

ELECTROMAGNETIC COMPATIBILITY FILTERS

EMC filters are used to minimize high frequency power supply line disturbances caused by PWM AC drives that may interfere with proper operation of sensitive electronic equipment. These specific filters have been assessed for conformance with the EMC directive by testing with the appropriate CT drives.

EMC data sheets are available for digital drive products. These data sheets list the applicable harmonized standards and give recommended installation techniques and further information on EMC behavior in typical situations. The filters are built and tested to the safety standard EN-33200 and to meet NEMA 1 standards.

Mounting Style

- Bookend: filter mounts next to the drive with the smallest dimension being the width of the filter
- Footprint: filter mounts between the drive heatsink and the panel or enclosure
- Panel: filter mounts on the panel near the drive

Filter Type

- Low Leakage: designed for use in industrial or residential applications* with motor lead lengths <15 m (49 ft)
- Standard: designed for use in industrial or residential applications* with motor lead lengths <75 m (246 ft)

* As defined by CE standards for EMC compliance



Commander SL, Commander SK / External, Surface Mount EMC Standard Filter Selection

Drive Order Code	RFI Filter Order Code	Mounting Style	Current (A)	Dims. (in.) H x W x D	Weight Lbs.
115 VAC, Single Phase 50/60 Hz Input					
SKA1100025	4200-6122	Footprint/Bookend	12	8 x 3 x 1.6	0.9
SKA1100037	4200-6122				
SKB1100075	4200-6216	Footprint/Bookend	27	10.2 x 3.2 x 1.6	1.5
SKB1100110	4200-6216				
230 VAC, Single Phase 50/60 Hz Input					
wA1200025	4200-6122	Footprint/Bookend	12	8 x 3 x 1.6	0.9
wA1200037	4200-6122				
wA1200055	4200-6122				
wA1200075	4200-6122				
wBD200110	4200-6212	Footprint/Bookend	20	8 x 3 x 1.6	1.3
wBD200150	4200-6212				
wCD200220	4200-6310	Footprint/Bookend	24	12.2 x 3.7 x 1.8	1.9
SKDD200300	4200-6409	Footprint/Bookend	24	16.4 x 4.5 x 2.0	3.6
230 VAC, 3-Phase 50/60 Hz Input					
wBD200110	4200-6213	Footprint/Bookend	10	10.2 x 3.2 x 1.6	1.4
wBD200150	4200-6213				
wCD200220	4200-6311	Footprint/Bookend	14	12.2 x 3.7 x 1.8	1.7
SKD3200400	4200-6411	Footprint/Bookend	Consult Factory		
SKDD200300	4200-6411	Footprint/Bookend	24	16.4 x 4.5 x 2.0	3.4
460 VAC, 3-Phase 50/60 Hz Input					
wB3400037	4200-6213	Footprint/Bookend	10	10.2 x 3.2 x 1.6	1.4
wB3400055	4200-6213				
wB3400075	4200-6213				
wB3400110	4200-6213				
wB3400150	4200-6213				
wC3400220	4200-6311	Footprint/Bookend	14	12.2 x 3.7 x 1.8	1.7
wC3400400					
SKD3400550	4200-6411	Footprint/Bookend	Consult Factory		
SKD3400750	4200-6411				

Commander SL, Commander SK / External, Surface Mount EMC Low Leakage Filter Selection

Drive Order Code	RFI Filter Order Code	Mounting Style	Current (A)	Dims. (in.) H x W x D	Weight Lbs.
115 VAC, Single Phase 50/60 Hz Input					
SKA1100025	4200-6123	Footprint/Bookend	12	8 x 3 x 1.6	0.9
SKA1100037	4200-6123				
230 VAC, Single Phase 50/60 Hz Input					
wA1200025	4200-6123	Footprint/Bookend	12	8 x 3 x 1.6	1.0
wA1200037					
wA1200055					
wA1200075					
wBD200110	4200-6214	Footprint/Bookend	20	8 x 3 x 1.6	1.4
wBD200150					
wCD200220	4200-6312	Footprint/Bookend	24	12.2 x 3.7 x 1.8	2.0
SKDD200300	4200-6410	Footprint/Bookend	24	16.4 x 4.5 x 2.0	3.6
230 VAC, 3-Phase 50/60 Hz Input					
wBD200110	4200-6215	Footprint/Bookend	10	10.2 x 3.2 x 1.6	1.4
wBD200150					
wCD200220	4200-6217	Footprint/Bookend	14	12.2 x 3.7 x 1.8	1.6
SKD3200400	4200-6412	Footprint/Bookend	Consult Factory		
SKDD200300	4200-6412	Footprint/Bookend	24	16.4 x 4.5 x 2.0	3.4
460 VAC, 3-Phase 50/60 Hz Input					
wB3400037	4200-6215	Footprint/Bookend	10	10.2 x 3.2 x 1.6	1.4
wB3400055	4200-6215				
wB3400075	4200-6215				
wB3400110	4200-6215				
wB3400150	4200-6215				
wC3400220	4200-6217	Footprint/Bookend	14	12.2 x 3.7 x 1.8	1.6
wC3400400	4200-6217				
SKD3400550	4200-6412	Footprint/Bookend	Consult Factory		
SKD3400750	4200-6412				

Commander SK, Commander GP20 and Unidrive SP / External, Surface Mount EMC Filter Selection

Drive Order Code	RFI Filter Order Code	Mounting Style	Current (A)	Dims. (in.) H x W x D	Weight Lbs.
230 VAC, Single Phase 50/60 Hz Input					
SP0201-SP0205	4200-6000	Footprint/Bookend	19	14.1 x 2.4 x 1.2	1.4
230 VAC, 3-Phase 50/60 Hz Input					
SP0201-SP0205	4200-6001	Footprint/Bookend	17	14.1 x 2.4 x 1.2	1.4
z1201	4200-6118	Footprint/Bookend	10	17.4 x 4 x 1.8	3.1
z1202	4200-6118				
z1203	4200-6119	Footprint/Bookend	16	17.4 x 4 x 1.8	3.1
z1204	4200-6119				
y2201	4200-6210	Footprint/Bookend	32	17 x 6.1 x 2.2	4.4
y2202	4200-6210				
y2203	4200-6210				
y3201	4200-6307	Footprint/Bookend	75	16.3 x 10 x 2.4	7.7
y3202	4200-6307				
y4201	4200-6406	Footprint/Bookend	101	11.8 x 9 x 4	8.8
y4202	4200-6406				
y4203	4200-6406				
SP5201	4200-6503	Footprint/Bookend	164	11.8 x 9.8 x 4.7	15
SP5202	4200-6503				

DRIVE ORDER CODE LEGEND

w=SL for Commander SL, or SK for Commander SK
 y= SK for Commander SK, or CGP for Commander GP20, or SP for Unidrive SP
 z= CGP for Commander GP20, or SP for Unidrive SP

Commander SK, Commander GP20 and Unidrive SP / External, Surface Mount EMC Filter Selection

Drive Order Code	RFI Filter Order Code	Mounting Style	Current (A)	Dims. (in.) H x W x D	Weight Lbs.
460 VAC, 3-Phase 50/60 Hz Input					
SP0401-SP0405	4200-6002	Footprint/Bookend	11	14.1 x 2.4 x 1.2	1.4
z1401	4200-6118	Footprint/Bookend	10	17.4 x 4 x 1.8	3.1
z1402	4200-6118				
z1403	4200-6118				
z1404	4200-6118				
z1405	4200-6119	Footprint/Bookend	16		3.1
z1406	4200-6119				
y2401	4200-6210	Footprint/Bookend	32	17 x 6.1 x 2.2	4.4
y2402	4200-6210				
y2403	4200-6210				
y2404	4200-6210				
y3401	4200-6305	Footprint/Bookend	62	16.3 x 10 x 2.4	7.7
y3402	4200-6305				
y3403	4200-6305				
y4401	4200-6406	Footprint/Bookend	101	11.8 x 9 x 4	8.8
y4402	4200-6406				
y4403	4200-6406				
y5401	4200-6503	Footprint/Bookend	164	11.8 x 9.8 x 4.8	15
y5402	4200-6503				
y6401	4200-6603	Footprint/Bookend	260	11.6 x 9 x 5.4	11.6
y6411	4200-6603				
y6402	4200-6603				
y6412	4200-6603				
575 VAC & 690 VAC, 3-Phase 50/60 Hz Input					
y3501	4200-6309	Footprint/Bookend	30	16.3 x 10 x 2.4	7.7
y3502	4200-6309				
y3503	4200-6309				
y3504	4200-6309				
y3505	4200-6309				
y3506	4200-6309				
y3507	4200-6309				
y4601	4200-6408	Footprint/Bookend	58	11.8 x 9 x 4	8.4
y4602	4200-6408				
y4603	4200-6408				
y4604	4200-6408				
y4605	4200-6408				
y4606	4200-6408				
y5601	4200-6504	Footprint/Bookend	95	11.8 x 9 x 4	9.7
y5602	4200-6504				
y6601	4200-6604	Footprint/Bookend	Consult Factory		
y6602	4200-6604				

DRIVE ORDER CODE LEGEND

y= SK for Commander SK, or CGP for Commander GP20, or SP for Unidrive SP
z= CGP for Commander GP20, or SP for Unidrive SP

Notes: A zero-space EMC filter adequate for most applications is standard on the drive.
Alternate filters are available on request.

Mentor / EMC Filter Selection

Drive Order Code	RFI Filter Catalog Number	Mounting Style	Current (A)	Dimensions (in.) H x W x D	Weight Lbs.
M25x-14M	4200-6116	Bookend	50	13.3 x 3.9 x 3.5	9
M45x-14M	4200-6116				
M75x-14M	4200-6117	Bookend	63	14.8 x 4.0 x 5.9	9
M105x-14M	4200-6106	Bookend	100	15 x 4.2 x 5.9	17
M155x-14M	4200-6107	Bookend	150	16.3 x 5.3 x 6.9	17
M210x-14M	4200-6111	Bookend	180	19.8 x 6.2 x 6.7	33
M350x-14M	4200-6115	Bookend	300	25.8 x 6.1 x 9.0	35
M420x-14M M550x-14M M700x-14M M825x-14M M900x-14M M1200x-14M M1850x-14M	Consult Factory				

Quantum / EMC Filter Selection

Drive Order Code	RFI Filter Catalog Number	Mounting Style	Current (A)	Dimensions (in.) H x W x D	Weight Lbs.
9500-8x02	4200-6116	Bookend	50	13.3 x 3.94 x 3.54	9
9500-8x03	4200-6116				
9500-8x05	4200-6106	Bookend	100	15 x 4.21 x 5.91	9
9500-8x06	4200-6107	Bookend	150	16.3 x 5.32 x 6.89	17
9500-8x07	4200-6112	Bookend	220	20.6 x 6.18 x 6.69	33
9500-8x08	4200-6115	Bookend	300	25.8 x 6.14 x 9.06	35
9500-8x09 9500-8x10 9500-8x11 9500-8x15 9500-8x16 9500-8x17 9500-8x18 9500-8x19 9500-8x20	Consult Factory				