

# GS10 Series Optional Accessories – EMC Filter & Zero Phase Reactor

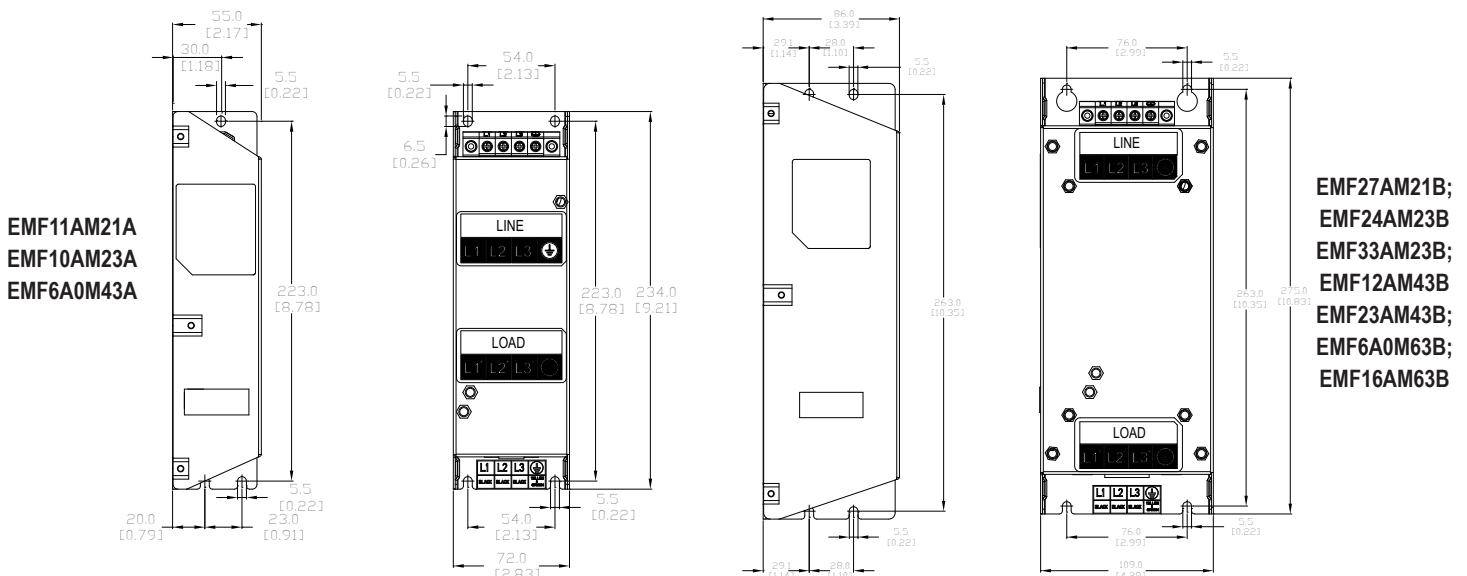
## GS10 Standard Footprint EMC Filter and Zero Phase Reactor

If electromagnetic noise is harmful to your manufacturing environment, we recommend that you select an EMC filter as shown below. For some motor drive models, you need to work with zero phase reactors to be compliant with EMC regulations. Refer to the table and figure below for the recommended model, setting method, and maximum motor cable length of the EMC filter and zero phase reactor. The footprint filter allows mounting of the drive on top of the recommended filter, saving panel space and wiring. For more information and installation instructions, please see your GS10 series User Manual.

GS10 EMC Filter and Zero Phase Reactor														
Frame	Drive Model	Input Current (A)	Footprint Filter Model #	Price	Recommended Zero Phase Reactor	Conducted Emission			Radiated Emission					
						C1-motor cable length-30m		C2-motor cable length-100m	C2-motor cable length-100m					
						Position to Install a Zero Phase Reactor						1	2	3
1	2	3	n/a	1	2	3								
A	<a href="#">GS11N-10P2</a>	6	EMF11AM21A	\$53.00	RF008X00A				N/A					
	<a href="#">GS11N-10P5</a>	9.4									N/A			
	<a href="#">GS11N-20P2</a>	5.1					✓	✓			N/A	✓	✓	
	<a href="#">GS11N-20P5</a>	7.3					✓	✓			N/A	✓	✓	
	<a href="#">GS13N-20P2</a>	1.9	EMF10AM23A	\$73.00			✓	✓			✓	✓		
	<a href="#">GS13N-20P5</a>	3.4					✓	✓			N/A	✓	✓	
	<a href="#">GS13N-21P0</a>	5.8					✓	✓			N/A	✓	✓	
	<a href="#">GS13N-40P5</a>	2.1				EMF6A0M43A	\$67.00			✓				✓
<a href="#">GS13N-41P0</a>	3.7			✓					N/A*		✓			
B	<a href="#">GS11N-21P0</a>	10.8	EMF11AM21A	\$53.00		✓	✓			✓	✓			
	<a href="#">GS13N-22P0</a>	9	EMF10AM23A	\$73.00		✓	✓			✓	✓			
	<a href="#">GS13N-42P0</a>	5.8	EMF6A0M43A	\$67.00			✓				✓			
C	<a href="#">GS11N-11P0</a>	18	EMF27AM21B	\$94.00										
	<a href="#">GS11N-22P0</a>	16.5					✓			N/A		✓		
	<a href="#">GS11N-23P0</a>	24.2					✓			N/A		✓		
	<a href="#">GS13N-23P0</a>	13.2	EMF24AM23B	\$115.00		✓	✓			✓	✓			
	<a href="#">GS13N-25P0</a>	20				✓	✓			N/A	✓	✓		
	<a href="#">GS13N-43P0</a>	6.1			EMF12AM43B	\$118.00								
	<a href="#">GS13N-45P0</a>	9.9						✓	✓			N/A	✓	✓
D	<a href="#">GS13N-27P5</a>	30	EMF33AM23B	\$167.00		✓	✓		✓	✓				
	<a href="#">GS13N-47P5</a>	14.3	EMF23AM43B	\$161.00		✓	✓	✓		✓	✓			
	<a href="#">GS13N-40I0</a>	19.3				✓	✓	✓		N/A	✓	✓		

### EMF Series Filter Dimensions

( Units = mm [in] )



# GS20(X) Optional Accessories – EMC Filter & Zero Phase Reactor

## GS20(X) Standard Footprint EMC Filter and Zero Phase Reactor

If electromagnetic noise is harmful to your manufacturing environment, we recommend that you select an EMC filter as shown below. For some motor drive models, you need to work with zero phase reactors to be compliant with EMC regulations. Refer to the table and figure below for the recommended model, setting method, and maximum motor cable length of the EMC filter and zero phase reactor. The footprint filter allows mounting of the drive on top of the recommended filter, saving panel space and wiring. For more information and installation instructions, please see the GS20(X) User Manual.

GS20(X) EMC Filter and Zero Phase Reactor													
Frame	Drive Model	Input Current (A)	Footprint Filter Model #	Price	Recommended Zero Phase Reactor	Conducted Emission			Radiated Emission				
						C1-motor cable length-30m			C2-motor cable length-100m		C2-motor cable length- 100m		
						Position to Install a Zero Phase Reactor						1	2
						1	2	3	n/a	1	2	3	
A	<a href="#">GS21-10P2</a>	6.8	<a href="#">EMF11AM21A</a>	\$53.00	RF008X00A				N/A				
	<a href="#">GS21-20P2</a>	3.8	<a href="#">EMF11AM21A</a>	\$53.00			✓	✓	N/A		✓	✓	
	<a href="#">GS21-20P5</a>	6.7	<a href="#">EMF11AM21A</a>	\$53.00			✓	✓	N/A		✓	✓	
	<a href="#">GS23-20P2</a>	2.2	<a href="#">EMF10AM23A</a>	\$73.00			✓	✓	N/A		✓	✓	
	<a href="#">GS23-20P5</a>	3.8	<a href="#">EMF10AM23A</a>	\$73.00			✓	✓	N/A		✓	✓	
	<a href="#">GS23-21P0</a>	6	<a href="#">EMF10AM23A</a>	\$73.00			✓	✓	N/A		✓	✓	
	<a href="#">GS23-40P5</a>	2.5	<a href="#">EMF6A0M43A</a>	\$67.00				✓	N/A				✓
	<a href="#">GS23-41P0</a>	4.2	<a href="#">EMF6A0M43A</a>	\$67.00				✓	N/A				✓
	<a href="#">GS23-51P0</a>	2.4	<a href="#">EMF6A0M63B</a>	\$154.00					N/A*				
	<a href="#">GS21-10P5</a>	10.1	<a href="#">EMF11AM21A</a>	\$53.00					N/A				
GS20X A	<a href="#">GS21X-20P5</a>	8.3	<a href="#">EMF11AM21A</a>	\$53.00			✓	✓	N/A		✓	✓	
	<a href="#">GS21X-21P0</a>	11.3	<a href="#">EMF11AM21A</a>	\$53.00			✓	✓	N/A		✓	✓	
	<a href="#">GS21X-22P0</a>	18.5	<a href="#">EMF27AM21B</a>	\$94.00				✓	N/A				✓
	<a href="#">GS23X-20P5</a>	3.8	<a href="#">EMF10AM23A</a>	\$73.00			✓	✓	N/A		✓	✓	
	<a href="#">GS23X-21P0</a>	6	<a href="#">EMF10AM23A</a>	\$73.00			✓	✓	N/A		✓	✓	
	<a href="#">GS23X-22P0</a>	9.6	<a href="#">EMF10AM23A</a>	\$73.00			✓	✓	N/A		✓	✓	
	<a href="#">GS23X-40P5</a>	2.5	<a href="#">EMF6A0M43A</a>	\$67.00				✓	N/A				✓
	<a href="#">GS23X-41P0</a>	4.2	<a href="#">EMF6A0M43A</a>	\$67.00				✓	N/A				✓
	<a href="#">GS23X-42P0</a>	6.4	<a href="#">EMF6A0M43A</a>	\$67.00				✓	N/A				✓
	<a href="#">GS23X-43P0</a>	7.2	<a href="#">EMF12AM43B</a>	\$118.00					N/A				
B	<a href="#">GS21-21P0</a>	10.5	<a href="#">EMF11AM21A</a>	\$53.00		✓	✓	N/A		✓	✓		
	<a href="#">GS23-22P0</a>	9.6	<a href="#">EMF10AM23A</a>	\$73.00		✓	✓	N/A		✓	✓		
	<a href="#">GS23-52P0</a>	4.2	<a href="#">EMF6A0M63B</a>	\$154.00				N/A*					
	<a href="#">GS23-42P0</a>	6.4	<a href="#">EMF6A0M43A</a>	\$67.00			✓	N/A				✓	
GS20X B	<a href="#">GS21X-23P0</a>	27.5	<a href="#">EMF27AM21B</a>	\$94.00			✓	N/A				✓	
	<a href="#">GS23X-23P0</a>	15	<a href="#">EMF24AM23B</a>	\$115.00		✓	✓	N/A		✓	✓		
	<a href="#">GS23X-25P0</a>	23.4	<a href="#">EMF24AM23B</a>	\$115.00		✓	✓	N/A		✓	✓		
	<a href="#">GS23X-45P0</a>	11.6	<a href="#">EMF12AM43B</a>	\$118.00		✓	✓	N/A		✓	✓		
C	<a href="#">GS21-11P0</a>	20.6	<a href="#">EMF27AM21B</a>	\$94.00				N/A					
	<a href="#">GS21-22P0</a>	17.9	<a href="#">EMF27AM21B</a>	\$94.00			✓	N/A				✓	
	<a href="#">GS21-23P0</a>	26.3	<a href="#">EMF27AM21B</a>	\$94.00			✓	N/A				✓	
	<a href="#">GS23-23P0</a>	15	<a href="#">EMF24AM23B</a>	\$115.00		✓	✓	N/A		✓	✓		
	<a href="#">GS23-25P0</a>	23.4	<a href="#">EMF24AM23B</a>	\$115.00		✓	✓	N/A		✓	✓		
	<a href="#">GS23-43P0</a>	7.2	<a href="#">EMF12AM43B</a>	\$118.00				N/A					
	<a href="#">GS23-53P0</a>	5.8	<a href="#">EMF16AM63B</a>	\$157.00				N/A*					
	<a href="#">GS23-55P0</a>	9.3	<a href="#">EMF16AM63B</a>	\$157.00				N/A					
	<a href="#">GS23-45P0</a>	11.6	<a href="#">EMF12AM43B</a>	\$118.00		✓	✓	N/A		✓	✓		
	<a href="#">GS23X-27P5</a>	32.4	<a href="#">EMF33AM23B</a>	\$167.00		✓	✓	N/A		✓	✓		
GS20X C	<a href="#">GS23X-47P5</a>	17.3	<a href="#">EMF23AM43B</a>	\$161.00		✓	✓	N/A		✓	✓	✓	
	<a href="#">GS23X-4010</a>	22.6	<a href="#">EMF23AM43B</a>	\$161.00		✓	✓	N/A		✓	✓	✓	

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# GS20(X) Optional Accessories – EMC Filter & Zero Phase Reactor

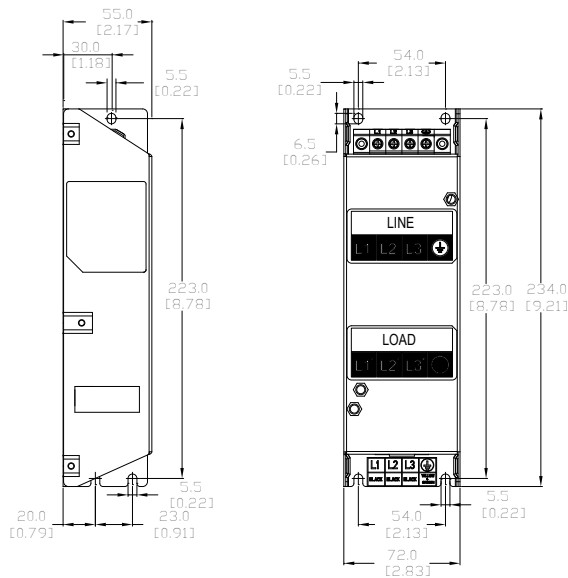
## GS20(X) Standard Footprint EMC Filter and Zero Phase Reactor, continued

GS20(X) EMC Filter and Zero Phase Reactor (continued)												
Frame	Drive Model	Input Current (A)	Footprint Filter Model #	Price	Recommended Zero Phase Reactor	Conducted Emission			Radiated Emission			
						C1-motor cable length-30m			C2-motor cable length-100m			
						Position to Install a Zero Phase Reactor						
						1	2	3	1	2	3	
D	<a href="#">GS23-27P5</a>	32.4	<a href="#">EMF33AM23B</a>	\$167.00	RF008X00A	✓	✓		N/A	✓	✓	
	<a href="#">GS23-47P5</a>	17.3	<a href="#">EMF23AM43B</a>	\$161.00		✓	✓	✓	N/A	✓	✓	
	<a href="#">GS23-57P5</a>	13.4	<a href="#">EMF16AM63B</a>	\$157.00					N/A			
	<a href="#">GS23-5010</a>	17.5	<a href="#">EMF16AM63B</a>	\$157.00					N/A			
	<a href="#">GS23-4010</a>	22.6	<a href="#">EMF23AM43B</a>	\$161.00		✓	✓	✓	N/A	✓	✓	
E	<a href="#">GS23-2010</a>	43.2	n/a	-			✓	✓	N/A		✓	✓
	<a href="#">GS23-2015</a>	61.2	n/a	-			✓	✓	N/A		✓	✓
	<a href="#">GS23-4015</a>	30.8	n/a	-					N/A			
	<a href="#">GS23-4020</a>	39.6	n/a	-			✓	✓	N/A		✓	✓
F	<a href="#">GS23-2020</a>	82.8	n/a	-			✓	✓	N/A		✓	✓
	<a href="#">GS23-4025</a>	45.7	n/a	-			✓	✓	N/A		✓	✓
	<a href="#">GS23-4030</a>	53.9	n/a	-		✓	✓	N/A		✓	✓	

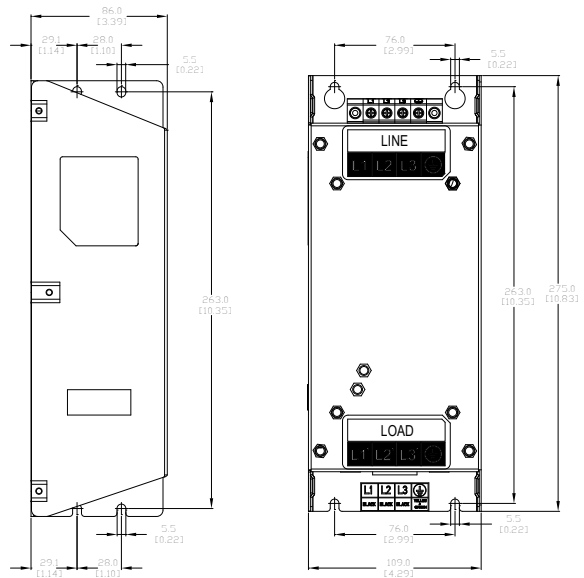
Note: It is not necessary to add a zero phase reactor for passing the C2 conducted emission test.  
 \* The maximum motor cable length of the conducted emission C2 class for GS23-51P0, GS23-52P0, and GS23-53P0 is 75 meters. All others are 100 meters.  
 \*\* See diagram below for installation positions.

### EMF Series Filter Dimensions

( Units = mm [in] )



**EMF11AM21A  
EMF10AM23A  
EMF6A0M43A**



**EMF27AM21B; EMF24AM23B  
EMF33AM23B; EMF12AM43B  
EMF23AM43B; EMF6A0M63B;  
EMF16AM63B**