



SIMOREG 6RA70 DC MASTER Planning Guide

Components

Radio interference suppression filters

SIMOREG DC MASTER applications comply with the EMC product standard EN 61 800-3 for electrical drives provided that the rules for electromagnetically compatible installation of the converters in the plant are observed.

However, the EMC legislation requires that the entire installation be electromagnetically compatible with the environment.

If the system is to comply with the "A1" degree of radio interference suppression according to EN 55011, RI suppression filters must be installed in addition to commutating reactors. In conjunction with the commutating reactors, the RI suppression filters reduce the radio interference voltages that arise due to the converters. RI suppression filters can only be installed in grounded-neutral systems.

The RI suppression filters generate discharge currents. In accordance with DIN VDE 0160, a PE connection with a cross-sectional area of 10 mm² is necessary. To ensure the best possible action of the filter it must be mounted with the converter on a common metal plate.

For converters with a three-phase system, the minimum rated current of the filter is equal

to the output DC current multiplied by 0.82. For units with a two-phase system (field supply and electronics power supply), only two phases are connected to the three-phase RI suppression filter. The line current is equal to the field DC current (plus 1 A for the electronics power supply).

List of suggested RI suppression filters from EPCOS

*) In place of *, the identification number for the design type must be inserted:

0 = 480 V
2 = 530 V

**) In place of **, the identification number for the design type must be inserted:

20 = 500 V
21 = 760 V
24 = 690 V

Rated current Radio interference suppression filters A	Radio interference sup- pression filters Type	Terminal cross-section mm ² Holes for M . .	Weight approx. kg	Dimensions H x W x D mm x mm x mm
8	B84143-G8-R11*	4 mm ²	1.3	80 x 230 x 50
20	B84143-G20-R11*	4 mm ²	1.3	80 x 230 x 50
36	B84143-G36-R11*	6 mm ²	2.8	150 x 280 x 60
50	B84143-G50-R11*	16 mm ²	3.3	150 x 60 x 330
66	B84143-G66-R11*	25 mm ²	4.4	150 x 330 x 80
90	B84143-G90-R11*	25 mm ²	4.9	150 x 330 x 80
120	B84143-G120-R11*	50 mm ²	7.5	200 x 380 x 90
150	B84143-G150-R11*	50 mm ²	8.0	200 x 380 x 90
220	B84143-G220-R11*	95 mm ²	11.5	220 x 430 x 110
150	B84143-B150-S**	M10	13	140 x 310 x 170
180	B84143-B180-S**	M10	13	140 x 310 x 170
250	B84143-B250-S**	M10	15	115 x 360 x 190
320	B84143-B320-S**	M10	21	115 x 360 x 260
400	B84143-B400-S**	M10	21	115 x 360 x 260
600	B84143-B600-S**	M10	22	115 x 410 x 260
1000	B84143-B1000-S**	M12	28	165 x 420 x 300
1600	B84143-B1600-S**	2 x M12	34	165 x 550 x 300
2500	B84143-B2500-S**	4 x M12	105	200 x 810 x 385

List of suggested RI suppression filters from Siemens

Rated current Radio interference suppression filters A	Radio interference sup- pression filters Type	Terminal cross-sec- tion mm ²	Ground bolt	Weight approx. kg	Dimensions H x W x D mm x mm x mm
12	6SE7021-0ES87-0FB1	4	M6	2.5	215 x 90 x 81
18	6SE7021-8ES87-0FB1	4	M6	2.5	215 x 90 x 81
36	6SE7023-4ES87-0FB1	16	M6	4	231 x 101 x 86
80	6SE7027-2ES87-0FB1	50	M10	9	308 x 141 x 141
120	6SE7031-2ES87-0FA1	50	M10	10	348 x 171 x 141
190	6SE7031-8ES87-0FA1	95	M10	10	404 x 171 x 141
320	6SE7033-2ES87-0FA1	Terminal link	M10 x 30	21	300 x 260 x 116
600	6SE7036-0ES87-0FA1	Terminal link	M10 x 30	22	350 x 260 x 116
1000	6SE7041-0ES87-0FA1	Terminal link	M10 x 30	28	350 x 300 x 166
1600	6SE7041-6ES87-0FB1	Terminal link	M12 x 30	34	400 x 300 x 166

Technical Data

Rated supply voltage	3-ph. AC 380-460 V (±15%)
Rated frequency	50/60 Hz (±6%)
Operating temperature	0 to +40°C
Degree of protection	IP 20 (EN 60529); IP 00 from 500 A