



MEA-100

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AC Resistance Welding Power Supply

- The MEA-100 High Performance AC Welding Power Supply is perfect for precision resistance welding of small-sized components.
- Four different weld modes to enable optimal process control
- Maximum of thirty-one pre-programmable weld schedules
- Easy programming with seven keys
- Upper and lower limits can be set to monitor the weld quality
- Maximum current can be set automatically to avoid damage to the product
- Step-up function to compensate for electrode wear to extend electrode lifetime

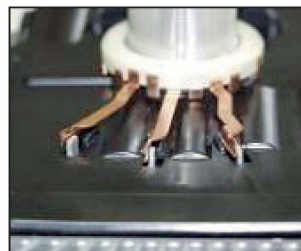
APPLICATIONS



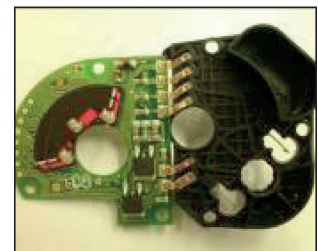
Electronics



Electronics



Automotive



Automotive



Automotive



Medical

KEY FEATURES

The MEA-100 has four welding control modes:

- Secondary constant current control - Multiple cycle welding
Closed loop control of the current using a toroidal coil. The current is adjusted every half cycle to maintain a constant current through the work piece to compensate for voltage fluctuations and work piece load variances.
- Voltage compensation control - Multiple cycle welding
Monitors and compensates for power supply voltage fluctuations to maintain a constant current.
- Voltage compensation control - Single cycle welding
Permits the flow of one cycle current only. The first half wave and second half wave can be set separately.
- Voltage compensation control - Half cycle welding
Permits the flow of one half-cycle current only. The direction of the current is inverted with each current flow.

CURRENT MONITOR

The MEA-100 has a current monitor that can check the current against pre-set limits. An alarm message is set when the current is out of range.

STEPPER FUNCTION

The stepper function increases or decreases the welding current when the weld count reaches a set value. This function is used to compensate for electrode wear or to accommodate increased temperatures within an electrode or work piece.

TECHNICAL SPECIFICATIONS

Power requirements	Single phase, 200/220/230/240/380/400/460/480VAC +13% -20%, 50/60Hz (Voltage is selectable but factory-fixed on shipment)						
Max. capacity	20kVA (10% @200VAC), 26kVA (10% @400VAC), 31kVA (10% @480VAC)						
Control mode	1) Secondary constant current control 2) Power-supply voltage compensation control						
Welding mode	1) Multiple cycle, 2) Single cycle, 3) Half cycle						
Control speed	Half cycle						
Welding current accuracy	<p>@ Secondary constant-current control (when the current is set to the maximum value)</p> <table> <tr> <td>Supply voltage fluctuation</td> <td rowspan="4">} within ± 2% for a fluctuation of ± 10%</td> </tr> <tr> <td>Resistance load fluctuation*)</td> </tr> <tr> <td>Inductive load fluctuation*)</td> </tr> <tr> <td>(Power factor angle fluctuation)</td> </tr> </table> <p>*) Fluctuation from our standard load</p> <p>@ Power-supply voltage fluctuation compensation control (when the current is set to the maximum value) Supply voltage fluctuation: within ± 3% for a fluctuation of ± 10% (within 20%-80% of the set current when using a welding machine with a power factor of 0.85-0.95)</p>		Supply voltage fluctuation	} within ± 2% for a fluctuation of ± 10%	Resistance load fluctuation*)	Inductive load fluctuation*)	(Power factor angle fluctuation)
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(Power factor angle fluctuation)							
Timer setting	@ Multiple cycle mode	Initial force apply, Weld 1, Cool, Weld 2, Hold 0 – 99 cycles Upslope 1, Upslope 2, Down slope 0 – 9 cycles Pulsation 1 – 9 times					
	@ Single cycle mode	Initial force apply, Hold 0 – 99 cycles, First half wave/Second half wave 0.5 cycles					
	@ Half cycle mode	Initial force apply, Hold 0 – 99 cycles, Half wave 0.5 cycles					
Current setting range	@ Secondary constant current control mode	Current 1, Current 2 0.20 – 9.99kA (by 0.01kA)					
	@ Power-supply voltage compensation control mode	Current 1, Current 2 0.0 – 99.9% (by 0.1%)					
Current monitoring	@ Secondary constant current control mode	Upper limit setting: +1 - +49% Lower limit setting: -1 – -49%					
	@ Power-supply voltage compensation control mode	Upper limit setting: 0.01 – 9.99kA (by 0.01kA) Lower limit setting: 0.01 – 9.99kA 'by 0.01kA)					
Option	Toroidal coil MB-35E						
Ambient environment	Temperature: 0 – 45 degree C, Humidity: 90% or below (No condensation)						
Power consumption	15W or below at stand-by						
Global standards	CE and CCC Certified						

TRANSFORMERS

MT-6X-400 Welding Transformer	AC Welding Transformer 6 kVA	- Primary: 400 V, 50 Hz - Secondary: 2.5/3.7/5.0 V - Nominal power: 6 kVA
MT-10X-530 Welding Transformer	AC Welding Transformer 10 kVA	- Primary: 530 V, 250 Hz - Secondary: 12.0 V - Nominal power: 10 kVA
MT-12X-400 Welding Transformer	AC Welding Transformer 12 kVA	- Primary: 400 V, 50 Hz - Secondary: 10.5/11.8/13.3 V - Nominal power: 12 kVA
MT-20X-400 Welding Transformer	AC Welding Transformer 20 kVA	- Primary: 400 V, 50 Hz - Secondary: 4.0/6.0/8.0 V - Nominal power: 12 kVA

DRAWINGS

