



**POWER  
DISTRIBUTION**



**IT  
INFRASTRUCTURE**



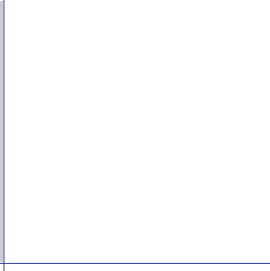
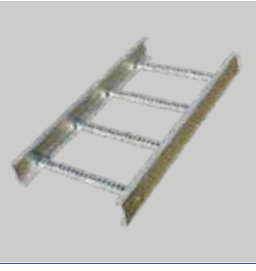
**INDUSTRIAL  
AUTOMATION**



**VOLTAGE  
STABILIZERS**



**CABLE  
MANAGEMENT**



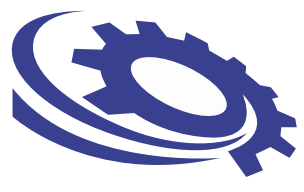
**TRANSFORMERS**



# PRODUCT CATALOG



**Trusted  
across  
Africa**



**PCTL**  
Automation Ltd  
Electrical Solution Provider

**Quality  
Certified  
Manufacturer**



## WHO WE ARE

**PCTL AUTOMATION LTD.** is an electrical engineering solution provider company. Specializing in design, manufacturing and servicing of electrical switchboards, Automation systems, Servo Voltage Regulators and customised solutions for both commercial and industrial environments.

We have been offering our products and services in East African region over 15 years and created a large number of satisfied clientele in almost all sectors of business spectrum.

Team PCTL strive hard as a preferred supplier and service provider to satisfy our customer's in the field of electricals across Africa.

## OUR VISION

Establish **PCTL AUTOMATION** as the premier manufacturer & supplier of electrical distribution & control products.

## OUR MISSION

"To offer World class electrical products by delivering outstanding values at a revolutionary price".



# CONTENT

## 1 POWER DISTRIBUTION

- ▷ Low Voltage Power Distribution
- ▷ Automatic Power Factor Correction - Safevar
- ▷ Automatic/Manual Change Over Systems
- ▷ Generator Synchronizing Panels
- ▷ Sub Mains Distribution Boards
- ▷ MCB Distribution Boards
- ▷ Bus Duct & Rising Mains
- ▷ Motor Control Centres
- ▷ Distribution Transformers
- ▷ Industrial Automation
- ▷ M.V SwitchGear
- ▷ Energy management systems
- ▷ Prepaid/Postpaid metering Solutions

## 2 CABLE MANAGEMENT SYSTEM

- ▷ Perforated Cable Trays
- ▷ Metallic Cable Ladder
- ▷ Metal Trunking
- ▷ Wire mesh Cable Tray/Basket
- ▷ Junction Boxes/Adaptor Box
- ▷ Floor Boxes/Table Top power distribution

## 3 VOLTAGE OPTIMIZATION

- ▷ Servo Voltage Stabilizers
- ▷ Static Voltage Stabilizers
- ▷ IGBT Voltage Regulator
- ▷ UPS

## 4 IT INFRA - PRODUCTS

- ▷ Network Cabinets/Racks
- ▷ PDUS
- ▷ Security Cage for Data Centres
- ▷ Battery Racks/Cabinets
- ▷ Intelligent Power Distribution Unit for Data Centres
- ▷ Intelligent Battery Monitoring System

## 5 Other Products

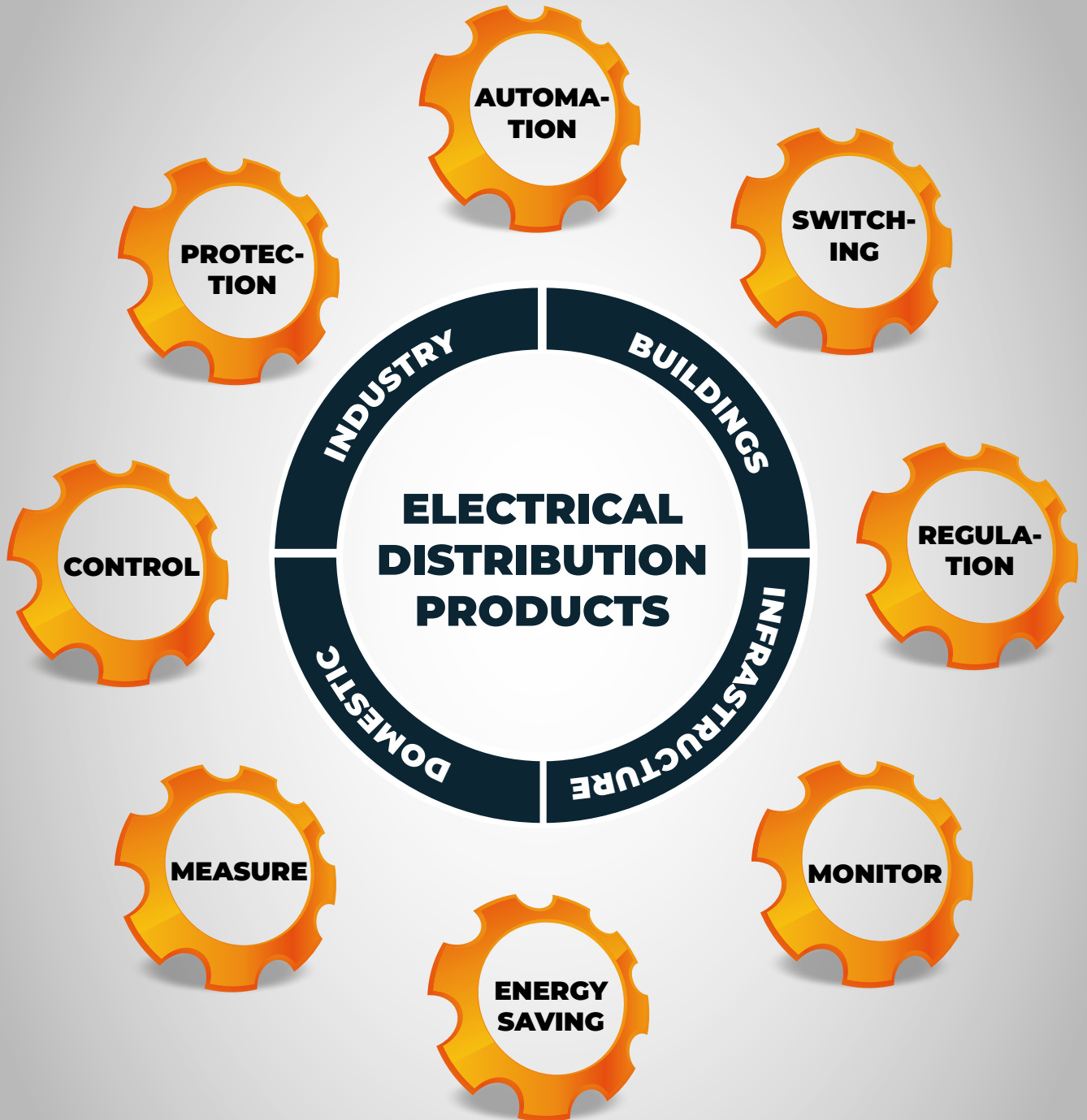
- ▷ Outdoor Telecom Shelter
- ▷ D.C Aircon
- ▷ Enclosure - FlexiPack
- ▷ CNC Job Work



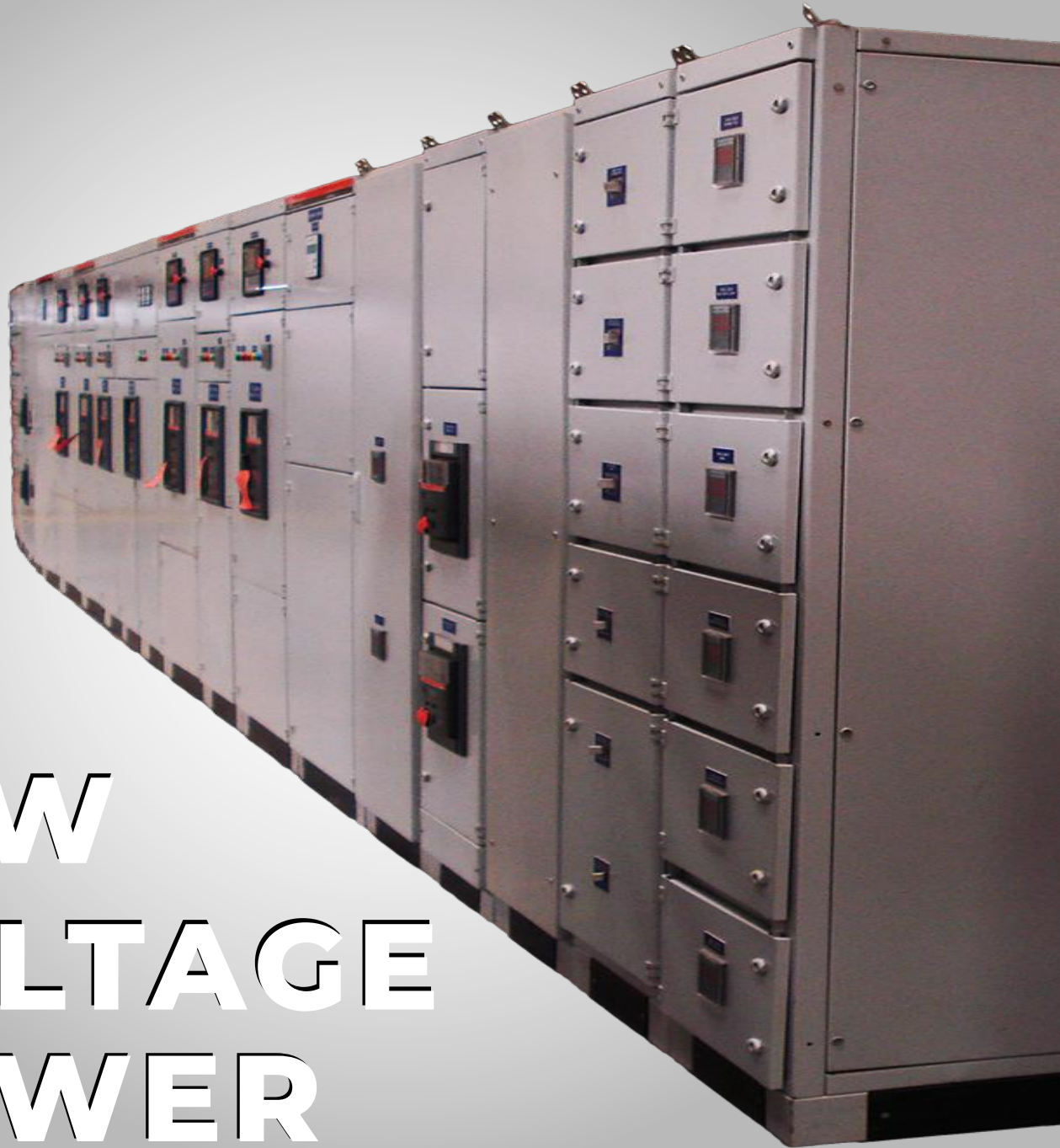
**INDUSTRIES**



**OFFICES**



**BUILDINGS**



# LOW VOLTAGE POWER

# DISTRIBUTION

Robust, reliable safe & secure distribution of electrical power is our core business. We design Low voltage Power distribution Boards in accordance with IEC 61439-1/-2 and is based on the modular approach, with respect to mechanical and electrical aspect.

Our product has been accepted in all the spectrum of industry and commercial buildings across Africa. Our specialisation in Low voltage switch boards means we can design, deliver switch boards for all your requirements.

## SYSTEM ADVANTAGES

- ▶ Optimum protection for equipment.
- ▶ Design verified by testing (type-tested).
- ▶ Optional Arc flash protection.
- ▶ High operational reliability and availability.
- ▶ Maintenance-free bus bars and frame construction.
- ▶ Compact, modular, space-saving design.



## SPECIFICATIONS

- ▶ Available up to -6300 a (in rating) -form-4 (segregation).
- ▶ IEC standards/ KEIEC - diamond mark quality certification.
- ▶ High quality world class component.
- ▶ Modular distribution boards.
- ▶ Customized solutions available.
- ▶ High conductivity copper bus bars - high class insulators.
- ▶ Full communication solution available for bms systems.



## APPLICATIONS

- ▶ Pharmaceutical Companies
- ▶ Power Stations
- ▶ Paper industries
- ▶ Water projects, Dams
- ▶ Steel Mills
- ▶ Food Industries
- ▶ Data Centres
- ▶ Airports
- ▶ Office Buildings
- ▶ Shopping Centres
- ▶ Hospitals
- ▶ Learning Institutions

# AUTOMATIC POWER FACTOR CORRECTION-SAFEVAR

## FEATURES



- ▶ Suitable for indoor installation.
- ▶ All Banks are supplied with MCCB as incomer.
- ▶ Capacitors switching is done using capacitor duty contactors.
- ▶ Economical in longlife.
- ▶ Wall mounted design are upto 200KvAR, above 200KvAR is free standing design.
- ▶ Natural & free cooling.
- ▶ Low P.F alarm.
- ▶ Rs 485 communication is optional.
- ▶ Heavy duty capacitors.
- ▶ High Harmonics power factor correction with detune reactors.
- ▶ Fast switching using static contactors suitable for high dynamic loads (fast changing loads).



## SYSTEM ADVANTAGES

- ▶ Reduce electricity Bills.
- ▶ Reduce power loss.
- ▶ Reduce CO<sub>2</sub> emissions.
- ▶ Economical in longlife.
- ▶ Optimised use for installation.

# AUTOMATIC/MANUAL CHANGEOVER SYSTEM



## FEATURES

- ▶ Options available for change overs systems:
  - 1.MCCB type
  - 2.ACB type
  - 3.Contactor type
  - 4.Motorized Isolator type
- ▶ Micro Processor Based Open Transition Automatic Change Over Systems.
- ▶ Current Ratings **16-6300amps.**
- ▶ Full Parameter Settings Like Genset On Delay Genset Off Delay After Run Timing Status Display Supplies On Load And Available.
- ▶ Mechanical And Electrical Interlock Integral.
- ▶ Unique Inbuilt Manual Bypass Available With Isolator Type.
- ▶ Multiple Genset Starting Option Available.
- ▶ Load Management.



## ADVANTAGES

- ▶ Possibility of integrating complex sequences.
- ▶ Facility of programming gensets to run equal hours in a system of multiple gensets.
- ▶ Remote operation possibility by using standard communication protocols.
- ▶ Reliable and Optimum change over system.
- ▶ Manual over ride options ( offered in selected ranges).
- ▶ Adjustable delays for change overs Simple and easy settings.
- ▶ High operational reliability and availability.
- ▶ Compact, space.
- ▶ Saving design.
- ▶ Electrical track resistance and with low water absorption.

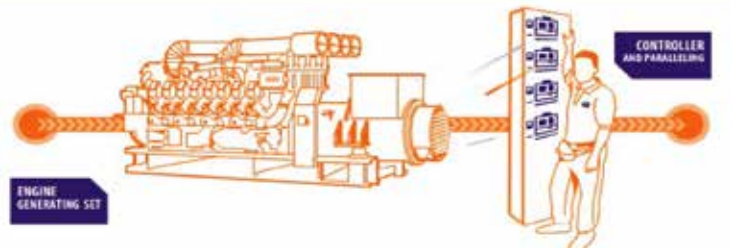


# GENERATOR SYNCHRONIZING PANELS

PCTL Automation designs and supplies Synchronizing systems for various demanding applications, the synchronizing is achieved from various sources such as Utility, Gensets, Solar or Gas turbines. The various load dependent functions can also be programmed in order to make the installation more energy efficient, the heart of the systems are very advanced controllers capable of eliminating the need for manual synchronizing, the important protections are inherent and are always active even in simple applications also. The basic solution is visualized below which is more clear graphically but in case of clarifications our support team will be more than happy to provide the necessary details for your requirement.

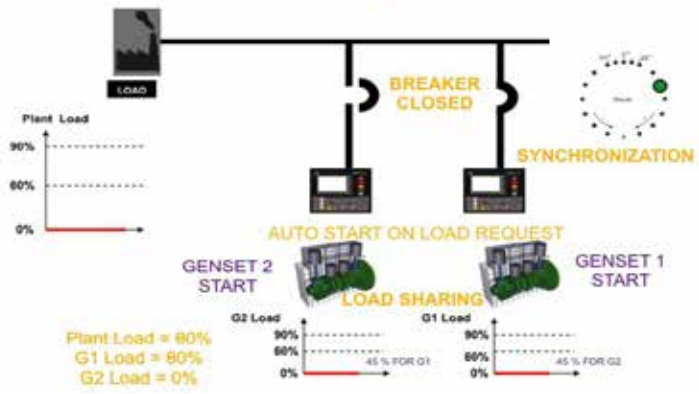


## SYNCHRONIZING SOLUTIONS



### SYNCHRONIZATION AND LOAD SHARING MODULE

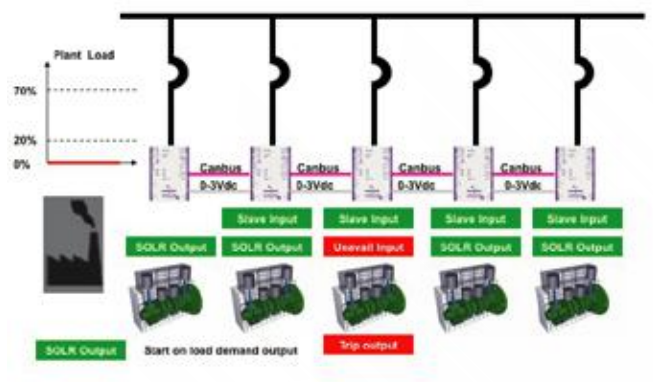
#### Auto load/unload



## ADVANTAGES

- ▶ Preventive (less mechanical stress on gensets).
- ▶ Flexible ( Easy maintenance).
- ▶ Power optimization (ideal genset operating run).
- ▶ Reliable (security with redundancy).
- ▶ Responsive (better response to load impacts).
- ▶ Expandable (no lit power plant extension).

## 2:LOAD DEPENDENT FUNCTION



## SUB MAINS DISTRIBUTION BOARDS

Sub mains distribution boards are installed midway to the power distribution system between the main board and the sub circuit. We manufacture Sub mains Distribution Board under brand name **SAFELINK** and **RUBY**.



### FEATURES

- ▶ Standard:-**KEIEC-60439 1-3**.
- ▶ Maximum current rating:-**1200 Amp**.
- ▶ Max. voltage:-**690 Volts**.
- ▶ Incoming Device :-**160 Amp to 1200 Amps**.
- ▶ Protection degree :-**IP41**.
- ▶ Color:-Powder coat **RAL 7035**.
- ▶ Enclosure material :-Cold rolled sheet steel .
- ▶ With internal covers and glazed doors.
- ▶ **RS 485** metering solutions.
- ▶ TVSS (Transient Voltage Surge Suppresion).
- ▶ Remote monitoring.

### ADVANTAGES

- ▶ Ready made boards.
- ▶ Readily available stock.
- ▶ Outgoing circuit can be fixed or changed as & when required.
- ▶ Wall mounting & free standing design.
- ▶ ABB or Schneider MCCBs.
- ▶ Easy to fix.

## MCB DISTRIBUTION BOARDS

Ruby is a range of MCB type TPN Distribution Boards and Consumer Units designed for safety, reliability and availability in electrical building installations. Ruby CU & DBs are designed to accept ABB & SCHNIEDER products.



### FEATURES

- ▶ Standard: **IEC 439-3 & BS 60439.**
- ▶ No. of ways: **4, 8, 12, 18, 22, 28 and 32** (higher no. of ways available).
- ▶ Maximum load **250Amps.**
- ▶ Maximum Voltage **240/415 V ac.**
- ▶ Degree of protection **Ip 41.**
- ▶ PAN Assembly **IP 20 copper.**
- ▶ Enclosure finish: **RAL 7035.**
- ▶ Incomer type: Isolator **63, 100, 125Amp, MCCB 160, 200, 250Amps.**
- ▶ Outgoing MCB single pole, tripple pole 6 to 63 Amps.
- ▶ Surge protection optional.
- ▶ Single phase/Three phase Kwh meters optional.
- ▶ Split Busbar system optional.
- ▶ Suitable for ABB and Schnieder components.

### ADVANTAGES

- ▶ Ready made boards.
- ▶ Readily available stock.
- ▶ Outgoing circuit can be fixed or changed as & when required.
- ▶ Wall mounting.
- ▶ Quick and easy installation.

## BUS DUCTS & RISING MAINS

### BUSDUCT

Bus duct is an economical solution when connecting high current loads compared to conventional Cables. PCTL has managed to carve a niche in the market for manufacture, supply and the export of a wide range of Bus Ducts which are made in a precise manner using a high quality copper / Aluminum. We offer Segregated / Non-segregated Bus Duct manufactured to suit all industrial requirement.

### FEATURES

- ▶ System: 3 Phase, 3 or 4 wire, 50Hz.
- ▶ Rated Current: Up to **6300A**.
- ▶ Operational Voltage: **415V AC**.
- ▶ Rated Insulation: **1000V**.
- ▶ Busbar material Copper/Aluminium.
- ▶ Rated Service Voltage: **690V**.
- ▶ Ambient Temperature: **45° C**.
- ▶ Short Time Current: **50KA for 1Sec, 105KA peak**.
- ▶ Degree of Protection: **IP42** for indoor installation, **IP55** for outdoor installation.
- ▶ Form of Separation: Up to 3B/4B (Optional Type 5).
- ▶ Type Tested for Short Time Current withstand Temperature Rise Degree of Protection.
- ▶ Type Totally enclosed, Air insulated, Non segregated.
- ▶ Enclosure Epoxy Powder Coated CRCA Sheet.
- ▶ Neutral 50% / 100% (Optional).
- ▶ Earthling Separate Earth bus provided on enclosure.
- ▶ Ref. Standard: **IEC61439-12009, IS:8623**.



## BUS DUCTS & RISING MAINS

### RISING MAINS

Rising Mains or Busways is an economical alternate for cable in high-rise building, Data Centers, Work Shop Floors. Unlike busduct these are used as distribution network. Bus bar risers have tap off points from where the power can be tapped.

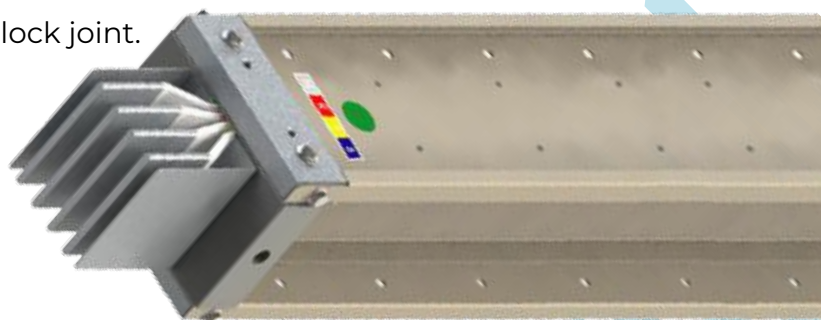
### FEATURES

#### EB - SandwichType

- ▶ Compliance of standard: **IEC 61439(1&6.)**
- ▶ Independent Certified Authority: UL,ASTA CPRI.
- ▶ Conductor Material & rating: Copper **800A-5000A.**
- ▶ Rate Operational Voltage (Ue): **1000 Volt,AC.**
- ▶ Rated Impulse withstand Voltage (Uimp) **12KV (1.2/50a).**
- ▶ Enclosure Material: Aluminium.
- ▶ Busbar Insulation: multi layer class 'F' insulation.
- ▶ Degree of protection: **IP 54/IP55/IP65/IP67.**
- ▶ Fire Rating 240Min. **(ISO834)55.**
- ▶ Seismic Compliance: Zone -5.
- ▶ Section Jointing: Uniblock joint.
- ▶ Plug-in Box: **32-630A.**

#### EB - Compact Air Insulated Type

- ▶ Compliance of standard: **IEC 61439(1&6).**
- ▶ Independent Certified Authority: UL,ASTA CPRI.
- ▶ Conductor Material & rating: Copper **125.-2000A, Aluminium 200 -1250A.**
- ▶ Rate Operational Voltage (Ue): **1000 Volt,AC.**
- ▶ Rated Impulse withstand Voltage (Uimp): **12KV (1.2/50a).**
- ▶ Enclosure Material: G.I.
- ▶ Busbar Insulation: Class -F.
- ▶ Degree of protection: **IP 54/IP55.**
- ▶ Fire Rating 240Min. **(ISO 834).**
- ▶ Seismic Compliance: Zone -5.
- ▶ Section Jointing: Uniblock joint.
- ▶ Plug-in Box: **32-630A.**



## MOTOR CONTROL CENTRE

PCTL Automation offers, a complete Motor Starting Solution for low voltage AC and DC motors, based on request a, type-1 or type-2 coordinated starters are offered.

Normally, when the load like a motor is applied a network voltage across it terminals, the motor has to overcome the load torque and connected inertia during this transition phase, the motor currents should remain within the limits acceptable by the mains, although the type of starting reduces the inrush current, it also reduces the torque supplied by the motor.

The various types and solutions offered are and not limited to :-

### AC MOTORS ( cage induction Motors)

- ▶ Direct Online Starting
- ▶ Star Delta starting
- ▶ Soft starter starting
- ▶ Variable speed drive starting
- ▶ Resistance starting

### AC SLIP RING INDUCTION MOTORS

- ▶ Water Starters
- ▶ Resistance based starting

### DC MOTORS

- ▶ DC Drives



## SPECIFICATIONS

- ▶ PCTL Offers low voltage motor control center as per IEC standards.
- ▶ The structure can be outdoor or indoor application.
- ▶ The Modular MCC offered are up to ip65 degree of protection with form 4 segregation.
- ▶ The PCTL-modular MCC offers fixed, or plug-in, withdrawable and full standard 2.3 Mtrs height, with power rating going up to 4000A horizontal (not limited) and 1600A vertical bus.
- ▶ Designed for the highest degree of safety.
- ▶ Ease of installation and maintenance.
- ▶ Reliability and flexibility.
- ▶ The MNS-MCC provides users with maximum availability time.

## SYSTEM ADVANTAGES

- ▶ Highly safe and reliable.
- ▶ Easy to use.
- ▶ Flexible configuration.
- ▶ Easy to maintain.

## Istart PUMP STARTERS

For pumps application PCTL offers Istart solutions where various parameters are monitored to provide a full protection to the motor in question the starting can be DOL or SD starting, but active current monitoring provides following protections such as:

- ▶ Continuous UNDER/OVER Voltage monitoring.
- ▶ Constant Current Monitoring.
- ▶ Locked rotor protection.
- ▶ Phase sequence monitoring and protection.
- ▶ Fault memory.



# DISTRIBUTION TRANSFORMER

Distribution transformers are heart of any power distribution network. We offer high quality distribution transformers for various voltage network used in Africa.



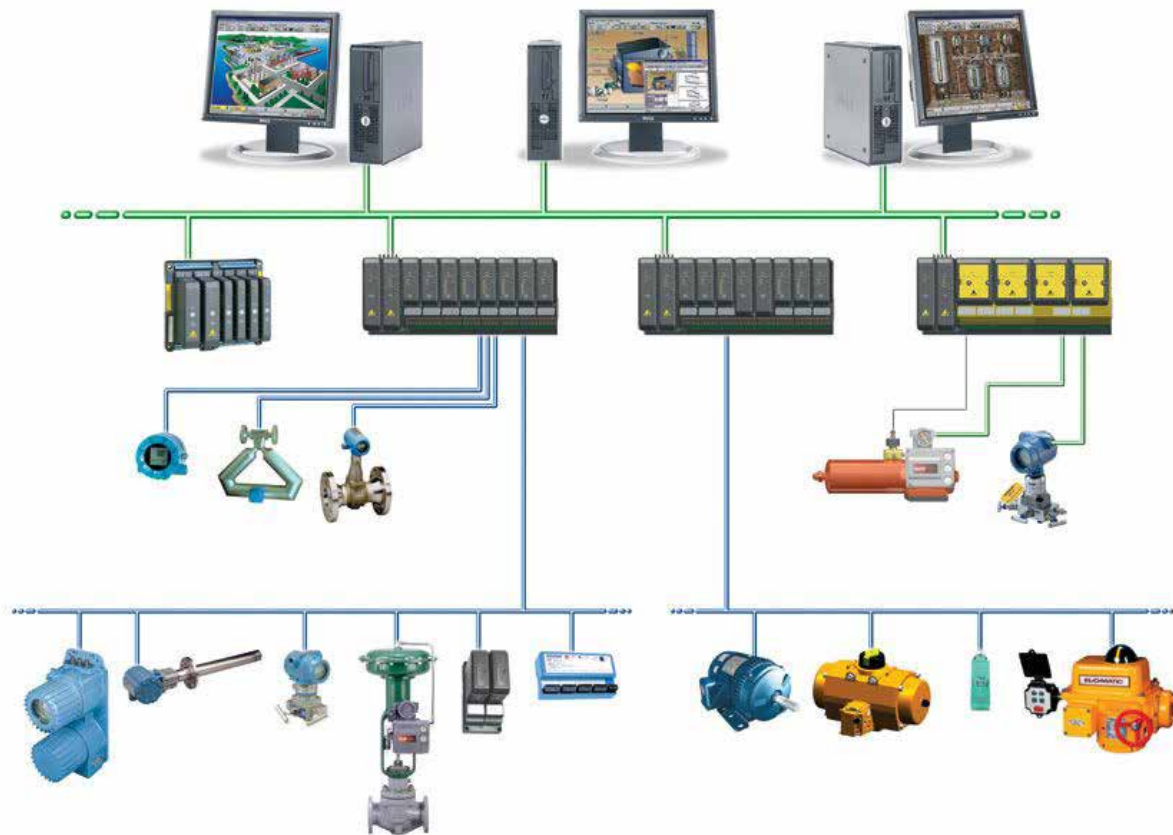
## SPECIFICATIONS


- ▶ Input Voltage: **6.6Kv, 11Kv, 15Kv, 22Kv, 30Kv, 33Kv.**
- ▶ Output Voltage: **380/400/415V.**
- ▶ Construction type:
  - Oil filled Transformer.
  - Hermetically Sealed Transformer.
  - Dry-Resin cast Transformer.



# INDUSTRIAL AUTOMATION


Today's industry is rapidly changing due to ever-changing product requirements, quality improvements and commercial constraints. Automation is key for survival for industry to adopt these new needs of the market. Our automation team has been involved in various process & machinery automation projects across the industrial spectrum. We deliver projects on a concept to commissioning basis.



 PLC

 SCADA

 HMI

 VFDs

 SERVO DRIVE & MOTORS



**Our Automation  
Partners**

**ABB**

**Schneider**  
Electric

## M.V SWITCHGEAR

PCTL has made strong business tie ups with the world leaders in switch gear, **ABB** and **SCHNEIDER** to serve you for all your requirements related to substations switch gears. M.V Switchgear covers the entire voltage range including indoor and outdoor circuit breaker, air and gas insulated switchgear disconnectors, reactive power compensation etc.



### SPECIFICATIONS

- ▶ Voltage Range: **6.6Kv, 12Kv, 17.5Kv, 24Kv, 33Kv.**
- ▶ Compact robust design.
- ▶ Minimal moving parts.
- ▶ Virtually maintenance free.
- ▶ High degree of functionality.
- ▶ Flexible design.
- ▶ Expandable/Non expandable system.
- ▶ Multiple configurations.
- ▶ Remote control/monitoring.

## ENERGY MANAGEMENT SYSTEM

EMS stands for Energy Management System. EMS is a combination of hardware and software that helps you to: ▶ **Monitor** - Regular collection of information on energy consumption in order to establish a basis for energy management and explain deviations from targets.

▶ **Analyze** - An information system that stores and analyzes energy-consumption data. It helps you identify trends as to how energy was used at various production levels of a manufacturing process or ambient temperature for a building.

▶ **Target /Bench Marking**- Setting targets to reduce or control energy consumption based on an appropriate standard or benchmark.

▶ **Control** – Implementing management and technological measures to correct any variances from target. This is a conservative definition of an EMS system and is primarily centered on technology.

According to the improved approach, an Energy Management System (EMS) is people centric. It is incomplete without “Engagement”.

▶ **Engagement** - The main objective of engagement is to connect user’s actions with energy consumption. By displaying real-time consumption information, users see the immediate impact of their actions. Letting users’ know their real-time consumption alone can be responsible for a substantial reduction in energy consumption.

▶ **System Architecture** – An EMS consists of smart energy meters, sensors and devices that monitor energy consumption and factors effecting consumption. These devices transmit data over wired or wireless network to a central server. An interactive application helps you in analyzing and reporting information, while engaging users.



## PREPAID/POSTPAID METERING SOLUTIONS

We offer economical yet reliable prepaid sub metering of energy and water for commercial companies, shopping malls, housing schemes etc.

**A Prepaid system architecture is based as shown below:**



### TYPE OF PREPAID METERS

- ▶ KEY PAD, KWH METER.
- ▶ CARD PAD, KWH METER.
- ▶ WIRED, KWH METER.
- ▶ Both for 3 phase & 1 phase Load.

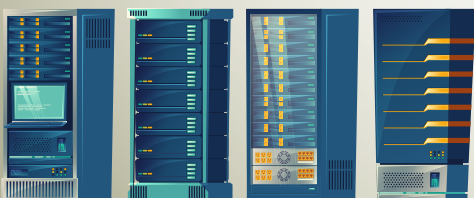
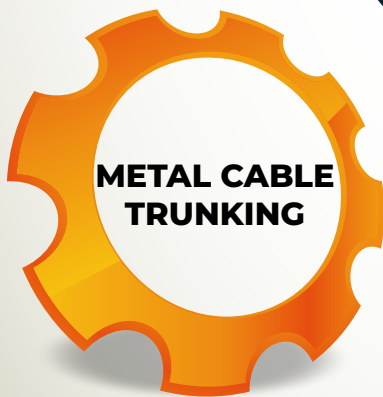
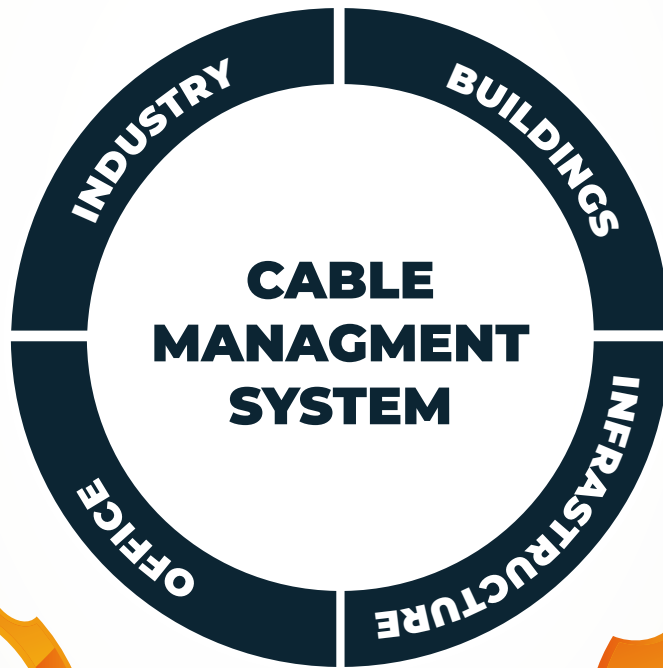
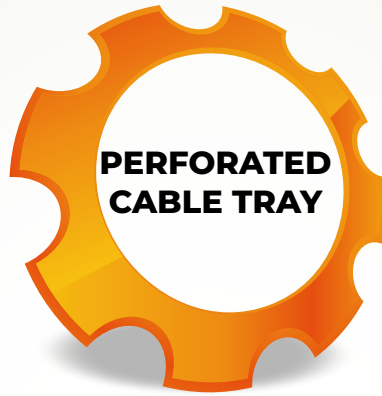




**INDUSTRIES**



**OFFICES**



**DATA CENTRES**



**BUILDINGS**



# CABLE MANAGEMENT SYSTEM

Cable management refers to the installation of equipment to save Cable (Electrical/Data/Fiber optic) for electrical/Data/Voice service in Industries and Buildings.

We offer a variety of Cable Management Solutions for all your requirements.

1. *Perforated Cable Trays and Accessories.*
2. *Metal cable trays and Accessories.*
3. *Cable Ladders.*
4. *Metal Trunking (single & compartment).*
5. *PVC Trunking for data/voice/powermesh.*
6. *Wired Cable Trays.*

We can supply cable Trays and Ladders in various metal grid and finish:

• Galvanized Iron

• Stainless Steel

• Aluminium

## PERFORATED CABLE TRAYS

PCTL Automation has full fledged cable tray manufacturing facility with state of art CNC machines, each profile is engineered and punched in such a way so as to minimize the work during the installation of the same, a full range of cable trays and accessories are provided under the R-line series of the product, the cable trays are manufactured using high quality steel Galvanized or GSPS sheets so as to provide a consistent high quality product at a cost effective price.



***Galvanised • IronAluminium • Stainless Steel • Epoxy Coated***

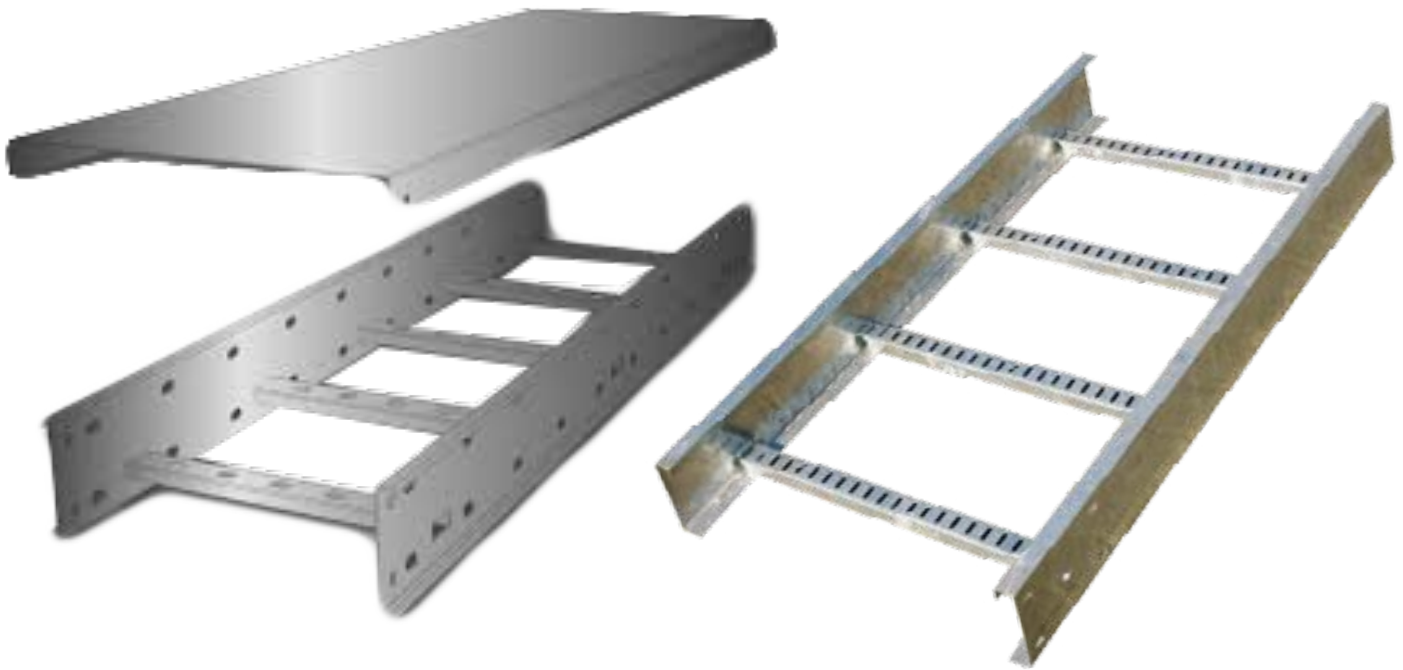
### SLOT CHARACTERISTICS

- Cable clamps can be attached to the larger 32 × 8 slots using up to m8 fixings without drilling.
- Longitudinal running 32 × 8 slots permit use of cable ties up to 32mm wide, correctly positioned across the width of the tray instead of staggered as with conventional patterns.
- The tray length may be cut at any position along the axial and can still be connected to any fitting or adjoining length without drilling.



## METALLIC CABLE LADDER

PCTL Automation has full fledged cable ladder manufacturing facility with state of art CNC machines, each profile is engineered and punched in such a way so as to minimize the work during the installation of the same, a full range of cable ladder and their accessories are provided, under the R-line series of the product, the cable ladder are manufactured using high quality steel Galvanized or GSPS sheets so as to provide a consistent high quality product at a cost effective price.



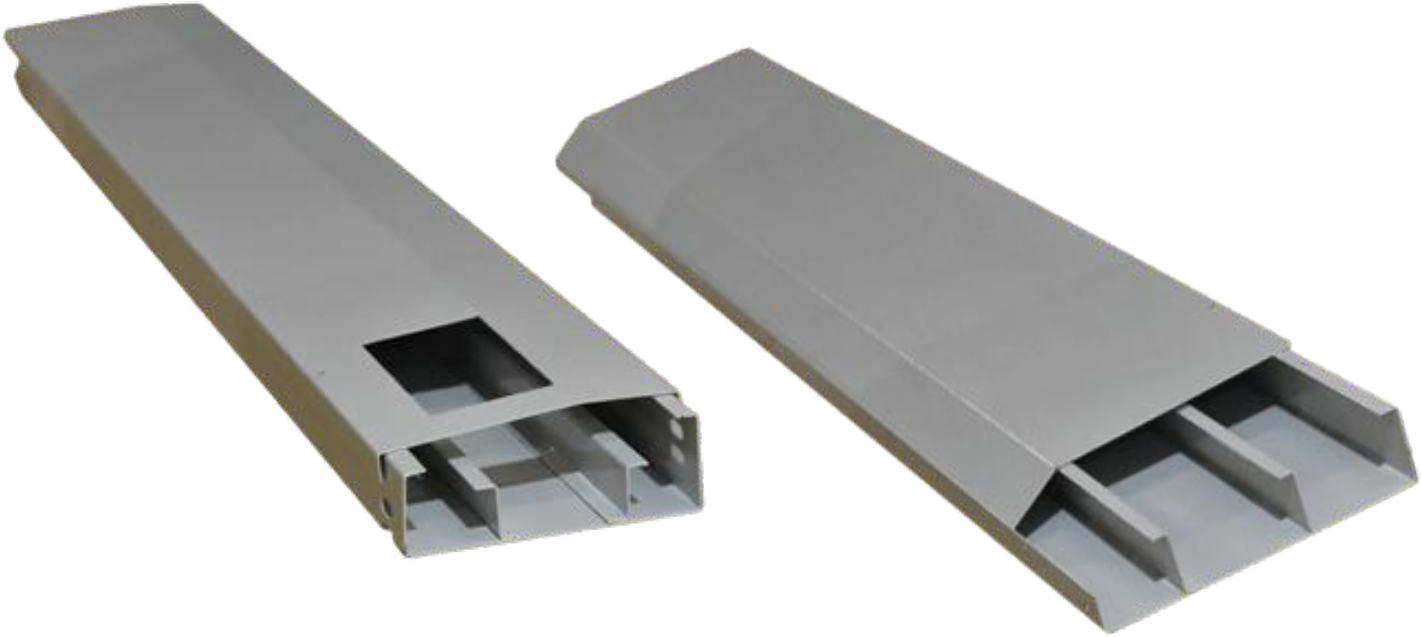
### Cable Ladder Specifications

ITEM	Dimensions(width x height)
Galvanized Cable Ladder	Range (100-1000) x 100
Flat bend	Range (100-150) x 100
Equal Tee	Range (100-150) x 100
Reducer for Cable tray	Please state reducer req for what width to what width
Insider Riser (100-150)	Inside Riser For 100x100 Cable Ladder
Outside Riser (100-150)	Outside Riser 100x 100 Cable Ladder
Coupler	Coupler for (100-150) x 100 Cable ladder
Vertical Hinged Connector	Vertical Coupler (100-150) x 100 Cable ladder
Horizontal Hinged Coupler	Horizontal coupler 100 x 100 Cable ladder
Wall Brackets	Wall Bracket for 100 x100 Cable Ladder
Suspension Clips (100-150)	Suspension Clips for 100x100 Cable Ladder



# METAL TRUNKING

PCTL Automation has full fledged cable trunking manufacturing facility with state of art CNC machines,a full range of cable trunking and accessories are provided under the R-line series of the product, the cable trunkings are manufactured using high quality steel sheets powder coated so as to provide a consistent high quality product at a cost effective price.

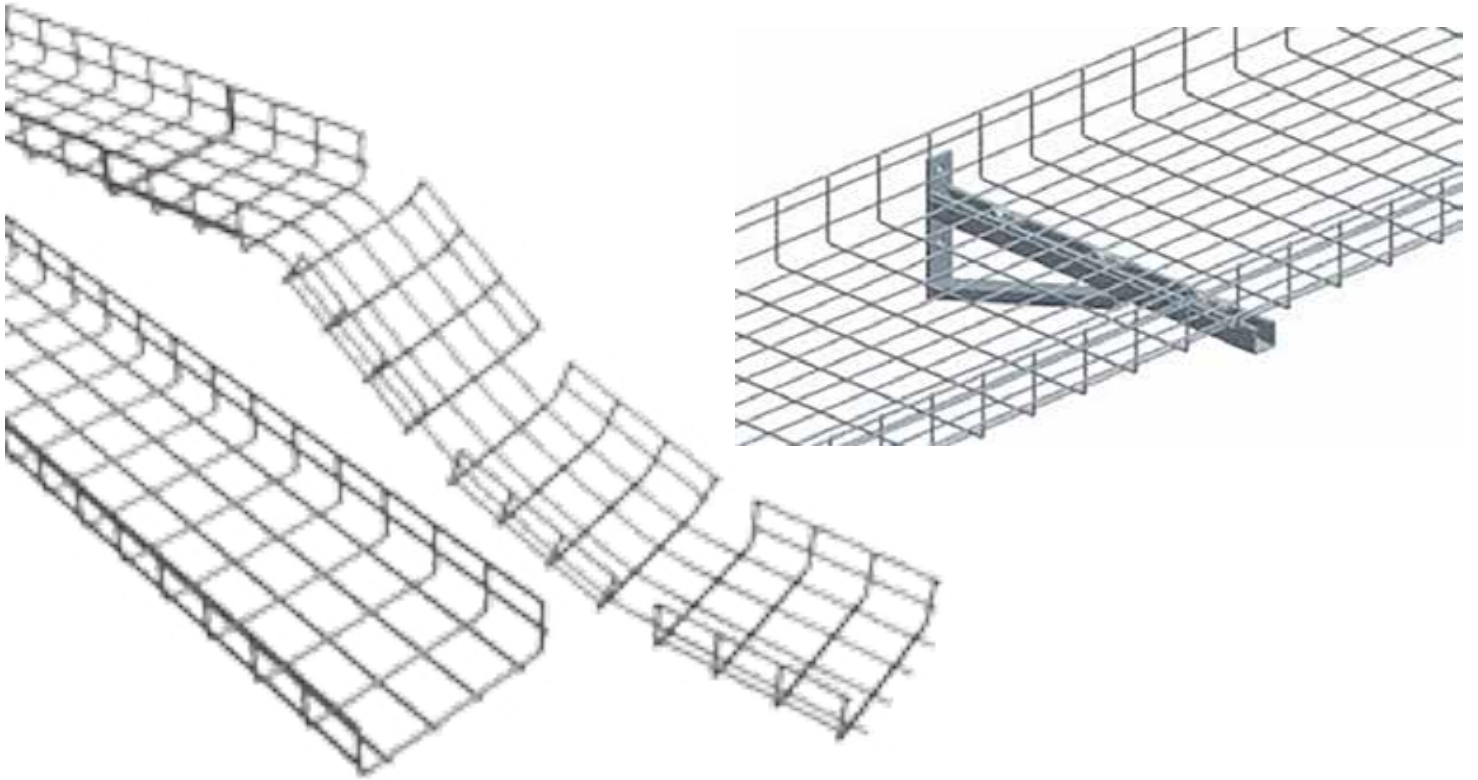


## Metal Trunking Specifications

ITEM	Dimensions(width mm)	Height(mm)
Powder Coated trunking	Range 50mm to 300mm (single compartment)	Range 25 to 50mm
Cable trunking accessories	Range 100mm to 300mm (single socket cover)	50mm
Outside bend	Range 100mm to 300mm (outside bend cover)	50mm
Inside bend	Range 100mm to 300mm (inside bend with cover)	50mm
Covers	Range 100mm to 300mm (plain cover)	50mm
End covers	Range 100mm to 300mm (end covers)	50mm

# WIRESHESH CABLE TRAY/BASKET

PCTL Automation supplies a wide variety of high quality base material steel Wiremesh Cable Trunkings for wide areas of applications at a cost effective price. A full range of Wiremesh Cable Trunkings complete with all the technical details can be downloaded as CMS Catalogue.



## Wiremesh cable tray Specification

ITEM	Dimensions(width mm)	Height(mm)
Caged Cable Trunking	Range 50mm to 600mm (caged trunking)	50mm
Galvanized WireMesh Cable Tray	Range 50mm to 600mm (galvanized)	
Bfr Cover	Range 50mm to 600mm (BFR)	
Cable Trays With Transverse Ribbing In Galvanized Steel	Range 65mm to 395mm	

## JUNCTION BOXES/ADAPTOR BOXES FLOOR BOXES/TABLE TOP POWER DISTRIBUTION

We offer a wide range of Junction, Adopter & Floor Junction Box G.I. & S.S.. Our quality range of boxes are manufactured using high grades of raw material which ensures its corrosion resistance and high load bearing capacity. Junction boxes are widely used in flooring to attempt cable and other purposes. In order to meet the various requirements of our clients, we offer our range of floor junction boxes in various sizes with the assurance of delivery within the stipulated time frame:

■ *Galvanized Steel* ■ *Stainless Steel* ■ *Powder Coated.* ■ *Customized Size*





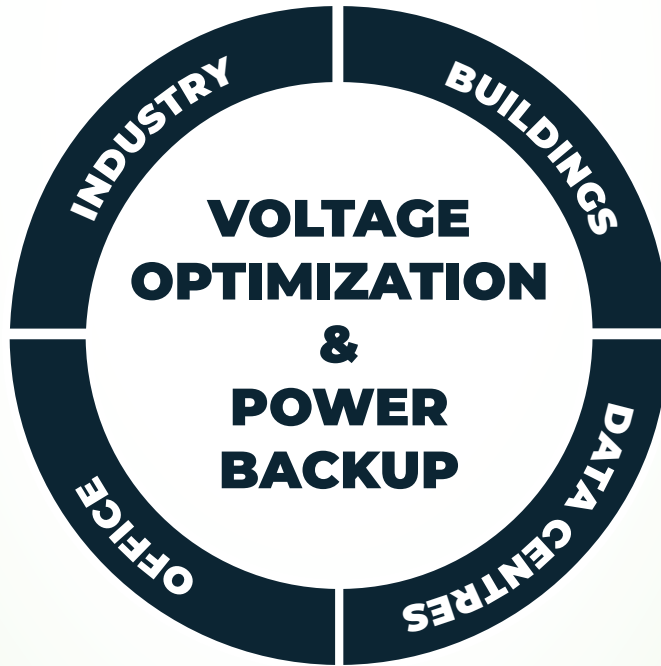
**INDUSTRIES**



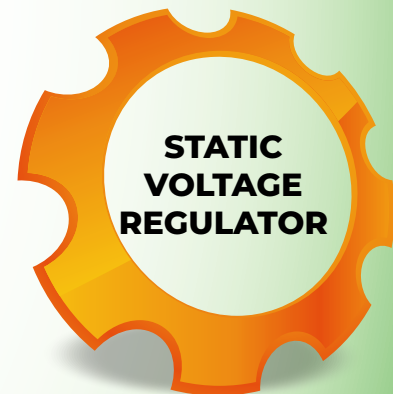
**OFFICES**



**AIR  
COOLED  
SERVO  
VOLTAGE  
STABILIZ-  
ERS**



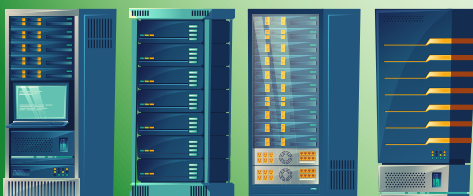
**UNINTERUPPTED  
POWER SUPPLY**



**STATIC  
VOLTAGE  
REGULATOR**



**IGBT BASED  
VOLTAGE  
REGULATOR**



**DATA CENTRES**



**BUILDINGS**



# SERVO VOLTAGE STABILIZERS

PCTL Offer a wide range of Voltage stabilizers to cater various marketing segments.

Comprising of the following different types : ▶ **STABLINE SERVO TYPE VOLTAGE STABILIZERS**

▶ **STATIC VOLTAGE STABILIZERS**

▶ **IGBT BASED VOLTAGE STABILIZERS**

## FEATURES

- ▶ Full Solid State Controller Operator Panel.
- ▶ Independent Phase Balancing and Control.
- ▶ LCD for Data Monitoring.
- ▶ True RMS measurement, feedback and control.
- ▶ Keypad for Parameter Setting.
- ▶ Line to Line & Line to Neutral RYB Voltage and Current indication.
- ▶ Settable Trip Voltage and Current Limits.
- ▶ Fault Status Display.
- ▶ Under Voltage / Over voltage / Over Current protection.
- ▶ Auto / Manual Operation Facility.
- ▶ Healthy power Output available indication Lamp.
- ▶ Surge Voltage Protection.
- ▶ Inbuilt Manual Bypass (Optional).
- ▶ Automatic Load Disconnection (Abnormal Condition).



## STATIC VOLTAGE STABILIZER

PCTL Offer a wide range of Voltage stabilizers to cater various marketing segments. Comprising of the following different types :-

### SPECIFICATIONS

- ▶ 3 phase in/ 3 phase out.
- ▶ Power 30-2000kVA.
- ▶ Input Voltage 155 - 490 VAC 3 Phase.
- ▶ Input Frequency 50Hz.
- ▶ Output Voltage: 415 VAC 3 P+N.
- ▶ Output Voltage Tolerance + - % 2.
- ▶ Regulation Rate 5000V/sec.
- ▶ Efficiency >% 97.
- ▶ Operating temperature 0°C - 40°C.
- ▶ Overload 20ms for % 500 overload.
- ▶ Relative Humidity up to % 0 -% 95.
- ▶ Acoustic Noise < 50 dBA.



## ADVANTAGES

- ▶ Sensitive and fast TRUE RMS reading module.
- ▶ In 20 mil second reading.
- ▶ Fast regulation module.
- ▶  $200\text{Volt} * 50\text{Hz} = 10.000 \text{ Volt/Second}$ .
- ▶ Improvable output regulation structure.
- ▶ Reading power parameters.
- ▶ Modular car structure.
- ▶ No need maintenance. It is completely static.
- ▶ Beginning failure doesn't exist.
- ▶ Ability to work under whatever with  $\cos \mu$  load.
- ▶ Ability to discriminate Non-Linear load and short circuit.
- ▶ In the case of short circuit it prevents blowing of fuse.
- ▶ Reoperating from short circuit.
- ▶ In the case short circuit none of static switch is to spoil.





## IGBT VOLTAGE REGULATOR

Stabline's static Voltage regulator is an IGBT based PWM type buck-boost voltage regulator which has tight regulation and fast correction speed. This is a switching topology where the PWM is made directly in AC-to-AC switching, without any harmonic distortion. The power stage is an IGBT chopper control. The chopping frequency is around 40KHz which ensures absolutely silent operation and pure sine wave output. The Static Voltage Regulator is compatible with all loads as it does not switch any components in the power path.

### STANDARD FEATURES

In this IGBT based PWM type static voltage, only the difference voltage is switched through IGBT and will be added or subtracted from the mains. This is done electronically without any step changing in voltage which occurs when the system regulates. This is achieved by a feedback control system using digital signal processor (DSP). The output voltage is sensed by the DSP and corrections are made by varying the duty cycle of the PWM.

### KEY FEATURES

- ▶ Fast Rate of Correction: 4000V/sec.
- ▶ High Efficiency of more than 97%.
- ▶ Designed for 100% continuous duty cycle.
- ▶ Natural/Forced Air Cooling.
- ▶ No Harmonic distortion.
- ▶ No Distortion in Output waveform.
- ▶ LCD display for data monitoring.
- ▶ Overload cutoff and short circuit cut off.
- ▶ Over Voltage and Under Voltage Cut Off.
- ▶ Automatic bypass on case of failure.
- ▶ Compact size and light weight.
- ▶ Silent operation.
- ▶ No mechanical or moving parts (no wear and tear).
- ▶ Long life and maintenance free.



## SPECIFICATIONS

- ▶ Capacity: Single Phase, 1kVA to 70 kVA. Three Phase: 10kVA to 200kVA.
- ▶ Technology: DSP based IGBT PWM switching.
- ▶ Type of connection: L1, L2, L3, N, G.
- ▶ Input Voltage Range: 340V-460 V L-L (+/-15%), customised range available.
- ▶ Output Voltage: 415 VAC L-L +/-1%.
- ▶ Response time: 4000V/sec.
- ▶ Frequency Range: 45Hz to 65Hz.
- ▶ EMI filter: Equipped with EMI filtering for proper operation of the unit.
- ▶ Display: LCD for I/P Voltage, output voltage, under voltage, load VA, overload cut off mode.
- ▶ Protection: Overload, short circuit, high voltage, low voltage.
- ▶ Trip and Restart: Auto.
- ▶ Nature of cooling: Natural/forced air cooled.
- ▶ Duty cycle: Continuous.
- ▶ Operating temperature: 0 to 50°C.
- ▶ Enclosure: IP21.
- ▶ Waveform: Same as input.
- ▶ Effect on power factor: Nil.
- ▶ Voltage surge protection: Class 2 surge (1.2 x 50 $\mu$ S, 6kV, 8 x 20 $\mu$ S, 2kA L-N<300V).



## UPS

PCTL Automation supplies a vast range of UPS Systems, These are covered in single phase and three phase configuration with variable power back up system, these UPS systems are supplied complete with battery racks and long life storage batteries.

The UPS system covers following:

### APPLICATION

- ▶ Small Computer Room
- ▶ Network Closet
- ▶ Data Center
- ▶ Critical Facility/Site
- ▶ Desktop/Workstation
- ▶ Emergency Lighting
- ▶ Colocation/Hosting

### CAPACITY (kVA)

- ▶ 3-20kVA (9)
- ▶ 0.35 - 3 kVA (6)
- ▶ > 500 kVA (4)
- ▶ 20 - 100 kVA (4)
- ▶ 100 - 500 kVA (4)

## SPECIFICATIONS

- ▶ High efficiency (96%) with IGBT rectifier and 3L Inverter.
- ▶ High efficiency operation with Eco mode (98%).
- ▶ Active input power factor correction (Pf 1).
- ▶ Active input current harmonics correction (TH DI <4%).
- ▶ Low output voltage THD (<2%).
- ▶ Smart charger can increase battery life by 40%.
- ▶ Parallel operation.
- ▶ Temperature compensated battery charging system.
- ▶ Generator-compatible operation, external by-pass feature (Optional).
- ▶ Easily synchronized with external sources.
- ▶ Remote monitoring and management software, programmable dry contacts.
- ▶ Output by-pass overload and short-circuit protection.
- ▶ Standard non-maintenance by-pass.
- ▶ Small footprint with compact dimensions.
- ▶ Low installation and operating costs.
- ▶ Smart fan control (depending on temperature and load).
- ▶ Wide input voltage range.
- ▶ Real-time status memory.

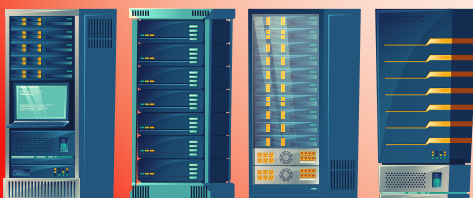
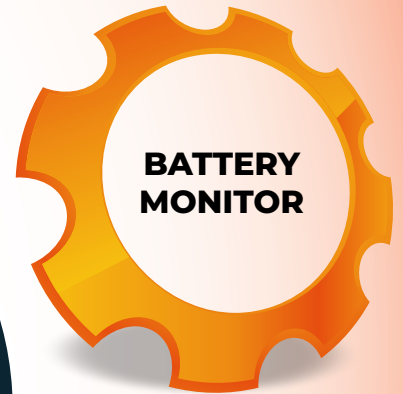




**INDUSTRIES**



**OFFICES**



**DATA CENTRES**



**BUILDINGS**



# IT

## INFRA PRODUCTS

In today's world most of the business revolve around data ,information and connectivity with the other entities .Reliable operation of a data center is a core necessity for small and large businesses alike. Without properly running network systems, most companies simply cannot run at all. An effective network system requires high quality Data/Server cabinets and accessories to perform without failures. At PCTL we have designed, flexible, cost effective, performance orient network cabinets know as NetcaB both for indoor and outdoor applications. We have a state of art facility to produce cabinets as per clients specification.NetcaB range of enclosures are designed to offer you complete solution for your cabinet requirement both wall mounting and Floor Standing. We have also to offer wide variety of accessories which are generally required with data cabinets.PCTL has a strict quality policy and all our products are manufactured as per ISO 9001-2015 process quality certification.

## NETWORK CABINETS/RACKS

PCTL is a vertically integrated, precision manufacturer of high quality metal enclosures designed for the protection and Stability of server, broadcasting and network technologies. We produce Netcab custom designed IT cabinets, racks Containment systems and related accessories used by companies with small server rooms – right. Through to large enterprises with global data centers and telecommunications equipment room. Netcab cabinet's solution can fit all your requirements from Data center to standalone cabinets to wall mounting cabinets for small office and home application.

### SPECIFICATIONS

#### NETCAB 2000 series-free standing cabinets

- ▶ CHOOSE HEIGHT: 22 U, 32 U, 42U, 45 U. netcab product range.
- ▶ Cabinets: Server, Network, Side venting, Colocation,, Broadcast.
- ▶ Open relay racks: 2 Post Relay Rack, Zone 4 Rack or 4 Post Open Rack
- ▶ Wall mounted racks and cabinets, brackets .
- ▶ Cable management for racks and cabinets .
- ▶ Power Distribution Equipment, Power Bars, PDUs, .
- ▶ Containment: Hot Air Chimney Systems, Cooling systems.
- ▶ In Rack cooling systems.
- ▶ Access Control for cabinets.
- ▶ In Rack UPS.
- ▶ CHOOSE WIDTH: 600mm or 800mm .
- ▶ CHOOSE DEPTH: 600mm, 800mm, 1000mm or 1200mm.
- ▶ COLOUR: RAL 6089/RAI7035.
- ▶ LOADING CAPACITY:: Static loading: 1000kg.
- ▶ DOORS: Perforated or glass front door Perforated or steel rear door  
800mm include bifold rear doors.
- ▶ SIDE PANELS: Steel side panels with release handles and locks.
- ▶ TOP PANEL: 2 & 4 fan tray - Cabinets with glass front doors only,  
multiple cable entry.
- ▶ MOUNTING RAILS: Front and rear mounting rails .
- ▶ CASTORS/FEET: 4 Castors & 4 feet. Features Included.
- ▶ Welded frame.
- ▶ Glass front door.
- ▶ Steel rear door (800mm bifold).
- ▶ 2xFan (600mm) 4xFan (800mm).



## SPECIFICATIONS

### NETCAB 1000 series-Wall Mounting cabinets

- ▶ CHOOSE HEIGHT: 6U,9U,12U,18U,22U ( Customized Sizes are available on request).
- ▶ CHOOSE WIDTH: 600mm.
- ▶ CHOOSE DEPTH: 450,mm 600mm, 800mm.
- ▶ COLOUR: RAL 6089/RAL7035.
- ▶ LOADING CAPACITY:: Static loading: 100 kg.
- ▶ DOORS: Perforated or glass front door Perforated or steel rear door .
- ▶ SIDE PANELS: Steel side panels with release handles and locks.
- ▶ TOP PANEL: 2 & 4 fan tray - Cabinets, multiple cable entry knockouts.
- ▶ MOUNTING RAILS: Front and rear mounting rails.

### Features Included.

- ▶ Welded frame·Glass front door, 2xFan (600mm) 4xFan (800mm).
- ▶ Glass front door, 2xFan (600mm) 4xFan (800mm) .
- ▶ 2xFan (600mm) 4xFan (800mm).

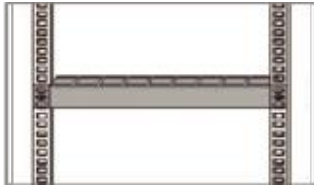
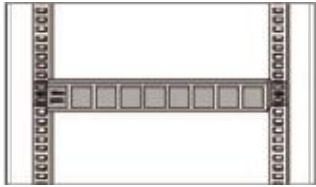
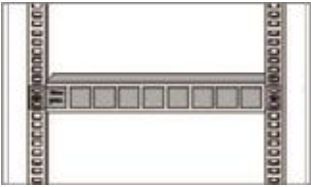


# PDU

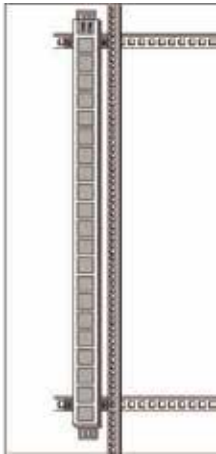
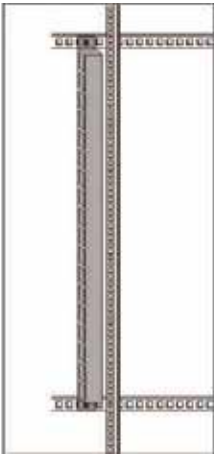
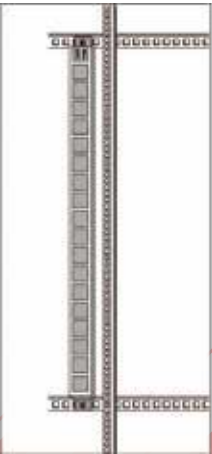
We manufacture Rack Mounted Power Distribution units in various size to suit ever changing requirement of Data- comm market. We also produce client specific PDU



## Installation Methods



**VERTICAL METHOD**



**HORIZONTAL METHOD**

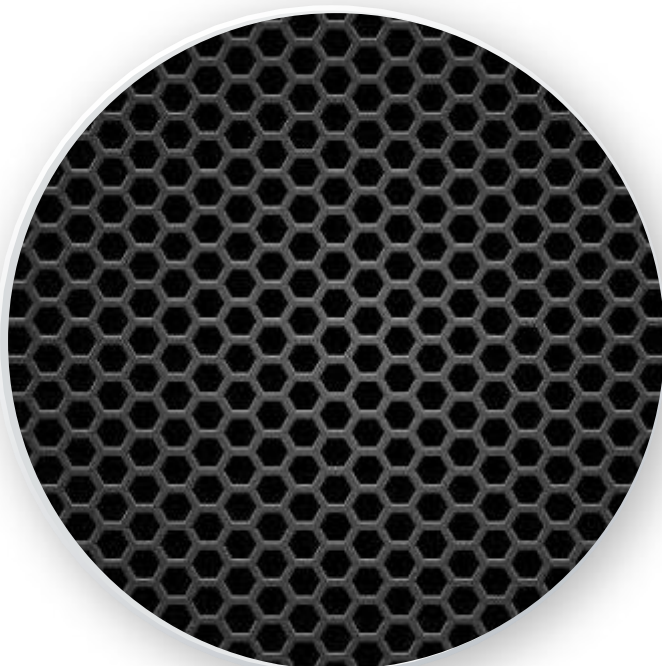
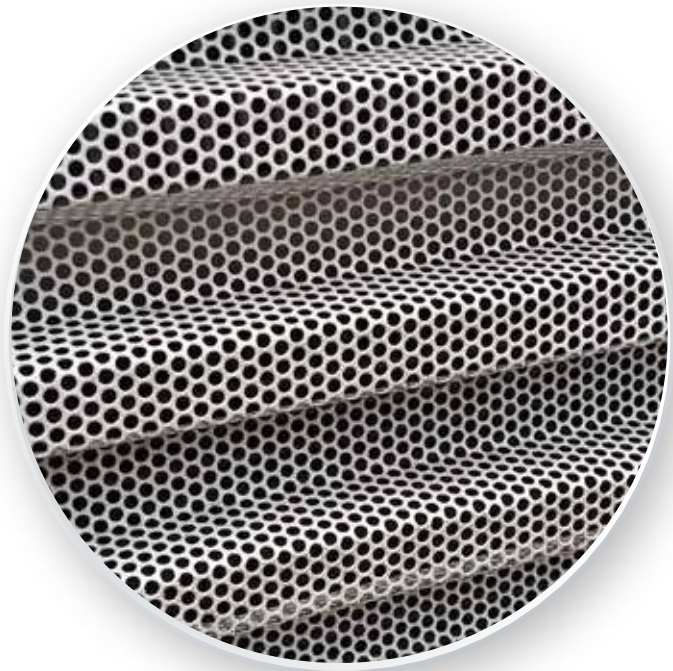


## SECURITY CAGE FOR DATA CENTRE

In location facility with in a data centre , it is important to ensure the safety and security. We offer a co-location facility with a data centre the safety and security of customers equipment is of paramount importance. We offer customized cage solution in various configuration to suit security caging requirements for data centres.

### FEATURES

- ▶ Modular design.
- ▶ Wire cage, perforated, slotted or solid steel panels.
- ▶ Hinged and sliding doors.
- ▶ Locking system with biometrics.
- ▶ Both for cold and hot aisle.
- ▶ Multiple colour option.
- ▶ Corporate logos.
- ▶ Easy installation.



## BATTERY RACKS/CABINETS



### FEATURES

- ▶ Made out of cold rolled steel on CNC machines.
- ▶ Powder coated after pre-treatment.
- ▶ For easy handling all cabinet are provided with castor wheel.
- ▶ Well ventilated design.
- ▶ Custom build design are available.

### OPTIONAL

- ▶ Battery monitoring System.
- ▶ DC disconnect switch.
- ▶ Low voltage disconnect switch.
- ▶ 48 V DC air conditioners.
- ▶ Outdoor design.

## INTELLIGENT POWER DISTRIBUTION UNIT FOR DATA CENTRE

### FEATURES

- ▶ Incoming circuit : 3-phase AC power.
- ▶ Outgoing circuit : 21, 42, 63...84 Branch circuit.
- ▶ 7" Color LCD Touch screen HMI.
- ▶ Low-low and high-high current alarm and data log.
- ▶ Installed Monitored SPD surge protection.
- ▶ Hot-plug system for MCB online maintenance.
- ▶ Monitoring Main and Branch circuit ON/OFF status.
- ▶ Class 1.0 Energy measurement for Energy Billing.
- ▶ Support communication to PILOT® DCIM or other system.

### OPTIONAL

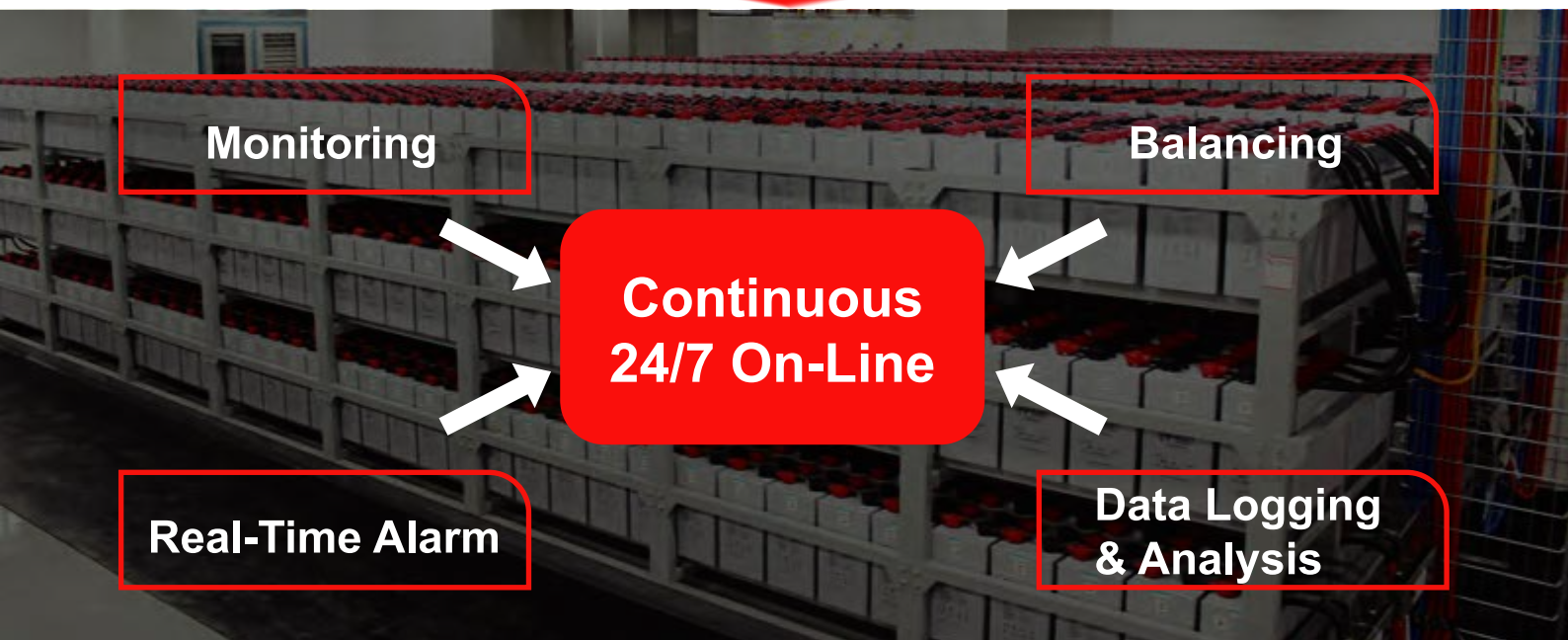
- ▶ K-factor isolation Transformer (K13,K20).
- ▶ Static Transfer Switch (STS).
- ▶ Support customization function.

### SPECIFICATIONS

- ▶ Floor standing installation, suit for raised and non-raised.
- ▶ Free rear space design with front cabling section.
- ▶ HMI for iPDU power and alarm management.
- ▶ Real time Alarm and historical event records.
- ▶ Flexible & Reliable Power Distribution Centre.
- ▶ Incoming and Outgoing Circuit Power Measuring.
- ▶ Alarm Functionality.



## INTELLIGENT BATTERY MONITORING SYSTEM



*BAT For VRLA Lead Acid Battery  
Easy-to-Use, Easy-to-Install*

### APPLICATIONS

- ▶ Data center for IDC, Bank, etc
- ▶ Telecommunication BTS
- ▶ Railway Transport
- ▶ Utility (substations)



### PBAT BMS Including

- ▶ **Management Layer:** PBAT- GATE: Intelligent Gateway
- ▶ **Battery String Sensor:** PBAT600: Battery string sensor
- ▶ **Battery Cell Sensors:** PBAT61-02: 2 vol battery cell sensor  
PBAT61-12: 12 volt battery cell sensor





# SPECIAL PRODUCTS

## MULTI PURPOSE ENCLOSURES FLEXI PACK

### FEATURES

- ▶ Empty multi purpose enclosures to IP 54.
- ▶ 8 Sizes.
- ▶ Supplied with or without components:
  - ▶ Load break Switches.
  - ▶ Switch fuses.
  - ▶ Changeover Switches.
- ▶ Hinged door.
- ▶ Strong reliable door lock, available also with key locking.



### SPECIFICATIONS

- ▶ Complying with IEC 974, parts 1 & 3.
- ▶ Manufactured from 1mm cold rolled sheet steel, 1.5mm for large sizes.
- ▶ Colour, Grey: RAL 7035.
- ▶ Rated voltage, 240/415 V, 50Hz.
- ▶ Bottom flange plate, (top and bottom on request).
- ▶ Easy mounting with external fixing key-holes.



## OUTDOOR TELECOM SHELTERS

### FEATURES

- ▶ Supplied fully assembled.
- ▶ Lockable front door.
- ▶ 4 x fans.
- ▶ Double 25mm wall cavity for sun protection.
- ▶ Front door dust filters.
- ▶ Incl. 10 x cage nut sets.
- ▶ Adjustable 19" mounting rails front and rear.
- ▶ 2 x sealed cable gland plate entry.
- ▶ Front door rubber seal.

### SPECIFICATIONS

- ▶ Colour : RAL Powder coated RAL 7035.
- ▶ IP rating: IP45.
- ▶ Material: Cold Rolled Steel.



## D.C AIR CONDITIONERS

### FEATURES

- ▶ Outside mount.
- ▶ Door mount, Whole unit inside cabinet.
- ▶ Half-embedded door mount.
- ▶ Narrow series, used for telecom cabinet, power cabinet, integrated cabinet, no need extra cabinet door cover.
- ▶ Low acoustic noise series, mainly for application need high acoustic noise requirement.
- ▶ No need flange, no need cabinet door cover, mainly for telecom battery cabinet, comprehensive cabinet.



### APPLICATIONS

- ▶ Telecom outdoor cabinet.
- ▶ Power cabinet.
- ▶ Battery cabinets.
- ▶ Integrated cabinet.





# CERTIFICATES

**PERMIT TO USE THE STANDARDIZATION MARK**  
THE STANDARD ACT (CAP 496)

PERMIT IS GRANTED TO:  
NAME OF FIRM: **PCTL AUTOMATION LTD** PERMIT NO: **794**  
STRUCTURE FROM: **09/04/19**

POSTAL ADDRESS: **P.O. BOX 90000 NAIROBI** EXPIRES ON: **09/04/19**  
PHYSICAL ADDRESS: **OFF WINDHRA ROAD, WINDHRA VISION PLAZA** DATE OF ISSUE: **09/04/19**

TO USE THE STANDARDIZATION MARK SPECIFIED IN THE FIRST COLUMN HEREON AND IN RESPECT OF THE COMMODITY AND BRAND SPECIFIED IN THE SECOND AND THIRD COLUMNS HEREON, AFTER CONSULTATION WITH THE STANDARDIZATION MARK BOARD.

1	2	3	4
Standard mark of quality	Description of the commodity or service	Brand name	Standard specification or reference to the standard
	<b>NETS</b>	<b>NETS</b>	<b>KE BS 550:1. NETS TO BE USED FOR THE INSTALLATION OF TELEVISION SETS</b>

APPROVED DIRECTOR / AUTHORIZED OFFICER  
**Amno**  
KENYA BUREAU OF STANDARDS

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APPROVED DIRECTOR / AUTHORIZED OFFICER  
**Amno**  
KENYA BUREAU OF STANDARDS

**BUREAU VERITAS**  
Certification

**PCTL AUTOMATION LIMITED**  
GODOWN NO. 9 WINDHRA VISION PLAZA  
WINDHRA ROAD  
P. O. BOX 90000 NAIROBI

Senior Worker Certification Holder ZMS - UK Director certify that the Management System of the above organization has been audited and found to be in accordance with the requirements of the international system standards adopted below.

**ISO 9001:2015**  
Scope of certification:  
MANUFACTURING, SUPPLY AND INSTALLATION OF PLASTER AND PLASTERING MACHINES, MORTAR COMPRESSORS, CONTROL VALVES AND VALVE REPAIRING TOOLS, TANKS AND ACCESSORIES FOR WATER AND TELEPHONE PRODUCTS.

Registered with the Registrar of Companies No. 20202017  
Manufacture licence No. 20202017  
Registration certificate No. 20202017  
Registered in the national subsidiaries register of the Independent Management System, the certificate expires on: 09/04/2019

Authorized by: **001 21229 015** Version: 20, Revision date: 01/01/2017

APPROVED DIRECTOR / AUTHORIZED OFFICER  
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APPROVED DIRECTOR / AUTHORIZED OFFICER  
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# PARTNERS



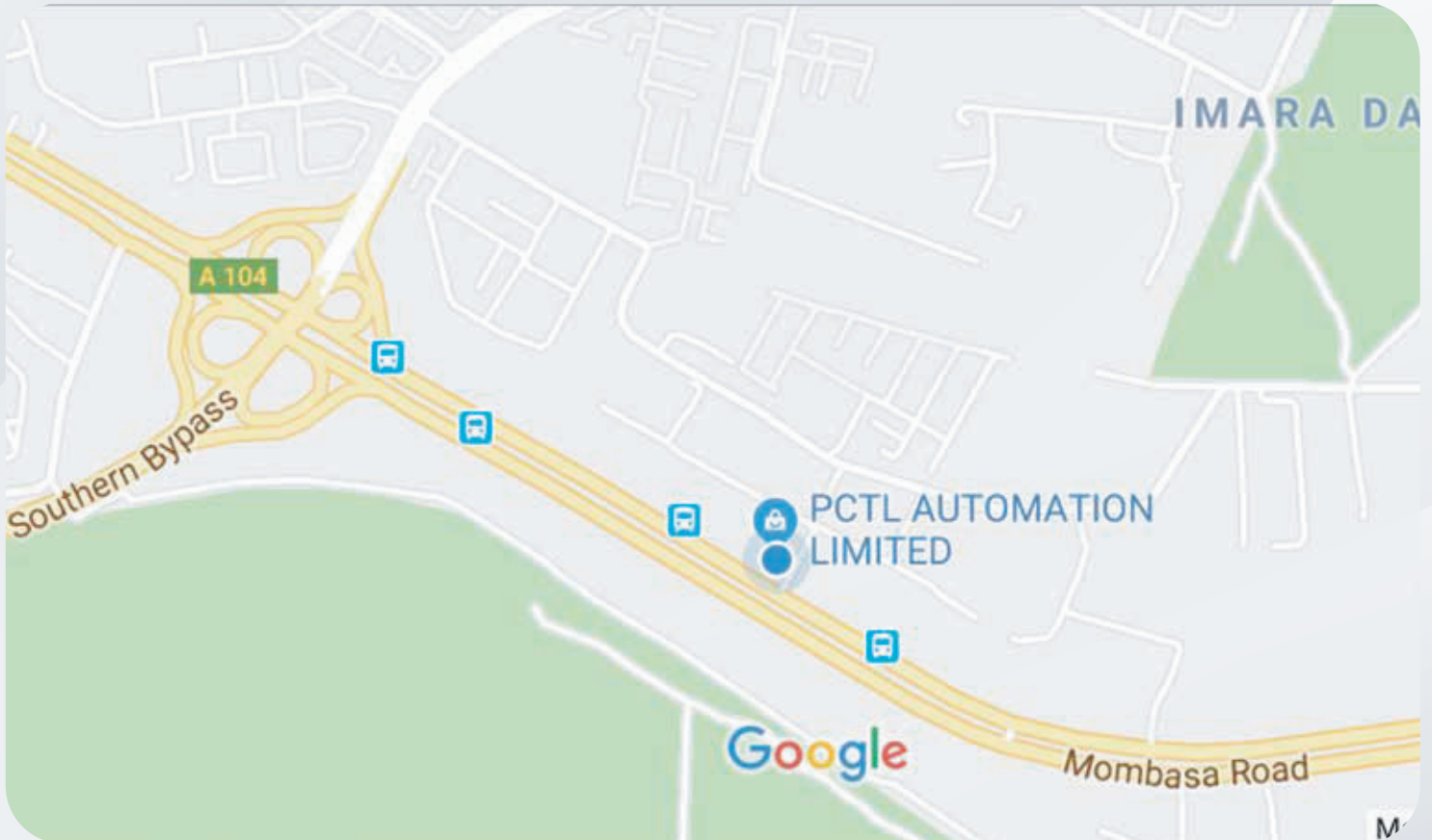
# ACCREDITATIONS



ISO 9001

BUREAU VERITAS  
Certification





**PCTL AUTOMATION LTD**

**P.O. Box 683 - 00606, Nairobi**

**Tel: +254 722 816 124 / +254 734 339 594**

**Email: [info@pctlautomation.com](mailto:info@pctlautomation.com)**

**[www.pctlautomation.com](http://www.pctlautomation.com)**