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SERIES MAT



Kepco MAT power supplies are oriented to systems applications. Their principal control means is a 2-wire, long range, serial bus, Kepco's single address, multiple instrument bus. As many as 27 power supplies, including models in the Kepco MST and BOP series may be "daisychained" on this bus and interfaced either to IEEE 488.2, a PC bus, or to a VXI host.

MAT are produced in three sizes: 360W, 720W, and 1080W. The two smaller groups plug in to appropriate rack adapters and may be replaced from the front. The 360W models are 1/3 width. The 720W models are 2/3 width. The 1080W models are full rack size and mount directly in a standard 19" rack.

FEATURES

- Plug-in construction (360W & 720W models).
- Local display of voltage and current.
- Talk-listen on the GPIB through Kepco's single address, multiple instrument long-range (300m) serial bus.
- Linear stabilization for low noise.





For information on digital interfaces, see page 59.



Model MAT 15-20* Size: 1/3 rack width Weight: 33lbs (15Kg)



Model MAT 15-40* Size: 12/3 rack width Weight: 60lbs (27.3Kg)



Model MAT 100-10 Size: Full rack width Weight: 75lbs (34.1Kg)

360 WATT MODULES – 1/3 RACK

Single output. Nominally 360 Watts. Mount in RA 50 and RA 51.					
MODEL	VOLTS AMPS POWE				
MAT 6-32	0-6	0-32	192		
MAT 15-20	MAT 15-20 0-15 0-20 300				
MAT 25-14	0-25	0-14	350		
MAT 36-10	0-36	0-10	360		
MAT 55-7	0-7	385			
MAT 75-5	0-75	0-5	375		
MAT 100-3.6	0-100	0-3.6	360		
MAT 150-2.4	0-150	0-2.4	360		

720 WATT MODULES – 2/3 RACK

Single output. Nominally 720 Watts. Mount in RA 51.					
MODEL	VOLTS	AMPS	POWER		
MAT 6-64	0-6	0-64	384		
MAT 15-40	0-15	0-40	600		
MAT 25-28	0-25	0-28	700		
MAT 36-20	0-36	0-20	720		
MAT 55-14	0-55	0-14	770		
MAT 75-10	0-75	0-10	750		
MAT 100-7.2	0-100	0-7.2	720		
MAT 150-4.8	0-150	0-4.8	720		

1080 WATT MODULES – FULL RACK							
Single output. Nominally 1080 Watts. Mounted directly into 19" rack. Panel: 51/4". Depth: 25"							
MODEL	VOLTS	AMPS	POWER				
MAT 6-100	0-6	0-100	600				
MAT 15-60	0-15	0-60	900				
MAT 25-42	0-25	0-42	1050				
MAT 36-30	0-36 0-30		1080				
MAT 55-20	0-55	0-20	1100				
MAT 75-15	0-75	0-15	1125				
MAT 100-10	0-100	0-10	1000				
MAT 150-7	0-150	0-7	1050				

*Covers shown are for shipping purposes only.

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MAT GENERAL SPECIFICATIONS							
PARAMETER	CONDITION	MAT POWER MODULE					
		360W	720W	1080W			
Input Voltage Range	User selectable	105-125V a-c 210-250V a-c					
Input Current	115V a-c	7.0A 14.0A 2		21.0A			
Max	230V a-c	3.5A	7.0A	10.5A			
Input Frequency	Range		47-63Hz				
Source Effect	Voltage	0.001% E _{omax}					
	Current	0.005% l _{omax}					
Load Effect	Voltage	0.002% E _{omax}					
	Current	3mA					
Time	Voltage	0.01% E _{omax}					
8 nour Drift	Current	0.02% I _{omax}					
Temperature	Voltage	(0.01% E _{omax}	1			
Coefficient/°C	Current		0.02% l _{omax}				
Ripple & Noise	Voltage	0.001%/0.019	% E _{omax} or 0	.3mV/3mV(1)			
rms/p-p(≃)	Current	0.06%/ 0.03%/0.3% l _{omax}					
Transient Recovery	Voltage	100µsec					
Programming	Voltage	0.024% E _{omax} (12 Bits)		Bits)			
Resolution	Current	0.024% I _{omax} (12 Bits)					
Data Read-back	Voltage	0.1% E _{omax}					
Accuracy Current		0.1% l _{omax}					
Operating Temperature	Range	0°C to 50°C					
Remote Sensing	Range	0.5V per lead					
dc Output Isolation	Voltage	500V d-c					
Output Display	31/2 digit LCD	Switch selectable voltage/curren		ge/current			
Indicators	4 LEDs	Voltage mode, current mo output enabled, polarity reve		t mode, v reversed			
Output Enable/Disable		Built-in power & sense relays		e relays			
Polarity Reversal		Built-in relays					
Protection	Overvoltage	Tracking 10% of full scale above the programmed value		scale			
	Overcurrent			ed value			
	Overtemperature	Monitors heat sink temperature		perature			
	Polarity reversal	Diode					
	Power loss	Disables output		ıt			
Mounting RA 50		3 x 360W					
	RA 51	1 x 360W & 1 x 720W					
	19" x 3U	1 x 1080W					
Filler Panels	For either RA 50 or RA 51	RFP 50-1 ⅓ panel; RFP 50-2 ⅔ panel		nel; nel			

(1) Whichever is greater.

(2) Peak-to-peak ripple is measured over a 20Hz to 20MHz bandwidth.

MAT front panels provide local status monitoring and on/off control. All setting controls and read back are via the serial bus. The interface between this bus and common host controllers is via devices called TMAs. TMA 4882-27 is a 13/4" high rack mount instrument that provides interface to the GPIB (IEEE 488.2 or RS 232). TMA 4882-27 supports IEEE 488.2 and the SCPI language.

Model TMA PC-27 is a card that plugs into any PC (half card slot) and provides direct control to MAT, MST and BOP models via their serial bus by emulating a GPIB. All of the GPIB functions are provided without having the awkward GPIB cables, the GPIB driver card and GPIB's limitations on distance.

Model TMA VXI-27 is a gateway to the VXI world. The unit is a single width size C instrument that plugs into a VXI cage and will drive Kepco's serial bus to control the power supplies "daisy-chained" thereon.



Accessories for MAT Models



RA 51 Housing with (1) 360W and (1) 720W MAT Module

To accommodate the 1/3 and 2/3 rack size MAT modules, Kepco offers two housings called RA 50 and RA 51. RA 50 is 3U, 51/4" x 19" x 25" and accepts up to three 1/3 rack power modules. RA 51 is like sized, but configured for one 1/3rack module and one 2/3 rack module.

Filler Panels **RFP 50-1** (1/3 slot filler) **RFP 50-2** (2/3 slot filler)

The full rack (1080W) MAT power supplies mount directly into a standard 19" rack.

FEATURES: RA 50 and RA 51

- Each power module installs from the front and has a latching means.
- A MIL-type connector supplies a-c power to the modules.
- Two DIN-type connectors link to the communications bus (arrangement permits daisy chaining).