Since 1971

VIDYUT CONTROLS & AUTOMATION PVT. LTD.

An ISO 9001: 2008 Company

Alliance Partner of

Schneider Electric

for MV Components Integration

MEDIUM VOLTAGE SWITCHGEAR PANELS UPTO 36 KV

www.vidyutcontrols.com

Our Product Range

33 KV HT Panel

22 KV HT Panel

11 KV HT Panel

PSS

Transformer

PDB / SDB

BBT

PCC

APFC

MCC

Electrical Power Distribution

We offer sophisticated, reliable and high-quality power distribution systems for Small / Medium & Large scale Companies for their varied power needs. Owing to the priorities to deliver a quality product, various stringent quality test, conducted under supervision of experts, major OEM's, consultant and contractors recognize us as most dependable company to be associated with. Our track record of Repeat Order Capabilities, with our Esteemed Customers, for the last decades is a classic example.

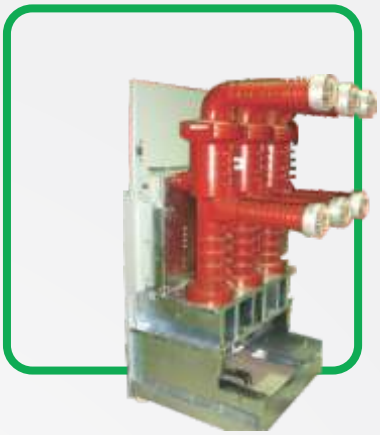
Turnkey Power Management Solutions

We have built high level of engineering innovations by offering completely customised solutions to the customers. Our turnkey solutions are designed to increase efficiency, ensure high machinery performance and offer utmost safety and aid easy installation & maintenance.

SPECIFICATIONS OF 11,22 & 33 KV PANEL

HVX -
VCB, 11 KV

EVOLIS -
VCB, 11 & 22 KV



HVX -
VCB, 33 KV

Switchgear Type : **VCB** - SF6 '**HVX**' upto 36 KV **| SF6** - '**SF400**' upto 36 KV **VCB** - '**EVOLIS**' upto 24 KV
Horizontal drawout & horizontal isolation. Easy interchangeability of breaker due to full drawout.

Protection : IP 4X - Indoor duty
IP 55 - Outdoor duty weather proof KIOSK (optional)

Construction : A) Metal clad fully enclosed design floor mounting & free standing.
B) Made out of minimum 2 mm CRCA sheet. Sheet metal work on CNC machines.
C) Compartmentalized construction.
D) Extensible on both sides.
E) Powder coating @ 80 - 100 micron thickness.

Sf6
GCB, 33 KV

Voltage rating : 3.3 / 6.6 / 12 / 24 / 36 KV

Current rating : 630 / 800 / 1250 / 1600 Amps

Fault level : 25 KA for 3 sec | 31.5 KA for 3 sec

Safety features : A) Explosion vent
B) Safety wire mesh on cable chamber side
C) Automatic safety shutters for safety of operating personals
D) Hermetically sealed vacuum interptures to protect the contacts from oxidation, corrosion & contamination
E) Danger boards
F) Earthing switch (optional)
G) Live line indication (optional)
H) Anti pumping feature (built in)
I) Hermaticaly sealed for life Sf6 gas chamber

Busbars : Single or double air insulted Aluminum / Copper with heat shrinkable sleeve (optional)

Insulators : SMC / DMC

Type testing : As per IEC-62271-200(2003), IEC-60529,2001

Control Supply : External 24 / 48 / 110 / 220 VDC for relays, trip, close coils.
230 VAC for space heaters / spring charging motor.

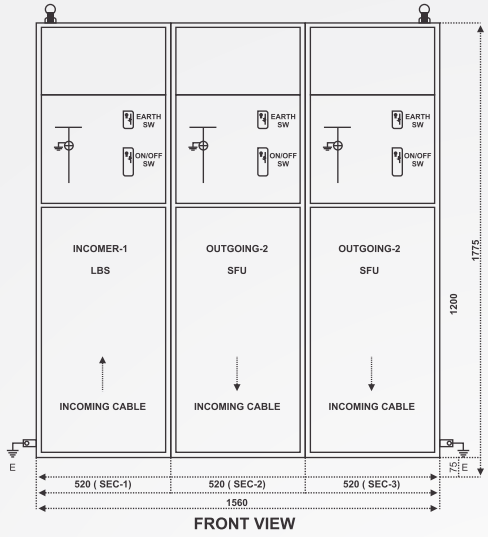
Power Pack : Optional (230 YAC / 24-110-220 YDC) with 10mm backup.

Application : Mainly used for operation & protection of public, industrial and tertiary distribution of network from 3.3 KV to 36 KV

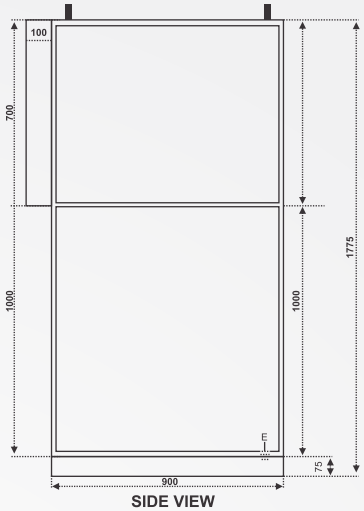
Rated Voltage	Ur	KV 50/60 Hz		7.2			12			17.5			24			36			40.5
Insulation Level																			
-power Frequency Withstand	Ud	KV50 Hz 1 min		20*			28*			38*			50			70			95
-lightning Impulse Withstand	Up	KA/3 sec		60			75			95			125			170			185
Rated Current	Ir	A	630	■	■	—	■	■	■	■	■	■	■	■	■	—	—	—	—
			1250	■	■	—	■	■	■	■	■	■	■	■	■	■	■	■	■
			1600\2000	—	—	—	—	—	—	—	—	—	■	■	■	■	■	■	—
			2500	■	■		■	■	■	■	■	■	■	■	■	—	—	—	—
			3150	■	■		■	■	■	■	■	■	■	■	■	—	—	—	—
Short Circuit Current	Isc	KA		25	31.5	40	25	31.5	40	25	31.5	40	16	25	31.5	25	31.5	40	31.5
Short Time Withstand Current	Ik/tk	KA/3 sec		25	31.5	40	25	31.5	40	25	31.5	40	16	25	31.5	25	31.5	40	31.5
Short-circuit Making Current	Ip	KA peak	50 Hz	63	79	100	63	79	100	63	79	100	40	63	79	62.5	79	100	79
Rated Switching Sequence		O-0.3 s-CO-15 s-CO		■									■			■			
Operating Time		Opening	ms	< 50									< 60			< 50			
		Breaking	ms	< 60									< 65			< 60			
		Closing	ms	< 70									< 70			< 65			
Service Temperature		^{0}C		-25 to +40									-25 to +40			-25 to + 40			
Mechanical Endurance		Class		M2									M2			M2			
		No. of switching op		10,000									10,000			10,000			
Electrical Endurance		Class		E2									E2			E2			
No Of Switching Operations at Full Isc Value		25 KA		100									100			100			
		31.5 KA		50									50			10			
		40 KA		30									—			10			
Capacitive current breaking capacity		Class		C_1									C_1-C_2			C2			

(*) Circuit breaker tested at Ud 42 kV
■ Available
— Not available

A DIMENSIONS



FRONT VIEW

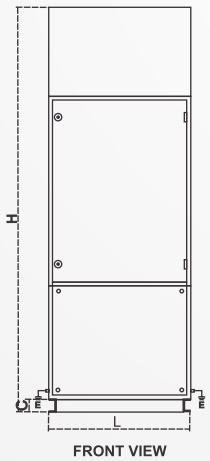


SIDE VIEW

SR. NO.	Rated Voltage		L	H	D	C
1.	6.6 / 12 / 17.5 / 24 / 36	Indoor	520	1775	900	75
		Outdoor	520	1875	1100	75
2.	36 KV	Indoor	600	2075	1390	75
		Outdoor	600	2175	1490	75

All dimension indicated are in mm and are indicative.

B BREAKER PANELS



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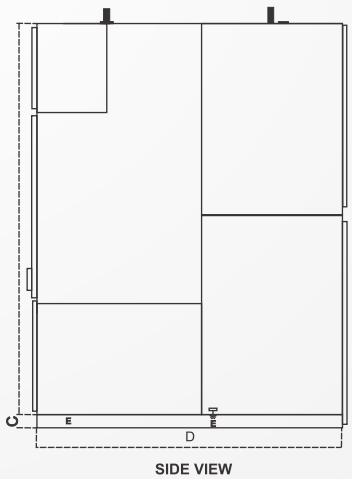


SIDE VIEW

SR. NO.	Rated Voltage		L	H	D	C
1.	6.6 / 12 / 17.5	Indoor	688	2275	1750	75
		Outdoor	800	2375	1850	75
2.	24 KV / 36 KV	Indoor	1050	2375	2050	75
		Outdoor	1100	2425	2460	75

All dimension indicated are in mm and are indicative. Dimensions shall vary as per current rating & fault level.

TEST SETUP & CERTIFICATION

Rautine Test

1) Primary injection test
2) Secondary injection test
3) Electrical operation
4) Mechanical operation

Special Test

1) Primary injection test
2) Secondary injection test
3) Electrical operation
4) Mechanical operation

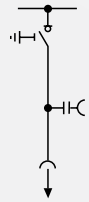
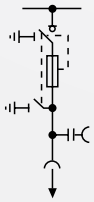
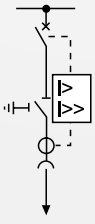
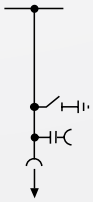
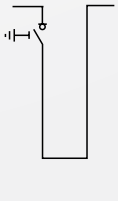
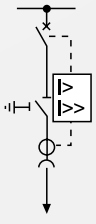
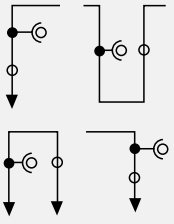
TYPE TEST

SR. NO.	SPECIFICATION	11KV	22KV	33KV
1.	Short time and peak withstand current tests	✓	✓	✓
2.	Power frequency withstand test	✓	✓	✓
3.	Impulse withstand test	✓	✓	✓
4.	Temperature rise test and measurement of resistance of main circuit breakers	✓	✓	✓
5.	Mechanicl, Electrical Endurance, Test duities, Switching operation test etc.	✓	✓	✓
6.	Degree of protection IP-4X & IP 55	✓	✓	✓

GAS INSULATED SWITCHGEAR (RMU) UPTO 24 KV

Technical characteristics			
Rated voltage	kV	12	24
Rated withstand voltage at 50Hz 1mm to earth and between poles	kV	28	50
Rated withstand voltage lightning impluse to earth and between poles	kV	75	125
Short time current value (1 s)	kA rms	16/21/25	16/21
Short time current value (3 s)	kA rms	16/21	16/21
Short time current peak value	kAp	40/52.5/62.5	40/52.5
Cubicle rated current	A	630	630
Busbar rated current	A	1250(1)	1250(1)
IAC classification according to IEC 62271-200	kA 1 s	21/25(2)	16/21

(1) With a top 1250 A busbar
(2) Please consult us

Main Functional Units								
Names	C	T1	T2	R	RE	Sb	CB	M
Functions	Cable incoming or outgoing feeder with switch-disconnector	Transformer protection with switch-disconnector fuse combination	Transformer protection with vacuum circuit-breaker	Direct incoming feeder without earthing switch	Direct incoming feeder with earthing switch	Busbar switch-disconnector	Outgoing feeder protection with O-C-O vacuum circuit-breaker	Metering
Mimic diagrams								

CONTAINER SOLUTIONS

13.8 KV Outdoor container solutions with VCB mounted inside .

36 KV container solutions with SF6 breaker mounted inside.

11/22/33 LBS/SFU

General Characteristics

Rated Voltage (kV)		7.2	12	17.5	24	36
Insulation level*						
50 Hz - 1 min	Insulation	20	28	38	50	70
(kV rms)	Isolation	23	32	45	60	80
1.2/50	Insulation	60	75	95	125	170
(kV peak)	Isolation	70	85	110	145	195
Short-time withstand current						
Switch (kA/1 s)	25	630 A				
	20	630 A				
	16	630 A				
	12.5	630 A				
Maximum breaking capacity						
Transformer off load (A)		16				
Cables off load (A)		31.5				50
Switch (A)		630				
Fuse-switch**(kA)		25		20		
Endurance						
Units	Mechanical Endurance			Electrical Endurance		
Switch	IEC 60265			IEC 60265		
Fuse-Switch	1000 operations Class M1			100 breaks at In, p.f. = 0.7 Class E3		
Location	Indoor / Outdoor - customer specific					

1 - 24 KV PACKAGE SUBSTATION

Description of substations

substations basically comprise:

- a 2.5 mm thick aluminum **enclosure**(2) mounted on a hot-dip galvanized 4 mm thick steel base. Access to the operating bay and to the transformer itself is provided by two double doors located on the side of each substation. The doors can be padlock and / or lock-protected (padlocks not supplied).The partitions between the compartments are in 2.5 mm thick aluminum.

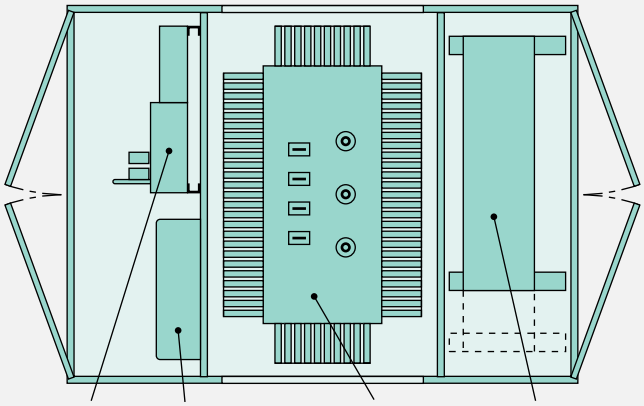
- **The MV switchboard** is a compact RMU unit with 2, 3 or 4 functions.

- **The transformer** is of hermetically sealed oil-immersed type equipped with draw-out MV terminals. The maximum admissible dimensions of the transformer are: length 1650 mm, height 1700 mm, width 1100 mm.

- **The LV switchboard**:
- Either a fuse-protected feeder board fitted with a main incomer and 4 to 12 feeders,
- Or a rack fitted with a Compact type main circuit breaker and circuit breaker feeders (at customer's request)

- **MV and LV connections**

- **options and accessories**:
- internal arcing withstand equipment
- LV metering
- internal lighting of MV and LV compartments
- safety notices
- oil holding tank



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& AUTOMATION PVT. LTD.

POWER CONTROLLING PEOPLE

An ISO 9001: 2008 Company

Regd. Office & Works
"Sahara", 82/1,82/2 and 83 Hissa No. 2/2, Old NDA Road, Shivane, Pune - 411023. India
020 - 2529 0857 / 2529 0208.
www.vidyutcontrols.com | sales@vidyutcontrols.com | vidyut@pn2.vsnl.net.in

Mumbai Office
112/113, Shivsagar Industrial Estate, Babasabab Katkar Road, Goregaon East - 400063
+91 9821224484
www.vidyutcontrols.com | mumbaisales@vidyutcontrols.com | vidyut@pn2.vsnl.net.in