device consume only 100-200 watt energy per hour. With this feature it is provided up to 1% energy saving.
- ➤ With this feature, Energy saver provides up to 1% energy saving and money according to power level of stabilizer



# **EDITELEKTRONİK**

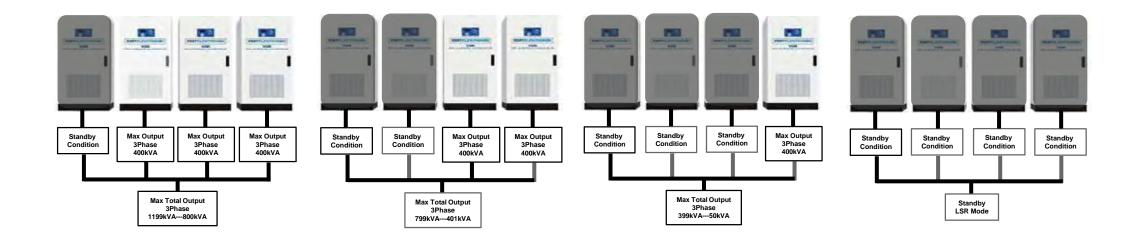
This Modular technology can be used for energy saving especially at big power levels. According to usage of power level, energy saver modules go to standby mode and save their own energy consumption. We can explain this system on an example;

- > In this scenario total power need is 1600 kVA
- ➤ We will use 4 pcs 400kVA modules to meet this 1600kVA requirement.
- In this system all modules are communicate with eachothers.
  But the whole system manage from one point in VOR.
- ➤ LSR and other energy saving methods which we mentioned in presenation are used in VOR systems.



# EDITELEKTRONİK

# **Different Energy Saving Ways For Different Power Usage Levels;**



Situation 1 shows that when usage power goes down to lower than 1200 kVA, last module turns standby mode Situation 2 shows that when usage power goes down to lower than 800 kVA, last two modules turn standby mode Situation 3 shows that when usage power goes down to lower than 400 kVA, last three modules turn standby mode Situation 4 shows that when usage power goes defined LSR current or voltage level ranges, whole VOR system truns to standby mode

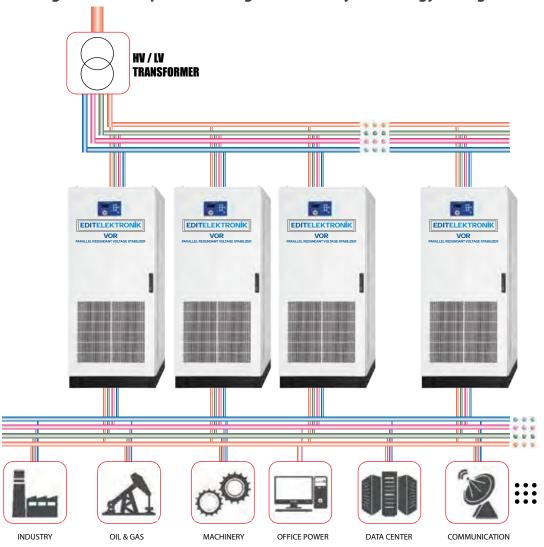
With whole explained features VOR provides totally up to 20% energy saving

# **EDITELEKTRONİK**

EDIT ELEKTRONIK patented technology VOR Parallel Redundant Voltage Stabilizers provides usage continuouty and energy saving solutions;

The Structure of device is modular system. This mean is; user can add new energy saver modules according to increase of power requirements. User don't have to buy a new and bigger stabilizer.

User can make to VOR BIGGER.





#### 220VAC 50A - 200A BATTERY CHARGER UNIT

- Production with single phase and three phase input supply
- Production between range of 12-450 V DC and 1 A-1000 A
- · Automatic float boost facility
- High productivity through Thyristor-Diode, Transistor technology and microprocessor controlled boards
- Low waviness (ripple 1%), high current and voltage stability
- User friendly, easy and comprehensible LCD display and mimic diagram
- Audial and lightened warning for all faults and dry contact outputs
- External battery connection
- Battery discharge protection with Low Voltage Disconnect unit (LVD)
- Silicon Dropper unit for voltage regulation of DC supply
- · Minimal size, static structure, easy commissioning
- Cabinet design suitable for industrial environment
- Special, durable cabinet, powder coated with standard color named RAL-7035, IP21 (IP54 Optional)
- Manuel adjusting property for output voltage and output current from LCD
- Automatic battery activation in case of power cuts (Optional)
- Possibility of regulation of charge-voltage-current through battery temperature feedback (Optional)
- Production with ISO 9001:2008 Quality Management System

### **5 kVA VOLTAGE STABILIZER - SERVO AUTOMATIC - ESV-1P05**

Servo Voltage Stabilizer is an economical solution for operation of your electrical without any problem wherever the main supply is not trusted. Produced with high quality materials, supplies to operate under heavy duty conditions at full load with high efficiency ESV3FXX has very wide using area range and to be used for years with reliability and without any problem.

#### **USAGE AREAS**

Uninterruptible Power Supplies, TV / Radio transmitter stations, GSM base stations, image and sound production studios, air - conditioners medical devices, hospitals, neon and laser illuminations, press and textile machines, photograph press machines, submerging pumps, ships, electric motors and all electrical devices sensitive to voltage changes.





#### **3 kVA VOLTAGE REGULATOR - IMPR-1P03**

Servo Voltage Stabilizer is an economical solution for operation of your electrical without any problem wherever the main supply is not trusted. Produced with high quality materials, supplies to operate under heavy duty conditions at full load with high efficiency ESV3FXX has very wide using area range and to be used for years with reliability and without any problem.

#### IMPACT STATIC VOLTAGE STABILIZER

IMPACT Static Voltage Stabilizer; are the devices of voltage control, protection and management which are microprocessor controlled, and which have high speed semiconductor technology. They are adjusted to the right voltage value required by industrial devices that are fastly growing and that are becoming more sensitive; and they are designed to meet their continuous, settled and secure energy needs.

Nowadays, thousands of users who have totally different characteristics such as plants, hospitals, public buildings, houses, farms, constructions etc. use the same main grid. IMPACT Static Voltage Stabilizer optimizes the irregular electricity which different users receive from city main grid at the same time, in accordance with only your business and the electronic devices you use.

IMPACT Static Voltage Stabilizer which can be produced in a very wide input voltage interval for places where grid voltages drop or rise excessively; evaluates gird voltage decreases and increases in 0.020 seconds when the main grid voltage drops -60% or rises +%40 and corrects with 500V/sec. Speed. By this means, your expensive industrial devices are protected against dangerous voltage changes and also it enables your systems to work with high efficiency and without interruption.

IMPACT Static Voltage Stabilizer has High Voltage, Low Voltage, Over-temperature, Overload, Short Circuit and Phase Break protections for its own operating safety and also for all electronic devices in your business to work safely. There is a "Manual By-Pass" unit which enables the loads to be transferred directly to network voltage for providing usage flexibility and working safety. It is equipped with thermomagnetic fuses in its inputs and outputs.

IMPACT Static Voltage Stabilizer is designed with its compact, esthetic and modular structure, in such a way that it can be easily connected with electric systems everywhere in the world. "BUS-BAR PANEL INPUT-OUT-PUT MODULE" which is required for direct connection can be added to BUS BAR systems optionally on request.

Information such as Input Voltage, Output Voltage, and Load Amount etc. can be viewed; breakdown and warning information can be followed on LCD DISPLAY which is standard in IMPACT SVS. One may reach devices over on the web, view all information on LCD DISPLAY and change set values of the device with "REMOTE VIEWING AND MANAGEMENT".





# INDUSTRIAL CABLE



Industrial Ethernet
Cable & ACCESSORIES

- Industrial Cat5E Cable
- Cat5E Profinet Cable
- Industrial Cat6 Cable
- Industrial Ethernet Patch Panel



SpaceMaker Series



**Data Bus Cable** 

- RS-485 Cable
- Blue Hose (9463) Cable
- ControlNet Cable
- Device Net Cable
- Fieldbus Cable



Multi Conductor Cable



Fiber Optic Cable

- Brakout Cable
- Distribution Cable
- InterConnect Cable
- Loose Tube Cable
- Mini Distribution Cable
- Tactical Fiber Optic Cable



Power & Control Tray Cable

- Power & Control TC & TC-ER Cable
- Matle Clad (MC) Cable
- Teck 90 Cable



Flex Cable



**VFD Cable** 



# INDUSTRIAL NETWORKING



# **Unmanaged Switches**

- OCTOPUS Switches
- RS20/30 Series Switches
- Magnum CP80 Switches
- Magnum ES42 Switches



# **Embedded Ethernet**

- Embedded Ethernet EES20 & EES25 Switches
- Hirschmann EESX20 & EESX30 Embeded Ethernet Switches



### **Routers**

- Magnum DX40 Router
- Magnum DX940 Router
- Magnum 10XTS Router
- Magnum 10RX Router



IP65/IP67 OCTOPUS Switches & Routers



# **Managed Rack Mount Switches**

- GREYHOUND Ethernet Switch
- Greyhound 1040 Ethernet Switch
- DRAGON PTN with HiProvision Software



# Fiber Optic Fieldbus Repeaters / Modems

- Fiber Interface Repeaters for standardized fieldbus protocols
- Optical Bypass Relay OBR40



# **Managed Switches**

- Hirschmann BOBCAT Next-Generation Managed Switches
- Lite Managed Industrial DIN Rail Fast Ethernet Switches -GECKO
- IP65/IP67 OCTOPUS Switches & Routers
- OCTOPUS OS24/34 Managed PoE Switches
- Modular Industrial DIN Rail Ethernet Switches – MS20/30 and MSP30/40
- RSB20 Managed Ethernet Switches
- Managed Industrial DIN Rai Ethernet
   Switches - RS20/30/40 Series



### **Power Connectors**

- M12 Power Series
- G/GO Series
- **CA** Series
- 7/8" Series
- ST Series
- M23 Series
- Mini Power Series



# I/O Systems

- Industrial Distributed Control Units
- Ethernet I/O Modules
- IO-Link Masters and I/O Hubs
- Connectors Micro (M12) 4 Ports
- Network Solutions
- Fieldbus Systems







# Industrial Connectors

- Connectors Mini
- Connectors Micro (M12)
- Connectors Micro (1/2"-20)
- Connectors Pico M8



# **Industrial Ethernet**

- IO Modules
- Cordsets
- Field Attachables
- Interface Modules
- Receptacles
- Switches
- Accessories

# Serial Communications





# Stainless Steel Connectors

- Distribution Boxes
- Cordsets
- Receptacles
- Field Attachables
- Accessories



# Security & Firewalls

- EAGLE One Security Router
- Magnum 10RX Router
- Magnum DX940 Router
- Magnum DX940e Industrial Cellular Router
- Hirschmann Rail Data Diode



# NEW PRODUCTS



#### **SPIDER III Standard Line PoE Switches**

Increase performance and reduce costs – with PoE+ for greater power to more devices, without an external power supply

Enable flexible network expansion – with configurable fiber and copper port options to meet specific industrial needs Protect network resiliency in harsh environments - with metal enclosure, IP30 protection rating and shock, vibration and interference resistance



#### **REVConnect Pre-term Cat6A**

Factory-terminated RJ45 plugs to REVConnect Core (switch port equipment harnesses). REVConnect Core to OPEN (pigtails) to be used when lengths cannot be exactly defined. More cost effective pre-term solution (no need to use couplers). 1 x Cable REVConnect Pre-Term System available.



#### **BAT450-F Industrial Wireless LAN Access Points**

Customizable configurations - Wide range of configurations available, including port type and quantity, as well as country-specific industry certifications.

Ruggedized and compact design - Meets the IP65/67 protection class and operates at an extended temperature range of  $-40^{\circ}$ C to  $+70^{\circ}$ C to enable mounting on masts or walls in harsh indoor and outdoor areas.

Secure operating system - Runs on Hirschmann's HiLCOS software to ensure maximum network availability and data security across wireless connections.

Increase efficiency and resiliency - With the option of direct 110 V DC power supply



JRC is a leading communications technology company. JRC is making the most of its knowledge, technology and experience built up over many years in various fields of information technology, contributing to the safety and security of people around the world.

# **BROADCASTING**







**Digital TV Broadcasting** 

This FM Radio broadcasting transmitter employs a high-efficiency power amplifier with power MOS-FET modules.



Frequency Standard



Satcomm

# **INDUSTRIES / FACILITIES**







**Simulator** 







**Measuring Instrument** 



Based on its core technologies that it has developed since its founding, JRC is creating new worlds of communications from people to people and to environments by leveraging its three business units, Marine Systems, Communications and Solutions.

# **ROADS / RAILWAYS**





# **MARINE**







# **GMDSS**

**Bridge System** 

Communication Print MF/HF Radio Equipment

# **ORTEA**

# AHEAD bTIME

Besides standard production, ORTEA is extremely flexible in developing and manufacturing special equipment according to user's specifications. Thanks to the experience gained by the Company over its many years of applied technological development. Such development today includes sophisticated computer hardware and software that enables the technical staff to draw up and examine electrical and mechanical designs for each "custom product" on a quick and cost effective basis. The belief that quality of product and customer satisfaction are the core for a modern organization, led to the implementation of an UNI EN ISO 9001:2008, ISO 14001:2004, OHSAS 18001:2007 approved Quality System.



# DIGITAL ELECTROMECHANICAL VOLTAGE STABILISERS DVS

from 210V to 255V (L-N) / from 360V to 440V (L-L)

#### Independent phase control Orion plus

Natural air ventilation Up to 35°C aided with fans



# - ORTEA







DIGITAL ELECTROMECHANICAL VOLTAGE STABILISERS DVS

**Vega**Single-phase
0.3-25kVA



OPTINET



DIGITAL ELECTROMECHANICAL VOLTAGE STABILISERS DVS

ORION PLUS THREE-PHASE 30-1250KVA



STATIC DIGITAL VOLTAGE STABILISERS DVS

**Gemini** single-phase 4-20kVA



# PowerSafe SBS | EON Technology

EnerSys is the global leader in stored energy solutions for industrial applications. We manufacture and distribute reserve power and motive power batteries, battery chargers, power equipment, battery accessories and outdoor equipment enclosure solutions to customers worldwide.

All EON Technology types do retain the traditional features and benefits associated with PowerSafe SBS, in particular:

- The long design life
- The high energy density
- The extended shelf life
- The wide operating temperature range



The DataSafe HX range of valve regulated lead acid batteries have been designed to offer superior solutions for the Uninterruptible Power Supply (UPS) and Information Technology markets.

- Revolutionary 16V, front terminal designs
- Specifically developed for UPS applications 550, 800 and 925 Wpc sizes
- High power density

#### **PowerSafe V Front Terminal**

Powersafe V Front Terminal has the performance and life of the Powersafe V but with front electrical connections for quicker and easier installation and maintenance.

- VRLA technology
- 31 to 165 Ah capacity range
- 12V monoblocs
- Front terminal connections for fast and easy installation and maintenance
- Fits 19", 23" and ETSI racking
- UL94 V-0 flame retardant case and lid
- High reliability









# The rail | power VR

The rail | power VR is a patented technology based on mesh electrodes with a fleece separator. The electrodes use tried-and-tested lead-calcium technology. The electrolyte contains gel additives (ESS technology) and is suspended in the fleece separator. As a result, this technology not only offers the benefits of a fleece battery, but also those of a gel battery. The batteries are installed in housings made of stable polypropylene or ABS. rail | power VR batteries work reliably as on-board batteries in all railway vehicles. They are also used as starter batteries in diesel vehicles.

## The FNC-VR is a valve regulated nickel-cadmium Battery

The extremely low maintenance grid FNC-VR battery is developed in line with the HOPPECKE proven fibre matrix plate technology. The addition of the special recombinant technology of this battery to the fibre plate design gives exceptional reliability in critical applications. The FNC-VR battery provides superior performance to other valve regulated nickel-cadmium technologies.

Designed specifically for UPS, switchgear and other standby applications where the system must be totally reliable with minimum maintenance.

## sun | power VR M

The design principle for HOPPECKE sun | power VR M batteries is based on the use of grid plates and ESS technology. The high energy density of HOPPECKE sun | power VR M batteries results in a very low space requirement, thus enabling maximum utilisation of your premises. The properties of HOPPEKCE sun | power VR M batteries make them extremely versatile. HOPPECKE sun | power VR M batteries are frequently used for street lighting, medical supply units, signal systems and leisure applications. Both the level battery lid with integrated handle and the easy-to-clean surface ensure safe and convenient handling during installation.







# **SIEMENS**

### **Siemens HiPath**

The Siemens HiPath 4000 Real-Time IP System is a converged IP-PBX telephone system—a circuit/packet switched system containing PBX common control components and utilizing both an internal switch network and external IP-based switch network (that is, enterprise LAN/WAN—for provisioning reliable and real-time call control over alternate networks.

The HiPath 4000 product family features the following models, maximum capacities and redundancy offerings:

- HiPath 4300—supporting from 300 to 2,000 stations (and a maximum of 1,200 IP stations), but no common control (that is, main processor) or power redundancy options.
- HiPath 4500—supporting from 1,000 to 12,000 stations (and a maximum of 2,490 IP stations), with standard common control (that is, main processor) redundancy and optional power redundancy.
- •HiPath 4900—supporting up to 30,000 stations (and a maximum of 7,470 IP stations), with standard common control (that is, main processor) redundancy and optional power redundancy.
- HiPath 4000 Networked—supporting up to 100,000 stations (and a maximum of 30,000 IP stations). This can be 100,000 IP stations depending on how many systems are networked.



Telephone

# HiPath 4000 Hicom 300 E/300 H

These Operating Instructions describe the use of the optiPoint 500 economy optiPoint 500 b asic, optiPoint 50 0 standard optiPoint 50 0 advance telephones in conjunction with the HiPath 4000 Communication Server, Version 1 .0 and Hicom 30 0 E/300 H, all Versions



They describe all functions you can use from your telephone. You may find that some functions you wish to use are not available on yo

# **SIEMENS**

## **Totally Integrated Automation Portal**

Totally Integrated Automation Portal (TIA Portal) provides you with unrestricted access to our complete range of digitalized automation services, from digital planning and integrated engineering to transparent operation.



### **Software for SIMATIC Controllers**

ntuitive and efficient engineering – from the microcontroller to the PC-based controller

Digitalization is noticeably changing our world – and the world of industry. The data volume in modern industrial plants is growing continuously. That brings new challenges for SCADA solutions: Enormous data volumes must be managed and archived for the long term. At the same time, production processes must be monitored and controlled as reliable, efficient, and productive as possible and they must be constantly optimized.



### **Spare Part Services**

Whether new, repaired or refurbished – our services ensure that any spare part required will reach you within the shortest possible delay. Easy Daily Spares® guarantees fast and reliable delivery of OEM-quality spare parts by the next business day. Easy Repair means that defective parts are overhauled and refurbished to fully functional 'good-as-new' components. Here too, depending on the region, 24h delivery is possible (advance replacement).



## SIMATIC SCADA Systems

Totally connected. Totally digitalized.

users over the entire life cycle of the machine or plant – from the planning and design With SIMATIC, users rely on an integrated engineering environment.



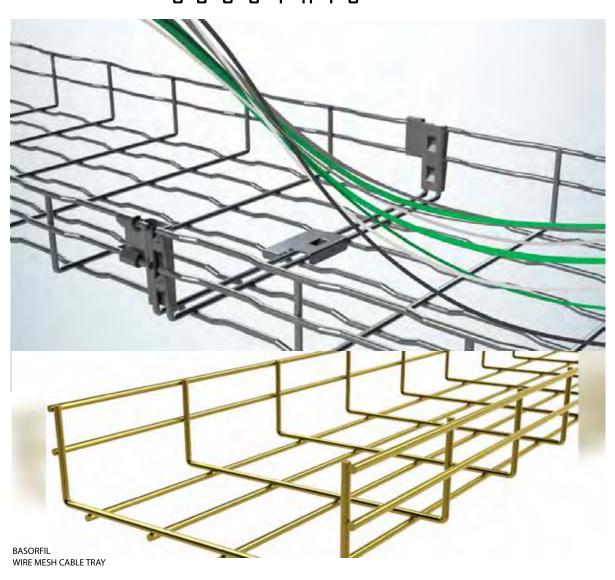
# **SIMATIC SCADA Systems**

Totally connected. Totally digitalized.

- Double Ear Binaural Headset
- Guaranteed Compatibility with your Tele phone
- Noise Cancelling Microphone
- Quick Disconnect Connection
- Full 12 Month Warranty



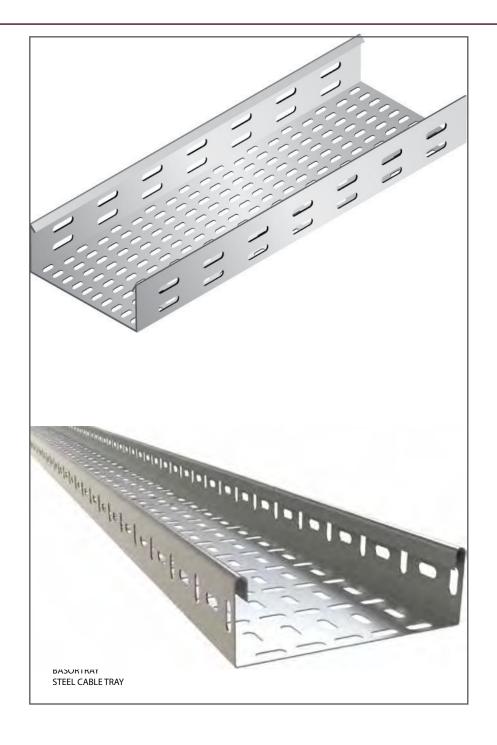
# \_\_\_\_\_basor



BASOR ELECTRIC, S.A. has more than 30 years of experience in the sector of industrial electrical systems which make it a recognized leader in the manufacture of cable conduction systems for both big and small engineering works. BASOR constantly demonstrates its interest in innovation by investing in its R&D department which, together with the engineering department, studies each case individually to find the most efficient solution and offer its clients the most advanced products available in the market. BASOR ELECTRIC is in possession of a number of patents related with the designs of the standardized family products.

All our products are manufactured following the IEC's International Standards, except in those cases in which the International Electro technical Commission has not yet developed an international standard and, therefore, the products are manufactured following European standards. To manage projects based on non-international rules and regulations, which are different to European regulations, (NEMA, ASTM. etc.), BASOR draws up technical documentation showing the equivalencies between such regulations and European regulations.

Moreover, every year the company invests greatly in the renovation of its machinery, in security for its staff and in the automation of the different processes. This reduces the time needed to manufacture a product and therefore improves the service, which can be rendered to clients. All the processes concerning the manufacture of every family of products are carried out in the production centers owned by GRUPO BASOR, which are located in Almansa Castell6 de Rugat Gandia

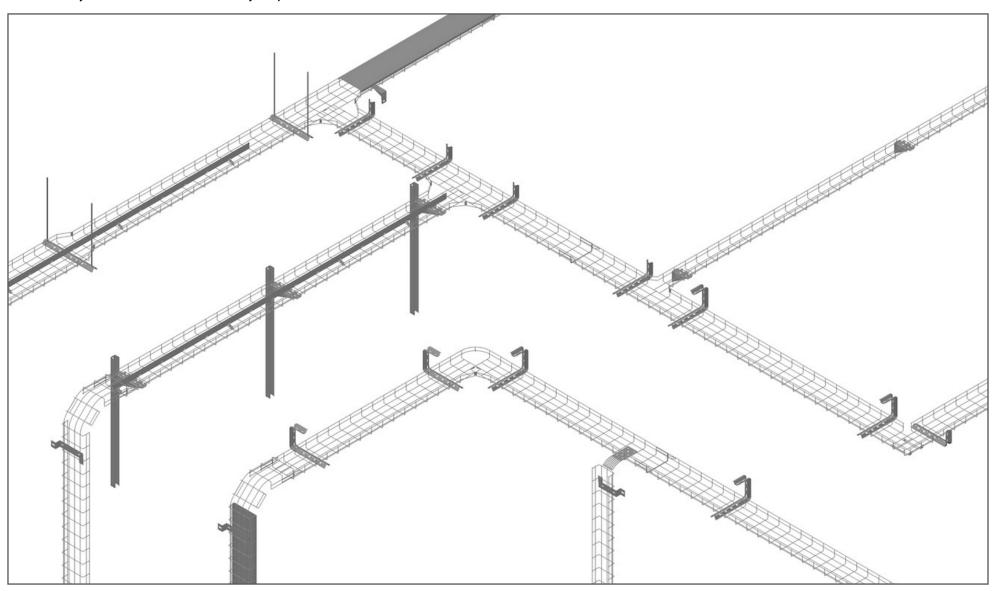




# basor e L e C T R i C



BASOR is one of the few companies in the industry of electrical cable trays which has its own Superficial Treatment's' and Plant, where the products receive a final hot dip galvanized finish, a cincado finish or an organic finish. The company has a great international projection, actively exports and distributes its products to more than 20 countries from its logistic centres in Almansa, Getafe (Madrid), San Vicens dels Horts (Barcelona), Paterna (Valencia), Seville, Vigo, Lisbon (Portugal), Paris (France) and Budapest (Hungary). The commercial department shall clarify any doubts which you may have. Please don't hesitate to contact any of our offices or, should you prefer to do so, feel free to contact our head office.





The high level integration of electric fence security system delivers full configuration, control and monitoring capabilities for multi-zoned, multi-site perimeter security. Our security electric and non-electric fence systems are safe, effective and reliable perimeter security solutions. It is configurable for any type and size of business. Our security solutions are fully customizable. The electric-fence technology has been installed throughout the world to provide effective perimeter protection and site security across a broad spectrum of applications.













To ensure such a high voltage, the wires used for the energizers need to have a high conductivity. This means that the wire should have a low resistance. For this purpose, professionals at Stinger use a specially made aluminum wire which has an extremely low resistance of 30 Ohm/km, compared to 260 Ohm/km on braided steel wire. The lower the resistance, the higher is the conductivity. This results in higher energy and voltage availability on the fence.







#### **EMPOWERING THE WORLD**

Vertiv designs, builds, and services critical infrastructure that enables vital applications. From data centers to communication networks to commercial facilities - we've got you covered.

We support today's growing mobile and cloud computing markets with power, thermal, and infrastructure management solutions.

Uninterruptible Power Supplies (UPS) Liebert Trinergy Cube UPS, 150 kW-3.4 MW

Liebert® Trinergy™ Cube is the new generation of Trinergy UPS delivering unsurpassed performance to enterprise data centers. Ready to evolve with growing business demands,



### Liebert EXL S1 UPS, 300-1200 kW

Liebert® EXL S1 delivers secure power while providing first class load protection and maximum energy saving for medium-large data centers and mission critical applications.



#### Liebert ITA2 5kVA - 20kVA

The Liebert ITA2 is a fully-digital, highly reliable, double conversion UPS solution that delivers clean and consistent power. This highly efficient solution is ideal for various deployments, whether they're IT racks, network closets,.



### Liebert APS 5kVA - 20kVA 230VAC

The Liebert® APS UPS provides mission-critical availability ensuring your critical IT functions – and your business – will be available and running as expected through power disruptions, fluctuations and outages. The Liebert® APS UPS...





### **Room Cooling**

Liebert DSE Free-Cooling Economization System, 50-250kW

### Part #DA0

Reduce costs and increase economization hours with the highly efficient Liebert DSE Packaged Free-Cooling Solution. The Liebert DSE is the world's most widely deployed pumped refrigerant economization system for data centers,







### Liebert Mini-Mate, Ceiling-Mounted Precision Cooling System, 3.5-28kW

### Part #MMD,MM0

The Liebert Mini-Mate is a zero footprint computer room cooling system for 7x24 temperature and humidity control and air filtration. It installs above a dropped ceiling and is easy to service, requiring only front access for maintenance.



### **Heat Rejection**

Liebert MC Microchannel Outdoor Condenser, 28 - 220kW

### Part #MCS,MCM,MCL

The Liebert MC Microchannel Condenser is an outdoor air-cooled condenser that provides higher efficiency, while using less refrigerant. Features such as variable speed fans, advanced controls and a microchannel coil make this system...





#### **AUTOMOTIVE INDUSTRY**

We can support you from metal forming to final assembly. In the Automotive production market, technology improvement is vital to increase production and revenue, for that reason, these Technologies can optimize your operation, from system design through maintenance. We can support you from metal forming to final assembly.

### **Metal forming - Stamping:**

o Press control system: Tandem and Transfer Systems o Welding Stations

#### **Powertrain:**

- o Sub-Assembly & Test Machines
- o Material Handling/conveyors
- o Robot Integration

### **Body Shop/Paint Shop & Final Assembly:**

- o Specific Control for Water, HVAC and Pressurized Air
- o Tracking Solutions
- o Manufacturing Execution System (MES)







### **ENTERTAINMENT INDUSTRY**

### **Theme Park:**

For theme parks, redundancy, instant response times and safety are essential to the engineering and design process.

- o Power Distribution
- o Motor Control
- o Monitoring
- o Redundant Controls
- o VFD's

### **Stage Automation:**

Controlling stage machinery and components through the use of electrical power and automation.

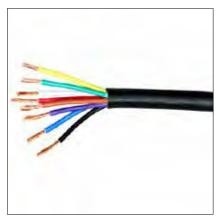
- o Motorized equipment
- o Stage effects
- o Stage lighting



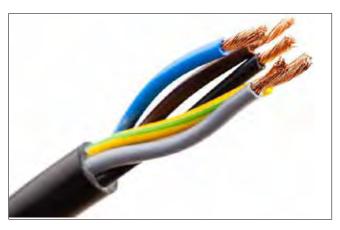


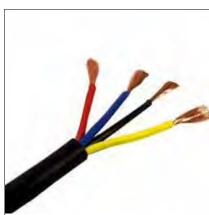


Synergy Cables manufactures cables through a continuous process including pulling of the AI or Cu wire, stranding, insulated coating (XLPE, EPR, or PVC), screening, and sheeting. Synergy Cables assures each customer a tailor-made solution to its needs, combined with logistical expertise.

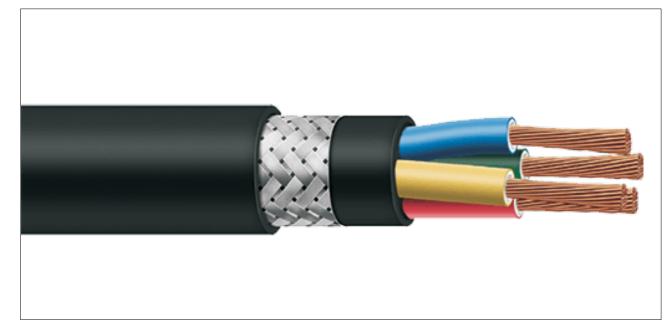














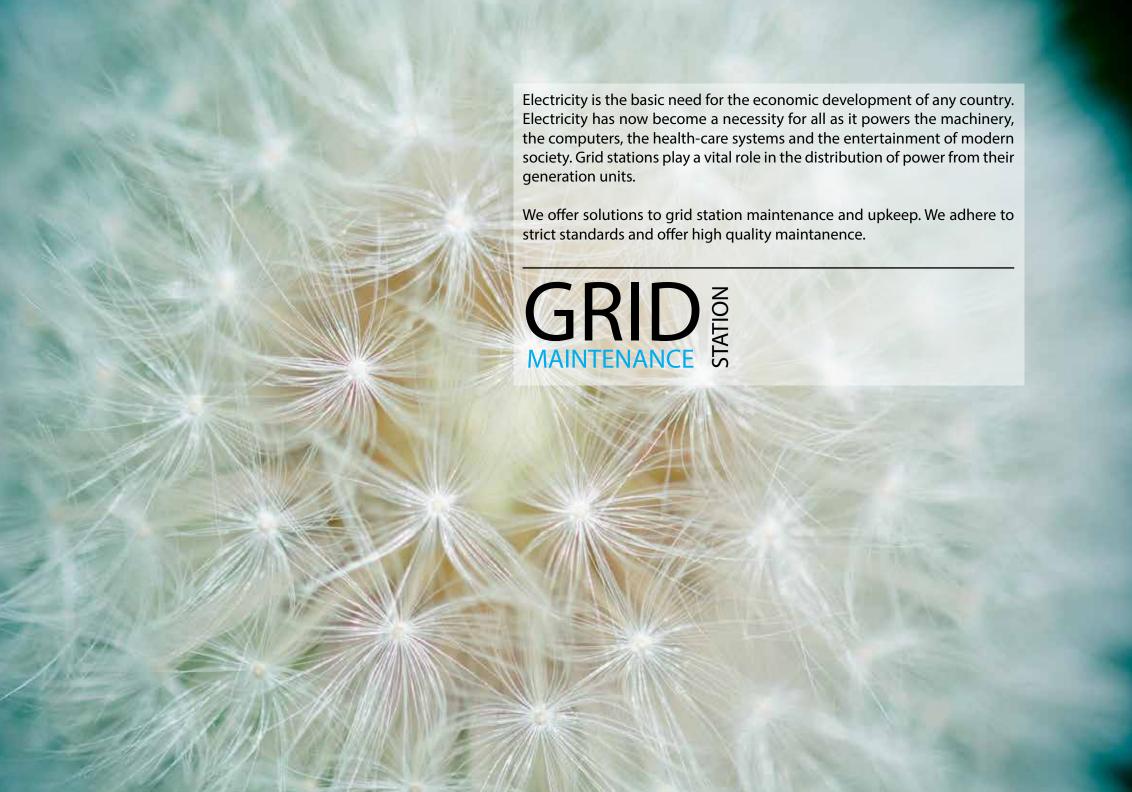
Synergy Cables sells its cables worldwide and has subsidiaries in the United States, Germany and the United Kingdom. The cables are designed and manufactured according to the most demanding specifications and international standards (UL, IEC, BS, VDE, AS, IS, etc.). The company is ISO 9001:2000 certified. Our manufacturing facilities continuously incorporate the latest state-of-the-art equipment, technologies and management techniques. Rigorous vendor selection plus testing and monitoring, starting from raw materials through all stages of cable production, ensure quality excellence and years of trouble-free service.











### SYSTEM SYSTEM & AUTOMATIONS

We are the leading and latest innovative technology providers in the field of Electrical SystemS, Insulations and Automation. We take pride in having executed jobs meeting quality, time and cost. Meeting growing needs in the energy sector, we are engaged in executing turnkey projects for industrial electrical projects. We are customer-centric in our approach, and the single largest source for a wide variety of electrical equipment and products.

With a capable team possessing strong engineering skills and experience, a strong technology orientation, we are fast emerging as a first choice for turnkey contracts for high-quality electrical projects with several industrial projects.









## FIRE FIGHTING EQUIPMENT LINSTALLATION \$

We give prime importance to deliver complete and integrated fire safety, prevention, detection, fire suppression, and security solutions to maximize customer satisfaction along with prompt and professional service. A team of qualified and dedicated professionals is delegated at our company which is equipped to execute the most challenging project with utmost ease to take care of all your Fire Fighting safety concerns. Our team of qualified and highly experienced engineers and technicians prudently train in Quality Assurance and Quality Control on continual basis at all levels. All our products and services follow stringent guidelines and are completed according to quality statuary and regulatory requirements.

















### SECURITY SURVEILLANCE SYSTEMS

In the changing era of today, there is a dire need for companies to keep a shrewd eye on their security and surveillance systems. At our Company we provide you with a variety of technological security solutions for the residential, commercial and government sectors. Staffed with highly trained, experienced and creative individuals with sound technical background to deliver you the best as you require. Our commitment is to offer advanced CCTV System equipped with the finest quality equipment to meet today's stringent requirements. Our latest imported surveillance products meet the existing and future requirements particularly in the wake of the prevailing law and order situation globally.





## &SANITARY CONTRACTING

We provide a well-qualified team of plumbers and plumbing technicians who are competent at handling problems and emergency plumbing situations. As a premier plumbing and sanitary contractor we provide comprehensive and cost-effective solutions guaranteed to exceed your expectations and take care of all your plumbing and sanitary needs. Installation services and repairing of a wide variety of plumbing fixtures for complete commercial projects and kitchens, bathrooms and throughout your home or offiice are offered at by us. We aim to provide professional efficient installation and solutions, maintenance customized to suit each and every one of our customer's requirement. Our highly dedicated, trained and experienced staff can solve your issues in an efficient and effective manner.

VENTILATIONS

& AIR FABRICATION

SYSTEMS INSTALLATIONS

& MAINTENANCE

We understand the importance of adequate ventilation in order to maintain good indoor air quality and a pleasant working environment so we expanded it services to include Air Conditioning and Ventilations as well to provide ventilation with filtration and provide thermal comfort. We design, install, service and maintain a large range of quality air conditioning systems for offices, factories, shops, restaurants, IT suites, industrial applications and all other types of commercial property.

From design to installation, you can rely on our in house team for all you ventilation and air conditioning requirements. We are leading suppliers of comfort cooling, heating, air conditioning systems, VRF/VRV heat recovery systems, and supply and extract ventilation systems.







## NSTALLATION MY MY MY MY REPAIRING

There's more to proper plumbing than just following the codes and rules. Planning and installing a system that's quiet, efficient, and leak free is something of an art, an art mastered by people at POWER SOLUTIONS. Sanitary Installations and repairing pipes requires skill and proper knowledge, which our team possesses.

We can ensure flawless and exceptional services when it comes to sanitary installation and pipes repairing. The aim is to provide customers with fast and efficient service along with good quality products as we have sufficient resources, skills and facilities to meet the industry requirements.

Sanitary Installations services are available for both commercial and residential purposes.









As the demand for cooling and energy-efficient solutions is growing, district cooling is becoming an essential part of urban development. Wte do realize the changing techniques required to cope up with the industrial ever increasing needs. Thus it also features District Cooling Contracting as a service. District cooling systems provide buildings with cooling which is energy-efficient, cost-effective and environmentally friendly. Being a green and economic alternative to conventional electric chillers, district-cooling systems can provide the buildings in an area with chilled water for comfort and process cooling – hand in hand with district heating. Availing this service from us has many benefits as centralized cooling is not just cost effective and energy efficient but also reduces maintenance cost, requires less space needed for cooling purposes, economies of scale and reduction of the total installed capacity. District cooling is a superior alternative to conventional air conditioning as it helps reduce energy consumption and costs to both customers and governments alike, while also protecting the environment by cutting carbon dioxide emissions.

## DISTRICT COOLING CONTRACTING







PANEL WORK

Power Solution is a total Automation and Electrical system integrator with globalreach. Its scope of work can start with assisting you in the successful implementation of the project.











PANEL WORK

Our approach is to create strategic long – term industrypartnerships with our clients. To achieve this, we combine the best industry expertise with a proven service delivery method.









Cable Ladder Trays are designed to meet most requirements of cable and electrical wire installations and comply to local and international standards of fabrication and finishing.

### CABLE LADDER& MESH







Cable Mesh connection profile for installations requiring long runs of straight Cable Trays lengths. Applications: Network cabling, wiring closets, fiberto-desktop applications and can often be used in suspended ceiling plenum areas and under computer room flooring.

### CABLE LADDER& MESH







### **BATTERIES**

Power Solutions Static Power offers complete battery installation services for all major brands. . Our expert technicians will work with your staff to ensure a seamless integration of the proper UPS based on site requirements, project scope and the product.





Power Solution offer HFO generators with the most renowned brands in the world and is reputed for its economical fuel consumption. We design, install and operate HFO power plants on long-term. We provide consultancy in determining the actual requirement and assist in constructing the power house for installation of the equipment.

# HFO & GENERATOR WORK





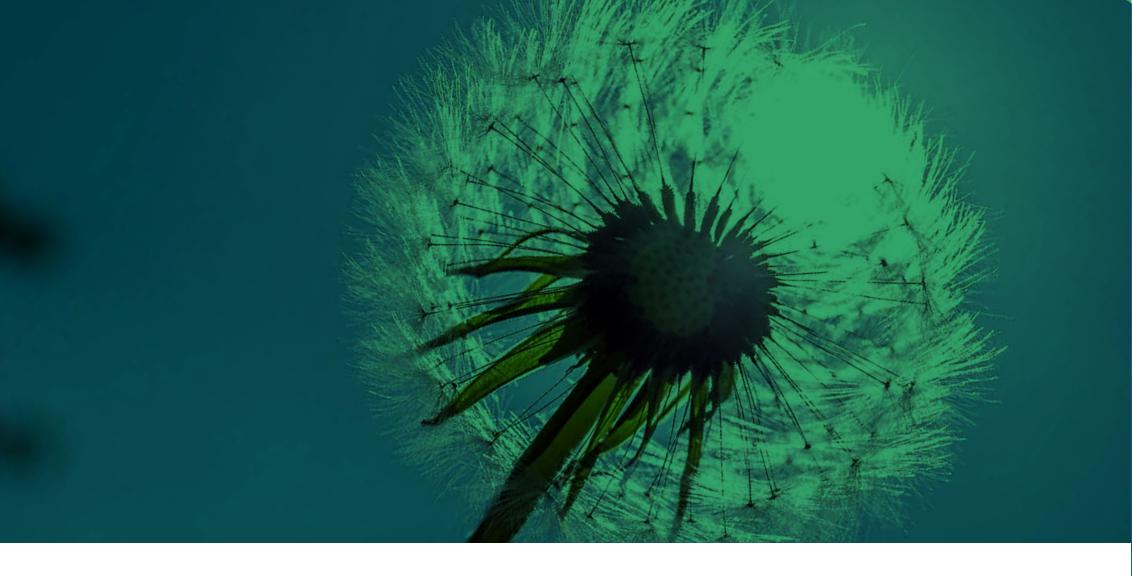




### **ENGINEERING SOLUTIONS**



FOR THE ENVIRONMENT, INDUSTRY AND COMMUNITY



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