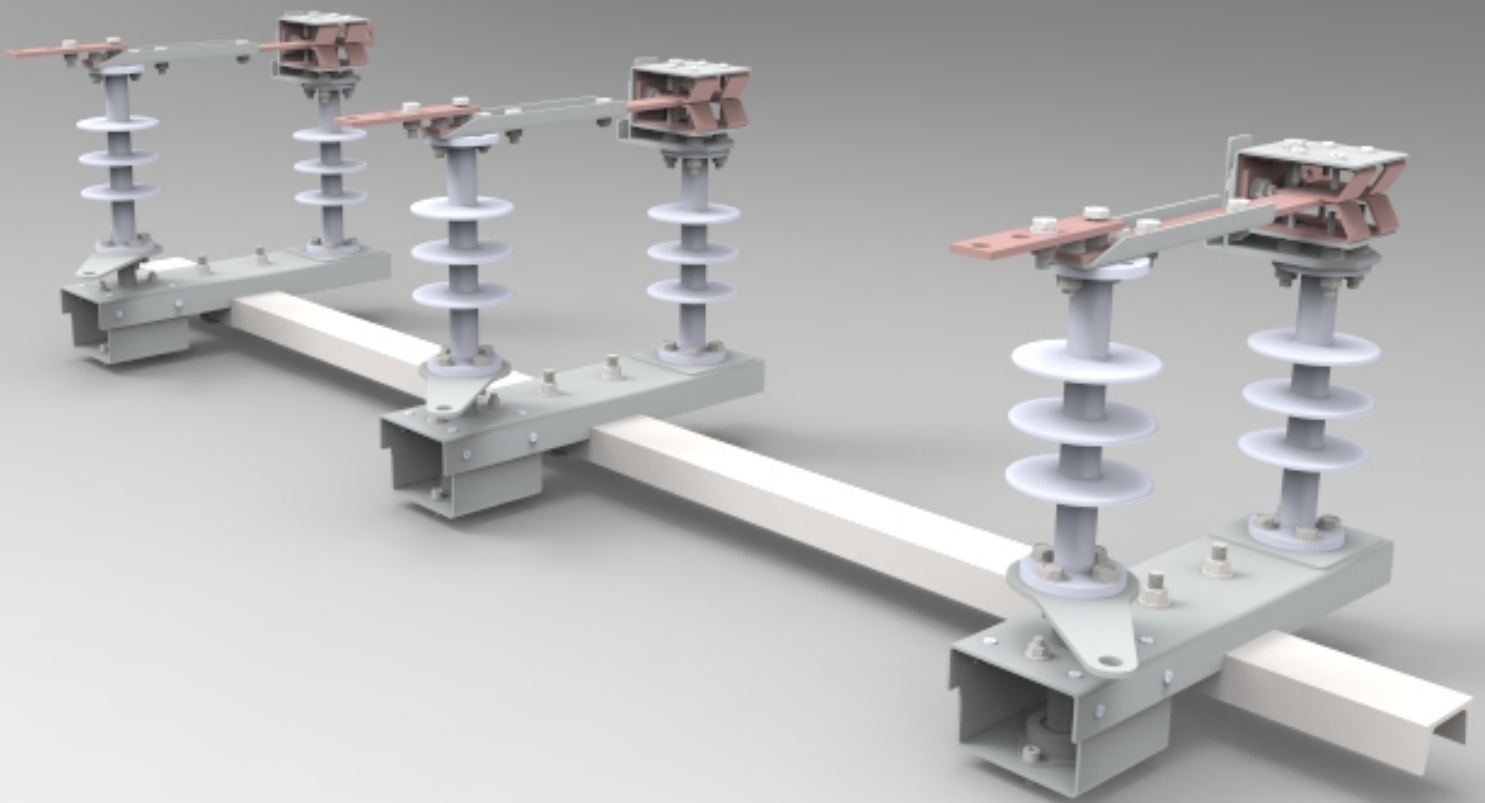


# Line Assist™

Group operated outdoor Disconnect Switches for medium voltage applications



## © Nikum Energy Control India Limited

We originated as a switchgear manufacturing company and this vertical is still the very core of our business. Now, we are a company providing excellence in MV and Distribution automation solutions. With our rich experience and engineering expertise, we have created a dominant position in the market.

We work closely with each customer to provide products, that not only meets or exceeds the customer's specification requirements, but guarantees years of exceptional performance and reliability. Our Quality Assurance Program, ensures the manufacturing of products with the best in the production. From the checking of raw materials to the final checking of manufactured product, Nikum, follows a very strict quality procedure to gain 100% product satisfaction from the customers. With the qualified testing team, we make sure that the product is according to the need of the customer with no compromise in quality.

Recloser is at the forefront of our switchgear technology. This product has proven itself in more than 30 electrical utilities in 13 countries. Through use of solid dielectric insulation and vacuum interruption technology, our Recloser is maintenance free and easy to install.

Simplicity and robustness has been key factors behind designing this product. It hosts patented magnetic actuator for mechanism which yield in service life of more than 20 years. The product is type tested by independent laboratories in India.

As the grid turns more complex, challenges are growing for power engineers everyday. Advance protection capabilities such as Broken conductor protection, Admittance protection, synchro-check are incorporated. It is also versatile enough to be deployed as Recloser, Sectionalizer or switch with programmable logic.

### Our business verticals

- Medium voltage SWITCHGEAR
- EPOXY BASED CHEMICALS
- SCADA AND AUTOMATION
- POWER QUALITY SOLUTIONS

### Quality and certifications



# Line Assist

Designed for superior reliability and, the Line Assist series of group-operated air-break switches includes 12 kV, 36 kV and 72 kV versions. It comes with an option for polymer / porcelain type insulators.

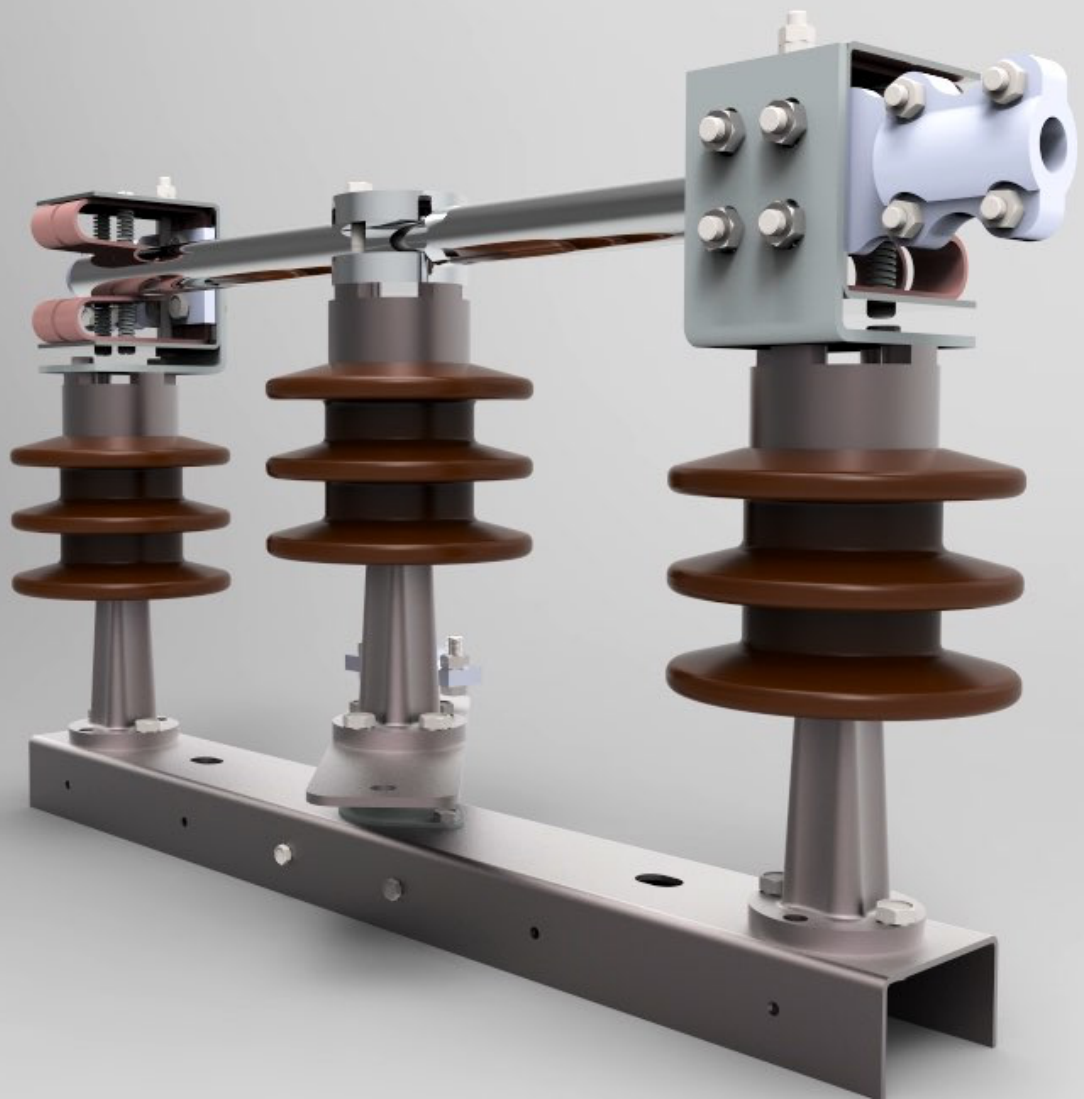
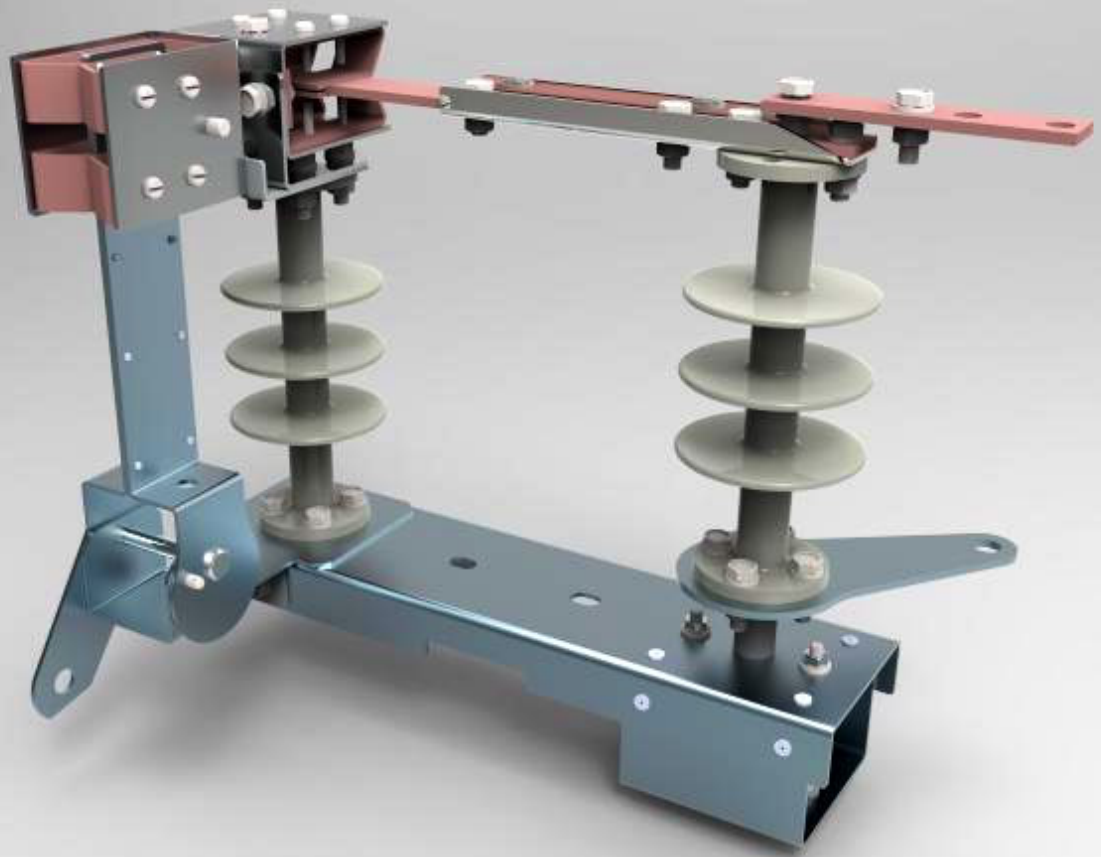
Manufactured as a true unitised switch, this product is completely factory assembled and adjusted to eliminate the need for tuning in the field.

Utilising NIKUM innovative motor operating device **DS100**, same switch can be utilised for automatic operation and SCADA connectivity.

**Line Assist** hosts cutting edge technologies which is rare to find in switches of this class.

Operational reliability is enhanced by enclosing the operating mechanism inside the switch base for superior weather protection. Ease-of-operation is assisted with the use of environmentally sealed, oil impregnated sintered bearings supporting a balanced-force operating mechanism. Galvanised steel, stainless steel tubular bases are available.





## Features

High pressure spring assisted female contacts with 800A standard configuration

NEMA connector for conductor connection

Earth Switch arrangement (optional)

Main switch to Earth Switch interlock

Lighting Arrestor brackets (optional)

Insulators

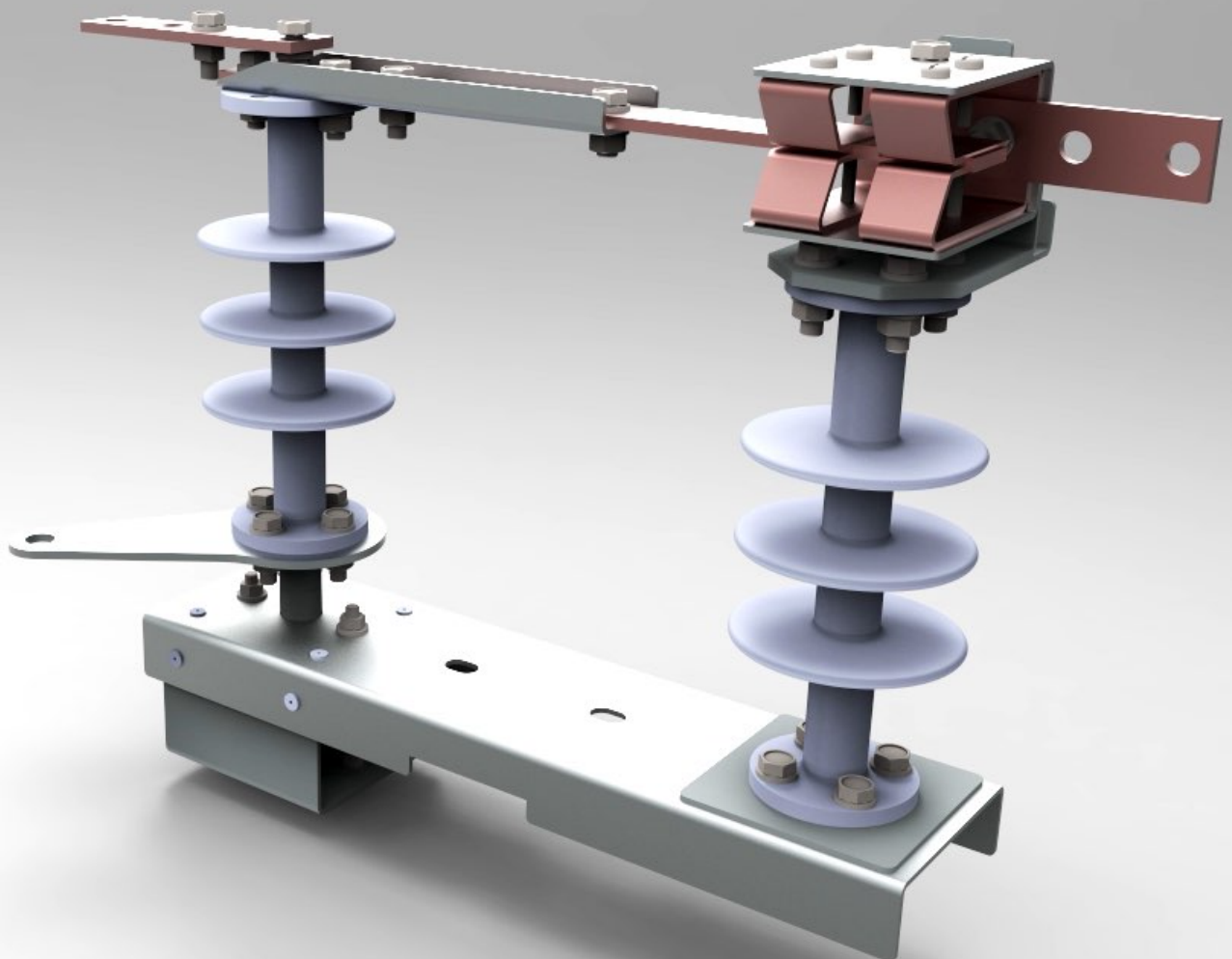
Flexible clamping arrangement

Single & Double pole installation

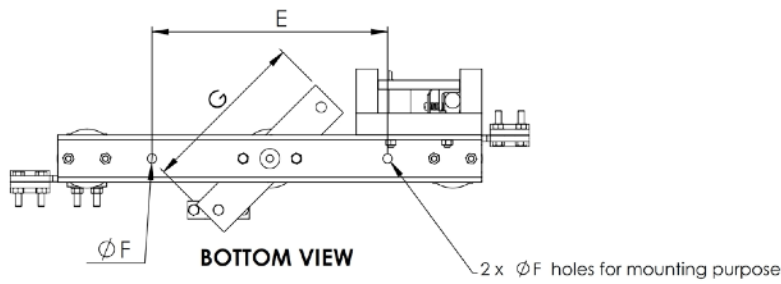
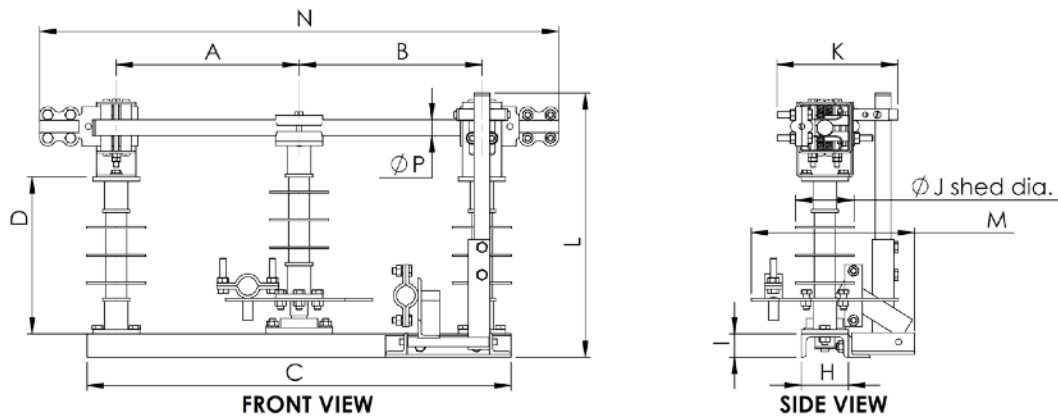
Padlocking arrangement

SCADA functionality

Mechanically stable structure to suit different climatic conditions

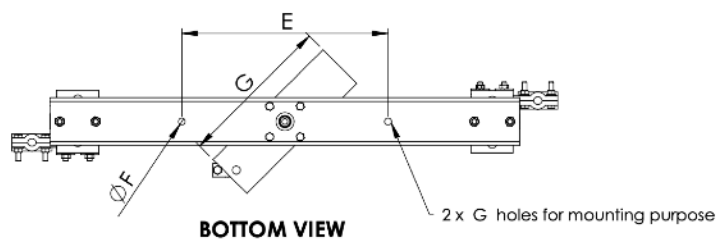
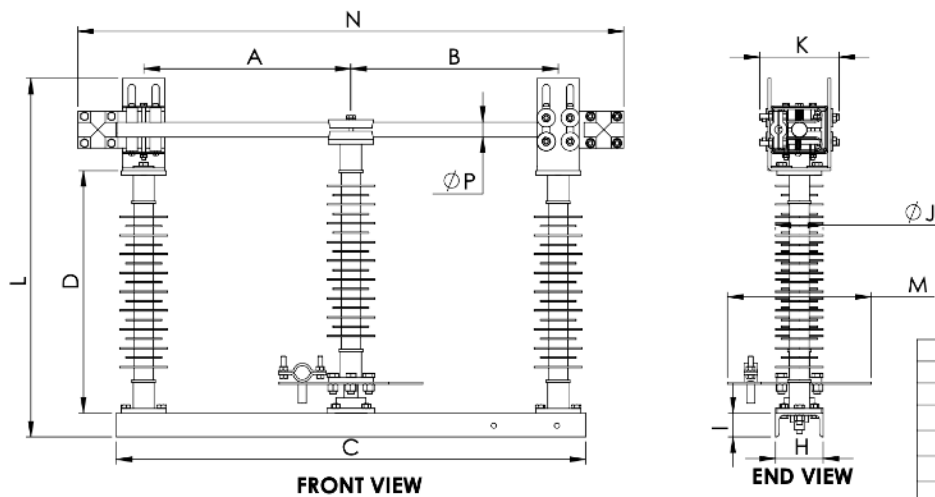


## Dimensions - LA12 (12KV Disconnecter)



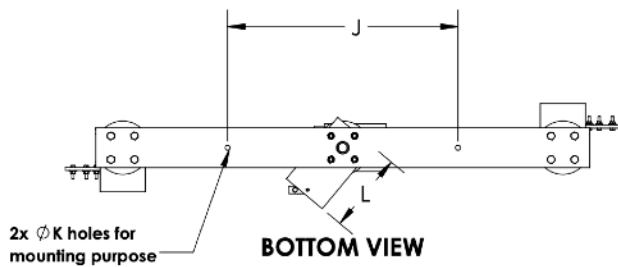
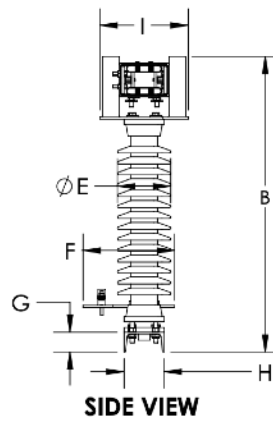
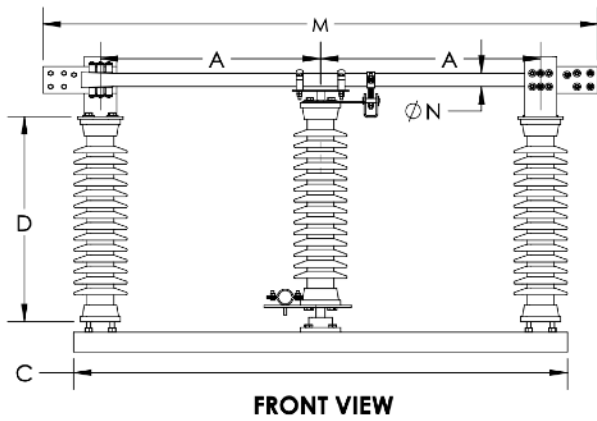
A	295
B	295
C-Mount channel length	685
D - Insulator height	250
E - Mounting clearance	381
F - Mounting hole dia.	14
G	273
H - Mount Channel width	76.2
I - Mount Channel height	38.1
J - Insulator dia.	95
K	195
L - Total height	427
M - Total Width	264
N - Total Length	840
P - Conductor dia.	25.4

## Dimensions - LA36 (36KV Disconnecter)



DIMENSIONS	
A	440
B	440
C-Mount channel length	997
D - Insulator height	516
E - Mounting clearance	438
F - Mounting hole dia.	14.5
G	330
H - Mount Channel width	101.6
I - Mount Channel height	50.8
J - Insulator dia.	101.6
K	169
L - Total height	762
M - Total Width	305
N - Total Length	1160
P - Cond. dia.	32

# Dimensions - LA72 (72KV Disconnecter)

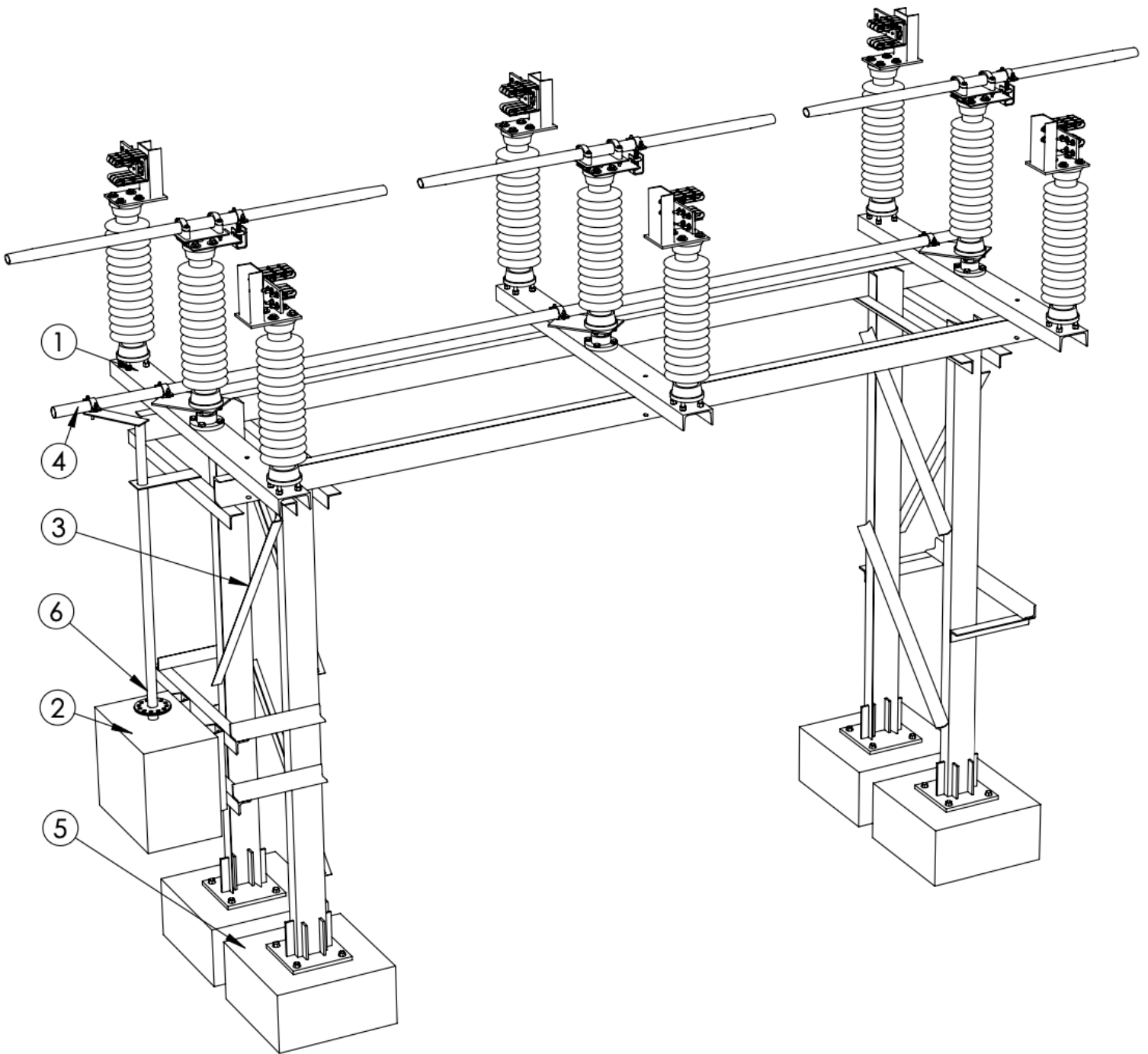


DIMENSIONS						
A	B	C	D	E	F	G
837	1125	1878	780	203	348	76
H	I	J	K	L	M	ØN
152	336	876	Ø19	305	2110	50.8
C : Mount Channel Length						
D : Insulator Height						
J : Mounting Clearance						
ØE : insulator Diameter						
ØN : Conductor pipe diameter						

NOTE : The indicated dimensions are subject to the manufacturing tolerances :

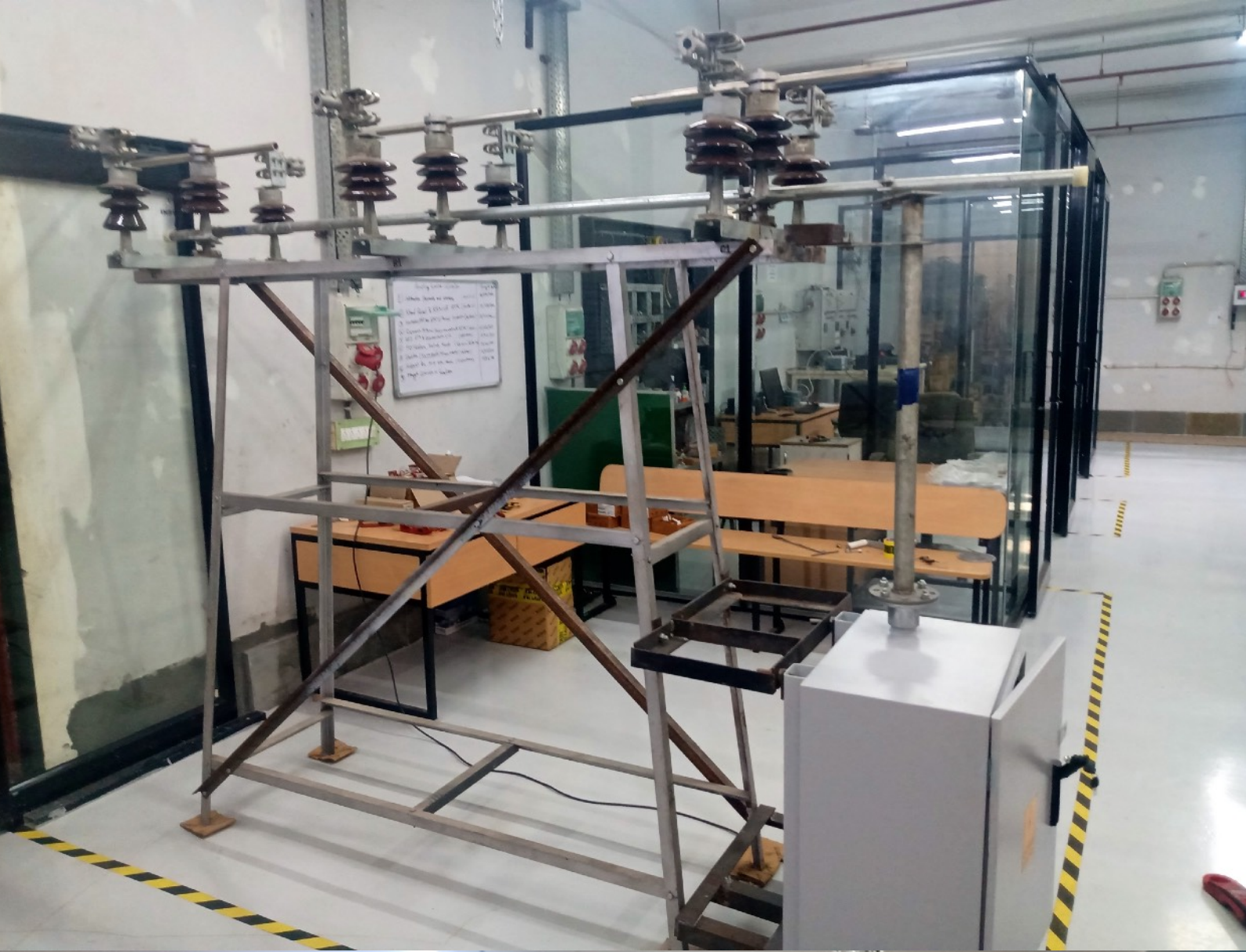
1. Upto 50mm --- ±3%
2. 51 to 100mm --- ±2%
3. 101 to 300mm -- ±1%
4. Above 300mm -- +0.75%

# Mounting arrangement

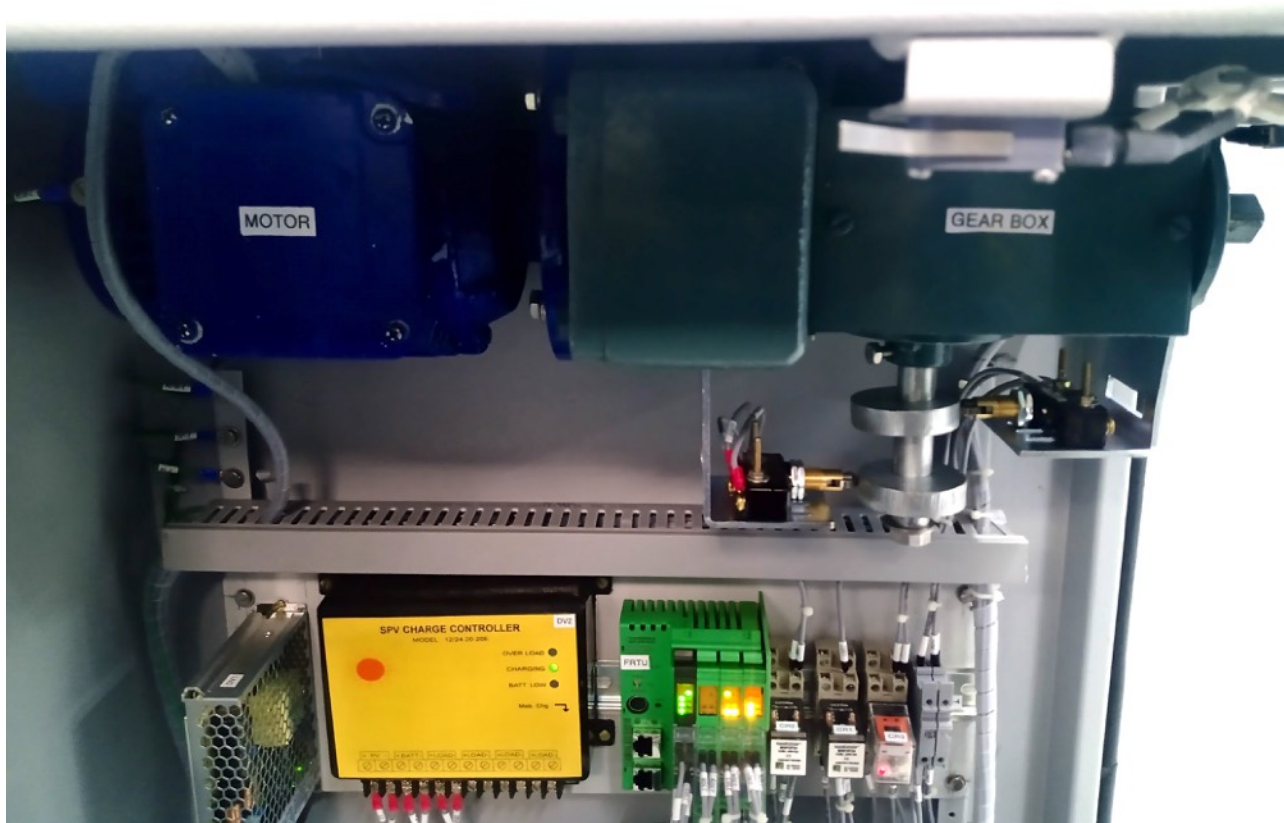


ITEM NO.	DESCRIPTION	QTY.
1	Isolator 66 KV without Earth Switch	3
2	Control Panel for 66 KV Isolator	1
3	Structural foundation for mounting purpose	-
4	Phase Coupling pipe Assy. (OD : 1in.) (GI pipe)	1
5	Concrete Foundation	-
6	Operating pipe Assy. for Isolator (OD : 2in.) (GI pipe)	1



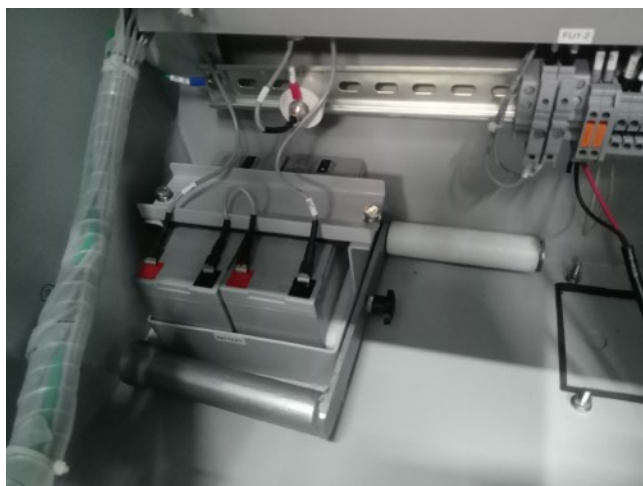


## Control & Automation



The Line Assist control cabinets are designed for remote control and local automation applications of switch disconnectors and other similar types with up/down operating movement. It can be combined with the advanced control modules for simple applications such as remote open/close operations and more sophisticated auto sectionalising schemes and measurements can be realised.

Control cabinets can also be used without the integrated motor mechanism. These can be used in applications such as master terminal for monitoring and controlling existing motor devices for indoor and outdoor switch disconnectors and other motor operated apparatus.



## Technical Specification

Specification	LA12	LA36	LA72
Rated Maximum Voltage	12KV	36kV	72kV
Power frequency withstand (Dry & Wet) for 60s	32kV rms	85kV rms	140kV rms
Lightning Impulse withstand	95kVp	185kVp	325kVp
Rated continuous current	Single Break up to 400A Double Break up to 1250A		1250A / 1600A
Short Circuit withstand (3s)	Single Break up to 12.5kA for 3s Double Break up to 25kA for 3s		40kA
Mechanical Endurance		3,000 / 10,000	
Creepage Distance		>25mm/kV	
Insulator material		Polymer / Porcelain	Porcelain
Rated frequency	50 Hz		50 Hz
Ambient temperature	-10°C to +55°C <sup>1</sup>		-10°C to +55°C <sup>1</sup>
Humidity	0 to 100%		0 to 100%
Altitude	2200 meter		2200 meter
Weight of single pole (Single Break with polymer insulator)	10KG	17KG	-
Weight of single pole (Single Break with porcelain insulator)	15KG	25KG	-
Weight of single pole (Double Break with porcelain insulator)	27KG	60KG	175KG
Weight of single pole (Double Break with polymer insulator)	21KG	45KG	-
Material (Line Assist Switch)		Hot Dip Galvanised CRCA Steel or Stainless Steel 304	Hot Dip Galvanised Steel
Material (Control Cabinet)		Power Coated CRCA Steel or Stainless Steel	

All steel components are hot dip galvanised according to ISO1461 which provides a high level of corrosion resistance. All copper components are tin-plated. All standardised fasteners are hot dip galvanised or stainless steel. This allows the Line Assist switch disconnecter to provide long-term operation even in the harshest environments

## Ordering Information

Description	Rating	Digit No								
		1	2	3	4	5	6	7	8	9
Line Assist Disconnect Switch		L	A							
Rated Voltage	12 kV			1	2					
	36 kV			3	6					
	72 kV			7	2					
Number of breaks per phase	Single					S				
	Double					V				
Insulator	Porcelain						1			
	Polymer (up to 36kV)						2			
Operation (Main Blade)	Manual							R		
	Motorised							M		
Earth Switch	None								N	
	Manual operation								E	
	Motorised operation								D	
Spare										0

## Accessories

- Auxiliary Supply Transformer**  
 A pole mounted transformer can be provided where Line Assist has to be installed on isolated locations
- Surge Arrestors**  
 Surge Arrestors can be installed on Incoming or Outgoing side of the ACR
- FRTU**  
 Used as a programmable controller for tele control and automation applications
- Current Transformer**  
 Can be used for line sensing where auto sectionalising application is required

# NIKUM ENERGY

Optimising Power

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