



VFD Unit Shown

Features

- Eliminates compressor start inrush current
- 208/230V 3 phase output, with 1-phase or 3-phase input
- Full 60Hz capacity even at 50Hz input (230V only)
- Low electronic noise, CE approved
- 400/480V 3-phase models available

VFD Models

A variable frequency drive eliminates the large starting inrush current of the compressor by ramping up voltage and frequency in a controlled time period. This allows running on limited dockside power, and also protects the generator from overload.

In addition to eliminating inrush, the VFD will also run a compressor at 60Hz, even when input power is 50Hz, which allows full BTU capacity performance (230V only). The drive also protects the compressor by monitoring input voltage and output current, and will shut down if a power supply problem is sensed.

The VFD unit produces a modified sine wave output for smooth acceleration and running, with precise frequency resolution. It is designed to operate in extreme environments, such as an engine room. It can withstand harsh vibrations, temperatures up to 122° F (50° C), and a maximum relative humidity of 93%. However, the enclosure is ventilated, and must be kept dry. Any direct water contact can damage the unit.

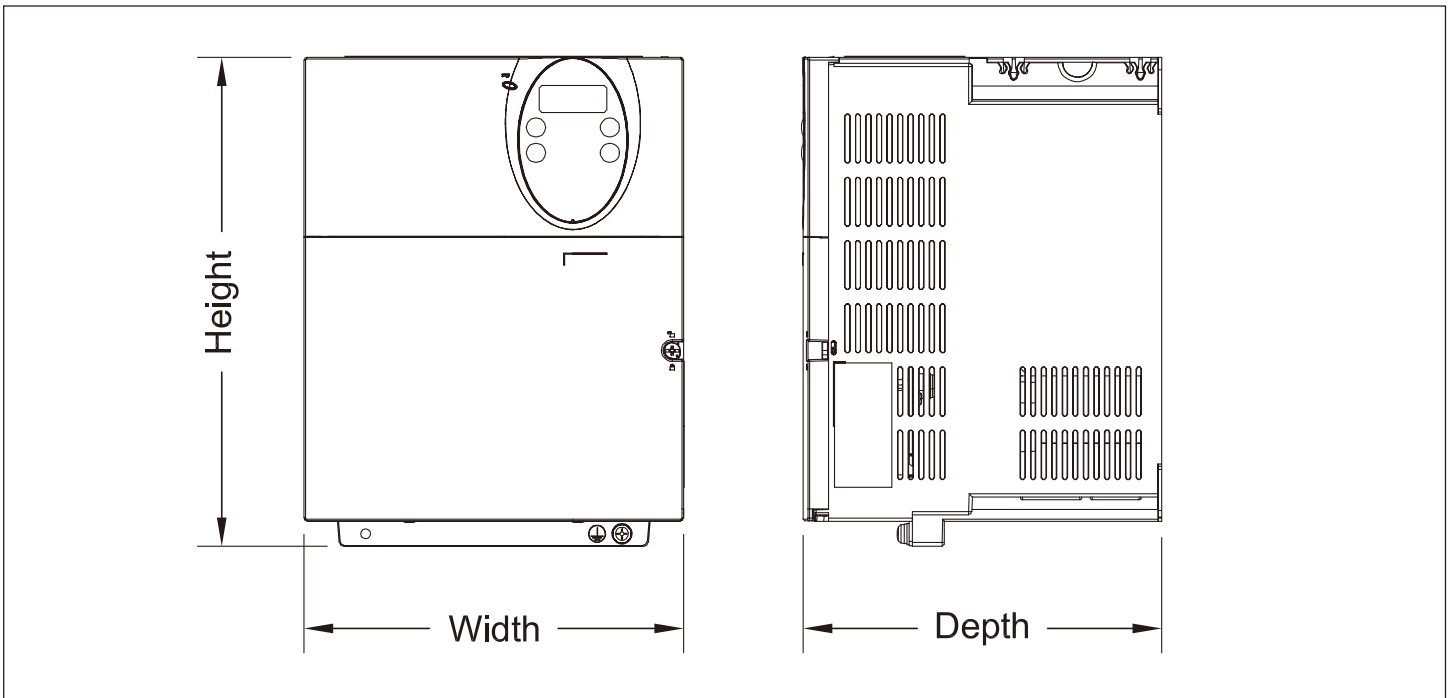
Built-in noise filters are standard and the VFD is CE approved. The Square D/Telemecanique Altivar 31 VFDs incorporate a class A EMC filter into their design. This helps prevent high frequency noise and harmonic distortions from affecting the AC power supply to which the drives are connected. If you have an application or a power system that requires even lower noise and lower distortion, then we recommend you purchase then class B EMC filters specifically designed to fit with the entire family of Altivar 31 VFDs.

A LED display allows the user to monitor operation and faults. The VFD is pre-programmed from the factory and no further setup is required.

VFD Selection:

The tempering unit must have a 3-phase compressor to operate with a VFD. Each unit will need a dedicated frequency drive, which is selected to handle the compressor power.

On 208/230V systems, the VFD can “convert” single-phase input power to 3-phase output, but at a reduced capacity.



TECHNICAL SPECIFICATIONS

Model	Item Number	Dimensions (inches / mm)			Weight lbs / kg	Rating Description	For use with largest MTC	
		Height	Width	Depth			w/1Ph input	w/3Ph input
VFD 230V 17.5A	763300006	7.2 / 184	5.5 / 140	5.9 / 150	5.2 / 2.4	230V 17.5A	MTC36DC	MTC60DC
VFD 230V 27.5A	763300007	9.1 / 232	7.1 / 180	6.7 / 170	10.4 / 4.7	230V 27.5A	MTC48DC	MTC96DC
VFD 230V 33.0A	763300008	9.1 / 232	7.1 / 180	6.7 / 170	10.4 / 4.7	230V 33.0A	MTC72DC	MTC120DC
VFD 230V 54.0A	763300009	13.0 / 330	9.7 / 245	7.5 / 190	19.9 / 9.0	230V 54.0A	MTC96DC	n/a
VFD 230V 66.0A	763300010	13.0 / 330	9.7 / 245	7.5 / 190	19.9 / 9.0	230V 66.0A	MTC120DC	n/a
VFD 460V 9.50A	763300011	7.2 / 184	5.5 / 140	5.9 / 150	5.2 / 2.4	460V 9.5A	n/a	MTC72EC
VFD 460V 14.3A	763300012	9.1 / 232	7.1 / 180	6.7 / 170	10.4 / 4.7	460V 14.3A	n/a	MTC96EC
VFD 460V 17.0A	763300013	9.1 / 232	7.1 / 180	6.7 / 170	10.4 / 4.7	460V 17.0A	n/a	MTC120EC
VFD 380V 14.3A 50Hz	763300016	9.1 / 232	7.1 / 180	6.7 / 170	10.4 / 4.7	380V 14.3A	n/a	MTC66ECK
VFD 380V 17.0A 50Hz	763300018	9.1 / 232	7.1 / 180	6.7 / 170	10.4 / 4.7	380V 17.0A	n/a	MTC96ECK
VFD 380V 27.7A 50Hz	763300019	13.0 / 330	9.7 / 245	7.5 / 190	19.9 / 9.0	380V 27.7A	n/a	MTC120ECK

Notes:

1. 208-230V VFDs will produce a 60Hz output, even with a 50Hz input. This allows 60Hz compressors to produce full capacity in 50Hz systems.
2. High voltage (380-480V) VFDs can be used at 380-420V 50Hz, or 440-480V 60Hz. At these higher voltages the VFD output frequency should be the same as the input.

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