

# TYPE 129

## PLUG-IN UNIT POWER SUPPLY



- **OPTIONAL CURRENT OR VOLTAGE OUTPUTS**
- **OPERATES UP TO FOUR PLUG-IN UNITS**

The Type 129 Plug-In Supply provides a method of utilizing 2- and 3-Series Amplifier and Time Base Plug-In Units in a wide variety of instrumentation systems. With this power supply, the amplifiers can be used to drive recording equipment, X-Y plotters, oscilloscopes, or other external indicators having requirements within the plug-in unit specifications. The unit is designed to mount in a standard 19 inch rack.

The Type 129 is recommended for use with the 2- and 3-Series single channel low-frequency amplifiers. Multiple-trace plug-ins are usable in the Type 129, but operation should be limited to single-trace modes unless provision is made to operate the multiple-trace switching circuits at a relatively slow rate compatible with the output-circuit bandwidth.

The Type 129 powers up to four 2- and 3-Series plug-in units\*, singly or in combination. Each plug-in unit fits into a plug-in compartment having an output connector at the front and rear panels. A selectable cathode-follower or passive circuit card, placed between the plug-in unit and the output connector, controls the output characteristics. All plug-in units that do not have a signal-out provision on the front panel must use one of these cards in order to function properly. Plug-in units with signal-output connectors on the front panel can be used with or without circuit cards.

With the cathode-follower plug-in circuit card installed, push-pull, low impedance signals (to approximately 8 V peak to peak) are available via cathode followers at front and rear connectors. An automatic DC level-setting circuit keeps the average DC level of the two connectors close to 0 V. Bandwidth of the cathode-follower output circuit is DC to approximately 1 MHz.

With the passive card installed, a high-impedance push-pull signal is available at the front panel for balancing and a single-ended signal at low impedance (approximately 500 ohms) is available at the rear output connector. Bandwidth of the passive divider output circuit is DC to approximately 100 kHz and is dependent upon the plug-in used.

Each output can be switched to a meter for DC balance indication. This allows quick setting of the plug-in position control. In addition to the output monitor switch, a two-position switch has been included for balancing of the Type 3C66 Carrier Amplifier Plug-In Unit.

*\*Sampling plug-ins, designed to operate in pairs (one vertical and one sweep), and Spectrum Analyzer or Automatic "Seeking" plug-ins designed to operate in conjunction with another 2 or 3 series plug-in, must be "paired up" in Channels 1 and 2 or 3 and 4.*

TYPICAL APPLICATIONS				
PLUG-IN TYPE	INDICATED DEFLECTION FACTOR	APPROXIMATE SYSTEM GAIN		
		With Passive Output Card*	With CF Output Card**	
			Single Ended	Push-Pull
2A60	50 mV/div	50	20	40
2A61	10 $\mu$ V/div (AC)	$2.5 \times 10^5$	$10^5$	$2 \times 10^5$
2A63	1 mV/div (DC)	$2.5 \times 10^3$	$10^3$	$2 \times 10^3$
3A3	100 $\mu$ V/div	$2.5 \times 10^4$	$10^4$	$2 \times 10^4$
3A75	50 mV/div	50	20	40
3C66	10 $\mu$ strain/div	0.25 V/ $\mu$ strain	0.1 V/ $\mu$ strain	0.2 V/ $\mu$ strain
3L5	To be used with any 2 or 3-Series Time Base to provide 10 Hz to 1 MHz Spectrum Analysis.			
	1 mV/div	$2.5 \times 10^3$	$10^3$	$2 \times 10^3$
3L10	To be used with any 2 or 3-Series Time Base to provide 1 to 36 MHz Spectrum Analysis.			
3S1/3S2/3S3	2 mV/div (max)	Sampling Amplifier (must be paired with Sampling Time Base).		
3T4/3T77A	0.2 ns/div	Sampling Time Base (must be paired with Sampling Amplifier).		

\*Output single ended at rear connector.

\*\*Output at front or rear connector.

In addition to supplying power for the plug-in compartments, the Type 129 provides regulated voltages at a rear-panel connector for powering accessories. Two low-noise fans provide forced-air cooling for the power supply and plug-in compartments.

### POWER REQUIREMENTS

Electronically-regulated DC supplies insure stable operation with as much as  $-10\%$  to  $+7\%$  variation from design-center line voltage. The instrument is factory wired to operate at a design center of 117 volts, but a multi-tap transformer permits operation at design centers of 110, 117, 124, 220, 234 or 248 volts, 50 to 60 Hz. Instrument can be ordered factory wired for any of the design centers listed. Power consumption is typically 575 watts maximum under full load.

### DIMENSIONS AND WEIGHTS

Height	10 $\frac{1}{2}$ in	26.8 cm
Width	19 in	48.3 cm
Rack depth	23 $\frac{1}{2}$ in	59.8 cm
Net weight	49 $\frac{1}{2}$ lb	22.5 kg
Domestic shipping weight	$\approx$ 83 lb	$\approx$ 37.8 kg
Export-packed weight	$\approx$ 107 lb	$\approx$ 48.6 kg

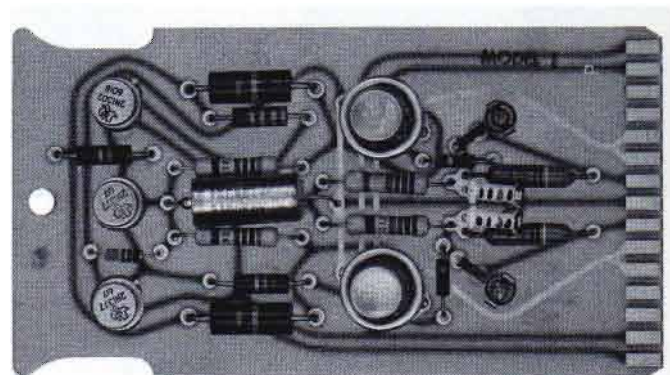
### INCLUDED STANDARD ACCESSORIES

Right-angle power cord (161-0024-01); 3 to 2-wire adapter (103-0013-00); pair of mounting tracks (351-0085-00); two instruction manuals (070-0409-00).

### OPTIONAL ACCESSORIES

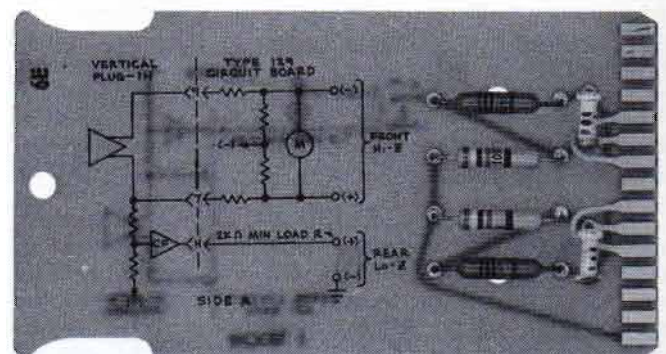
#### BLANK PLUG-IN CHASSIS

Contains necessary mechanical parts for construction of a custom plug-in. Includes frame, blank front panel, blank chassis, 24-pin connector, latch and small hardware; electrical components not included. Order 040-0245-00



**CATHODE-FOLLOWER CIRCUIT CARD**

Order 018-0001-00



**PASSIVE DIVIDER CIRCUIT CARD**

Order 018-0002-00

Please refer to Terms and Shipment, General Information page.