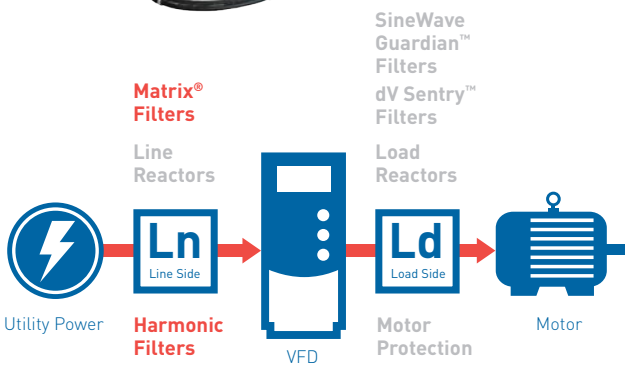
Single Phase Matrix® ONE

Product Selector

Power quality you can count on.

The Single Phase Matrix® ONE Filter provides reliable harmonic protection in environments where utility power may not be optimal. MTE has built the Single Phase Matrix ONE Filter with time-tested components to work in rural, remote areas where three phase power is often not available. Its patented technology reduces harmonic distortion allowing your equipment to run with increased energy, efficiency, and better overall THID performance. The Matrix ONE is designed to generate less heat and reduce system downtime. Easy to install and maintain, the Matrix ONE produces the protection you need to extend the service life of your equipment.



MTE
AN SL INDUSTRIES COMPANY

Power quality. Solved.

Improve power quality and reduce downtime with our optimized single phase harmonic filters.

The Single Phase Matrix® ONE Filter is proven to reduce harmonic distortion for your VFD or other single phase power applications, and it enables your system to be more efficient.

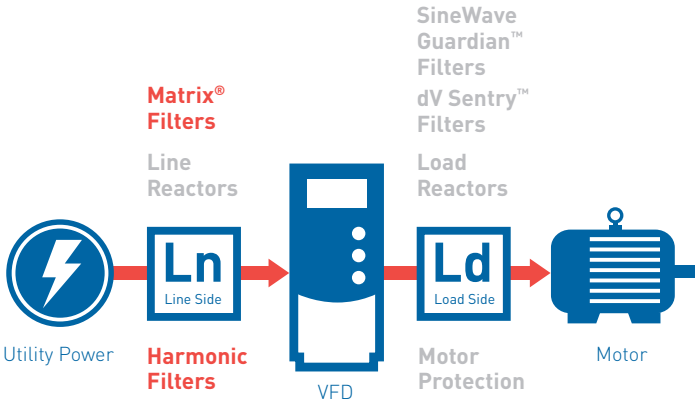
Patented design with reliable components provides harmonic mitigation and reduced THID (Total Harmonic Distortion) where you need it most.

Low cost solution that is easy to install and maintain.

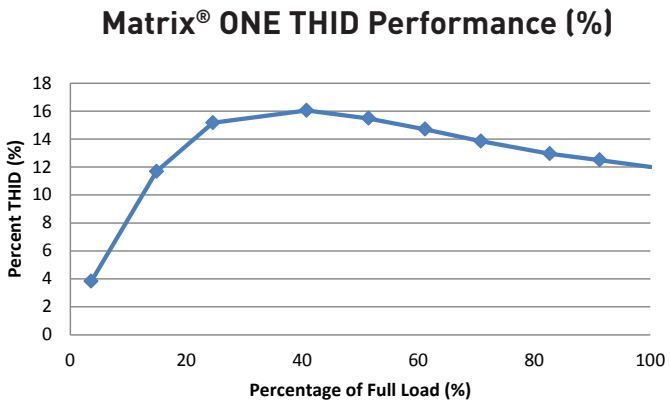
Performance that is able to withstand harsh and remote conditions.

Extends service life of equipment by reducing heat, and improving system efficiency.

Alleviates system downtime by preventing blown fuses and tripped circuit breakers.



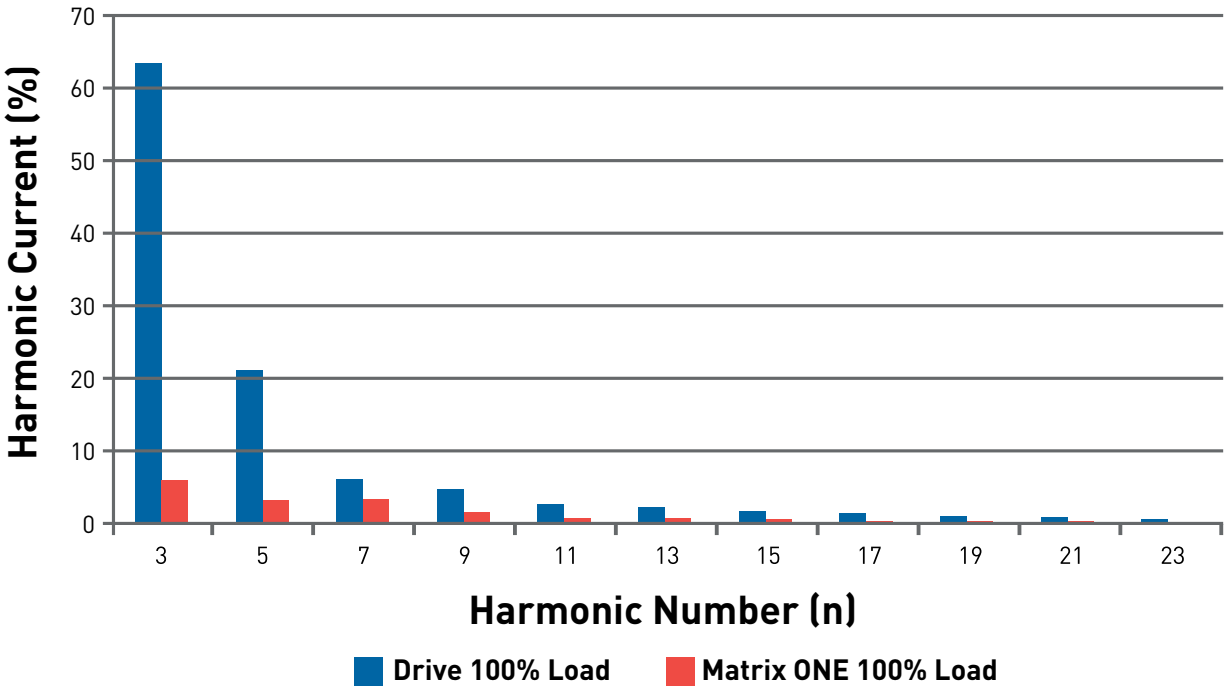
We know power quality, because **power quality is all we do.**



Performance Specifications:

Input Voltages	**240V 60Hz** **480V 60Hz**
Current Range	**240V: 17A - 620A (3HP - 150HP)** **480V: 8A - 310A (3HP - 150HP)**
Available Form Factors	**Open** **NEMA 1/2** **NEMA 3R**
Power Type	**Single Phase**
Total Harmonic Current Distortion	**12% Max at Full Load**
Insertion Load	**+10% at no load** **-10% at full load**
Ambient Temperature	**-40 to +50 C° Open Panel Filters** **-40 to +40 C° Enclosed Filters** **-40 to +90 C° Storage**
Overload Rating	**150% for 60 seconds**
Altitude Without Derating	**3,300 ft above sea level**
Agency Approvals	**UL and cUL listed to UL508 Type MX and CSA-C22.2 No 14-95 File E180243 (1-999 Ampere, 120VAC through 690VAC 50/60Hz 1 or 3 phase.**
Efficiency	**>98%**
Warranty	**3 years**

Matrix® ONE Harmonic Spectrum Chart



SELECTION TABLES:

The Matrix ONE is available in Open Panel, NEMA 1/2 and NEMA 3R

Note: **MSxxxxxA is 240V**, 60Hz and **MSxxxxxD is 480V**, 60Hz.

Note: To ensure single phase compatibility, consult drive manual for proper filter sizing.

Ln
Line Side

Motor HP	Amps Rating	240V Open Panel					Capacitor/Capacitor Assemblies Size (included) (in.) (H X W X D)	Capacitor Ref. Figure
		Catalog PN.	Weight (lbs.)	Open Magnetics (in.) (H X W X D)	Ref. Fig.	Watts Loss		
3	17	**MSP0017A**	47	8.7 x 10.5 x 7.2	8	181	6.9 x 14.0 x 6.0	2
5	26	**MSP0026A**	52	8.7 x 10.5 x 7.7	8	228	6.9 x 14.0 x 6.0	2
7.5	38	**MSP0038A**	69	10.5 x 12.0 x 9.6	10	258	6.9 x 18.4 x 7.0	3
10	49	**MSP0049A**	79	10.5 x 12.0 x 10.2	10	430	6.9 x 18.4 x 7.0	3
15	73	**MSP0073A**	114	10.6 x12.0 x 12.0	10	473	10.7 x 18.4 x 7.0	3
20	94	**MSP0094A**	150	15.2 x 15.3 x 10.9	12	636	10.7 x 16.3 x 7.6	4
25	115	**MSP0115A**	167	15.2 x 15.3 x 11.6	12	631	6.9 x 16.3 x 7.6	4
30	140	**MSP0140A**	202	15.2 x 15.3 x 12.3	12	805	10.7 x 16.3 x 7.6	4
40	180	**MSP0180A**	249	15.3 x 15.3 x 15.0	12	1055	10.7 x 16.3 x 7.6	4
50	225	**MSP0225A**	296	18.3 x 15.3 x 13.8	12	967	10.7 x 16.3 x 7.6	4
60	265	**MSP0265A**	318	18.3 x 15.3 x 14.9	12	1115	10.7 x 16.3 x 7.6 10.7 x 16.3 x 7.6	4
75	330	**MSP0330A**	376	18.4 x 15.3 x 16.7	12	1359	10.7 x 16.3 x 7.6 10.7 x 16.3 x 7.6	4
100	430	**MSP0430A**	611	20.5 x 24.0 x 17.4	13	1647	10.7 x 16.3 x 7.6 8.9 x 16.3 x 7.6	4
125	540	**MSP0540A**	718	20.6 x 24.0 x 18.4	13	1872	10.7 x 16.3 x 7.6 11.5 x 16.3 x 7.6	4
150	620	**MSP0620A**	827	20.6 x 24.0 x 19.7	13	2094	11.5 x 16.3 x 7.6 11.5 x 16.3 x 7.6	4
		480V Open Panel						
3	8	**MSP0008D**	41	8.6 x 10.5 x 7.2	8	184	5.5 x 3.9	1
5	13	**MSP0013D**	51	8.7 x 10.5 x 7.7	8	219	5.5 x 4.6	1
7.5	19	**MSP0019D**	67	10.5 x 12.0 x 8.0	9	292	5.5 x 4.6	1
10	24	**MSP0024D**	75	10.5 x 12.0 x 8.5	9	350	7.2 x 4.6	1
15	37	**MSP0037D**	112	10.6 x 12.0 x 11.8	10	509	6.8 x 18.4 x 7.0	3
20	47	**MSP0047D**	145	15.2 x 15.3 x 10.9	11	667	10.8 x 16.4 x 7.6	5
25	59	**MSP0059D**	159	15.2 x 15.3 x 11.7	11	648	7.9 x 16.3 x 7.6	4
30	69	**MSP0069D**	166	15.1 x 15.3 x 11.8	11	629	6.9 x 16.3 x 7.6	4
40	90	**MSP0090D**	217	15.2 x 15.3 x 13.0	12	818	6.9 x 16.3 x 7.6	4
50	110	**MSP0110D**	256	18.3 x 15.3 x 13.0	12	1010	7.9 x 16.3 x 7.6	4
60	135	**MSP0135D**	299	18.3 x 15.3 x 14.3	12	1287	8.9 x 16.3 x 7.6	4
75	165	**MSP0165D**	349	18.3 x 15.3 x 15.4	12	1503	10.7 x 16.3 x 7.6	4
100	215	**MSP0215D**	587	20.4 x 24.0 x 15.8	13	1409	6.9 x 16.3 x 7.6 6.9 x 16.3 x 7.6	4
125	270	**MSP0270D**	690	20.3 x 24.0 x 18.7	13	1641	6.9 x 16.3 x 7.6 7.9 x 16.3 x 7.6	4
150	310	**MSP0310D**	785	20.3 x 24.0 x 20.2	13	1797	6.9 x 16.3 x 7.6 6.9 x 16.3 x 7.6	4

The Matrix ONE is available in Open Panel, NEMA 1/2 and NEMA 3R

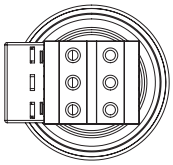
Note: **MSxxxxxA is 240V**, 60Hz and **MSxxxxxD is 480V**, 60Hz.

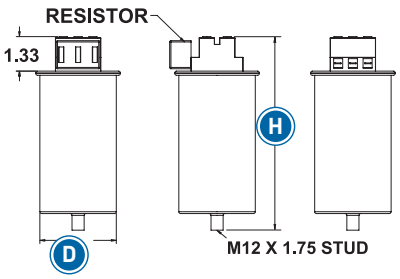
Note: To ensure single phase compatibility, consult drive manual for proper filter sizing.

Ln
Line Side

Amps Rating	240V NEMA 1/2					240V NEMA 3R				
	Catalog PN.	Wt. (lbs.)	Enclosure	Ref. Fig.	Size (in.) (H X W X D)	Catalog PN.	Wt. (lbs.)	Enclosure	Ref. Fig.	Size (in.) (H X W X D)
17	**MSG0017A**	95	CAB-12AP2	6	24.0 x 12.5 x 17.9	**MSW0017A**	103	CAB-12AP3	6	24.0 x 12.5 x 23.0
26	**MSG0026A**	100	CAB-12AP2	6	24.0 x 12.5 x 17.9	**MSW0026A**	108	CAB-12AP3	6	24.0 x 12.5 x 23.0
38	**MSG0038A**	145	CAB-17AP2	6	33.9 x 18.3 x 20.9	**MSW0038A**	152	CAB-17AP3	6	33.9 x 18.3 x 26.0
49	**MSG0049A**	155	CAB-17AP2	6	33.9 x 18.3 x 20.9	**MSW0049A**	165	CAB-17AP3	6	33.9 x 18.3 x 26.0
73	**MSG0073A**	190	CAB-17AP2	6	33.9 x 18.3 x 20.9	**MSW0073A**	198	CAB-17AP3	6	33.9 x 18.3 x 26.0
94	**MSG0094A**	320	CAB-26AP2	7	51.3 x 27.7 x 24.9	**MSW0094A**	333	CAB-26AP3	7	51.3 x 27.7 x 30.0
115	**MSG0115A**	338	CAB-26AP2	7	51.3 x 27.7 x 24.9	**MSW0115A**	351	CAB-26AP3	7	51.3 x 27.7 x 30.0
140	**MSG0140A**	372	CAB-26AP2	7	51.3 x 27.7 x 24.9	**MSW0140A**	385	CAB-26AP3	7	51.3 x 27.7 x 30.0
180	**MSG0180A**	420	CAB-26AP2	7	51.3 x 27.7 x 24.9	**MSW0180A**	433	CAB-26AP3	7	51.3 x 27.7 x 30.0
225	**MSG0225A**	467	CAB-26AP2	7	51.3 x 27.7 x 24.9	**MSW0225A**	480	CAB-26AP3	7	51.3 x 27.7 x 30.0
265	**MSG0265A**	742	CAB-42AP2	7	87.6 x 43.7 x 31.1	**MSW0265A**	779	CAB-42AP3	7	87.6 x 43.7 x 40.1
330	**MSG0330A**	800	CAB-42AP2	7	87.6 x 43.7 x 31.1	**MSW0330A**	836	CAB-42AP3	7	87.6 x 43.7 x 40.1
430	**MSG0430A**	1042	CAB-42AP2	7	87.6 x 43.7 x 31.1	**MSW0430A**	1079	CAB-42AP3	7	87.6 x 43.7 x 40.1
540	**MSG0540A**	1146	CAB-42AP2	7	87.6 x 43.7 x 31.1	**MSW0540A**	1186	CAB-42AP3	7	87.6 x 43.7 x 40.1
620	**MSG0620A**	1455	CAB-48AP2	7	84.0 x 52.0 x 36.5	**MSW0620A**	1495	CAB-48AP3	7	84.0 x 52.0 x 45.5
	480V NEMA 1/2					480V NEMA 3R				
8	**MSG0008D**	89	CAB-12AP2	6	24.0 x 12.5 x 17.9	**MSW0008D**	97	CAB-12AP3	6	24.0 x 12.5 x 23.0
13	**MSG0013D**	98	CAB-12AP2	6	24.0 x 12.5 x 17.9	**MSW0013D**	106	CAB-12AP3	6	24.0 x 12.5 x 23.0
19	**MSG0019D**	142	CAB-17AP2	6	33.9 x 18.3 x 20.9	**MSW0019D**	149	CAB-17AP3	6	33.9 x 18.3 x 26.0
24	**MSG0024D**	159	CAB-17AP2	6	33.9 x 18.3 x 20.9	**MSW0024D**	157	CAB-17AP3	6	33.9 x 18.3 x 26.0
37	**MSG0037D**	188	CAB-17AP2	6	33.9 x 18.3 x 20.9	**MSW0037D**	195	CAB-17AP3	6	33.9 x 18.3 x 26.0
47	**MSG0047D**	311	CAB-26AP2	7	51.3 x 27.7 x 24.9	**MSW0047D**	324	CAB-26AP3	7	51.3 x 27.7 x 30.0
59	**MSG0059D**	325	CAB-26AP2	7	51.3 x 27.7 x 24.9	**MSW0059D**	338	CAB-26AP3	7	51.3 x 27.7 x 30.0
69	**MSG0069D**	333	CAB-26AP2	7	51.3 x 27.7 x 24.9	**MSW0069D**	346	CAB-26AP3	7	51.3 x 27.7 x 30.0
90	**MSG0090D**	387	CAB-26AP2	7	51.3 x 27.7 x 24.9	**MSW0090D**	400	CAB-26AP3	7	51.3 x 27.7 x 30.0
110	**MSG0110D**	499	CAB-26APD2	7	76.0 x 27.7 x 24.9	**MSW0110D**	525	CAB-26APD3	7	76.0 x 27.7 x 34.0
135	**MSG0135D**	542	CAB-26APD2	7	76.0 x 27.7 x 24.9	**MSW0135D**	567	CAB-26APD3	7	76.0 x 27.7 x 34.0
165	**MSG0165D**	592	CAB-26APD2	7	76.0 x 27.7 x 24.9	**MSW0165D**	618	CAB-26APD3	7	76.0 x 27.7 x 34.0
215	**MSG0215D**	1010	CAB-42AP2	7	87.6 x 43.7 x 31.1	**MSW0215D**	1047	CAB-42AP3	7	87.6 x 43.7 x 40.1
270	**MSG0270D**	1113	CAB-42AP2	7	87.6 x 43.7 x 31.1	**MSW0270D**	1147	CAB-42AP3	7	87.6 x 43.7 x 40.1
310	**MSG0310D**	1405	CAB-48AP2	7	84.0 x 52.0 x 36.5	**MSW0310D**	1446	CAB-48AP3	7	84.0 x 52.0 x 45.5

CAPACITOR





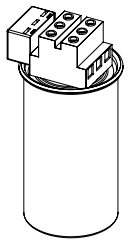
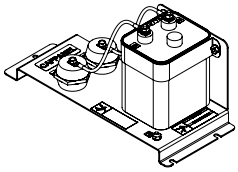
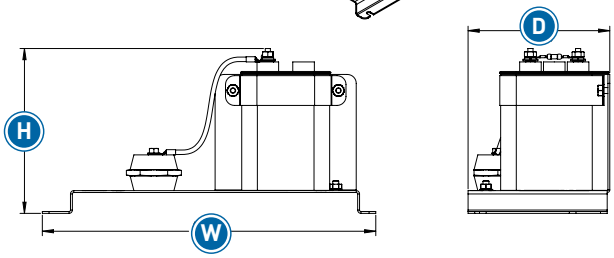


FIGURE 1

CAPACITOR PANEL

FIGURE 2





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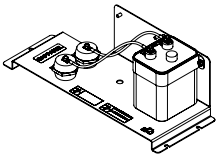


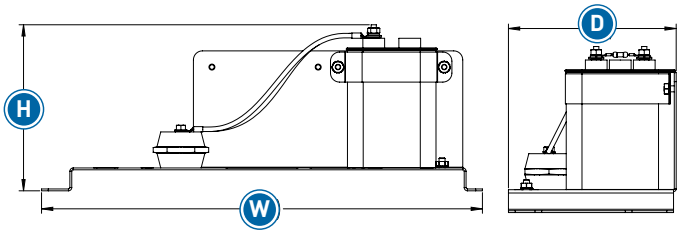
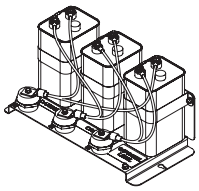


FIGURE 4



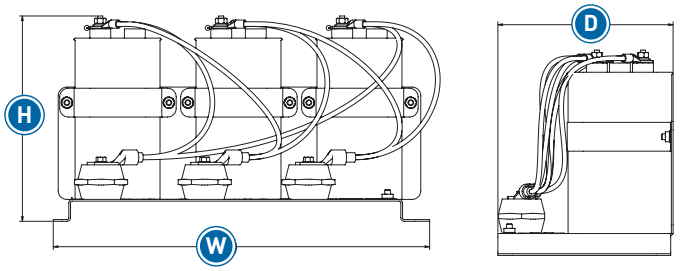
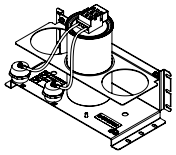
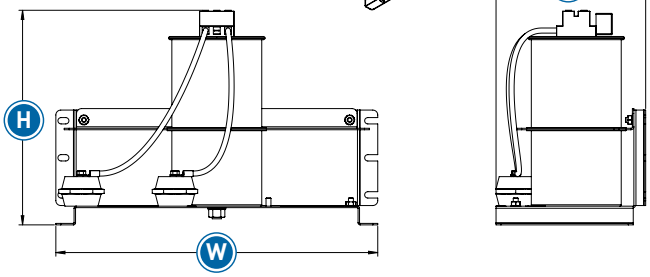


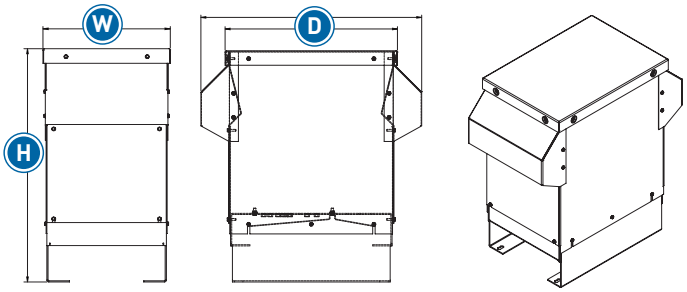
FIGURE 5





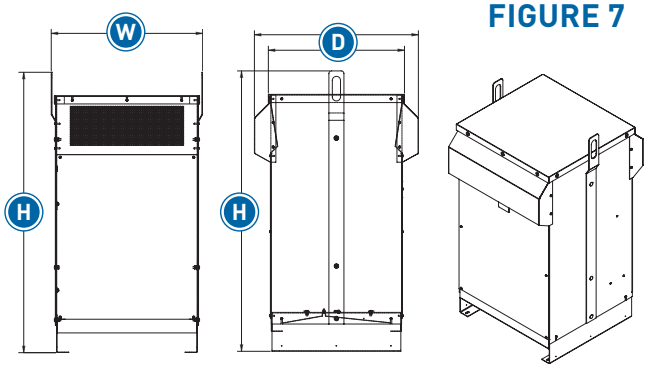
ENCLOSURES

FIGURE 6



NOTE: HOODS ONLY ON NEMA 3R ENCLOSURES

FIGURE 7



NOTE: HOODS ONLY ON NEMA 3R ENCLOSURES

Note: Figure illustrations are for reference only. Actual hardware may differ.

OPEN MAGNETICS

FIGURE 8

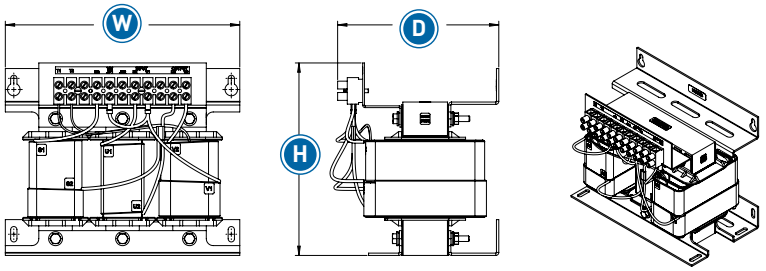


FIGURE 9

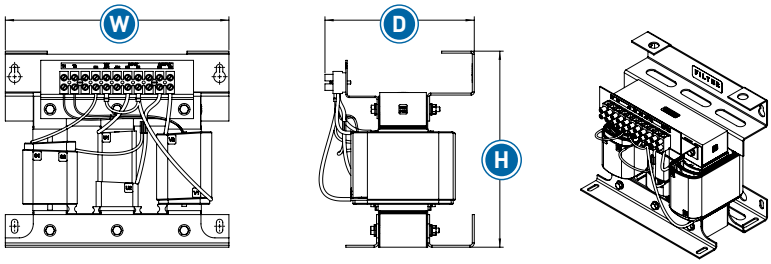


FIGURE 10

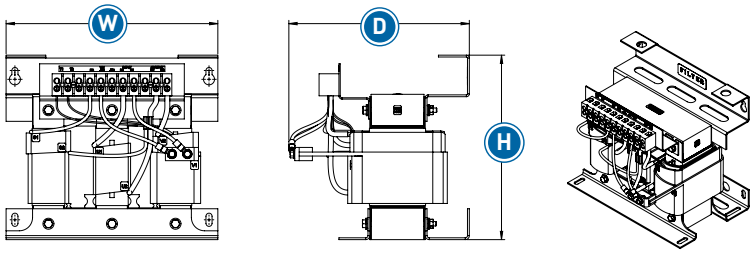


FIGURE 11

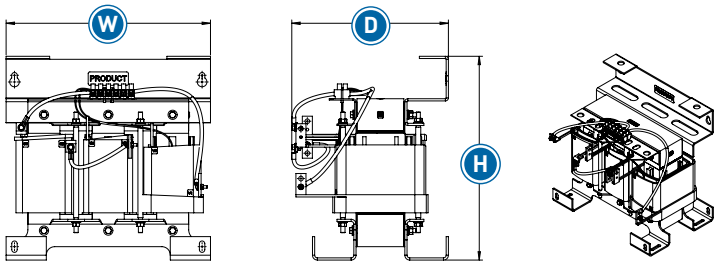


FIGURE 12

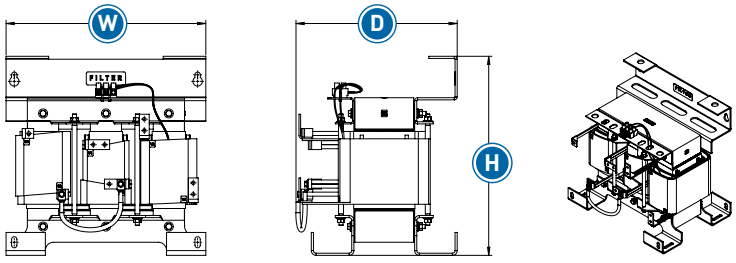
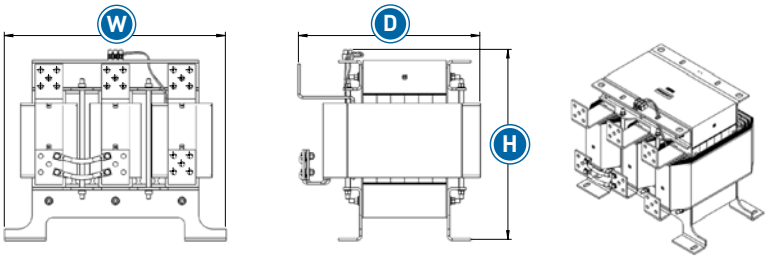


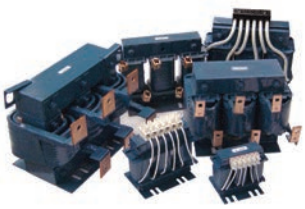
FIGURE 13



Note: Figure illustrations are for reference only. Actual hardware may differ.

Simple, robust power quality solutions that are never over engineered.

Power quality management requirements vary significantly. By utility. By industry. By application. By country. By site. That is why we offer a variety of power quality and filter products, for both input (line-side) and output (load-side) of Variable Frequency Drives (VFDs) and power conversion equipment. These components represent strategic parameters of power quality. We can provide you with a complete power quality solution.



Ln Line Side Ld Load Side

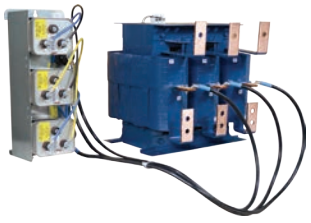
RL and RLW line/load Reactors help keep your equipment running longer by absorbing many of the power line disturbances which otherwise damage or shut down your inverters, variable speed controllers, or other sensitive equipment.

Ld Load Side

The dV Sentry™ redefines innovation with its unique all-in-one design and its patented Triple Defense Core. It is the only filter on the market proven to provide common mode and rise time reduction, as well as peak voltage protection.

Ln Line Side

Matrix® AP Harmonic Filters can help ensure that your system meets the IEEE-519 requirements for harmonic current.



Ld Load Side

SineWave Guardian™ Filters transform the output of your VFD to a near perfect sinusoidal waveform for the best level of motor protection.

MTE AN SL INDUSTRIES COMPANY

Power quality. Solved.

Specifications subject to change without notice.

MS-PSL-E-1115