



**Future-Ready
Electrical & Distribution
Solutions**



PACKAGED SUBSTATION

PSS manufacturing range Upto 5000 KVA (11KV & 33KV)



Engineered for Seamless Integration

Sudhir Power's Packaged Substations (PSS) are pre-engineered, factory-assembled systems that integrate the Ring Main Unit (RMU), Distribution Transformer and Low Voltage Panel within a weather-proof enclosure. Ideal for rapid installation and reliable performance across urban, industrial and infrastructure projects

Key Advantages

-  Factory-built and pre-tested for plug & play at site
-  Designed for unattended operation with minimal maintenance
-  Customization flexibility in layout and component selection
-  Compact, modular and aesthetically designed
-  Safe and tamper-proof with interlocked access and earthed enclosures
-  Complies with IEC and BIS standards for assured quality and safety
-  Complies with Internal Arc 21kA for 1 Sec for Operator Safety



Sudhir: Guiding the Future of Power

 Reliable power continuity

 Easy scalability

 Enhanced safety

 Advanced monitoring and control

 Smart PSS

Designed with precision and innovation, the Packaged Sub Stations offers a compact, efficient, and standards-compliant solution for modern power distribution needs.



Characteristics of Outdoor Package Substations



BIOSCO substations have successfully passed internal arching with-stand test for 21kA for 1Sec.



Access to the MV & LV compartment provided through a double door arrangement.



Louvers designed for natural ventilation and thermal class K10.



Roof designed Tilt type to support load upto 250kg/m².



Spaciously designed to have adequate clearance.



Degree of protection for MV/LV compartment is IP54 & for transformer compartment IP34.



LV inter-connection made Al/CU busbars.



Internal earthing with 50x6mm Aluminium/G.I or 25x6 copper busbars.

Together We Power Progress



PSS manufacturing range Upto 5000 KVA (11KV & 33KV)

LT Switchgear

- Air Circuit Breaker upto 4000A, Fixed Manual/EDO, 50/65KA
- Microprocessor based MCCB's upto 630A, 50KA
- Digital Multifunction Meters
- Copper/Aluminum Bus bar
- Provision of APFC panel with Detune reactors

LT Panel

- Rated Voltage: 440V
- Incomer: upto 5000 A Circuit Breaker
- Feeders: max, upto 10 nos. of 630 A MCCB

HT Switchgear Ring Main Unit

- 11KV RMU
- 22KV RMU
- 33KV RMU
- 3 Way/2Way/1Way options

HT Panel

- Rated Voltage: upto 33KV
- Rated Current: 630 A
- Transformer protection
- Short time withstand current : upto 25KA - 1s

Transformers



Cast Resin Dry Type
(Up to 3MVA, 33KV)



Hermetically Sealed Oil Type
(Up to 5MVA, 33KV)



Vaccum Pressure Impregnated Dry Type
(Up to 5MVA, 22KV)

Optional Equipments

- OLTC - On load tap changer
+ 5% to - 15% in steps of 1.25%
- LV metering
- MV metering
- APFC panel
- Remote interface
- Remote Control of MV switches
- Monitoring of fault passage
- Remote monitoring interface
(load, alarms, events)
- Fault passage indicator

**Guided by Expertise.
Driven by Power**



Technical Specification

Ambient temperature	Normal Operating conditions	Upto 40/50 Deg C.
Standard color	-	RAL 1001(Cream)
Outdoor operation	-	Yes
Compartmentalised design	-	Yes
Type of ventilation	-	Natural
Degree of standard protection	MV & LV Compartment Transformer Compartment	IP 54 IP 34
Electrical characteristics	-	-
Rated voltage(KV)	-	12/17.5 24
Rated insulation	kv rms 50Hz 1 min	28/38 50
Level	kv impulse, 1.2/50	75/95 125
Rated frequency	-	50
Switch connection to MV network	-	-
Rated Current (A)	-	630
Short me withstand current	kA - 1s	25
Peak withstand current	kA - peak	62.5
Transformer protected by circuit breaker	-	-
Rated current (A)	-	200 /630A
Breaking capacity (A)	Transformer off-load	16
	Cable off-load	30
Short me withstand current (KA 1s)	Circuit breaker	25
Peak withstand current (KA peak)	Circuit breaker	62.5
Immersed transformer	-	-
Rated Power(KVA)	-	100 to 2500
Rated secondary voltage (V)	-	440/0.433/0.415
Vector Group	-	Dyn 11
Tapping range (%) OLTC:- +5% to -15%@1.25% OFTC:- ±5%@2.5%	-	±5 insteps of 2.5%
Compliance with standards	-	IEC 439-1; BS EN 601439 part1: IEC 947-1 and 947-2
Metering devices (LV & MV)	-	Yes (Optional)

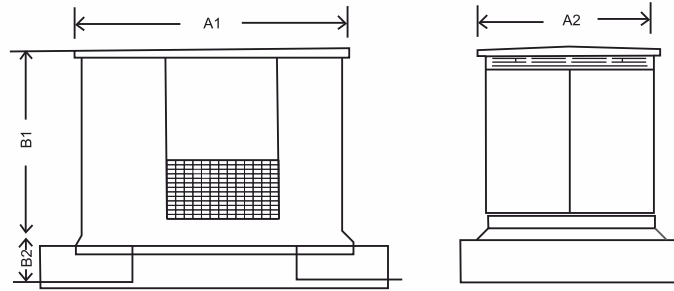


- Our Factory- built MV/LV Substations meet users needs with respect to reliability, safety, overall quality, time-saving and appropriateness for the local surroundings (climatic conditions, operating mode, architectural requirements..)
- 2mm thick painted GI enclosure mounted on a hot dip galvanized 4mm thick GI base.
- Partitions between compartments with 2mm thick GI sheet.
- Gasket/Stiffeners provided as required.
- Internal lighting facility provided.

**Smart.
Secure.
Intelligent.**



General Installation & Civil Work Layout



The table below gives footprints dimensions for each enclosure.

kVA	A1	A2	B1	B2*
Upto 500	3100	1550	2200	700*
Upto 1000	3300	2000	2400	700*
Upto 2500	4500	2400	3000	700*

*Recommended Plinth (Concrete)

Package substations are delivered in a protective cover or optional packed for sea transport. They are fitted with a lifting beam. Package substation dimensions allow 20-feet open top container transport. Units are delivered fully equipped, only the concrete foundation slab and external cable connection are required on site. Commissioning and operating instruction are provided with each substation.

SMART PSS with DAS compatibility

Smart PSS with Data acquisition systems include Wi-Fi/Bluetooth access for remote/local Configuration with Cyber Security Compliance. It also offers Web Accessibility for remote maintenance & PLC programming facility for self healing, giving Complete controlling & monitoring from remote location.

CUSTOMER BENEFITS

Powerful

A concentrate of innovation dedicated to customer performance by overcoming challenges e.g. quality, accuracy, smart grid readiness, reduction of cost of operations.

An up to date communication for customer future proof systems with open protocol.

Simple

A modern solution entirely designed to make easier the installation. RTU configuration/ maintenance on Wi-Fi with closed door of PSS.

Secure

To secure all control and data acquisition for the operation of customer electric system.

Scalability

To support future expandability with add-on modules.

VALUE OFFER

Opened Communication

- Protocol : Multiple options IEC101/104, DNP3, Modbus, IEC 61850(#)
- Ports: 3 Ethernet, 1 Serial, 1 USB, 1 PT100, Wi-Fi
- Peer to peer and redundant communication
- Flexible comm. medias (Eth, RS232, 3G, 4G, USB)
- Local Wi-Fi connection for operator
- Open IEC61131-3 PLC for Network Automation : Sectionalizer, Self healing grid

Simplified maintenance

- Local & remote access via embedded web apps
- Wi-Fi access for laptop smart phone and tablet
- Local and remote software update

Secure connectivity

- Compliance to the Cyber Security standards (IEEE P1686, IEC62351) : RBAC, Secure protocol
- Radius server and IPsec services

Large IO Capability

- 32 DI, 16 DO, 4 AI, 2 general purpose DI
- Expandability: Supports up to 16 additional boards

Smart PSS

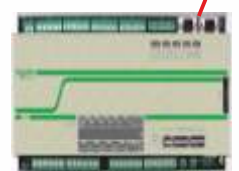


FRTU

(Feeder remote terminal unit)



(as slave)



**Reliable Energy when
it Matters Most**



Clientele



Our Presence



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