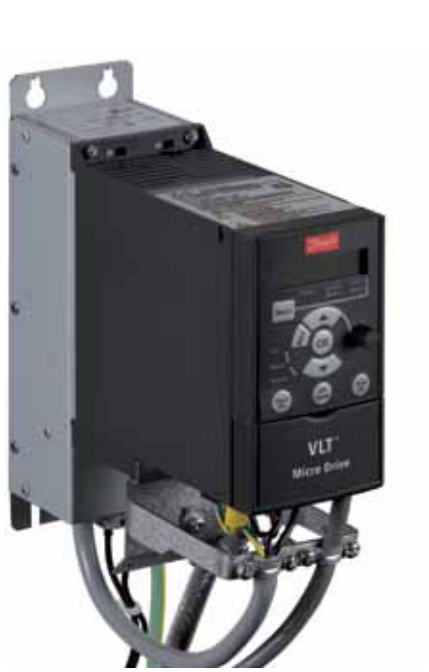
VLT® Line Filter MCC 107

The VLT® Micro Drive Line Filter combines a harmonic filter and an EMC filter to improve the low frequency and high frequency performance of the line current to the VLT® Micro Drive.



Increased drive lifetime
Reducing the voltage ripple on the DC link will result in higher reliability and longer drive lifetime. Under similiar running conditions (temperature, load), the expected lifetime of the DC capacitors may be extended by 2-3 times.

Improved power-factor
The VLT® Line Filter will reduce the RMS value of line current. A smaller line current means higher true power-factor (PF).
Typically, line current can be reduced by more than 40% and improve PF from 0.4 to 0.7 for single-phase drives and 0.47 to 0.9 for three-phase drives.

Improved high frequency conduction EMC performance
The VLT® Line Filter ensures compliance with EN55011 class A1 for up to 50m of motor cable, and class B up to 10m of motor cable.

That means the VLT® Micro Drive + VLT® Line Filter, has an outstanding EMC performance in the micro- inverter class, even with relatively long motor cables.

High immunity against grid disturbances
The line filter will reduce the harmonic current drawn from the grid. The drive will comply with IEC61000-2-2 and IEC6100-2-4 without power derating, including 15% harmonic voltage distortion, 3% voltage imbalance and commutation notches, as described in IEC60146-1. With the line filter, the performance of the immunity to the surge and burst impact of the drive stated in IEC61800-3 will be greatly improved.

Perfect match for:

- Meeting harmonics recommendations
- Soft power grid
- Multiple drives with one filter

Features	Benefits
Reduces the voltage ripple on the DC link	Increased drive lifetime
Reduces the RMS value of line current	Improved power-factor
Compliant with EN55011 class A1 up to 50m of motor cable, and class B up to 10m of motor cable	Improved high frequency conduction EMC performance
The line filter will reduce the harmonic current drawn from the grid.	High immunity against grid disturbances
Can be used for filtering several small VLT® Micro Drives	One filter for several drives

One filter for several drives

The line filter can be used for filtering several small VLT®Micro Drives. In this case the line filter should be derated by one size. Example: 1x FC 51 400V/1,5 kW + 1x FC 51 400V/1,5 kW -> total 3,0 kW + derating one size up: select filter 400V/4,0 kW.

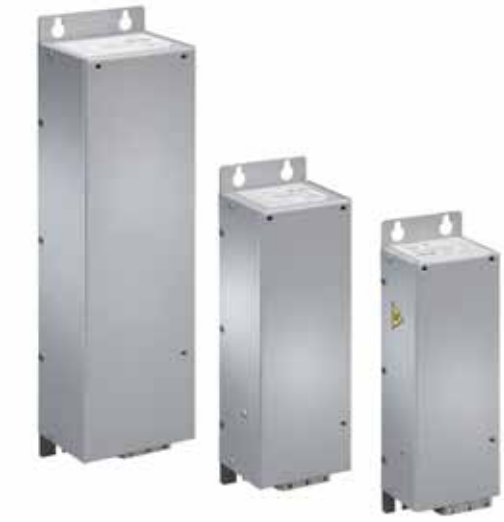
Frame sizes

There are three different frame sizes of line filters corresponding to the M1, M2 and M3 enclosures of the VLT® Micro Drive.

Frame	M1	M2	M3	
w	70	75	90	mm
d	55	65	69	mm
h	190	210	300	mm
h3	230	250	340	mm
w1	40	40	55.6	mm
h1	213	233	323	mm
w2	55	59	69	mm
h2	140	166.5	226	mm
l1	45	38.5	68	mm
l2	7.6	8	9.3	mm
PE*	M6	M6	M6	metric
weight	2	3	5	kg

Filter Selection

VLT® Micro Drive FC 51 Part no.	Power [kW]	Ph.	Voltage [V]	Option MCC 107 Part no.	Rated current [A]
132F0001	0.18	1	200	130B2522	4.1
132F0002	0.37	1	200	130B2522	4.1
132F0003	0.75	1	200	130B2533	7.4
132F0005	1.5	1	200	130B2525	14.2
132F0007	2.2	1	200	130B2530	20.1
132F0008	0.25	3	200	130B2523	3.3
132F0009	0.37	3	200	130B2523	3.3
132F0010	0.75	3	200	130B2523	3.3
132F0012	1.5	3	200	130B2526	6.2
132F0014	2.2	3	200	130B2531	8.6
132F0016	3.7	3	200	130B2527	15.0
132F0017	0.37	3	400	130B2523	3.3
132F0018	0.75	3	400	130B2523	3.3
132F0020	1.5	3	400	130B2524	3.4
132F0022	2.2	3	400	130B2526	6.2
132F0024	3.0	3	400	130B2529	6.4
132F0026	4.0	3	400	130B2531	8.6
132F0028	5.5	3	400	130B2528	11.3
132F0030	7.5	3	400	130B2527	15



Dimensions