

MEA-100B
AC Resistance Power Supply

High performance welding power supply for precision welding of small parts

- Intuitive user interface for easy operation
- Compact, desktop footprint
- CE certified units available

KEY FEATURES

- **Secondary constant current control (multi-cycle welding) –** Secondary current feedback every half cycle ensures stable current flow.
- **Single-cycle welding.** First half and second half waves may be programmed separately for small parts welding.
- **Half-cycle welding –** Added precision with half cycle welding capability.
- **Power supply voltage fluctuation compensation control –** Compensates current every half cycle in accordance with fluctuation of power supply voltage.
- **Built-in weld monitor.** Upper and lower limits can be set to monitor the weld quality

	Multi-cycle welding	Single-cycle welding	Half-cycle welding
Secondary constant current control	●	—	—
Power supply voltage fluctuation compensation control	●	●	●

TECHNICAL SPECIFICATIONS

Model	MEA-100B	
Power requirements	Single phase, 200 / 220 / 230 / 240 / 380 / 400 / 460 / 480 VAC +13% -20%, 50/60 Hz, auto-switch (voltage is selectable but factory-fixed on shipment)	
Maximum output capacity	60 kVA (Duty cycle 1.3% when 200 VAC is input) / 66 kVA (Duty cycle 1.3% when 220 VAC is input) / 68 kVA (Duty cycle 2% when 380 VAC is input) 72 kVA (Duty cycle 2% when 400 VAC is input) / 86 kVA (Duty cycle 2% when 480 VAC is input)	
Control method	Secondary constant-current control / Power supply voltage fluctuation compensation control	
Welding current supply system	Multi-cycle welding / Single-cycle welding / Half-cycle welding	
Control speed	Half cycle	
Welding current accuracy	Secondary constant-current control	Within +/- 2% against +/- 10% fluctuation of power supply voltage, Within +/- 2% against +/- 10% fluctuation of load
	Power supply voltage fluctuation compensation control	Within +/- 3% against +/- 10% fluctuation of power supply voltage
Timer setting (31 schedules)	Multi-cycle welding	SQUEEZE, WELD1, COOL, WELD2, HOLD: 0 – 99 cycle UPSLOPE1, UPSLOPE2, DOWNSLOPE: 0 – 9 cycle PULSATION: 1 – 9 times
	Single-cycle welding	SQUEEZE, HOLD: 0 – 99 cycle first half and second half wave: 0.5 cycle
	Half-cycle welding	SQUEEZE, HOLD: 0 – 99 cycle, half wave: 0.5 cycle
Current setting (31 schedules)	Secondary constant-current control	Current 1, Current 2: 0.20 – 9.99 kA (0.01 kA incremental)
	Power supply voltage fluctuation compensation control	Current 1, Current 2: 10.0 – 99.9% (0.1% incremental)
Current monitoring (31 schedules)	Secondary constant-current control	Upper limit: +1 to +49%, Lower limit: -1 to –49%
	Power supply voltage fluctuation compensation control	Upper limit: 0.01 – 9.99 kA (0.01 kA incremental) Lower limit: 0.01 – 9.99 kA (0.01 kA incremental)
Optional	MB-400K Toroidal coil (required at secondary constant current control)	
External communication	RS-485, bi-directional communication	
Operating environment	Temperature: 0°–45°C, humidity: 90% or less (no condensation), altitude: 1000 meters or lower	
Power consumption	15 W or less in standby	

WEIGHT & DIMENSIONS – CONTROLLER

Dimensions (W x D x H)	5.6 in x 16.4 in x 10.6 in (142 mm x 418 mm x 269 mm)
Weight	14.3 lb (6.5 kg)

WELDING TRANSFORMER SPECIFICATIONS

Following transformers can be used when factory supplied power is 200/220 VAC

Model	MT-510AC	MT-520AC	MT-530A *1	MT-25, MT-25A		X16/230
Rating capacity	1.0 kVA	3.2 kVA	6.0 kVA [4.2 kVA]	11.1 kVA		6.4 kVA
Primary rated voltage	200 VAC ±10% 50 / 60 Hz					230
Non-load secondary voltage	1.2 V / 1.8 V / 2.5 V / 3.5 V	2.5 V / 3.2 V / 4.0 V / 5.0 V	2.7 V [2.2 V] / 3.4 V [2.8 V] / 4.3 V [3.6 V] / 5.3 V [4.4 V]	Parallel connection 2.6 V / 4.0 V	Series connection 5.3 V / 8.0 V	1.4 to 5.6 in 9 steps
Transformer turns ratio	167:1 / 111:1 / 80:1 / 57:1	80:1 / 63:1 / 50:1 / 40:1	74:1 / 59:1 / 47:1 / 38:1	77:1 / 50:1	38:1 / 25:1	164:1 to 41:1 in 9 steps
Standard max. input capacity	5.6 kVA	18.5 kVA	35.0 kVA [24.2 kVA]	64.0 kVA		16 kVA
Maximum welding current	1600 A	3700 A	6600 A [5500 A]	8000 A		6500 A
Duty cycle	1.5 % or less					8%
Cooling	Air cooled			Water cooled (4 liters / min.)		Air cooled
CE	–	–	–	– : MT-25 / X : MT-25A		–
CCC	X	–	X	X		–

WEIGHT & DIMENSIONS – TRANSFORMERS

Dimensions (W x D x H)*2	7.6 in x 11.2 in x 6.9 in (193 mm x 284 mm x 175 mm)	7.2 in x 14 in x 7.75 in (182.5 mm x 358 mm x 197 mm)	9 in x 14.6 in x 9.6 in (228 mm x 370 mm x 244 mm)	MT-25: 7 in x 14.5 in x 9.5 in (180 mm x 370 mm x 240 mm) MT-25A: 7 in x 18.25 in x 8 in (180 mm x 463 mm x 200 mm)	7.5 in x 14 in x 13 in (191 mm x 356 mm x 330 mm)
Weight	44 lb (20 kg)	77.2 lb (35 kg)	114.6 lb (52 kg)	132.3 lb (60 kg)	95 lb (43 kg)

*1 Values at 60 Hz input are indicated in brackets [ ]. *2 Not including projections

USA Headquarters and Western Technical Center
AMADA WELD TECH
1820 S. Myrtle Ave. • Monrovia, CA 91016 US • T: (626) 303-5676
info@amadaweldtech.com • www.amadaweldtech.com
ISO 9001:2015 Certified Company • 24/7 Repair Service: 1-866-751-7378

AMADA WELD TECH
(Eastern Technical Center)
High Point, North Carolina
T: (941) 544-5762
southsales@amadaweldtech.com

AMADA WELD TECH
(Midwest Technical Center)
Detroit, Michigan
T: (248) 313-3078
midwestsales@amadaweldtech.com

AMADA WELD TECH GmbH
Puchheim, Germany
T: +49-89-839403-0
infode@amadaweldtech.eu

AMADA WELD TECH SHANGHAI CO., LTD.
Shanghai, China
T: +86-21-6448-6000
jwu@amadaweldtech.com.cn

AMADA WELD TECH KOREA CO., LTD.
Seoul, Korea
T: +82-31-8015-6810
sales@amadaweldtech.co.kr

AMADA TAIWAN CO., LTD.
Taipei, Taiwan
T: +886-3-328-3511

AMADA (THAILAND) CO., LTD.
Bangkok, Thailand
T: +66-2170-5900
info@amada.co.th

AMADA VIETNAM CO., LTD.
Ha Noi, Vietnam
T: +84-24-6261-4583
thuyet@amada.co.jp

AMADA WELD TECH INDIA PVT., LTD.
Bangalore, India
T: +91-80-4092-1749
info@amadaweldtech.in

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