MV Series Reactor

Applications

1. Damping of switching inrush current
2. Inrush current limiting
3. De-tuning (of shunt capacitor banks)
4. Tuning (of shunt passive harmonic filters)

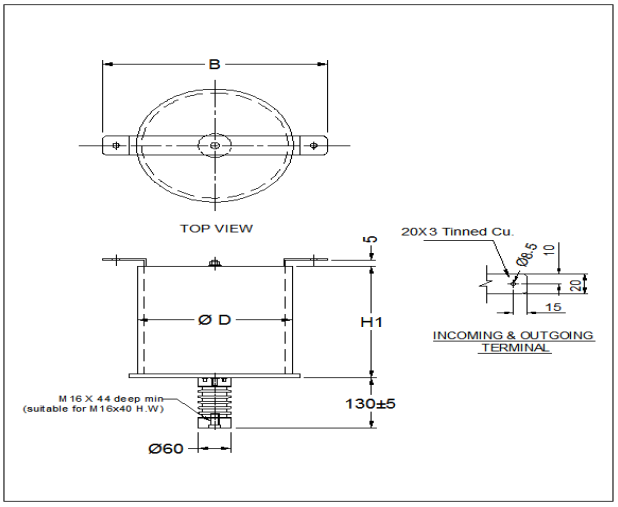
Strip / Foil Wound Reactor

Dry type, Air Core Reactor

Dry type, Iron Core Reactor

Series Reactor Principal Drawings

Indoor 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

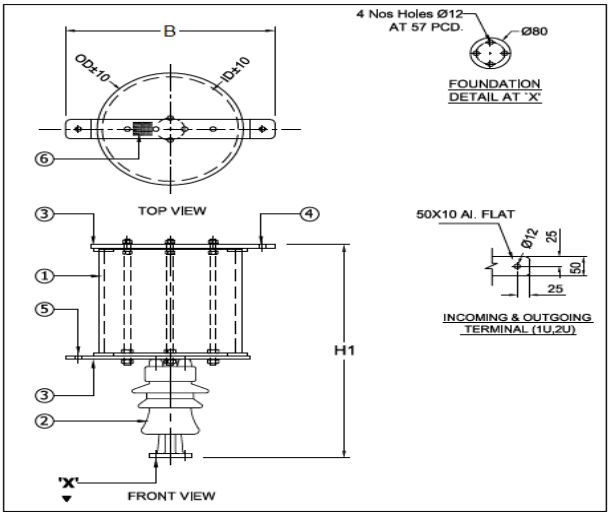
Thickness of tinned copper terminal = 3 mm

Width of tinned copper terminal = 20 mm

d = diameter of hole on terminal = 8 mm

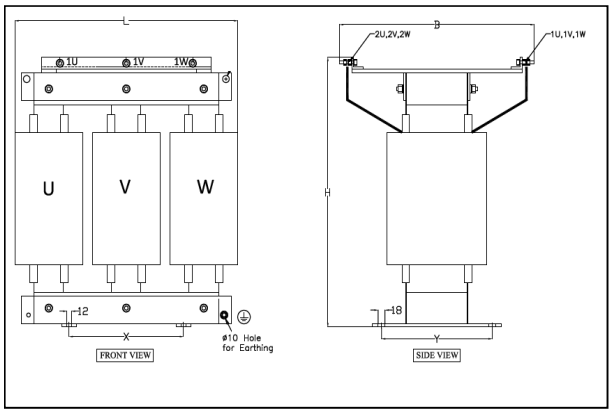
db = diameter of support insulator = 60 mm

Outdoor 0.2% Damping Series Reactor Drawing



Item No.	Description
1.	Aluminum Wound Coil
2.	11kV Post Insulator
3.	Clamping Frame
4.	Incoming Terminal "1U"
5.	Outgoing Terminal "2U"
6.	Rating & Diagram Plate

Indoor de-tuning reactor, 3 phase, Iron core



Details:

L = Length of coil

B = Width of coil

H = Height of coil

X = Front View mounting dimensions

Y = Side View mounting dimensions

TECHNICAL PARTICULARS OF SERIES REACTOR

1	Reference standard	:	*IEC-600076 & IS-5553*
2	Application	:	Inrush current limiting , Damping , De-tuning, Tuning. #
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, µH (Ln ±10%)	:	25µH to 150mH (Please refer table details).#
8	Rated Voltage, kV (Un)	:	1kV to 33kV (Please refer table details).#
9	Rated Current, Amps(In)	:	5A to 250A (Please refer table details). #
10	Rated Inductance	:	25µH to 150mH (Please refer table details). #
11	Maximum rated current, Amps (Imax)	:	1.3 X In
12	Max. ambient temperature (˚C)	:	+55 deg C
13	Min. ambient temperature (˚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.**

 # Please check customer requirements and select / indicate appropriate values.
Part nos., price etc. depend on the selected values of such variable parameters

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 (Foil Wound)**						
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
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 (Strip Wound)**						
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
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

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 (Foil Wound)**						
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

SACH Code	Wound Type	Voltage	Current	kVAr	Wt.	Coil OD	Coil Height
		kV	Amp	per ph	kg	(B) mm	(H1) mm
Type II	**: 0.2% Damping, 1phase, Air Core Series Reactor**						
B44061S1026B111	Aluminium	11	18.1	0.26	10.0	415	565
B44061S1052B111	Aluminium	11	36.1	0.52	11.5	415	590
B44061S1079B110	Aluminium	11	54.2	0.79	12.5	415	560
B44061S1004B512	Aluminium	11	27.4	0.40	12.0	430	560
B44061S1008B511	Aluminium	11	54.8	0.80	12.5	430	550

SACH Code	Wound Type	Voltage	Current	kVAr	Wt.	Coil OD	Coil Height
		kV	Amp	per ph	kg	(B) mm	(H1) mm
Type III	**: De-tuned, 3phase, Iron Core Series Reactor**						
B44061S3008E511	Copper	11	5.5	8.68	84.0	460	510
B44061S3017E511	Copper	11	11.0	17.36	118.0	560	545
B44061S3034E511	Copper	11	22.0	34.69	182.0	570	585
B44061S3043E511	Copper	11	27.4	43.38	212.0	570	650
B44061S3078E511	Copper	11	49.4	78.11	312.0	620	690

Type IV **: Tuned / De-tuned Series Reactor**

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