



POWER SUPPLIES

NUTHERM HAS DEVELOPED THREE POWER SUPPLY LINES TO MEET THE QUALIFICATION, PERFORMANCE AND RELIABILITY NEEDS OF THE NUCLEAR POWER INDUSTRY.

NI MODEL	INPUT VOLTAGE RANGE	NOMINAL OUTPUT VOLTAGE	OUTPUT AMPERAGE
55320	108-132Vac	24Vdc	20A
70429	82-185Vdc	48Vdc	12.6A
70785	82-185Vdc	24Vdc	24A

NUTHERM MODEL 55320

Model 55320 power supply converts 120V/1PH/60Hz AC power input into a regulated 24VDC power supply for operation of electrical and electronic equipment requiring a highly stable supply source.

OPERATIONS

A 750VA transformer steps 120VAC down to 24VAC. A full wave bridge rectifier converts the AC power to DC power. The pre-regulator DC power is filtered by input capacitors. A master regulator senses the output voltage and controls slave power regulators to produce the regulated DC output. An output capacitor filters the output signal to further reduce output noise.

REDUNDANCY

Slave regulators are designed with redundancy to provide full continuous output current in the event of regulator shutdown.

OVERCURRENT PROTECTION

If adverse conditions such as excessively high voltage or output faults occur, the regulators go into a safe mode until conditions return to normal.

PARALLEL OPERATION

The unit is diode protected. An output diode is provided at terminal 4 for paralleling of power supplies.

THERMAL PROTECTION

Regulators have a thermal protection circuit and safe area protection for the power transistors.

Class 1E Systems & Components Since 1979



NUTHERM MODELS 70429/70785

Models 70429/70785 converts 125VDC into 24/48VDC with maximum loads shown above. Custom sizes can be supplied upon request.

OVERCURRENT PROTECTION

The power supply is equipped with an overcurrent protection circuit that provides a constant current limiting characteristic. The current limit point is factory set and cannot be changed. If an output short or overcurrent condition occurs, the output voltage will automatically recover once the abnormal condition is cleared.

OVERVOLTAGE PROTECTION

All models include a built-in overvoltage protection circuit which prevents damage to the load caused by an excessive power supply output voltage.

PARALLEL OPERATION

The power supplies incorporate a diode to prevent reverse current and allow operation of additional units in parallel with a similar power supply.

THERMAL PROTECTION

These models have a thermal protection circuit that senses the base plate temperature between the range of 85°C to 115°C for an over temperature condition. Under a condition where the ambient temperature or the power module internal temperature rises excessively, the thermal protection circuit will shut down the converter, removing output voltage from the module.

