

AT-50, 100

Automatic Matching Network(s)

- ◆ CE Marked
- ◆ Automatic Gain Control
- ◆ Programmable Presets
- ◆ DC Probe Standard
- ◆ High Voltage Vacuum Variable Capacitors
- ◆ Generator Forward Power, Reflected Power and DC Bias Displayed
- ◆ Analog or Serial Interface
- ◆ Low Loss Design
- ◆ Single Point System Integration



SEREN

INDUSTRIAL POWER SYSTEMS, INC.

1670 Gallagher Drive

Vineland, NJ 08360

Phone: 856.205.1131

Fax: 856.205.1141

www.serenips.com

PRODUCT DESCRIPTION

Seren "AT Series" automatic matching networks automatically transform plasma impedances to 50 Ohms, regardless of load variations with the advanced, intelligent, MC-2 matching network controller, and an interconnect cable.

MC-2 CONTROLLER

The MC-2 Controller is designed to meet the required accuracy and repeatability of the most demanding processes. MC-2 controller standard features include: independent selection of Auto /Manual Operation of either or both Load and Tune Capacitors, Record Strike Preset, Programmable Internal and External Presets, Back-Out Feature, Probe Select, Probe Attenuation Factor and Programmable Limits. The MC-2 front panel controls and indicators are logically grouped, with operational status displayed on a four line Vacuum Fluorescent Display. Available display information: Generator Forward Power, Generator Reflected Power, DC or RF Probe Voltage, Capacitor Positions, Preset Positions and Phase/Magnitude Error Signals.

The MC2 Controller's Loop-Through Interface provides a single point interface for the generator and matching network.

MATCHING NETWORK

Seren AT Series matching networks components are conservatively rated for continuous duty. "L" or inverted "L" configurations are available, to accommodate a wide range of impedances and

applications. Both configurations feature low losses and wide tuning ranges.

PHASE and MAGNITUDE SENSORS

Phase and Magnitude sensors are located within the chassis of the AT Series matching network. The Phase sensor is associated with the operation of the Tune capacitor; the Magnitude sensor is associated with the operation of the Load capacitor. Together, they sense the voltage and current on an internal RF transmission line and generate a direct current (DC) steering signal to drive the servo amplifiers in the MC-2 Matching Network Controller.

VOLTAGE PROBE:

A DC Voltage probe is included within the AT-Series Matching Networks. The probe provides a means to measure the developed DC Voltage within the chamber. The DC Voltage probe's output signal is proportional to the developed DC within the chamber.

PULSE DETECTOR

A pulse detector option is available for pulsing applications.

WARRANTY

Seren products are warranted against defects for a period of (15) months from date of shipment.

SERVICE

Seren IPS products are supported by a World-Wide Network of qualified service engineers. Consult our web page for locations in your area.

MC-2 Controller		CE-Marked (EMC and Safety)	
Input Power	98 -125 / 196 – 250 VAC Selectable, 47-63 Hz		
Dimensions	3.5" H x 9.5" W x 12.8" D		
I/O Connections	Match (DB15F), Analog (DB25F), RS232 (DB9F), Loop-Thru (DB25M/F)		

AT-Series Matching Networks				CE-Marked (Safety)
Model	Power Rating	Water Conn.	RF Conn.	Dimensions / Inches (H, W, D)
AT-50/75	5000 watts (75 amp/6KV)	1/4" Swagelok	HN, DIN, LC	6" x 13.13" x 13.4"
AT-50/120	5000 watts (120 amp/6KV)	1/4" Swagelok	HN, DIN, LC	7.5" x 14.7" x 14.4"
AT-50/140	5000 watts (140 amp/6KV)	3/8" Swagelok	DIN, LC	9.5" x 16.13" x 17"
AT-100	10,000 watts (Custom Configurations)	3/8" Swagelok	DIN, LC	9.5" x 16.13" x 17"