

Specifications 2750L

Output 1

Specification	Standard Programmable Type -P	Transient Programmable Type -PT	Manual Control Type -M
Voltage Ranges	Standard 0 - 135 V or 0 - 270 V. All voltages are L-N. Programmable range change included. Program different amplitudes each phase.	Standard 0 - 135 V or 0 - 270 V. All voltages are L-N. Programmable range change included. Program different amplitudes each phase.	Variable POT control from 0 to FS. Optional (-RPV) 0 to FS based on 0 - 10 VDC input. Switchable range change included.
Voltage Accuracy	TRMS Sense: ±0.135 V from 5 V to 135 V ±0.54 V from 135 V to 270 V All at 25°C ±1°C (based on TRMS reading).	±0.7% FS from 5% FS to FS Constant line, load and temperature at 25°C ±1°C.	Variable control. (Analog meter indication)
Load Regulation	TRMS sense: ±0.05% FS, no load to full load.	-0.5% FS: 45 Hz - 100 Hz -2.0% FS: 100 Hz - 550 Hz	±0.05%: 45 Hz to 5 kHz
Line Regulation	±0.02% FS for ±10% line change	±2% of full output for a ±10% line change	±0.02% of full output for a ±10% line change
Stability (Amplitude)	±0.015% FS over 24 hours at constant line, load and temperature.	±0.25% FS over 24 hours at constant line, load and temperature.	±0.015% FS over 24 hours at constant line, load and temperature.
Default Voltage	0.0/5.0 volts (field selectable)	0 volts	N/A
Frequency Range*	2750L-1P, 4500L-1P & all multi-box systems: 45 Hz to 2 kHz -3P & 751L/1501L/20010L: 45 Hz to 5 kHz 6000L-1P, 12000L-1P: 45 Hz to 440 Hz	All models except 6000L and 12000L: 45 to 550 Hz 6000L, 12000L: 45 to 440 Hz	2750L-1M, 4500-1M & all multi-box systems: 45 Hz to 2 kHz -3M & 751L/1501L/20010L: 45 Hz to 5 kHz 6000L, 12000L: 45 Hz to 440 Hz
Frequency Resolution	0.01 Hz: 45 Hz to 99.99 Hz 0.1 Hz: 100 Hz to 999.9 Hz 1 Hz: 1000 Hz to 5000 Hz	0.01 Hz: 45 Hz to 99.99 Hz 0.1 Hz: 100 Hz to 550 Hz	3 digit resolution
Frequency Accuracy	±0.001% of programmed value	±0.001% of programmed value	±0.005% of set value
Default	Any (within range)	Any (within range)	Setting

Frequency (Initial Value)			
Ext. Sync Input	TTL level	TTL level	N/A
External Amplitude Modulation	N/A	0 to 5 V RMS signal generates 0 to 11% amplitude modulation of output voltage. 45 Hz to 5 kHz signal	0 to 5 V RMS signal generates 0 to 11% amplitude modulation of output voltage.
Phase Angle Programming	Phases B and/or C relative to Phase A: 0 to $\pm 360.0^\circ$ in 0.1° increments	Phases B and/or C relative to Phase A: 0 to $\pm 360.0^\circ$ in 0.1° increments	N/A
Phase Accuracy	$\pm 2^\circ$	$\pm 2^\circ$	$\pm 3^\circ$
Distortion (45 Hz - 550 Hz)	N/A	0 to 20% THD with sine waveform and 1% resolution	N/A
Settling Time	16 mSec no-load, from 5V to 2% of final value; 16 mSec, full-load, to 15% of final value.	0.5 mSec	N/A
Current Limit	Adjustable trip Adjustable hold-off	Adjustable fold back with recovery	
Remote On/Off	Contact closure turn off	Contact closure trip off	Contact closure turn off

* Lower limit is 17 Hz with voltage restrictions

Current capability

Model	Total Power 35° C 1	Output (Phase) 2	Total Current Rating on 135 V RNG			3 pH A rms/pH	Size/Weight 6
			A rms	A peak 3	A peak 4		
751L	833 VA	1	6.1	55.6	6015	n/a	A
1501L	1,667 VA	1	12.3	55.6	6030	n/a	A
1503L	1,667 VA	3	12.3	27.8	30	4.1	A
2001L	2,000 VA	1	14.8	55.6	60	n/a	A

2750L	3,000 VA	1/3	22.2	83.3	90	7.4	B
4500L	5,000 VA	1/3	37	83.3	90	12.3	B
6000L	6,000 VA	1/3	44.4	157.4	170	14.8	B
9000L	10,000 VA	1/3	74	166.6	180	24.7	C
12000L	12,000 VA	1/3	90	314.8	340	30	C
13500L	15,000 VA 5	1/3	111.2	250.0	270	37	D
18000L	18,000 VA 5	1/3	133.2	472.0	510	44.4	D

Notes

- (1) Derate power by 10% for operation at 50° C ambient or when using with -UP option.
- (2) 1 ϕ /3 ϕ systems are factory configured unless "MODE" option is specified.
- (3) Repetitive peak current capability
- (4) Peak in-rush drive capability (non-repetitive, less than 20 ms)
- (5) Similar products available to 72,000 VA from the FCS Series. Contact factory for more information.
- (6) See Dimensions, weight and environmental Table below for specifications.

Input

Voltage	Input range must be specified when ordering
751L, 1501L, 1503L, 2001L	103 - 127 VAC, L-N, Single phase or 207 - 251 VAC, L-N, Single phase
2750L, 4500L, 9000L, 13500L	187 - 252 VAC, L-L, Three phase (or 187 - 252 VAC, 1 Phase for 2750L only)
6000L, 12000L, 18000L	208 - 252 VAC, L-L, Three phase
2750L, 4500L, 9000L, 13500L	342 - 456 VAC, L-L, Three phase with -UP option
Line Frequency	47 - 440 Hz
Hold up time	> 10 msec

Standard Measurements, -P and -PT controllers

Parameter	Range	Accuracy* (\pm)	Resolution*
AC Measurements			
Frequency	16.00 - 99.99 Hz	\pm 0.02 Hz	0.01 Hz
	100.0 - 500.0 Hz	\pm 0.2 Hz	0.1 Hz
	500.0 - 999.9 Hz	\pm 0.5 Hz	0.1 Hz
	1000 - 5000 Hz	\pm 10 Hz	1 Hz
Phase	0.0-360.0	\pm 2°	0.1°
RMS Voltage	0 -400 V	1 V	0.1 V
RMS Current	0 - 40 A	0.1 A	0.01 A
	0 - 400 A	1 A	0.1 A

Real Power	0 - 2 kW	10 W	1 W
	>0 - 20 kW	100 W	10 W
Apparent Power	0 - 2 kVA	10 VA	1 VA
	0 - 20 kVA	100 VA	10 VA
Power Factor	0.000 - 1.000		0.001

* Measurement specifications shown are for -P or -PT controllers only.

System

Waveforms	
Waveform Types	Sine Square (optional on -P and -PT) Clipped Sine, 0 - 20 % THD
Transient Programming	
Transient Types	
Voltage:	drop, step, sag, surge, sweep
Frequency:	step, sag, surge, sweep
Voltage and Frequency:	step, sweep
Transient register Parameters:	Voltage, Frequency, Time, Slew rate, , Phase angle
Transient storage	-P and -PT : up to 16 transient registers
Time resolution	1 msec
Time range	-P and -PT : 1 msec - 9999 sec

Specification subject to change without notice.

Connectors

Line input	Input terminal block
Output	Output terminal block
Interfaces	-P and -PT : 24 pin IEEE-488
Remote sense	Remote voltage sense terminal block
Miscellaneous	System interface Clock and Lock BNC (2) (for rack enclosed system use only)

Dimensions, weight, environmental

	A	B	C	D
Height	5.25" / 133 mm	10.5" / 267 mm	21" / 533 mm	31.5" 800 mm
Width	19" / 483 mm	19" / 483 mm	19" / 483 mm	19" / 483 mm
Depth	23" / 584 mm	23" / 584 mm	23" / 584 mm	23" / 584 mm
Weight (net)	85 lbs / 39 Kg	180 lbs / 82 Kg	360 lbs / 164 Kg	540 / 250 Kg
Vibration and Shock	designed to meet NSTA project 1A transportation levels			
Cooling	Forced air cooling, side air intake, rear exhaust.			
Operating humidity	0 to 95 % RH, non condensing			
Operating Altitude	0 - 6000 feet			
Operating Temperature	0 to 50 ° Celsius			
Storage Temperature	-40 to + 85 ° Celsius			

Note: Dimension and weight are for L Series chassis and controller exclusive of options. Multi chassis configurations are shipped as individual units.