

## DATASHEET

# Single Phase Common Mode HEMP Filter – SMF913

HEMP EMI power line filters are designed to protect electronic equipment from high-energy magnetic pulses and electromagnetic interference (EMI) that can be caused by events like nuclear explosions or lightning strikes. HEMP EMI filters are designed to provide high attenuation of electromagnetic interference across a wide frequency range. These filters are crucial in ensuring the reliability and functionality of sensitive electronic systems especially in military, aerospace, and high-security applications.

### Technical Specifications:

Rated Voltage	: 250VAC
Current Rating	: 6A to 3000A @50°C
Operating Frequency	: 50/60 Hz
Insulation Resistance	: >100MΩ @ 250VDC (Before Connecting Discharge Resistor)
Discharge Resistance	: Internally Connected
Dielectric Withstand	: 2500 VDC each Line to case (Before Connecting MOVs)

### Features:

- Designed to Handle Large Currents
- Integrated with Surge Suppression to Protect against voltage spikes
- Effectively Attenuates unwanted high-frequency Noise
- Protects equipment from conducted and radiated HEMP Pulses

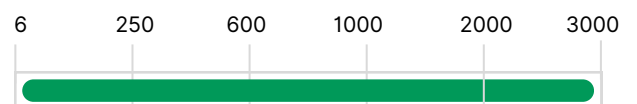
### Applications:

- EMP Shielded Mobile Shelters
- EMP Racks
- Command and Control Centers
- Data Centers
- Combat / Tracked Vehicles
- MIL Grade Panels
- Radar Power Supplies

### Performance Indicator:



### Rated Current (A):



Maximum Voltage drop per line	: Max 2% @ 240VAC
Short Pulse Common Mode	: 5kA (20ns/500ns-550ns) ≤ 10A
Short Pulse Line to Ground	: 2.5kA (20ns/500ns-550ns) ≤ 10A
Intermediate Pulse Common Mode	: 0.25kA (1.5µs/3ms-5ms) – No Damage
Intermediate Pulse Line to Ground	: 0.25kA (1.5µs/3ms-5ms) – No Damage
Overload Capability	: 140 % of rated current for 15 minutes
Operating Temperature	: -40°C to +50°C
Storage Temperature	: -40°C to +85°C
Enclosure Material	: CRCA-Plated
Finish	: Powder Coating / Paint
Design Corresponding to	: MIL-STD-188-125-1/2, MIL-PRF-15733J
Insertion Loss Performance	: 100dB attenuation from 30MHz to 18GHz then 90dB attenuation up to 40GHz (Standard) 100dB from 14KHz to 40GHz (Extended)
Peak Surge Current	: 80kA (8/20µs)

## Ordering Information: Standard Performance

Model Number	Part Number	Rated Current @50°C (A)	Maximum Leakage Current (A)	Min. Weight (Kgs)
SMF913-2-6	E108543-1	6	1.5	8
SMF913-2-16	E108544-1	16	1.5	10
SMF913-2-32	E108545-1	32	1.5	15
SMF913-2-63	E108546-1	63	1.5	30
SMF913-2-100	E108547-1	100	5	40
SMF913-2-150	E108548-1	150	5	70
SMF913-2-200	E108549-1	200	5	70
SMF913-2-250	E111855-1	250	6	90
SMF913-2-300	E108550-1	300	6	120
SMF913-2-400	E108551-1	400	8	120
SMF913-2-500	E108552-1	500	10	210
SMF913-2-600	E108553-1	600	10	210
SMF913-2-700	E108554-1	700	10	260
SMF913-2-800	E108555-1	800	10	260
SMF913-2-1000	E108556-1	1000	12	260
SMF913-2-1200	E108557-1	1200	12	310
SMF913-2-1500	E108558-1	1500	12	330
SMF913-2-2000	E108559-1	2000	16	350
SMF913-2-2500	E108560-1	2500	16	360
SMF913-2-3000	E108561-1	3000	16	470

**Note:** EXXXXXX - Y

- Y - Indicates Enclosure Paint Color  
1 - Olive Green RAL 6003  
2 - Light Grey RAL 7035  
3 - Dark Grey RAL 7046

## Ordering Information: Extended Performance

Model Number	Part Number	Rated Current @50 °C (A)	Maximum Leakage Current (A)	Min. Weight (Kgs)
SMF913N-2-6	E111856-1	6	1.5	16
SMF913N-2-16	E111857-1	16	1.5	25
SMF913N-2-32	E111858-1	32	2.5	40
SMF913N-2-63	E111859-1	63	2.5	70
SMF913N-2-100	E111860-1	100	2.5	80
SMF913N-2-150	E111861-1	150	5	100
SMF913N-2-200	E111862-1	200	5	100
SMF913N-2-250	E111863-1	250	5	180
SMF913N-2-300	E111864-1	300	6	250
SMF913N-2-400	E111865-1	400	6	250
SMF913N-2-500	E111866-1	500	8	250
SMF913N-2-600	E111867-1	600	8	250
SMF913N-2-700	E111868-1	700	8	290
SMF913N-2-800	E111869-1	800	8	290
SMF913N-2-1000	E111870-1	1000	10	290
SMF913N-2-1200	E111871-1	1200	10	340
SMF913N-2-1500	E111872-1	1500	10	360
SMF913N-2-2000	E111873-1	2000	10	380
SMF913N-2-2500	E111874-1	2500	15	390
SMF913N-2-3000	E111875-1	3000	15	520

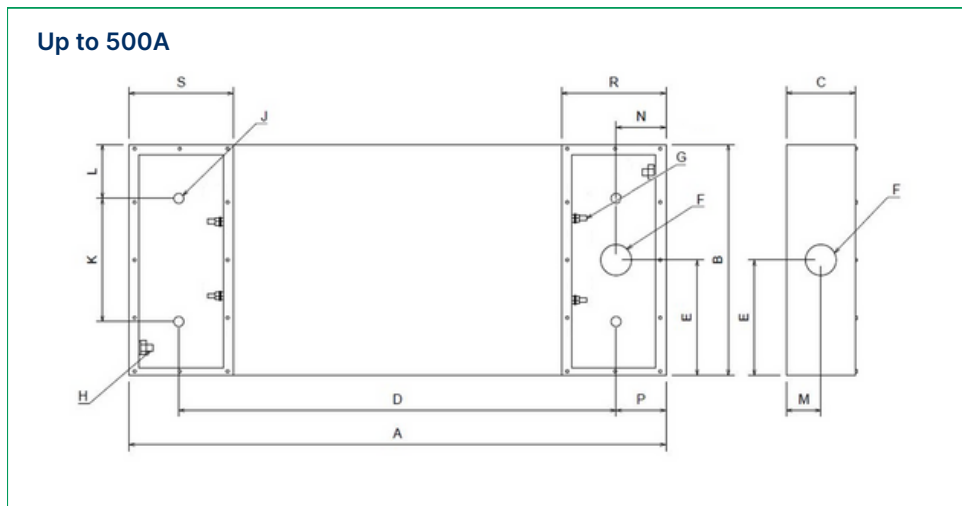
**Note:** EXXXXXX - Y

- Y - Indicates Enclosure Paint Color  
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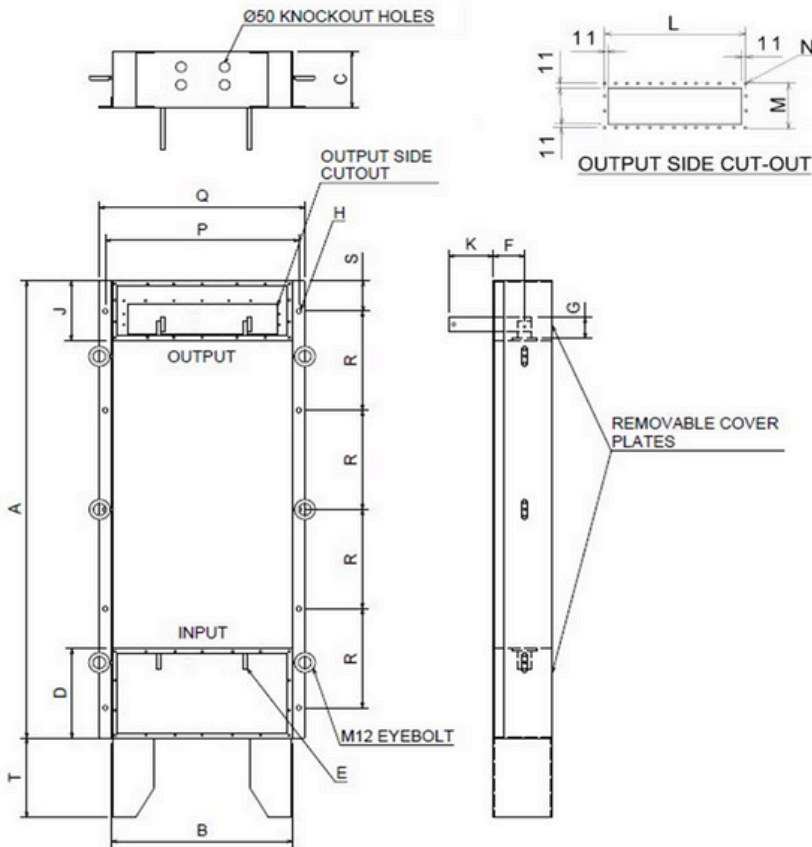
**Note:**

1. Earth Leakage Current is measured at 250VAC, 50Hz
2. This Filter series have very high leakage current to the ground, it is recommended to use Earth Leakage Circuit Breaker (ELCB) or Residual Circuit Breaker (RCCB) at the load side of filter
3. Different Enclosure Paint Colors are provided on request

### Mechanical Drawing :



## 600A to 3000A



### Mechanical Dimensions :

### Standard Performance (Up to 500A)

Model number	A	B	C	D	E	ØF	G	H	ØJ	K	L	M	N	P	R	S
<b>SMF913-2-6</b>	310	175	90	212	88	20	M5	M6	9	127	24	45	35	20	65	80
<b>SMF913-2-16</b>	420	200	120	340	100	20	M5	M6	9	110	45	60	40	40	80	140
<b>SMF913-2-32</b>	500	250	120	410	125	25	M8	M10	9	140	55	60	45	45	100	160
<b>SMF913-2-63</b>	620	320	170	530	160	32	M8	M10	11	210	55	85	45	45	100	160
<b>SMF913-2-100</b>	740	350	230	630	175	32	M8	M10	11	240	55	115	55	55	120	160
<b>SMF913-2-150</b>	860	450	250	710	225	50	M12	M16	17	300	75	125	75	75	150	200
<b>SMF913-2-200</b>	860	450	250	710	225	50	M12	M16	17	300	75	125	75	75	150	200
<b>SMF913-2-250</b>	1220	450	220	1020	225	50	M16	M20	17	300	75	110	100	100	235	235
<b>SMF913-2-300</b>	1600	480	250	1140	240	75	M20	M20	17	340	70	125	85	230	300	300
<b>SMF913-2-400</b>	1600	480	250	1140	240	75	M20	M20	17	340	70	125	85	230	300	300
<b>SMF913-2-500</b>	1600	480	250	1140	240	75	M20	M20	17	340	70	125	85	230	300	300

## Extended Performance (Up to 500A)

Model number	A	B	C	D	E	ØF	G	H	ØJ	K	L	M	N	P	R	S
SMF913N-2-6	600	200	120	520	100	20	M5	M6	9	110	45	60	40	40	80	140
SMF913N-2-16	780	250	120	690	125	25	M8	M10	9	140	55	60	45	45	100	160
SMF913N-2-32	780	250	120	690	125	25	M8	M10	9	140	55	60	45	45	100	160
SMF913N-2-63	950	320	170	860	160	32	M8	M10	11	210	55	85	45	45	100	160
SMF913N-2-100	1100	350	230	990	175	32	M8	M10	11	240	55	115	55	55	120	160
SMF913N-2-150	1220	450	250	1070	225	50	M12	M16	17	300	75	125	75	75	150	200
SMF913N-2-200	1220	450	250	1070	225	50	M12	M16	17	300	75	125	75	75	150	200
SMF913N-2-250	1500	450	250	1300	225	50	M12	M16	17	300	75	125	100	100	250	250
SMF913N-2-300	1900	480	250	1440	240	75	M20	M20	17	340	70	125	230	230	300	300
SMF913N-2-400	1900	480	250	1440	240	75	M20	M20	17	340	70	125	230	230	300	300
SMF913N-2-500	1900	480	250	1440	240	75	M20	M20	17	340	70	125	230	230	300	300

## Standard Performance (600A to 3000A)

Model Number	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T
SMF913-2-600	1700	655	285	450	50x8	180	125	14	400	250	12X60=720	3X50=150	11	550	610	350	150	350
SMF913-2-700	1700	655	285	450	50x8	180	125	14	400	250	12X60=720	3X50=150	11	625	685	350	150	350
SMF913-2-800	1900	655	300	500	80x10	185	200	14	450	250	15x61=915	3x60=180	11	625	685	400	150	350
SMF913-2-1000	1900	655	300	500	80x10	185	200	14	450	250	15x61=915	3x60=180	11	715	775	400	150	350
SMF913-2-1200	2300	655	300	600	125X10	212	200	14	500	300	15x61=915	3x60=180	11	715	775	400	150	350
SMF913-2-1500	2500	655	300	600	125X10	212	200	14	500	300	15x61=915	3x60=180	11	715	775	400	150	350
SMF913-2-2000	3500	655	350	700	127X16	212	200	14	600	300	15X61=915	4X57.5=230	11	715	775	775	200	500
SMF913-2-2500	3500	655	350	700	127X16	212	200	14	600	300	15X61=915	4X57.5=230	11	845	905	775	200	500
SMF913-2-3000	4000	785	350	800	130x20	212	200	14	700	300	15X61=915	4X57.5=230	11	550	610	900	200	500

## Extended Performance (600A to 3000A)

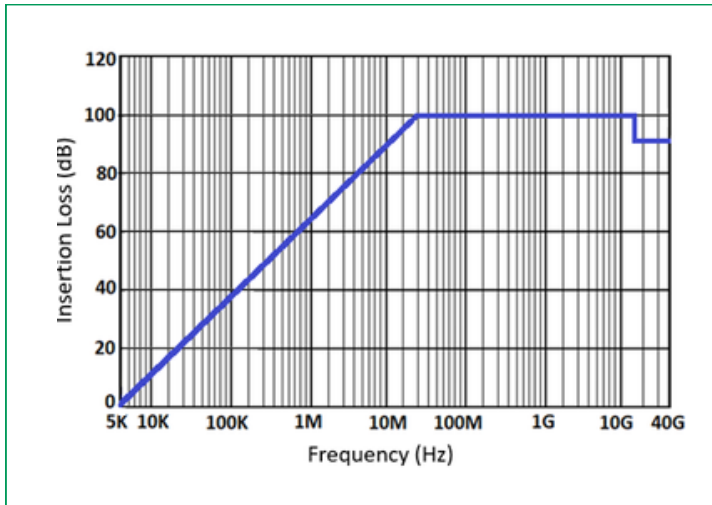
Model Number	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T
SMF913N-2-600	1900	655	285	450	50x8	180	125	14	400	250	9X60=540	3X50=150	11	715	770	400	150	350
SMF913N-2-700	1900	655	285	450	50x8	180	125	14	400	250	9X60=540	3X50=150	11	715	770	400	150	350
SMF913N-2-800	2100	655	300	500	80x10	185	200	14	450	250	9X60=540	3x60=180	11	715	770	450	150	350
SMF913N-2-1000	2100	655	300	500	80x10	185	200	14	450	250	9X60=540	3x60=180	11	715	770	450	150	350
SMF913N-2-1200	2500	655	300	600	125X10	212	200	14	500	300	9X60=540	3x60=180	11	715	770	525	200	350
SMF913N-2-1500	2800	655	300	600	125X10	212	200	14	500	300	9X60=540	3x60=180	11	715	770	600	200	350
SMF913N-2-2000	3700	655	350	700	127X16	212	200	14	600	300	9X60=540	4X57.5=230	11	715	770	800	250	500
SMF913N-2-2500	3700	655	350	700	127X16	212	200	14	600	300	9X60=540	4X57.5=230	11	715	770	800	250	500
SMF913N-2-3000	4200	785	350	800	130x20	212	200	14	700	300	11X60=660	4X65=260	11	845	900	900	300	500

All dimensions are in mm;

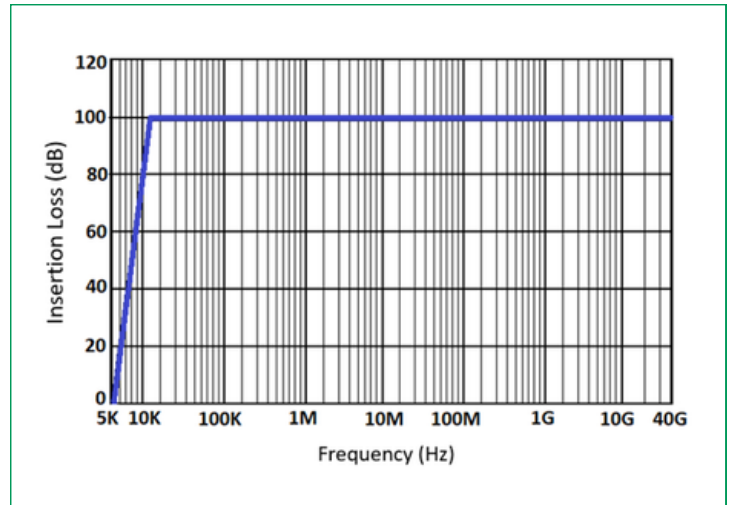
**Note:** The output threaded tube or Bulk-head Penetration Pipe along with accessories shall be supplied on request

## Insertion Loss Graph :

### Standard Performance

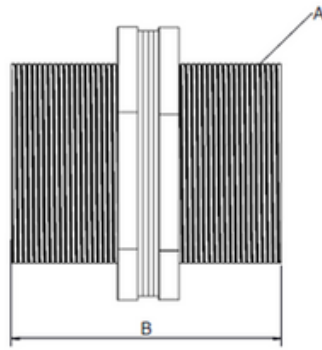


### Extended Performance



## Accessories Details :

### Bulk Head Penetration Kit

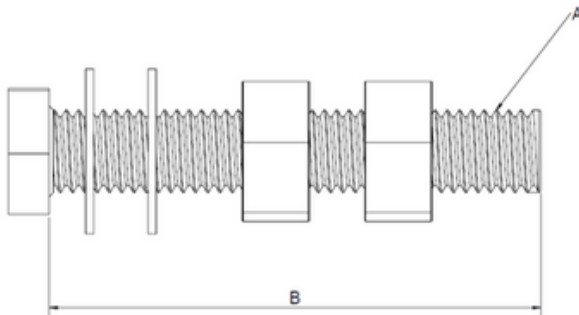


#### Accessories :

1. Threaded Pipe - 1 No
2. Plain Washer - 2 No's
3. Hex Nut - 2 No's
4. Gasket - 2 No's

SL No.	Part Number	Description	Thread(A) X Length(B)
1	E111914-1	BULKHEAD PENETRATION KIT FOR M20	M20X100
2	E111915-1	BULKHEAD PENETRATION KIT FOR M25	M25X100
3	E111916-1	BULKHEAD PENETRATION KIT FOR M32	M32X100
4	E111917-1	BULKHEAD PENETRATION KIT FOR M40	M40X100
5	E111918-1	BULKHEAD PENETRATION KIT FOR M50	M50X100
6	E111919-1	BULKHEAD PENETRATION KIT FOR M63	M63X100
7	E111920-1	BULKHEAD PENETRATION KIT FOR M75	M75X100

### Fixing Screw Kit



#### Accessories :

1. Bolt - 1 No
2. Plain Washer - 2 No's
3. Hex Nut - 2 No's

SL No.	Part Number	Description	Thread(A) X Length(B)
1	E111921-1	FIXING SCREW KIT FOR M5	M5X40
2	E111922-1	FIXING SCREW KIT FOR M6	M6X40
3	E111923-1	FIXING SCREW KIT FOR M8	M8X50
4	E111924-1	FIXING SCREW KIT FOR M10	M10X50
5	E111925-1	FIXING SCREW KIT FOR M12	M12X60
6	E111926-1	FIXING SCREW KIT FOR M16	M16X60
7	E111927-1	FIXING SCREW KIT FOR M20	M20X70

**Note:** The suggested Fasteners can be used with a mounting surface thickness up to 20mm