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EPCOS Medium Voltage

# Power Quality Solutions

Power Capacitors & Components Catalogue (1st July 2016 to 31st March 2017)



## Details of MV Capacitor Units & Components

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#### Typical Drawings & Technical Particular

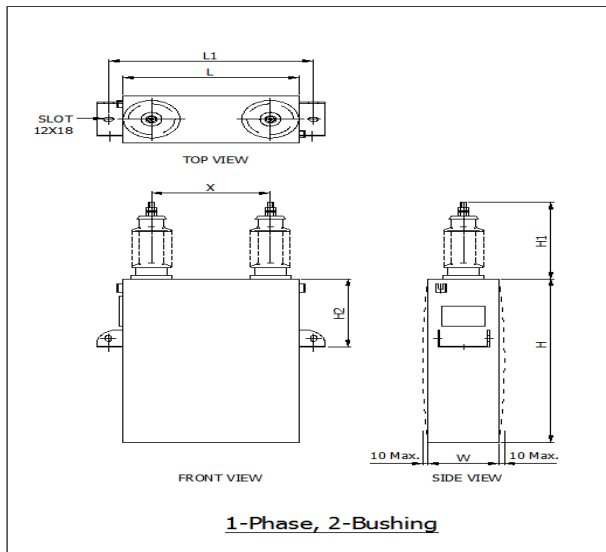
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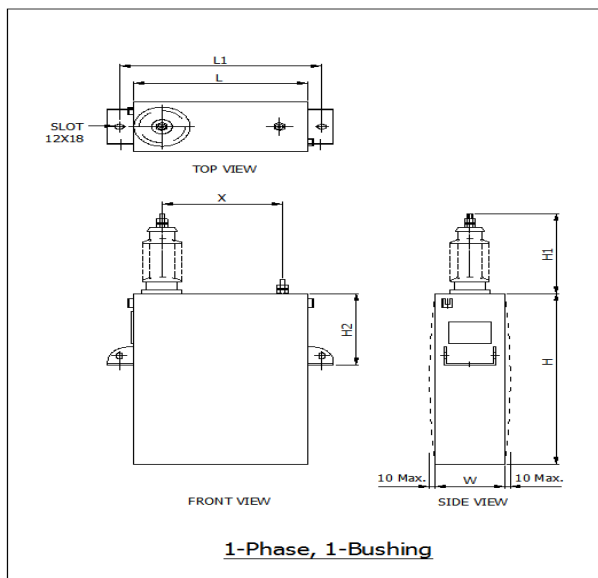
# MV Capacitor Unit

# Capacitor Principal Drawings



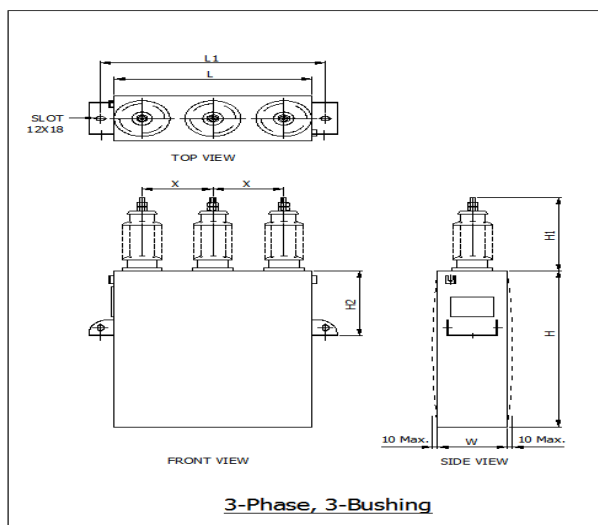
## 1-Phase, 2-Bushing, Capacitor Unit

Bushing Details		
BIL	Bushing Height	Bushing Creepage
(kV)	H1 (mm)	(mm)
10/40	165	180
20/60	165	180
28/75	200	300
38/95	225	380
50/125	310	600
70/170	360	760



## 1-Phase, 1-Bushing, Capacitor Unit

Bushing Details		
BIL	Bushing Height	Bushing Creepage
(kV)	H1 (mm)	(mm)
50/125	310	600
70/170	360	760



## 3-Phase, 3-Bushing, Capacitor Unit

Bushing Details		
BIL	Bushing Height	Bushing Creepage
(kV)	H1 (mm)	(mm)
10/40	165	180
20/60	165	180
28/75	200	300
38/95	225	380
50/125	310	600
70/170	360	760

## TECHNICAL PARTICULARS OF CAPACITOR UNIT

1	Application	:	Shunt compensation of reactive power
2	Reference standard	:	IEC 60871 (1): 2005 / IEEE 18 / IS 13925 : 2012 (Part 1)
3	Type of Capacitor	:	Film, Foil, Oil impregnated (APP type)
4	Rated voltage, kV	:	1kV to 38kV (Please refer table details)
5	Rated output, kVAr	:	50kVAr to 800kVAr (Please refer table details)
6	Rated current, A	:	(Please refer table details)
7	Rated capacitance	:	(Please refer table details)
8	Rated frequency, Hz	:	50 / 60Hz
9	Number of phase	:	1phase, 3phase (Please refer table details)
10	Connection Details	:	1ph, 3ph Star, 3ph Delta (Please refer table details)
<b>Material</b>			
11	Dielectric	:	Bi-axially oriented hazy polypropylene film (APP type)
12	Electrode	:	Aluminum foil
13	Impregnant	:	NPCB oil
14	Earth insulation	:	Press phan Insulating paper
15	Protective enclosure	:	Mild Steel (CRCA) / Stainless steel SS409 / SS304*
16	Bushing	:	Ceramic, 1ph-1B, 1ph-2B, 3ph-3B, 3ph-4B**
17	Discharge device	:	Metal oxide film resister
18	Paint	:	Epoxy Based, light grey 631 of IS 5***
<b>Construction</b>			
19	Electrode edge	:	Corona ring (folded foil)
20	Element	:	Flat elliptical, extended foil type, without tabs
21	Element end connection	:	Soldered type
22	Fuse Type	:	Internal / External
23	Discharge device	:	Internal resistor
24	Container sealing	:	Hermetically sealed
<b>Characteristics</b>			
25	Insulation class	:	Y
26	Protection class	:	IP00
27	Cooling	:	ONAN
28	Application duty	:	Indoor / Outdoor
29	Temperature category	:	`-5/C , -25/C ****
30	Capacitor unit losses	:	≤ 0.2 watt/kVAr at 25 <sup>0</sup> C after stabilization
31	Discharge time	:	600 seconds
32	Residual voltage	:	Less than 75V

**Note:**

\* Default is CRCA container, SS container available on request.

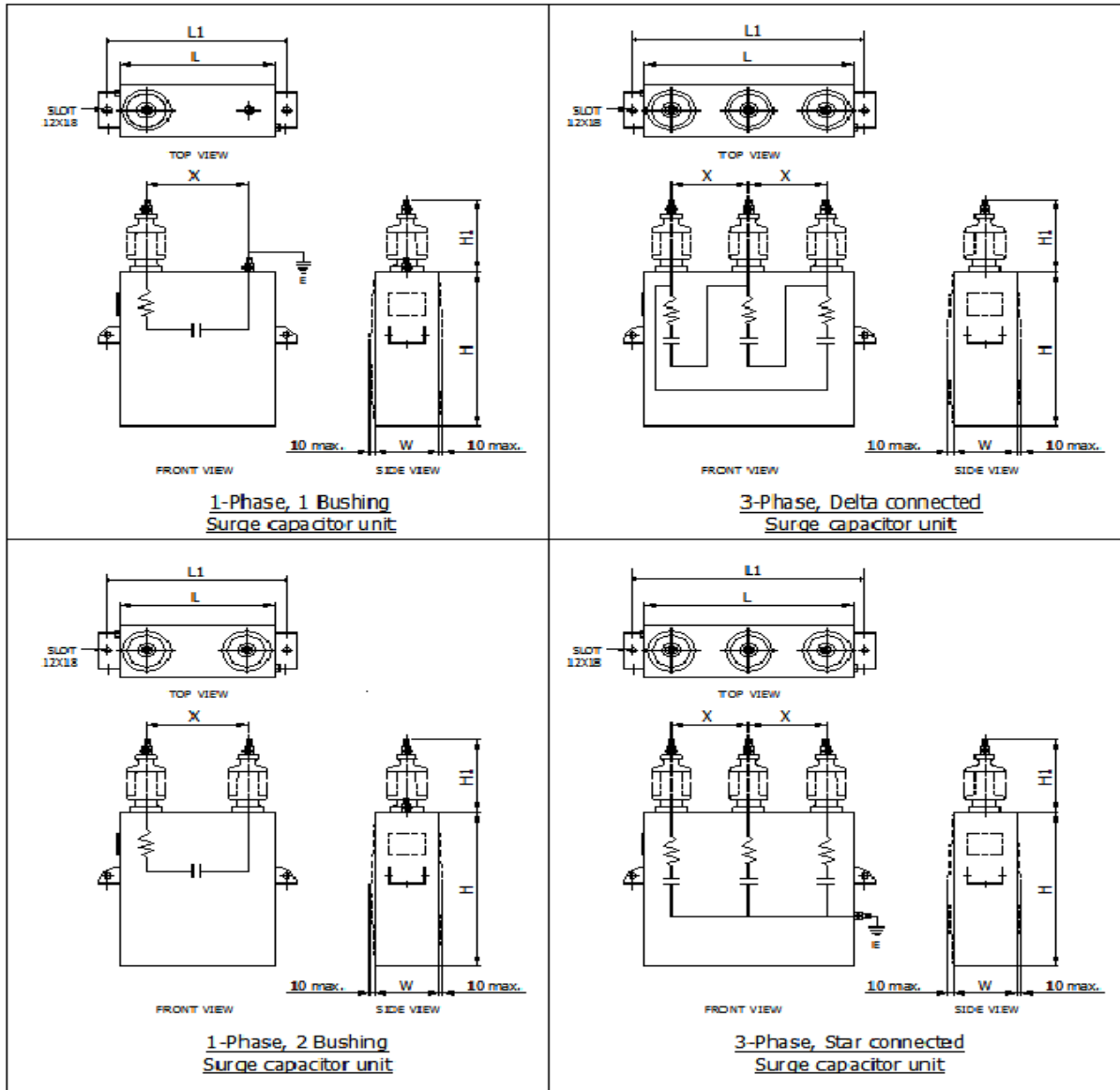
\*\* Non-ceramic bushing available on request for certain part nos.

\*\*\* Other paint shade available on request.

\*\*\*\* Please specify lowest operating ambient temp., other temp. category available on request.

# MV Surge Capacitor Unit

# Surge Capacitor Unit Principal Drawing



## TECHNICAL PARTICULARS OF SURGE CAPACITOR UNIT

1	Application	:	Protection from transient over voltages
2	Reference standard	:	IEC 60871 (1): 2005, IS 11548 : 1986
3	Type of Capacitor	:	Film, Foil, Oil impregnated (APP type)
4	Rated voltage, kV	:	3.6 kV to 52kV
5	Number of phase	:	Single / Three
6	Internal connections	:	$\Delta$ / Y / YN (for 3 phase only)
7	Rated frequency, Hz	:	50 / 60Hz
8	Capacitance Value	:	0.05 $\mu$ F to 2 $\mu$ F
9	Resistor Value	:	0 $\Omega$ to 100 $\Omega$
10	Time constant	:	1 - 20 $\mu$ s
<b>Material</b>			
11	Dielectric	:	Bi-axially oriented hazy polypropylene film (APP type)
12	Electrode	:	Aluminum foil
13	Impregnant	:	NPCB oil
14	Earth insulation	:	Press phan Insulating paper
15	Protective enclosure	:	Mild Steel (CRCA) / Stainless steel SS409 / SS304*
16	Bushing	:	Ceramic, 1ph-1B, 1ph-2B, 3ph-3B, 3ph-4B**
17	Discharge device	:	Metal oxide film resistor
18	Paint	:	Epoxy Based, light grey 631 of IS 5
<b>Construction</b>			
19	Electrode edge	:	Corona ring (folded foil)
20	Element	:	Flat elliptical, extended foil type, without tabs
21	Element end connection	:	Soldered type
22	Discharge device	:	Internal resistor
23	Container sealing	:	Hermetically sealed
<b>Characteristics</b>			
24	Insulation class	:	Y
25	Protection class	:	IP00
26	Cooling	:	ONAN
27	Application duty	:	Indoor / Outdoor
28	Temperature category	:	`-5/C***
29	Capacitor unit losses	:	$\leq$ 0.2 watt/kVAr at 25 <sup>0</sup> C after stabilization
30	Discharge time	:	600 seconds
31	Residual voltage	:	Less than 75V

**Note:**

\* Default is CRCA container, SS container available on request.

\*\* Non-ceramic bushing available on request for certain part nos.

\*\*\* Other Temp Category available on request.



# **MV Energy Storage Capacitor Unit**

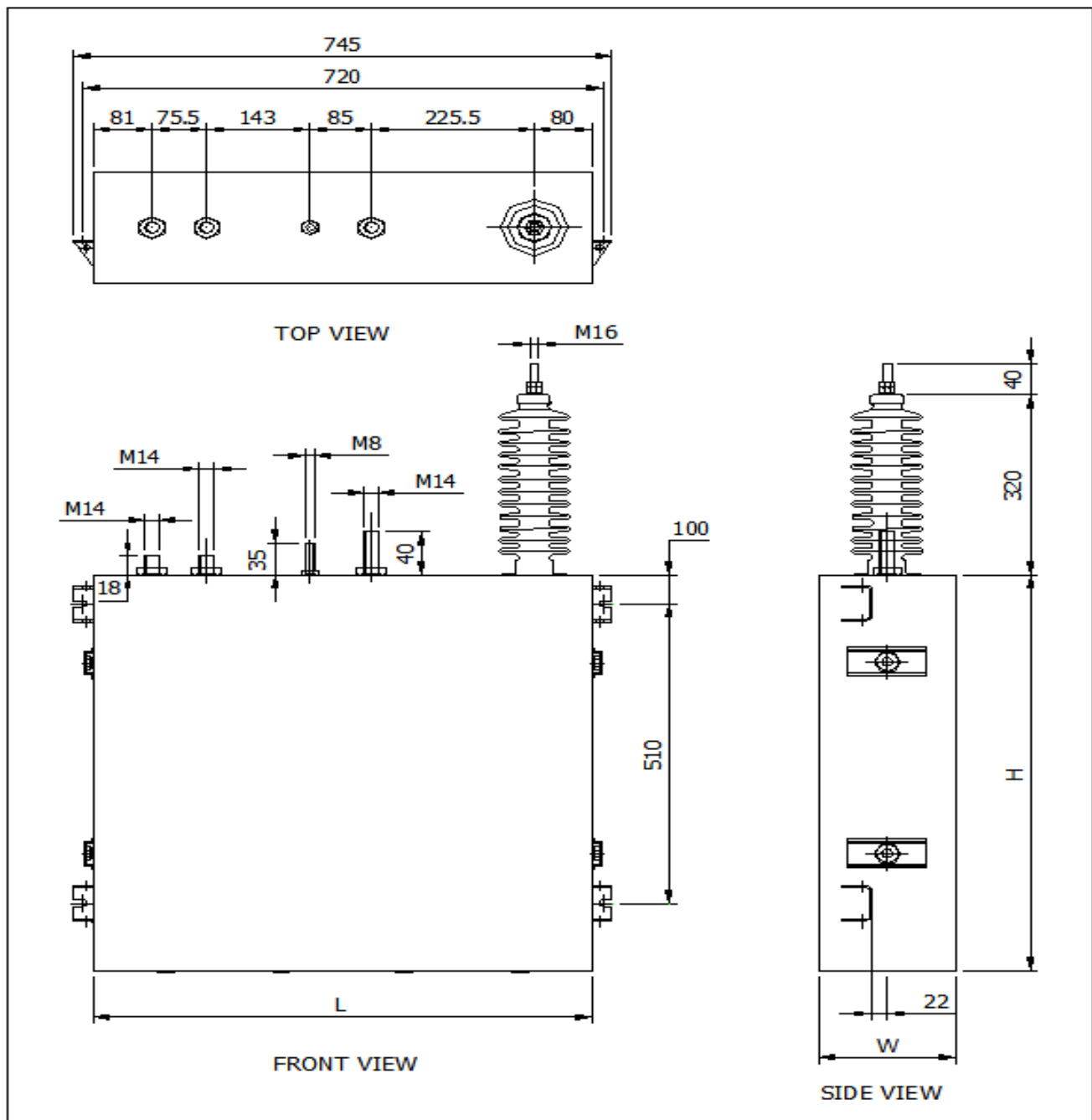
## TECHNICAL PARTICULARS OF ENERGY STORAGE UNIT

1	Application	:	Pulse discharge/Voltage, Impulse current & voltage generator
2	Reference standard	:	IS 13666:1993
3	Type of Capacitor	:	Film, Foil, Oil impregnated (APP type)
4	Rated Voltage, $U_N$	:	5 to 100kV DC (Please refer table details)
5	Rated Capacitance, $C_N$	:	0.05 $\mu$ F to 10 $\mu$ F (Please refer table details)
6	Rated Energy	:	500 to 5000 Joule (Please refer table details)
<b>Material</b>			
7	Dielectric	:	Bi-axially oriented hazy polypropylene film (APP type)
8	Electrode	:	Aluminum foil
9	Impregnant	:	NPCB oil
10	Protective enclosure	:	Mild Steel (CRCA) / Stainless steel SS409 / SS304
11	Bushing	:	Porcelain type
12	Paint	:	light grey 631 of IS 5
<b>Construction</b>			
13	Electrode edge	:	Corona ring (folded foil)
14	Element	:	Flat elliptical, extended foil type, without tabs
15	Element end connection	:	Soldered type
16	Fuse Type	:	Not Provided
17	Discharge device	:	Not Provided
18	Container sealing	:	Hermetically sealed
<b>Characteristics</b>			
19	Insulation class	:	Y
20	Protection class	:	IP00
21	Cooling	:	ONAN
22	Application duty	:	Indoor, Vertical or horizontal mounting
23	Creepage distance	:	> 5 mm/ kV DC of rated voltage
24	Equivalent series inductance	:	< 800nH
25	Equivalent series resistance	:	< 10 m $\Omega$
26	Temp. Category	:	`-5/C*

**Note:**

\* Other Temp Category available on request

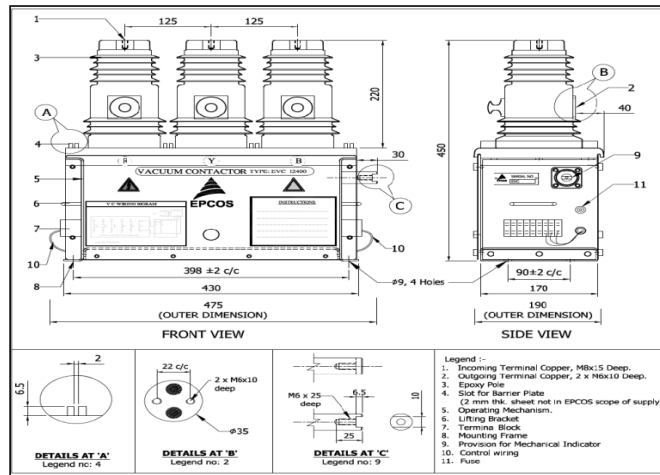
# Energy Storage Capacitor Principal Drawing



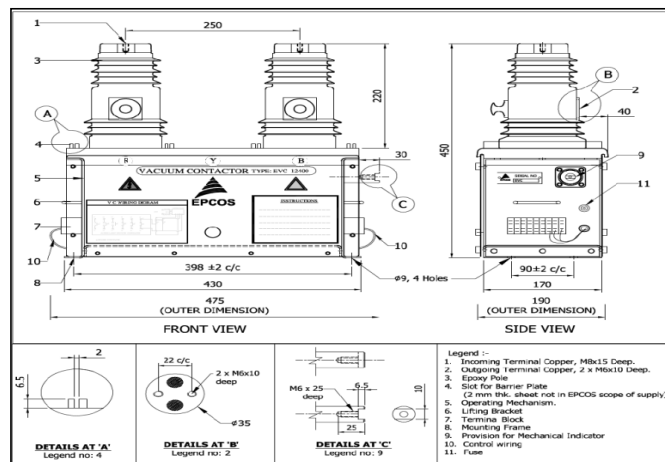
# MV Vacuum Contactor

# Vacuum Contactor Principal Drawings

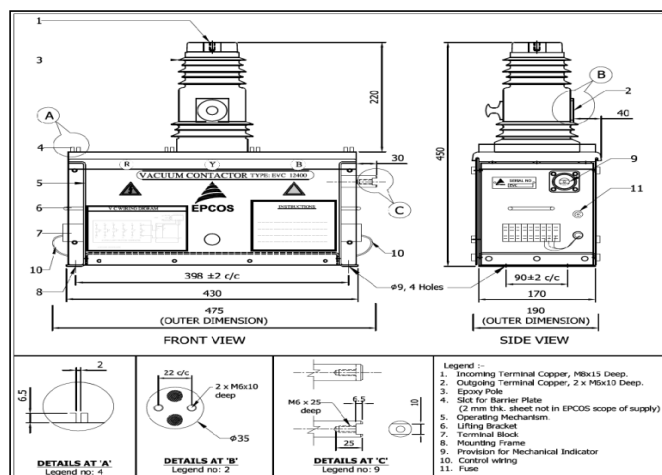
## Three Pole Vacuum Contactor



## Two Pole Vacuum Contactor



## Single Pole Vacuum Contactor



## TECHNICAL PARTICULARS OF VACUUM CONTACTOR

1	Reference Standard	:	IS:9046:1978 / IEC:60470-1 / IEC:60694
2	Installation	:	Indoor
3	System Voltage	:	3.3 / 6.6 / 11kV
4	Highest System Voltage	:	4 / 7.2 / 12.7kV
5	Mechanism	:	Solenoid (Electrical Latch) / Mechanical Latch
6	Rated Thermal Current	:	200 / 400 Amp
7	Capacitor Switching current	:	100 / 200 Amp
8	Rated Power frequency	:	20/60kVp / 20/60kVp / 28/75kVp*
9	Lightning Impulse (1.2/50 $\mu$ sec)	:	60kVp / 60kVp / 75kVp,
10	STC for 1 sec	:	10kArms with 25kA dynamic peak.
11	Aux. voltage (AC/DC)	:	24V / 48V / 110V / 220 V
12	Electrical Operations (AC 3)	:	100000 nos
13	Mechanical Operations	:	250000 nos
14	Capacitor switch duty	:	100000 nos
15	Short circuit making capacity	:	25 kA
16	Closing current (appx) in Amp.	:	5
17	Holding current (appx) in Amp.	:	0.5
18	Closing coil wattage (appx)	:	880
19	Holding coil wattage (appx)	:	88
20	Min. Temperature (deg C)	:	-5 deg C
21	Max. Temperature (deg C)	:	+55 deg C

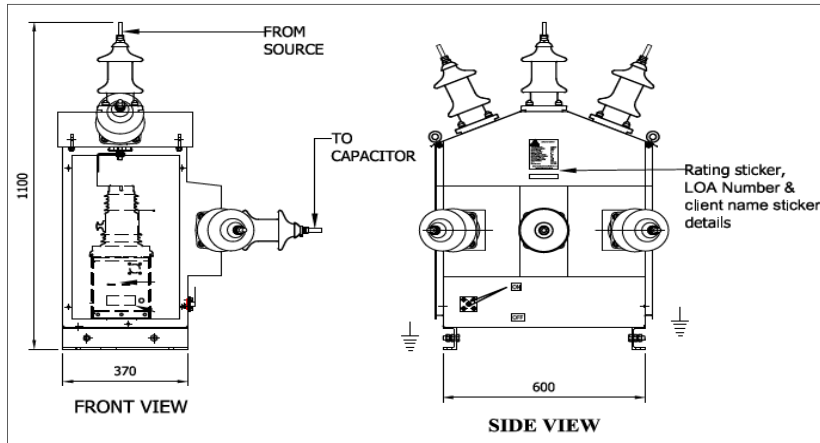
**Note:**

\* Other BIL available on request

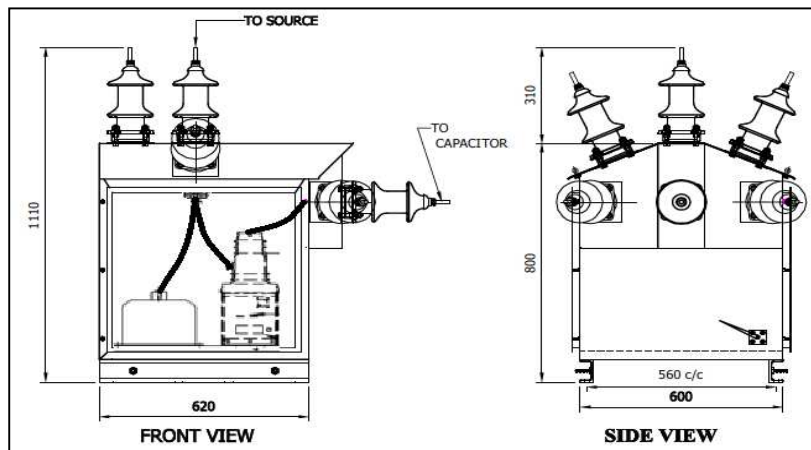
# **MV Cap Switch (Vacuum Type)**

# Principal CapSwitch Drawings

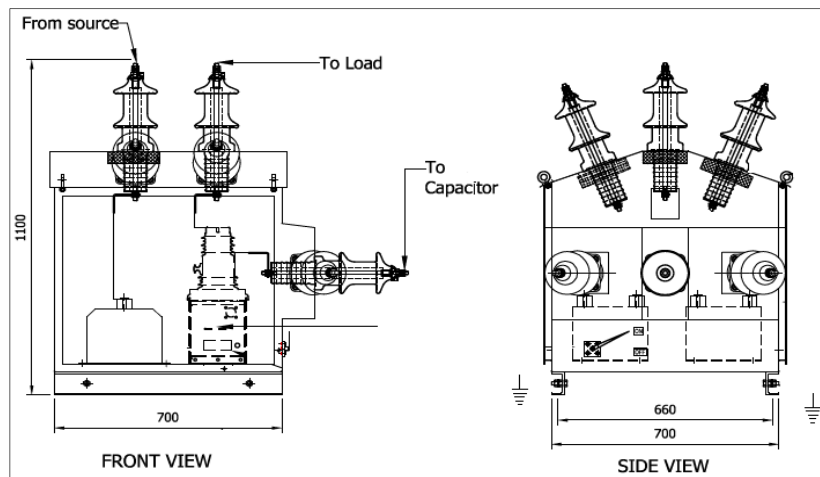
## CapSwitch 6 bushing Drawing



## CapSwitch 7 bushing Drawing



## CapSwitch 9 bushing Drawing





## TECHNICAL PARTICULARS OF VACUUM TYPE CAPSWITCH

1	Applicable standard	:	IS:9920:85 with it's latest amendment
2	Type & Make	:	Outdoor type in IP55 enclosure
3	Number of Bushing	:	Six / Seven / Nine
4	Capacitor Switching current	:	100 / 200 Amp
5	Rated Voltage	:	11 kV
6	Rated maximum voltage	:	12 kV
7	Rated normal current	:	200 /400 Amp*
8	Rated single capacitor bank current	:	100 A / 200 A
9	Frequency	:	50 Hz
10	Rated short time current for one sec	:	10 kA with dynamic peak of 25kAp
11	Peak Making current	:	25kVpeak
12	Rated short circuit making current	:	25 kA
13	Impulse with stand voltage (1.2x50 micro sec.wave,crest)	:	75 kVp*
14	One minute power frequency withstand voltage	:	28 kV*
15	One minute power frequency withstand voltage on auxiliary circuit to earth	:	3 KV
16	Electrical Operations	:	100000 nos
17	Mechanical Operations	:	250000 nos
18	Max. Required Current of Solenoid	:	
a	Closing Solenoid	:	5 A
b	Opening Solenoid	:	0 A
19	Operating Mechanism	:	
a	Stored energy	:	Spring- Solenoid
b	Release	:	Spring- Solenoid
c	Rated voltage	:	220 V AC

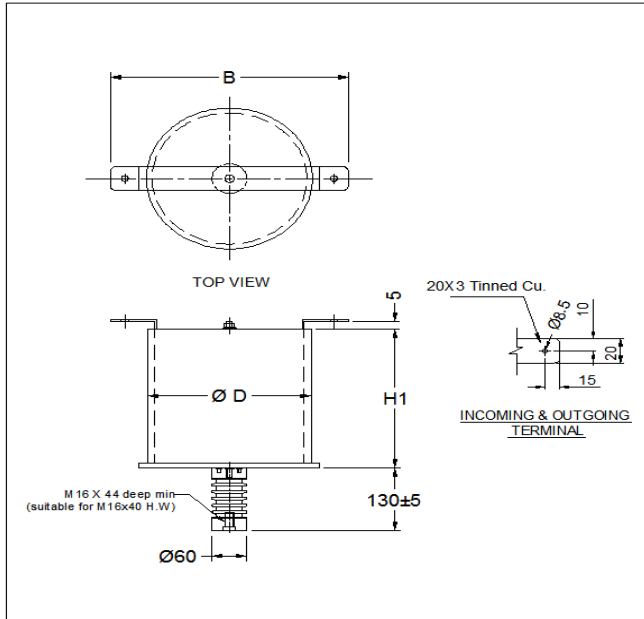
**Note:**

\* Other ratings available on request

# MV Series Reactor

# Series Reactor Principal Drawings

## Current Limiting Series Reactor Drawing



### Tolerances:

On dimensions: +/- 10% or 10 mm whichever is higher

On weight: +/- 10% or 500 gm, whichever is higher

D = diameter of coil

H1 = height of coil

h = height of support insulator = 130 mm

B = maximum width of coil = D + 80 mm

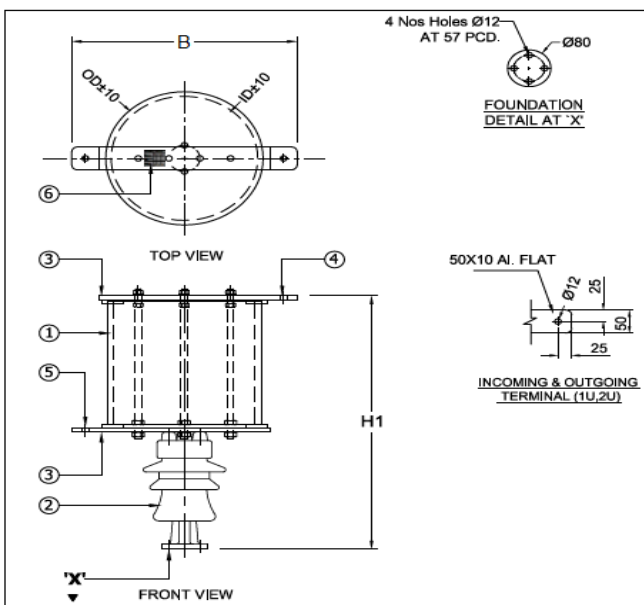
Thickness of tinned copper terminal = 3 mm

Width of tinned copper terminal = 20 mm

d = diameter of hole on terminal = 8 mm

db = diameter of support insulator = 60 mm

## 0.2% Damping Series Reactor Drawing



### Item No. Description

1. Aluminium Wound Coil
2. 11kV Post Insulator
3. Clamping Frame
4. Incoming Terminal "1U"
5. Outgoing Terminal "2U"
6. Rating & Daigram Plate

## TECHNICAL PARTICULARS OF SERIES REACTOR

1	Reference standard	:	IEC-600076 & IS-5553
2	Application	:	Inrush current limiting type, Damping type, Tuned or De-tuned type
3	Type of impregnated	:	Dry Type / Oil impregnated
4	No. of phases	:	1ph (Air Core / Iron Core) / 3ph (Iron Core)
5	Type of Reactor	:	Indoor / Outdoor
6	Type of Cooling	:	AN / ONAN
7	Per phase Inductance, $\mu\text{H}$ ( $L_n \pm 10\%$ )	:	25 $\mu\text{H}$ to 150mH (Please refer table details)
8	Rated Voltage, kV ( $U_n$ )	:	1kV to 33kV (Please refer table details)
9	Rated Current, Amps( $I_n$ )	:	5A to 250A (Please refer table details)
10	Rated Inductance	:	25 $\mu\text{H}$ to 150mH (Please refer table details)
11	Maximum rated current, Amps ( $I_{max}$ )	:	1.3 X $I_n$
12	Max. ambient temperature ( $^{\circ}\text{C}$ )	:	+55 deg C
13	Min. ambient temperature ( $^{\circ}\text{C}$ )	:	-25 deg C
14	Insulation Level (KV rms / KV peak), max	:	20/60kVp, 28/75kVp to 70/170kVp*
15	Terminal Width (mm)	:	Please refer table details
16	Class of Insulation	:	Class B / Class F / Class H
17	Rated short time symmetrical RMS Current for 1 Sec.	:	16.66 times the rated current
18	Winding material	:	Aluminum Strip / Aluminum Foil / Copper Strip
19	Incoming & Outgoing	:	Tinned copper terminals for foil winding and Aluminum lugs for strip winding

**Note:**

\* Other BIL available on request.

# MV Cap Unit & Comp Catalogue

## Catalogue for 1phase 2Bushing with External Fuse

SACH Code	Un	Qn	Cn	Freq.	In	L	L1	W	H	H2	X	Stud	Wt.
	kV	kVAr	μF	Hz	Amp.	mm	mm	mm	mm	mm	mm	mm	kg
B25161A0050B006	1.91	50.0	43.9	50	26.2	343	397	115	175	50	230	M12	14
B25161A0100B006	1.91	100.0	87.8	50	52.5	343	397	115	275	100	230	M16	20
B25161A0150B006	1.91	150.0	131.6	50	78.7	343	397	115	400	200	230	M16	27
B25161A0200B006	1.91	200.0	175.5	50	105.0	343	397	115	500	200	230	M16	33
B25161B0050B007	2.40	50.0	27.6	50	20.8	343	397	115	175	50	230	M12	14
B25161B0100B007	2.40	100.0	55.3	50	41.7	343	397	115	275	100	230	M16	20
B25161B0150B007	2.40	150.0	82.9	50	62.5	343	397	115	375	100	230	M16	26
B25161B0200B007	2.40	200.0	110.6	50	83.3	343	397	115	475	200	230	M16	31
B25161B0233B007	2.40	233.3	129.0	50	97.2	343	397	115	525	200	230	M16	34
B25161B0250B007	2.40	250.0	138.2	50	104.2	343	397	115	550	200	230	M16	36
B25161C0050B007	3.30	50.0	14.6	50	15.2	343	397	115	175	50	230	M12	14
B25161C0100B007	3.30	100.0	29.2	50	30.3	343	397	115	275	100	230	M16	20
B25161C0150B007	3.30	150.0	43.9	50	45.5	343	397	115	375	100	230	M16	26
B25161C0167B007	3.30	166.7	48.7	50	50.5	343	397	115	425	200	230	M16	29
B25161C0200B007	3.30	200.0	58.5	50	60.6	343	397	115	475	200	230	M16	31
B25161C0233B007	3.30	233.3	68.2	50	70.7	343	397	115	550	200	230	M16	36
B25161C0250B007	3.30	250.0	73.1	50	75.8	343	397	115	575	200	230	M16	37
B25161C0267B007	3.30	266.7	78.0	50	80.8	343	397	138	500	200	230	M16	38
B25161C0300B007	3.30	300.0	87.7	50	90.9	343	397	138	550	200	230	M16	41
B25161C0050B008	3.81	50.0	11.0	50	13.1	343	397	115	175	50	230	M12	14
B25161C0100B008	3.81	100.0	21.9	50	26.2	343	397	115	275	100	230	M12	20
B25161C0150B008	3.81	150.0	32.9	50	39.4	343	397	115	400	200	230	M16	27
B25161C0200B008	3.81	200.0	43.9	50	52.5	343	397	115	500	200	230	M16	33
B25161C0250B008	3.81	250.0	54.8	50	65.6	343	397	115	600	200	230	M16	39
B25161C0300B008	3.81	300.0	65.8	50	78.7	343	397	138	575	200	230	M16	43
B25161C0400B008	3.81	400.0	87.8	50	105.0	343	397	155	650	200	230	M16	53
B25161D0050B007	4.19	50.0	9.1	50	11.9	343	397	115	175	50	230	M12	14
B25161D0100B007	4.19	100.0	18.1	50	23.9	343	397	115	250	100	230	M12	19
B25161D0150B007	4.19	150.0	27.2	50	35.8	343	397	115	325	100	230	M16	23
B25161D0200B007	4.19	200.0	36.3	50	47.7	343	397	115	425	200	230	M16	29
B25161D0250B007	4.19	250.0	45.4	50	59.7	343	397	115	500	200	230	M16	33
B25161D0300B007	4.19	300.0	54.4	50	71.6	343	397	115	600	200	230	M16	39
B25161D0400B007	4.19	400.0	72.6	50	95.5	343	397	138	625	200	230	M16	46

## Catalogue for 1phase 2Bushing with External Fuse

SACH Code	Un	Qn	Cn	Freq.	In	L	L1	W	H	H2	X	Stud	Wt.
	kV	kVAr	μF	Hz	Amp.	mm	mm	mm	mm	mm	mm	mm	kg
B25161D0050B008	4.80	50.0	6.9	50	10.4	343	397	115	175	50	230	M12	14
B25161D0100B008	4.80	100.0	13.8	50	20.8	343	397	115	275	100	230	M12	20
B25161D0150B008	4.80	150.0	20.7	50	31.3	343	397	115	375	100	230	M16	26
B25161D0200B008	4.80	200.0	27.6	50	41.7	343	397	115	475	200	230	M16	31
B25161D0250B008	4.80	250.0	34.6	50	52.1	343	397	115	550	200	230	M16	36
B25161D0300B008	4.80	300.0	41.5	50	62.5	343	397	138	550	200	230	M16	41
B25161D0400B008	4.80	400.0	55.3	50	83.3	343	397	155	625	200	230	M16	51
B25161F0050B006	6.35	50.0	3.9	50	7.9	343	397	115	175	50	230	M12	14
B25161F0100B006	6.35	100.0	7.9	50	15.7	343	397	115	300	100	230	M12	21
B25161F0150B006	6.35	150.0	11.8	50	23.6	343	397	115	400	200	230	M12	27
B25161F0200B006	6.35	200.0	15.8	50	31.5	343	397	115	500	200	230	M16	33
B25161F0250B006	6.35	250.0	19.7	50	39.4	343	397	115	600	200	230	M16	39
B25161F0300B006	6.35	300.0	23.7	50	47.2	343	397	138	575	200	230	M16	43
B25161F0400B006	6.35	400.0	31.6	50	63.0	343	397	155	650	200	230	M16	53
B25161F0500B006	6.35	500.0	39.5	50	78.7	350	404	178	750	300	230	M16	69
B25161F0600B006	6.35	600.0	47.4	50	94.5	350	404	178	875	300	230	M16	80
B25161F0050B007	6.60	50.0	3.7	50	7.6	343	397	115	175	50	230	M12	14
B25161F0100B007	6.60	100.0	7.3	50	15.2	343	397	115	275	100	230	M12	20
B25161F0150B007	6.60	150.0	11.0	50	22.7	343	397	115	375	100	230	M12	26
B25161F0200B007	6.60	200.0	14.6	50	30.3	343	397	115	475	200	230	M16	31
B25161F0250B007	6.60	250.0	18.3	50	37.9	343	397	115	550	200	230	M16	36
B25161F0300B007	6.60	300.0	21.9	50	45.5	343	397	138	550	200	230	M16	41
B25161F0400B007	6.60	400.0	29.2	50	60.6	343	397	155	625	200	230	M16	51
B25161F0500B007	6.60	500.0	36.6	50	75.8	350	404	178	700	300	230	M16	64
B25161G0050B007	7.26	50.0	3.0	50	6.9	343	397	115	200	100	230	M12	16
B25161G0100B007	7.26	100.0	6.0	50	13.8	343	397	115	325	100	230	M12	23
B25161G0150B007	7.26	150.0	9.1	50	20.7	343	397	115	425	200	230	M12	29
B25161G0200B007	7.26	200.0	12.1	50	27.5	343	397	115	550	200	230	M12	36
B25161G0250B007	7.26	250.0	15.1	50	34.4	343	397	138	525	200	230	M16	40
B25161G0300B007	7.26	300.0	18.1	50	41.3	343	397	138	625	200	230	M16	46
B25161G0400B007	7.26	400.0	24.2	50	55.1	343	397	178	675	200	230	M16	62
B25161G0500B007	7.26	500.0	30.2	50	68.9	350	404	178	800	300	230	M16	73
B25161G0600B007	7.26	600.0	36.3	50	82.6	350	404	178	950	300	230	M16	86

## Catalogue for 1phase 2Bushing with External Fuse

SACH Code	Un	Qn	Cn	Freq.	In	L	L1	W	H	H2	X	Stud	Wt.
	kV	kVAr	μF	Hz	Amp.	mm	mm	mm	mm	mm	mm	mm	kg
B25161G0050B006	7.62	50.0	2.7	50	6.6	343	397	115	200	100	230	M12	16
B25161G0100B006	7.62	100.0	5.5	50	13.1	343	397	115	300	100	230	M12	21
B25161G0150B006	7.62	150.0	8.2	50	19.7	343	397	115	400	200	230	M12	27
B25161G0200B006	7.62	200.0	11.0	50	26.2	343	397	115	500	200	230	M12	33
B25161G0233B006	7.62	233.3	12.8	50	30.6	343	397	115	550	200	230	M16	36
B25161G0250B006	7.62	250.0	13.7	50	32.8	343	397	115	600	200	230	M16	39
B25161G0267B006	7.62	266.7	14.6	50	35.0	343	397	138	525	200	230	M16	40
B25161G0300B006	7.62	300.0	16.5	50	39.4	343	397	138	575	200	230	M16	43
B25161G0333B006	7.62	333.3	18.3	50	43.7	343	397	138	625	200	230	M16	46
B25161G0400B006	7.62	400.0	21.9	50	52.5	343	397	155	650	200	230	M16	53
B25161G0500B006	7.62	500.0	27.4	50	65.6	350	404	178	750	300	230	M16	69
B25161G0600B006	7.62	600.0	32.9	50	78.7	350	404	178	875	300	230	M16	80
B25161I0050B006	9.53	50.0	1.8	50	5.2	343	397	115	200	100	230	M12	16
B25161I0100B006	9.53	100.0	3.5	50	10.5	343	397	115	300	100	230	M12	21
B25161I0150B006	9.53	150.0	5.3	50	15.7	343	397	115	400	200	230	M12	27
B25161I0200B006	9.53	200.0	7.0	50	21.0	343	397	115	500	200	230	M12	33
B25161I0250B006	9.53	250.0	8.8	50	26.2	343	397	115	600	200	230	M12	39
B25161I0300B006	9.53	300.0	10.5	50	31.5	343	397	138	575	200	230	M16	43
B25161I0400B006	9.53	400.0	14.0	50	42.0	343	397	155	650	200	230	M16	53
B25161I0500B006	9.53	500.0	17.5	50	52.5	350	404	178	750	300	230	M16	69
B25161I0600B006	9.53	600.0	21.0	50	63.0	350	404	178	875	300	230	M16	80
B25161I0667B006	9.53	666.7	23.4	50	70.0	350	404	178	950	300	230	M16	86
B25161I0800B006	9.53	800.0	28.1	50	83.9	350	404	200	975	300	230	M16	97
B25161J0100B006	10.50	100.0	2.9	50	9.5	343	397	115	250	100	230	M12	19
B25161J0150B006	10.50	150.0	4.3	50	14.3	343	397	115	350	100	230	M12	24
B25161J0200B006	10.50	200.0	5.8	50	19.0	343	397	115	425	200	230	M12	29
B25161J0300B006	10.50	300.0	8.7	50	28.6	343	397	115	600	200	230	M12	39
B25161J0400B006	10.50	400.0	11.6	50	38.1	343	397	138	625	200	230	M16	46
B25161J0600B006	10.50	600.0	17.3	50	57.1	350	404	178	750	300	230	M16	69
B25161J0800B006	10.50	800.0	23.1	50	76.2	350	404	178	950	300	230	M16	86



## Catalogue for 1phase 2Bushing with External Fuse

SACH Code	Un	Qn	Cn	Freq.	In	L	L1	W	H	H2	X	Stud	Wt.
	kV	kVAr	μF	Hz	Amp.	mm	mm	mm	mm	mm	mm	mm	kg
B25161K0050B006	11.00	50.0	1.3	50	4.5	343	397	115	200	100	230	M12	16
B25161K0100B006	11.00	100.0	2.6	50	9.1	343	397	115	300	100	230	M12	21
B25161K0150B006	11.00	150.0	3.9	50	13.6	343	397	115	400	200	230	M12	27
B25161K0200B006	11.00	200.0	5.3	50	18.2	343	397	115	500	200	230	M12	33
B25161K0250B006	11.00	250.0	6.6	50	22.7	343	397	115	600	200	230	M12	39
B25161K0267B006	11.00	266.7	7.0	50	24.2	343	397	138	525	200	230	M12	40
B25161K0300B006	11.00	300.0	7.9	50	27.3	343	397	138	575	200	230	M12	43
B25161K0333B006	11.00	333.3	8.8	50	30.3	343	397	138	625	200	230	M16	46
B25161K0400B006	11.00	400.0	10.5	50	36.4	343	397	155	650	200	230	M16	53
B25161K0500B006	11.00	500.0	13.2	50	45.5	350	404	178	750	300	230	M16	69
B25161K0600B006	11.00	600.0	15.8	50	54.5	350	404	178	850	300	230	M16	77
B25161K0800B006	11.00	800.0	21.1	50	72.7	350	404	200	975	300	230	M16	97
B25161L0100B006	12.00	100.0	2.2	50	8.3	343	397	115	250	100	230	M12	19
B25161L0150B006	12.00	150.0	3.3	50	12.5	343	397	115	350	100	230	M12	24
B25161L0200B006	12.00	200.0	4.4	50	16.7	343	397	115	425	200	230	M12	29
B25161L0300B006	12.00	300.0	6.6	50	25.0	343	397	115	600	200	230	M12	39
B25161L0400B006	12.00	400.0	8.8	50	33.3	343	397	138	625	200	230	M16	46
B25161L0600B006	12.00	600.0	13.3	50	50.0	350	404	178	750	300	230	M16	69
B25161L0800B006	12.00	800.0	17.7	50	66.7	350	404	178	950	300	230	M16	86
B25161L0100B007	12.50	100.0	2.0	50	8.0	343	397	115	325	100	230	M12	24
B25161L0150B007	12.50	150.0	3.1	50	12.0	343	397	115	425	200	230	M12	29
B25161L0200B007	12.50	200.0	4.1	50	16.0	343	397	115	550	200	230	M12	36
B25161L0300B007	12.50	300.0	6.1	50	24.0	343	397	138	625	200	230	M12	47
B25161L0400B007	12.50	400.0	8.2	50	32.0	343	397	178	650	200	230	M16	59
B25161L0450B007	12.50	450.0	9.2	50	36.0	350	404	178	750	300	230	M16	69
B25161L0600B007	12.50	600.0	12.2	50	48.0	350	404	178	925	300	230	M16	84
B25161L0100B009	12.65	100.0	2.0	50	7.9	343	397	115	325	100	230	M12	24
B25161L0150B009	12.65	150.0	3.0	50	11.9	343	397	115	425	200	230	M12	29
B25161L0200B009	12.65	200.0	4.0	50	15.8	343	397	115	550	200	230	M12	36
B25161L0250B009	12.65	250.0	5.0	50	19.8	343	397	138	525	200	230	M12	40
B25161L0300B009	12.65	300.0	6.0	50	23.7	343	397	138	625	200	230	M12	47
B25161L0600B009	12.65	400.0	8.0	50	31.6	343	397	178	650	200	230	M16	59
B25161L0800B009	12.65	600.0	11.9	50	47.4	350	404	178	925	300	230	M16	84

## Catalogue for 1phase 2Bushing with External Fuse

SACH Code	Un	Qn	Cn	Freq.	In	L	L1	W	H	H2	X	Stud	Wt.
	kV	kVAr	μF	Hz	Amp.	mm	mm	mm	mm	mm	mm	mm	kg
B25161L0100B008	12.70	100.0	2.0	50	7.9	343	397	115	325	100	230	M12	24
B25161L0150B008	12.70	150.0	3.0	50	11.8	343	397	115	425	200	230	M12	29
B25161L0200B008	12.70	200.0	3.9	50	15.7	343	397	115	550	200	230	M12	36
B25161L0250B008	12.70	250.0	4.9	50	19.7	343	397	138	525	200	230	M12	40
B25161L0300B008	12.70	300.0	5.9	50	23.6	343	397	138	625	200	230	M12	47
B25161L0350B008	12.70	350.0	6.9	50	27.6	343	397	155	650	200	230	M16	53
B25161L0400B008	12.70	400.0	7.9	50	31.5	343	397	178	650	200	230	M16	59
B25161L0500B008	12.70	500.0	9.9	50	39.4	350	404	178	800	300	230	M16	73
B25161N0100B006	13.28	100.0	1.8	50	7.5	343	397	115	300	100	230	M12	22
B25161N0150B006	13.28	150.0	2.7	50	11.3	343	397	115	400	200	230	M12	28
B25161N0200B006	13.28	200.0	3.6	50	15.1	343	397	115	500	200	230	M12	33
B25161N0250B006	13.28	250.0	4.5	50	18.8	343	397	115	575	200	230	M12	38
B25161N0300B006	13.28	300.0	5.4	50	22.6	343	397	138	575	200	230	M12	44
B25161N0400B006	13.28	400.0	7.2	50	30.1	343	397	155	650	200	230	M16	53
B25161N0600B006	13.28	600.0	10.8	50	45.2	350	404	178	850	300	230	M16	77
B25161N0100B008	13.80	100.0	1.7	50	7.2	343	397	115	300	100	230	M12	22
B25161N0150B008	13.80	150.0	2.5	50	10.9	343	397	115	375	100	230	M12	26
B25161N0200B008	13.80	200.0	3.3	50	14.5	343	397	115	475	200	230	M12	32
B25161N0250B008	13.80	250.0	4.2	50	18.1	343	397	115	575	200	230	M12	38
B25161N0300B008	13.80	300.0	5.0	50	21.7	343	397	138	550	200	230	M12	42
B25161N0400B008	13.80	400.0	6.7	50	29.0	343	397	155	625	200	230	M12	51
B25161N0600B008	13.80	600.0	10.0	50	43.5	350	404	178	825	300	230	M16	76
B25161B0050B005	2.40	50.0	23.0	60	20.8	343	397	115	175	50	230	M12	14
B25161B0100B005	2.40	100.0	46.1	60	41.7	343	397	115	250	100	230	M16	19
B25161B0150B005	2.40	150.0	69.1	60	62.5	343	397	115	325	100	230	M16	23
B25161B0200B005	2.40	200.0	92.2	60	83.3	343	397	115	400	200	230	M16	27
B25161B0250B005	2.40	300.0	138.2	60	125.0	343	397	115	550	200	230	M16	36

## Catalogue for 1phase 2Bushing with External Fuse

SACH Code	Un	Qn	Cn	Freq.	In	L	L1	W	H	H2	X	Stud	Wt.
	kV	kVAr	μF	Hz	Amp.	mm	mm	mm	mm	mm	mm	mm	kg
B25161B0050B008	2.77	50.0	17.3	60	18.1	343	397	115	200	100	230	M12	16
B25161B0100B008	2.77	100.0	34.6	60	36.1	343	397	115	325	100	230	M16	23
B25161B0150B008	2.77	150.0	51.9	60	54.2	343	397	115	425	200	230	M16	29
B25161B0200B008	2.77	200.0	69.2	60	72.2	343	397	115	550	200	230	M16	36
B25161B0250B008	2.77	250.0	86.5	60	90.3	343	397	138	550	200	230	M16	41
B25161C0050B009	3.83	50.0	9.0	60	13.1	343	397	115	175	50	230	M12	14
B25161C0100B009	3.83	100.0	18.1	60	26.1	343	397	115	250	100	230	M12	19
B25161C0150B009	3.83	150.0	27.1	60	39.2	343	397	115	325	100	230	M16	23
B25161C0200B009	3.83	200.0	36.2	60	52.2	343	397	115	425	200	230	M16	29
B25161C0250B009	3.83	250.0	45.2	60	65.3	343	397	115	500	200	230	M16	33
B25161C0300B009	3.83	300.0	54.3	60	78.3	343	397	115	600	200	230	M16	39
B25161C0400B009	3.83	400.0	72.4	60	104.4	343	397	138	625	200	230	M16	46
B25161D0050B006	4.16	50.0	7.7	60	12.0	343	397	115	150	50	230	M12	13
B25161D0100B006	4.16	100.0	15.3	60	24.0	343	397	115	225	100	230	M12	17
B25161D0150B006	4.16	150.0	23.0	60	36.1	343	397	115	275	100	230	M12	20
B25161D0200B006	4.16	200.0	30.7	60	48.1	343	397	115	400	200	230	M16	27
B25161D0250B006	4.16	250.0	38.3	60	60.1	343	397	115	450	200	230	M16	30
B25161D0350B006	4.16	350.0	53.7	60	84.1	343	397	115	500	200	230	M16	33
B25161D0400B006	4.16	400.0	61.3	60	96.2	343	397	115	600	200	230	M16	39
B25161D0500B006	4.16	500.0	76.7	60	120.2	343	397	138	525	200	230	M16	40
B25161D0050B009	4.80	50.0	5.8	60	10.4	343	397	115	175	50	230	M12	14
B25161D0100B009	4.80	100.0	11.5	60	20.8	343	397	115	250	100	230	M12	19
B25161D0150B009	4.80	150.0	17.3	60	31.3	343	397	115	325	100	230	M12	23
B25161D0200B009	4.80	200.0	23.0	60	41.7	343	397	115	400	200	230	M16	27
B25161D0300B009	4.80	300.0	34.6	60	62.5	343	397	115	550	200	230	M16	36
B25161D0400B009	4.80	400.0	46.1	60	83.3	343	397	138	600	200	230	M16	44
B25161F0050B008	6.35	50.0	3.3	60	7.9	343	397	115	175	50	230	M12	14
B25161F0100B008	6.35	100.0	6.6	60	15.7	343	397	115	250	100	230	M12	19
B25161F0150B008	6.35	150.0	9.9	60	23.6	343	397	115	350	100	230	M12	24
B25161F0200B008	6.35	200.0	13.2	60	31.5	343	397	115	425	200	230	M12	29
B25161F0300B008	6.35	300.0	19.7	60	47.2	343	397	115	600	200	230	M16	39
B25161F0400B008	6.35	400.0	26.3	60	63.0	343	397	138	625	200	230	M16	46

## Catalogue for 1phase 2Bushing with External Fuse

SACH Code	Un	Qn	Cn	Freq.	In	L	L1	W	H	H2	X	Stud	Wt.
	kV	kVAr	$\mu$ F	Hz	Amp.	mm	mm	mm	mm	mm	mm	mm	kg
B25161F0050B009	6.60	50.0	3.0	60	7.6	343	397	115	250	100	230	M12	19
B25161F0100B009	6.60	100.0	6.1	60	15.2	343	397	115	325	100	230	M12	23
B25161F0150B009	6.60	150.0	9.1	60	22.7	343	397	115	325	100	230	M12	23
B25161F0200B009	6.60	200.0	12.2	60	30.3	343	397	115	400	200	230	M12	27
B25161F0300B009	6.60	300.0	18.3	60	45.5	343	397	115	550	200	230	M16	36
B25161F0400B009	6.60	400.0	24.4	60	60.6	343	397	138	575	200	230	M16	43
B25161G0100B008	7.62	100.0	4.6	60	13.1	343	397	115	250	100	230	M12	19
B25161G0150B008	7.62	150.0	6.9	60	19.7	343	397	115	350	100	230	M12	24
B25161G0200B008	7.62	200.0	9.1	60	26.2	343	397	115	425	200	230	M12	29
B25161G0300B008	7.62	300.0	13.7	60	39.4	343	397	115	600	200	230	M16	39
B25161G0400B008	7.62	400.0	18.3	60	52.5	343	397	138	625	200	230	M16	46
B25161G0600B008	7.62	600.0	27.4	60	78.7	350	404	178	750	300	230	M16	69
B25161N0100B007	13.28	100.0	1.5	60	7.5	343	397	115	250	100	230	M12	19
B25161N0150B007	13.28	150.0	2.3	60	11.3	343	397	115	350	100	230	M12	25
B25161N0200B007	13.28	200.0	3.0	60	15.1	343	397	115	425	200	230	M12	29
B25161N0300B007	13.28	300.0	4.5	60	22.6	343	397	115	575	200	230	M12	38
B25161N0400B007	13.28	400.0	6.0	60	30.1	343	397	138	625	200	230	M12	47
B25161N0600B007	13.28	600.0	9.0	60	45.2	350	404	178	750	300	230	M16	69
B25161N0800B007	13.28	800.0	12.0	60	60.2	350	404	178	925	300	230	M16	84
B25161N0100B009	13.80	100.0	1.4	60	7.2	343	397	115	250	100	230	M12	19
B25161N0150B009	13.80	150.0	2.1	60	10.9	343	397	115	325	100	230	M12	24
B25161N0200B009	13.80	200.0	2.8	60	14.5	343	397	115	425	200	230	M12	29
B25161N0300B009	13.80	300.0	4.2	60	21.7	343	397	115	575	200	230	M12	38
B25161N0400B009	13.80	400.0	5.6	60	29.0	343	397	138	600	200	230	M12	45
B25161N0600B009	13.80	600.0	8.4	60	43.5	350	404	178	700	300	230	M16	65

## Catalogue for 1phase 1Bushing with External Fuse

SACH Code	Un	Qn	Cn	Freq.	In	L	L1	W	H	H2	X	Stud	Wt.
	kV	kVAr	μF	Hz	Amp.	mm	mm	mm	mm	mm	mm	mm	kg
B25161P0050B006	19.05	50	0.44	50	2.62	350	404	120	250	100	230	M16	21
B25161P0100B006	19.05	100	0.88	50	5.25	350	404	120	300	100	230	M16	24
B25161P0150B006	19.05	150	1.32	50	7.87	350	404	120	425	200	230	M16	32
B25161P0200B006	19.05	200	1.76	50	10.50	350	404	120	500	200	230	M16	36
B25161P0250B006	19.05	250	2.19	50	13.12	350	404	145	500	200	230	M16	42
B25161P0300B006	19.05	300	2.63	50	15.75	350	404	145	600	200	230	M16	49
B25161P0400B006	19.05	400	3.51	50	21.00	350	404	185	625	200	230	M16	62
B25161P0600B006	19.05	600	5.27	50	31.50	350	404	185	900	300	230	M16	86
B25161Q0100B006	21.00	100	0.72	50	4.76	350	404	120	275	100	230	M16	23
B25161Q0150B006	21.00	150	1.08	50	7.14	350	404	120	375	100	230	M16	29
B25161Q0200B006	21.00	200	1.44	50	9.52	350	404	120	450	200	230	M16	33
B25161Q0300B006	21.00	300	2.17	50	14.29	350	404	145	500	200	230	M16	42
B25161Q0400B006	21.00	400	2.89	50	19.05	350	404	160	600	200	230	M16	53
B25161Q0600B006	21.00	600	4.33	50	28.57	350	404	185	750	300	230	M16	73
B25161Q0100B007	22.13	100	0.65	50	4.52	350	404	120	300	100	230	M16	24
B25161Q0150B007	22.13	150	0.98	50	6.78	350	404	120	425	200	230	M16	32
B25161Q0200B007	22.13	200	1.30	50	9.04	350	404	120	500	200	230	M16	36
B25161Q0250B007	22.13	250	1.63	50	11.30	350	404	145	500	200	230	M16	42
B25161Q0300B007	22.13	300	1.95	50	13.56	350	404	145	600	200	230	M16	49
B25161Q0400B007	22.13	400	2.60	50	18.08	350	404	185	625	200	230	M16	62
B25161Q0500B007	22.13	500	3.25	50	22.59	350	404	185	750	300	230	M16	73
B25161Q0600B007	22.13	600	3.90	50	27.11	350	404	185	900	300	230	M16	86
B25161Q0667B007	22.13	667	4.34	50	30.13	350	404	185	950	300	230	M16	91
B25161Q0100B009	24.00	100	0.55	50	4.17	350	404	120	300	100	230	M16	24
B25161Q0150B009	24.00	150	0.83	50	6.25	350	404	120	425	200	230	M16	32
B25161Q0200B009	24.00	200	1.11	50	8.33	350	404	120	500	200	230	M16	36
B25161Q0250B009	24.00	250	1.38	50	10.42	350	404	145	500	200	230	M16	42
B25161Q0300B009	24.00	300	1.66	50	12.50	350	404	145	600	200	230	M16	49
B25161Q0400B009	24.00	400	2.21	50	16.67	350	404	185	625	200	230	M16	62
B25161Q0600B009	24.00	600	3.32	50	25.00	350	404	185	900	300	230	M16	86

## Catalogue for 1phase 1Bushing with External Fuse

SACH Code	Un	Qn	Cn	Freq.	In	L	L1	W	H	H2	X	Stud	Wt.
	kV	kVAr	μF	Hz	Amp.	mm	mm	mm	mm	mm	mm	mm	kg
B25161P0100B007	19.92	100	0.67	60	5.02	350	404	120	275	100	230	M16	23
B25161P0150B007	19.92	150	1.00	60	7.53	350	404	120	350	100	230	M16	27
B25161P0200B007	19.92	200	1.34	60	10.04	350	404	120	425	200	230	M16	32
B25161P0300B007	19.92	300	2.01	60	15.06	350	404	145	500	200	230	M16	42
B25161P0400B007	19.92	400	2.68	60	20.08	350	404	145	600	200	230	M16	49
B25161P0600B007	19.92	600	4.01	60	30.12	350	404	185	700	300	230	M16	68
B25161P0100B008	20.80	100	0.61	60	4.81	350	404	120	275	100	230	M16	23
B25161P0150B008	20.80	150	0.92	60	7.21	350	404	120	300	100	230	M16	24
B25161P0200B008	20.80	200	1.23	60	9.62	350	404	120	425	200	230	M16	32
B25161P0400B008	20.80	400	2.45	60	19.23	350	404	145	550	200	230	M16	45
B25161Q0100B008	22.80	100	0.51	60	4.39	350	404	120	275	100	230	M16	23
B25161Q0150B008	22.80	150	0.77	60	6.58	350	404	120	350	100	230	M16	27
B25161Q0200B008	22.80	200	1.02	60	8.77	350	404	120	425	200	230	M16	32
B25161Q0300B008	22.80	300	1.53	60	13.16	350	404	145	500	200	230	M16	42
B25161Q0400B008	22.80	400	2.04	60	17.54	350	404	145	600	200	230	M16	49
B25161Q0100B005	23.80	100	0.47	60	4.20	350	404	120	275	100	230	M16	23
B25161Q0150B005	23.80	150	0.70	60	6.30	350	404	120	375	100	230	M16	29
B25161Q0200B005	23.80	200	0.94	60	8.40	350	404	120	450	200	230	M16	33
B25161Q0300B005	23.80	300	1.41	60	12.61	350	404	145	500	200	230	M16	42
B25161Q0400B005	23.80	400	1.87	60	16.81	350	404	160	600	200	230	M16	53
B25161Q0600B005	23.80	600	2.81	60	25.21	350	404	185	750	300	230	M16	73

## Catalogue for 3phase 3bushing with External Fuse

SACH Code	Un	Qn	Cn	Freq.	In	L	L1	W	H	H2	X	Stud	Wt.
	kV	kVAr	μF	Hz	Amp.	mm	mm	mm	mm	mm	mm	mm	kg
B25161C0050C006	3.30	50	7.31	50	8.75	343	397	115	200	100	115	M12	17
B25161C0100C006	3.30	100	14.62	50	17.50	343	397	115	300	100	115	M12	23
B25161C0150C006	3.30	150	21.93	50	26.24	343	397	115	400	200	115	M12	29
B25161C0200C006	3.30	200	29.24	50	34.99	343	397	115	500	200	115	M16	35
B25161C0250C006	3.30	250	36.56	50	43.74	343	397	115	575	200	115	M16	39
B25161C0300C006	3.30	300	43.87	50	52.49	343	397	138	550	200	115	M16	43
B25161C0350C006	3.30	350	51.18	50	61.24	343	397	155	575	200	115	M16	49
B25161C0400C006	3.30	400	58.49	50	69.98	343	397	155	650	200	115	M16	55
B25161C0450C006	3.30	450	65.80	50	78.73	343	397	178	650	200	115	M16	62
B25161C0500C006	3.30	500	73.11	50	87.48	350	404	178	750	300	115	M16	71
B25161C0550C006	3.30	550	80.42	50	96.23	350	404	178	800	300	115	M16	76
B25161C0600C006	3.30	600	87.73	50	104.98	350	404	178	875	300	115	M16	82
B25161F0050C008	6.60	50	1.83	50	4.37	390	445	115	175	50	140	M12	17
B25161F0100C008	6.60	100	3.66	50	8.75	390	445	115	250	100	140	M12	22
B25161F0150C008	6.60	150	5.48	50	13.12	390	445	115	375	100	140	M12	30
B25161F0200C008	6.60	200	7.31	50	17.50	390	445	115	450	200	140	M12	35
B25161F0250C008	6.60	250	9.14	50	21.87	390	445	115	550	200	140	M12	41
B25161F0300C008	6.60	300	10.97	50	26.24	390	445	138	525	200	140	M12	45
B25161F0350C008	6.60	350	12.79	50	30.62	390	445	138	600	200	140	M16	51
B25161F0400C008	6.60	400	14.62	50	34.99	390	445	155	600	200	140	M16	56
B25161F0450C008	6.60	450	16.45	50	39.37	390	445	178	600	200	140	M16	63
B25161F0500C008	6.60	500	18.28	50	43.74	390	445	178	700	300	140	M16	72
B25161F0600C008	6.60	600	21.93	50	52.49	390	445	178	800	300	140	M16	81
B25161F0800C008	6.60	800	29.24	50	69.98	390	445	178	1025	300	140	M16	103

## Catalogue for 3phase 3bushing with External Fuse

SACH Code	Un	Qn	Cn	Freq.	In	L	L1	W	H	H2	X	Stud	Wt.
	kV	kVAr	μF	Hz	Amp.	mm	mm	mm	mm	mm	mm	mm	kg
B25161F0100C007	7.20	100	3.07	50	8.02	390	445	115	400	200	140	M12	31
B25161F0150C007	7.20	150	4.61	50	12.03	390	445	115	550	200	140	M12	41
B25161F0200C007	7.20	200	6.14	50	16.04	390	445	138	600	200	140	M16	51
B25161F0250C007	7.20	250	7.68	50	20.05	390	445	178	600	200	140	M16	63
B25161F0300C007	7.20	300	9.22	50	24.06	390	445	178	700	300	140	M16	72
B25161F0100C009	7.20	100	2.56	60	8.02	390	445	138	600	200	140	M16	51
B25161F0150C009	7.20	150	3.84	60	12.03	390	445	155	600	200	140	M16	56
B25161F0200C009	7.20	200	5.12	60	16.04	390	445	178	600	200	140	M16	63
B25161F0250C009	7.20	250	6.40	60	20.05	390	445	178	700	300	140	M16	72
B25161F0350C007	7.20	350	8.96	60	28.07	390	445	178	800	300	140	M16	81
B25161K0100C006	11.00	100	1.32	50	5.25	475	530	115	290	100	180	M12	28
B25161K0150C006	11.00	150	1.97	50	7.87	475	530	115	350	100	180	M12	33
B25161K0200C006	11.00	200	2.63	50	10.50	475	530	115	390	100	180	M12	36
B25161K0250C006	11.00	250	3.29	50	13.12	475	530	138	390	100	180	M12	41
B25161K0300C006	11.00	300	3.95	50	15.75	500	555	155	390	100	180	M12	47
B25161K0350C006	11.00	350	4.61	50	18.37	525	580	178	390	100	180	M12	55
B25161K0400C006	11.00	400	5.26	50	21.00	525	580	200	390	100	180	M12	61
B25161K0450C006	11.00	450	5.92	50	23.62	475	530	155	600	200	180	M12	66
B25161K0500C006	11.00	500	6.58	50	26.24	475	530	155	650	200	180	M12	71



## Catalogue for 1phase 2bushing with Internal Fuse

SACH Code	Un	Qn	Cn	Freq.	In	L	L1	W	H	H2	X	Stud	Wt.
	kV	kVAr	μF	Hz	Amp.	mm	mm	mm	mm	mm	mm	mm	kg
B25161A0050A005	1.91	50.00	43.9	50	26.25	350	404	120	200	100	230	M12	17
B25161A0100A005	1.91	100.00	87.8	50	52.49	350	404	120	300	100	230	M16	23
B25161A0150A005	1.91	150.00	131.6	50	78.74	350	404	120	400	200	230	M16	29
B25161A0200A005	1.91	200.00	175.5	50	104.99	350	404	120	500	200	230	M16	35
B25161B0050A005	2.40	50.00	27.6	50	20.83	350	404	120	200	100	230	M12	17
B25161B0100A005	2.40	100.00	55.3	50	41.67	350	404	120	300	100	230	M16	23
B25161B0150A005	2.40	150.00	82.9	50	62.50	350	404	120	375	100	230	M16	27
B25161B0200A005	2.40	200.00	110.6	50	83.33	350	404	120	475	200	230	M16	33
B25161C0050A005	3.30	50.00	14.6	50	15.15	350	404	120	200	100	230	M12	17
B25161C0100A005	3.30	100.00	29.2	50	30.30	350	404	120	300	100	230	M16	23
B25161C0150A005	3.30	150.00	43.9	50	45.45	350	404	120	400	200	230	M16	29
B25161C0200A005	3.30	200.00	58.5	50	60.61	350	404	120	500	200	230	M16	35
B25161C0250A005	3.30	250.00	73.1	50	75.76	350	404	145	500	200	230	M16	40
B25161C0300A005	3.30	300.00	87.7	50	90.91	350	404	145	575	200	230	M16	46
B25161C0100A007	3.81	100.00	21.9	50	26.25	350	404	120	300	100	230	M12	23
B25161C0150A007	3.81	150.00	32.9	50	39.37	350	404	120	400	200	230	M16	29
B25161C0200A007	3.81	200.00	43.9	50	52.49	350	404	120	500	200	230	M16	35
B25161C0250A007	3.81	250.00	54.8	50	65.62	350	404	145	500	200	230	M16	40
B25161D0100A006	4.80	100.00	13.8	50	20.83	350	404	120	300	100	230	M12	23
B25161D0150A006	4.80	150.00	20.7	50	31.25	350	404	120	375	100	230	M16	27
B25161D0200A006	4.80	200.00	27.6	50	41.67	350	404	120	475	200	230	M16	33
B25161D0250A006	4.80	250.00	34.6	50	52.08	350	404	120	575	200	230	M16	39
B25161D0300A006	4.80	300.00	41.5	50	62.50	350	404	145	550	200	230	M16	43
B25161D0400A006	4.80	400.00	55.3	50	83.33	350	404	160	650	200	230	M16	54

## Catalogue for 1phase 2bushing with Internal Fuse

SACH Code	Un	Qn	Cn	Freq.	In	L	L1	W	H	H2	X	Stud	Wt.
	kV	kVAr	μF	Hz	Amp.	mm	mm	mm	mm	mm	mm	mm	kg
B25161F0100A006	6.35	100.00	7.9	50	15.75	350	404	120	325	100	230	M12	24
B25161F0150A006	6.35	150.00	11.8	50	23.62	350	404	120	425	200	230	M12	30
B25161F0200A006	6.35	200.00	15.8	50	31.50	350	404	120	525	200	230	M16	36
B25161F0250A006	6.35	250.00	19.7	50	39.37	350	404	145	500	200	230	M16	40
B25161F0300A006	6.35	300.00	23.7	50	47.24	350	404	145	600	200	230	M16	47
B25161F0400A006	6.35	400.00	31.6	50	62.99	350	404	160	675	200	230	M16	57
B25161F0100A007	6.60	100.00	7.3	50	15.15	350	404	120	300	100	230	M12	23
B25161F0150A007	6.60	150.00	11.0	50	22.73	350	404	120	400	200	230	M12	29
B25161F0200A007	6.60	200.00	14.6	50	30.30	350	404	120	475	200	230	M16	33
B25161F0250A007	6.60	250.00	18.3	50	37.88	350	404	120	575	200	230	M16	39
B25161F0300A007	6.60	300.00	21.9	50	45.45	350	404	145	550	200	230	M16	43
B25161F0400A007	6.60	400.00	29.2	50	60.61	350	404	160	625	200	230	M16	53
B25161G0150A006	7.62	150.00	8.2	50	19.69	350	404	120	450	200	230	M12	31
B25161G0200A006	7.62	200.00	11.0	50	26.25	350	404	120	525	200	230	M12	36
B25161G0250A006	7.62	250.00	13.7	50	32.81	350	404	145	525	200	230	M16	42
B25161G0300A006	7.62	300.00	16.5	50	39.37	350	404	145	600	200	230	M16	47
B25161G0400A006	7.62	400.00	21.9	50	52.49	350	404	160	675	200	230	M16	57
B25161G0600A006	7.62	600.00	32.9	50	78.74	350	404	185	900	300	230	M16	84
B25161B0050C006	2.40	50	23.0	60	12.03	343	397	115	175	50	115	M12	16
B25161B0100C006	2.40	100	46.1	60	24.06	343	397	115	250	100	115	M12	20
B25161B0150C006	2.40	150	69.1	60	36.09	343	397	115	325	100	115	M16	24
B25161B0200C006	2.40	200	92.2	60	48.11	343	397	115	400	200	115	M16	28
B25161B0250C006	2.40	250	115.2	60	60.14	343	397	115	475	200	115	M16	32
B25161B0300C006	2.40	300	138.2	60	72.17	343	397	115	550	200	115	M16	37
B25161B0350C006	2.40	350	161.3	60	84.20	343	397	138	525	200	115	M16	40
B25161B0400C006	2.40	400	184.3	60	96.23	343	397	138	600	200	115	M16	45

## Catalogue for 1phase 2bushing with Internal Fuse

SACH Code	Un	Qn	Cn	Freq.	In	L	L1	W	H	H2	X	Stud	Wt.
	kV	kVAr	μF	Hz	Amp.	mm	mm	mm	mm	mm	mm	mm	kg
B25161D0050C006	4.16	50	7.7	60	6.94	343	397	115	175	50	115	M12	16
B25161D0100C006	4.16	100	15.3	60	13.88	343	397	115	250	100	115	M12	20
B25161D0150C006	4.16	150	23.0	60	20.82	343	397	115	325	100	115	M12	24
B25161D0200C006	4.16	200	30.7	60	27.76	343	397	115	425	200	115	M12	30
B25161D0250C006	4.16	250	38.3	60	34.70	343	397	115	500	200	115	M16	34
B25161D0300C006	4.16	300	46.0	60	41.64	343	397	115	575	200	115	M16	38
B25161D0350C006	4.16	350	53.7	60	48.58	343	397	138	550	200	115	M16	42
B25161D0400C006	4.16	400	61.3	60	55.52	343	397	138	625	200	115	M16	47
B25161D0050C007	4.80	50	5.8	60	6.01	343	397	115	175	50	115	M12	16
B25161D0100C007	4.80	100	11.5	60	12.03	343	397	115	250	100	115	M12	20
B25161D0150C007	4.80	150	17.3	60	18.04	343	397	115	325	100	115	M12	24
B25161D0200C007	4.80	200	23.0	60	24.06	343	397	115	400	200	115	M12	28
B25161D0250C007	4.80	250	28.8	60	30.07	343	397	115	500	200	115	M16	34
B25161D0300C007	4.80	300	34.6	60	36.09	343	397	115	575	200	115	M16	38
B25161D0350C007	4.80	350	40.3	60	42.10	343	397	138	525	200	115	M16	40
B25161D0400C007	4.80	400	46.1	60	48.11	343	397	138	600	200	115	M16	45
B25161F0100A008	6.60	100.00	6.1	60	15.15	350	404	120	300	100	230	M12	23
B25161F0150A008	6.60	150.00	9.1	60	22.73	350	404	120	350	100	230	M12	26
B25161F0200A008	6.60	200.00	12.2	60	30.30	350	404	120	425	200	230	M12	30
B25161F0300A008	6.60	300.00	18.3	60	45.45	350	404	120	575	200	230	M16	39
B25161F0400A008	6.60	400.00	24.4	60	60.61	350	404	145	600	200	230	M16	47
B25161G0150A007	7.20	150.00	9.2	50	20.83	350	404	120	300	100	230	M12	23
B25161G0200A007	7.20	200.00	12.3	50	27.78	350	404	120	400	200	230	M12	29
B25161G0250A007	7.20	250.00	15.4	50	34.72	350	404	120	450	200	230	M12	31
B25161G0300A007	7.20	350.00	21.5	50	48.61	350	404	120	575	200	230	M16	39

## Catalogue for Surge Capacitor Unit

SACH Code	Un	Cn	Freq.	Phase	Bushing	L	W	H	H1	Stud	Wt.
	kV	μF	Hz			mm	mm	mm	mm	mm	kg
B25161C12C	3.60	1.00	50/60	3.0	3B	340	115	170	335	M12	16
B25161F1U1	6.60	0.10	50/60	3.0	3B	460	135	200	365	M12	20
B25161L4U1	12.00	0.10	50/60	3.0	3B	460	115	190	390	M16	24
B25161P35U1	18.00	0.25	50/60	3.0	3B	570	115	290	515	M16	37
B25161P24U1	17.50	0.25	50/60	1.0	1B	343	120	290	515	M16	28
B25161P11B1	19.00	0.10	50/60	1.0	1B	400	120	300	660	M16	40
B25161P 11B 1	19.00	0.10	50/60	1.0	1B	400	120	300	660	M16	45
B25161S125U1	40.00	0.13	50/60	1.0	1B	550	130	420	780	M16	50

Note : Below ratings are custom built, available on request

Surge Capacitor Unit Range (mfd) : (0.02, 0.05, 0.1, 0.125, 0.15, 0.2, 0.25, 0.3, 0.4, 0.5, 0.75, 1, 2, 2.5, 5, 10)

Surge Capacitor Unit Container : CRCA / SS Container

No. of Phase	Voltage	mfd
1phase	3.6kV	0.2 mfd to 10mfd
1phase	7.2kV	0.15 mfd to 10mfd
1phase	12kV	0.1 mfd to 5mfd
1phase	17.5kV	0.1 mfd to 2mfd
1phase	24kV	0.1 mfd to 1mfd
1phase	36kV	0.02 mfd to 0.75mfd
1phase	40kV	0.02 mfd to 0.5mfd
1phase	52kV	0.02 mfd to 0.5mfd

No. of Phase	Voltage	mfd
3phase	3.6kV	0.2 to 10mfd
3phase	7.2kV	0.15 to 5mfd
3phase	12kV	0.1 to 2mfd
3phase	17.5kV	0.1 to 1mfd

## Catalogue for Energy Storage Capacitor Unit

SACH Code	DC Un	Cn	Phase	Bushing	L	W	H	Stud	Wt.
	kV	μF			mm	mm	mm	mm	kg
B25161R 25U 2	100.00	0.25	1.0	1B	690	130	710	M12	100
B25161R 29U 1	100.00	0.50	1.0	1B	690	130	710	M12	105
B25161X 75X 1	100.00	0.75	1.0	1B	690	159	900	M12	140
B25161R 58U 3	100.00	1.00	1.0	1B	690	189	775	M12	160
B25161X 15U	100.00	1.50	1.0	1B	690	210	900	M12	195

**Note : Other ratings are available on request**

## Catalogue for Vacuum Contactor

SACH CODE	Material Name	Phase	No. of Pole	L	W	H	Wt.
				mm	mm	mm	kg
<b>Three Pole Vacuum Contactor</b>							
B44061C2400C66	VACUUM CONTACTOR 7.2kV 400A 3P SOLE 220V	3	3P	430	170	450	28
B44061C2401C66	VACUUM CONTACTOR 7.2kV 400A 3P SOLE 110V	3	3P	430	170	450	28
B44061C1403C66	VACUUM CONTACTOR 7.2kV 400A 3P MECH 24V	3	3P	430	170	450	28
B44061C1400C66	VACUUM CONTACTOR 7.2kV 400A 3P MECH 220V	3	3P	430	170	450	28
B44061C1401C66	VACUUM CONTACTOR 7.2kV 400A 3P MECH 110V	3	3P	430	170	450	28
B44061C2400C110	VACUUM CONTACTOR 12kV 400A 3P SOLE 220V	3	3P	430	170	450	28
B44061C2401C110	VACUUM CONTACTOR 12kV 400A 3P SOLE 110V	3	3P	430	170	450	28
B44061C1400C110	VACUUM CONTACTOR 12kV 400A 3P MECH 220V	3	3P	430	170	450	28
B44061C1401C110	VACUUM CONTACTOR 12kV 400A 3P MECH 110V	3	3P	430	170	450	28
<b>Two Pole Vacuum Contactor</b>							
B44061C2401B66	VACUUM CONTACTOR 7.2kV 400A 2P SOLE 110V	2	2P	430	170	450	26
B44061C1400B66	VACUUM CONTACTOR 7.2kV 400A 2P MECH 220V	2	2P	430	170	450	26
B44061C1401B66	VACUUM CONTACTOR 7.2kV 400A 2P MECH 110V	2	2P	430	170	450	26
B44061C2401B110	VACUUM CONTACTOR 12kV 400A 2P SOLE 110V	2	2P	430	170	450	26
B44061C1400B110	VACUUM CONTACTOR 12kV 400A 2P MECH 220V	2	2P	430	170	450	26
B44061C1401B110	VACUUM CONTACTOR 12kV 400A 2P MECH 110V	2	2P	430	170	450	26
<b>Single Pole Vacuum Contactor</b>							
B44061C2400A66	VACUUM CONTACTOR 7.2kV 400A 1P SOLE 220V	1	1P	430	170	450	24
B44061C2401A66	VACUUM CONTACTOR 7.2kV 400A 1P SOLE 110V	1	1P	430	170	450	24
B44061C1402A66	VACUUM CONTACTOR 7.2kV 400A 1P MECH 48V	1	1P	430	170	450	24
B44061C1403A66	VACUUM CONTACTOR 7.2kV 400A 1P MECH 24V	1	1P	430	170	450	24
B44061C1400A66	VACUUM CONTACTOR 7.2kV 400A 1P MECH 220V	1	1P	430	170	450	24
B44061C1401A66	VACUUM CONTACTOR 7.2kV 400A 1P MECH 110V	1	1P	430	170	450	24
B44061C2400A110	VACUUM CONTACTOR 12kV 400A 1P SOLE 220V	1	1P	430	170	450	24
B44061C2401A110	VACUUM CONTACTOR 12kV 400A 1P SOLE 110V	1	1P	430	170	450	24
B44061C1403A110	VACUUM CONTACTOR 12kV 400A 1P MECH 24V	1	1P	430	170	450	24
B44061C1401A110	VACUUM CONTACTOR 12kV 400A 1P MECH 110V	1	1P	430	170	450	24

## Catalogue for CapSwitch

SACH CODE	Material Name	Phase	Bushing	L	W	H	Wt.
				mm	mm	mm	kg

### CapSwitch 6 bushing

B44061S6200K110	CAP SWITCH 6B 11kV 200A	3	6	370	600	1,100	130
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### CapSwitch 7 bushing

B44061S7200C110	CAP SWITCH 7B 11kV 200A	3	7	620	560	1,100	150
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### CapSwitch 9 bushing

B44061S9200C110	CAP SWITCH 9B 11kV 200A	3	9	700	660	1,100	175
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## Catalogue for Series Reactor

SACH Code	Wound Type	Voltage	Current	Inductance	Wt.	Coil OD	Coil Height
		kV	Amp	μH	kg	(B) mm	(H1) mm

### Type I : Current Limiting Series Reactor

B44061S1025I111	Foil Wound	11	25	50	2	130	115
B44061S1036I111	Foil Wound	11	36	50	2	130	115
B44061S1050I111	Foil Wound	11	50	50	2	145	115
B44061S1063I111	Foil Wound	11	63	50	2	145	115
B44061S1075I111	Foil Wound	11	75	50	2	145	115
B44061S1100I111	Foil Wound	11	100	50	3	150	115
B44061S1025J111	Foil Wound	11	25	75	2	140	115
B44061S1036J111	Foil Wound	11	36	75	2	140	115
B44061S1050J111	Foil Wound	11	50	75	2	155	115
B44061S1063J111	Foil Wound	11	63	75	3	155	115
B44061S1075J111	Foil Wound	11	75	75	3	155	115
B44061S1100J111	Foil Wound	11	100	75	3	160	115
B44061S1025K111	Foil Wound	11	25	100	2	140	115
B44061S1036K111	Foil Wound	11	36	100	3	140	115
B44061S1050K111	Foil Wound	11	50	100	3	140	115
B44061S1063K111	Foil Wound	11	63	100	3	140	115
B44061S1075K111	Foil Wound	11	75	100	3	140	115
B44061S1100K111	Foil Wound	11	100	100	3	155	115
B44061S1025L111	Strip Wound	11	25	50	2	130	100
B44061S1036L111	Strip Wound	11	36	50	2	130	100
B44061S1050L111	Strip Wound	11	50	50	2	130	100
B44061S1063L111	Strip Wound	11	63	50	2	130	100
B44061S1075L111	Strip Wound	11	75	50	2	130	100
B44061S1100L111	Strip Wound	11	100	50	2	140	100



## Catalogue for Series Reactor

SACH Code	Wound Type	Voltage	Current	Inductance	Wt.	Coil OD	Coil Height
		kV	Amp	μH	kg	(B) mm	(H1) mm
B44061S1025M111	Strip Wound	11	25	75	2	135	100
B44061S1036M111	Strip Wound	11	36	75	2	135	100
B44061S1050M111	Strip Wound	11	50	75	2	150	100
B44061S1063M111	Strip Wound	11	63	75	2	150	100
B44061S1075M111	Strip Wound	11	75	75	2	150	100
B44061S1100M111	Strip Wound	11	100	75	3	150	100
B44061S1025N111	Strip Wound	11	25	100	2	135	100
B44061S1036N111	Strip Wound	11	36	100	2	135	100
B44061S1050N111	Strip Wound	11	50	100	2	150	100
B44061S1063N111	Strip Wound	11	63	100	3	150	100
B44061S1075N111	Strip Wound	11	75	100	3	150	100
B44061S1100N111	Strip Wound	11	100	100	3	150	100

### **Type II : 0.2% Damping Series Reactor**

B44061S1026B111	Aluminium	11	18.1	2.6	10	415	565
B44061S1052B111	Aluminium	11	36.1	1.3	11.5	415	590
B44061S1079B110	Aluminium	11	54.2	0.9	12.5	415	560
B44061S1004B512	Aluminium	11	27.4	0.5	12	430	560
B44061S1008B511	Aluminium	11	54.8	0.3	12.5	430	550

### **Type III : Tuned / De-tuned Series Reactor**

**Note : Details available on specific customer request**

## OTHER PQS PRODUCTS and ACCESSORIES :

**Note** : Following material is custom built, details available on request

Sr. No.	Details	
1	<b>LT APP Capacitor Unit</b>	Voltage : 380V to 900V
		kVAr : 5kVAr - 100kVAr
		No. of Phase : 3phase / Delta
2	<b>MV Fixed Capacitor Panel</b>	Voltage : 3.3kV / 6.6kV / 11kV / 24kV / 33kV
		kVAr : 50kVAr - 20000kVAr
		% Series Reactor : 0.2%, 1%, 6%
		No. of Phase : 3phase, Star (Y), Double Star (Y-Y), Delta ( $\Delta$ )
3	<b>MV APFC Capacitor Panel</b>	Voltage : 3.3kV / 6.6kV / 11kV
		kVAr : 50kVAr - 18000kVAr
		% Series Reactor : 0.2%, 1%, 6%
		No. of Steps : 1 to 8steps
		Connection : 3phase, Star (Y), Double Star (Y-Y), Delta ( $\Delta$ )
4	<b>Current Transformer (CT)</b>	Voltage : 3.3kV / 6.6kV / 11kV
		Primary Ratio : 50A .....500A
		Secondary Ratio : 1A / 5A
		Class : 0.2, 0.5, 1, 3P, 5P10, 5P15, 5P20
		Burden : 10VA ....30VA
		Type : Dry Type, Resin Cast
5	<b>Potential Transformer (PT)</b>	Voltage : 3.3kV / 6.6kV / 11kV
		Secondary Ratio : 110V
		Class : 0.2, 0.5, 1, 3P, 5P10, 5P15, 5P20
		Burden : 10VA ....30VA
		Type : Dry Type, Resin Cast
6	<b>Neutral Current Transformer (NCT)</b>	Voltage : 3.3kV / 6.6kV / 11kV / 24kV
		Primary Ratio : 5A.....20A
		Secondary Ratio : 1A / 5A
		Class : 0.2, 0.5, 1, 3P, 5P10, 5P15, 5P20
		Burden : 10VA ....30VA
7	<b>Residual Voltage Transformer (RVT)</b>	Voltage : 3.3kV/ $\sqrt{3}$ / 6.6kV/ $\sqrt{3}$ / 11kV/ $\sqrt{3}$
		Secondary Ratio : 110V/ $\sqrt{3}$ - 190V
		Class : 3P, 5P, 0.5, 1
		Burden : 100VA.....500VA