

## Technical Data Sheet

### MFSL Advanced Voltage Stabilizer 110-285V

The MFS is an advanced voltage stabilizer system designed for OEM installation.

It has been designed for applications such as

- Glass Door Coolers
- Subzero Beer coolers
- Freezers
- Double Door Coolers
- Cake Coolers
- Vending Machines
- Post Mix Applications
- HVAC Applications

Its advanced design and control features are managed by the advanced microcontroller technology and patented algorithms



### Features

- MFS is a Voltage and Frequency Supervisor
- MFS boosts the low voltage of the mains supply to maintain equipment operative
- MFS reduces the high voltage of the mains supply
- If voltage goes out of range the MFS will automatically disconnect the device
- Soft start to reduce electrical and mechanical strain
- Smart 3 Minute - When voltage is within range the MFS will wait for prior to reconnecting device to protect the asset
- Zero crossing to reduce current on switching
- Zero Current Changeover
- Monitoring of Condenser area temperature for thermal events

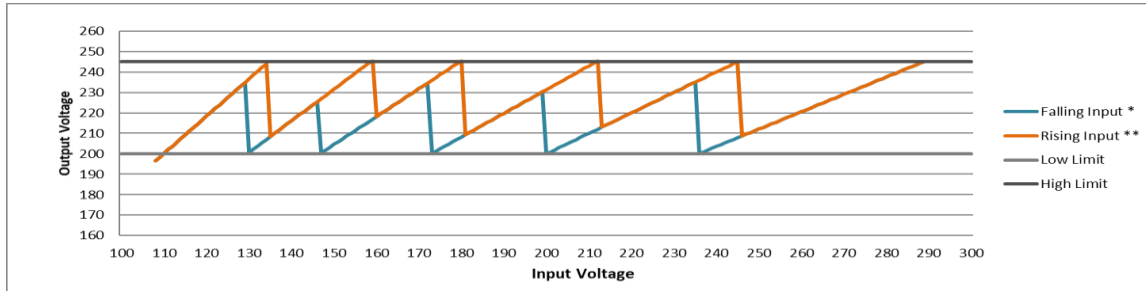
### Technical Data

Product		MFSL 40	MFSL 50	MFSL 60	MFSL 70	MFSL 85	MFSL 100	MFSL 150	MFSL 200
Power Supply	Nominal Voltage	220 - 240 VAC 50 Hz							
	Operational Bandwidth	90 - 310 VAC							
Input	Low Voltage	110 VAC $\pm$ 3% with hysteresis							
	High Voltage	285 VAC $\pm$ 2%							
Output	Low Voltage	200 VAC $\pm$ 2% ( 196V @ Lowest Input Voltage )							
	High Voltage	245 VAC $\pm$ 2%							
Output Current	Maximum (Amp)	1.7	2.2	2.6	3	3.6	4.3	6.5	8.5
	Continuous Operation Current (Amp) @ Low limit	1.3	1.7	2	2.2	2.7	3.2	4.8	6.4
Frequency Supervisor	Lower Limit (50/60 Hz)	47 Hz/ 57 Hz ( $\pm$ 0.2Hz)							
	Upper Limit (50/60 Hz)	53 Hz/ 63 Hz ( $\pm$ 0.2Hz)							
Thermal Protection	DT Increase Cutout	15°C per 15 minutes							
Environment	Ambient Temperature	-40 to 85 °C							
	Humidity	85 %RH							
Lifetime	Relay lifetime Cycles	350,000							
Connections	Power In	6.3mm x 0.8mm flat, terminal							
Cable Harness	Lengths	Available at 300,600,1000,1250 mm							
IP Class		IP44							
Plastic Housing		UL94 V-0 Flame Retardant							
Insulation class	Transformer Windings	F ( 155°C)							
Start Up Time	Time Delay	3 minutes (2'30'' +0 to 30'' random) zero on Production Line							
Total Weight	Kgs	2.4	2.4	2.9	3.5	3.9	4.2	6.3	7.4

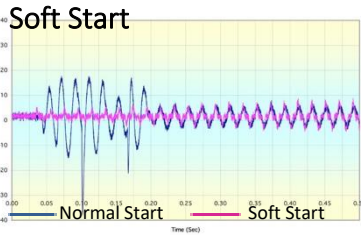
### Approvals

Approvals		
CE	LVD European Directive 2014/35/EU	EMC European Directive 2014/30/EU
	<ul style="list-style-type: none"> <li>EN 61558-1</li> <li>EN 61558-2-13</li> </ul>	<ul style="list-style-type: none"> <li>EN 61000-6-1</li> <li>EN 61000-6-2</li> <li>EN 61000-6-3</li> <li>EN 61000-6-4</li> <li>EN 62041</li> </ul>

### Input/vs Output Graph 110V-285V

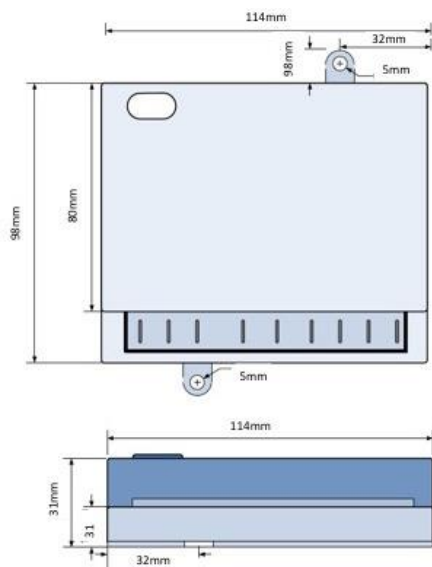


\*Falling input: Output Voltage graph, when the input voltage goes down  
 \*\*Rising input: Output Voltage graph, when the input voltage goes up



Reduces the load and Torque and electric current surge during startup. This reduces the mechanical stress on the motors and their components as well as electrical stresses on winding and cables, thus extending the lifespan of the system.

### Dimensions and Weights



Transformer Dimensions (mm)							
	MFSL40	MFSL60	MFSL 70	MFSL 85	MFSL 100	MFSL 150	MFSL 200
A	106	116	120	127	133	138	150
B	86	86	86	86	86	103	101
C	96	96	96	96	96	120	115
D	54	62	65	72	78	75	87
E	82	82	82	82	82	104	105

