

Sunstone CD SPM Welders

Single Pulse Capacitive Discharge Spot Welders

Sunstone's CD SPM microprocessor-controlled single pulse resistance spot welders are engineered to provide a wide range of welding flexibility for fine-spot resistance welding. The CD SPM welders can provide as little as 0.1 watt seconds of energy for welding microscopic wires and parts. For thicker welds, energy can be adjusted up to 100ws or 200ws depending on the unit model. These welders are versatile and easy-to-use for many fine-spot resistance welding applications. The welder interface lets users quickly select weld settings for a wide variety of welding applications. Some features and enhancements found on the CD SPM welders include:

Refined Control of Weld Energy

LCD Display with Exact Energy Read-Out

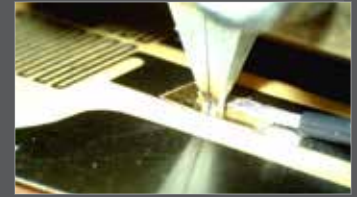
Audio Beeps – Indicating Weld Initiation Successful

Thermal Protection Monitoring of Internal Power Supply Temperature

These features allow for increased use and functionality.



Applications



- Cross wire welding
- Thermocouple welding
- Copper, Aluminum, Steel, and Brass wire and sheet welding
- Strain gauges

Features

- 100 or 200 watt second capacity
- Single Pulse operation
- Weld energy displayed in 0.1ws increments below 10ws
- Simple, user-friendly interface
- Up to 120 welds/min



Sunstone - Your partner in micro welding!
Contact us for **free sample weld evaluations**.
We will find the solution for any application.

Sunstone Engineering
1-877-786-9353
1693 American Way #5
Payson, UT 84651 USA

Table 1: CD100SP Energy release as a function of weld load and pulse width

Pulse Width Dial Marker	Pulse Time in ms	1.0mΩ Load % of energy	1.5mΩ Load % of energy	4.0mΩ Load % of energy
1	0.26 ms	27%	20%	12%
1.5	0.28 ms	29%	22%	12%
2	0.45 ms	42%	33%	19%
2.5	0.59 ms	51%	40%	24%
3	0.75 ms	60%	48%	29%
3.5	0.90 ms	67%	55%	35%
4	1.06 ms	72%	60%	39%
4.5	1.43 ms	82%	71%	49%
5	2.23 ms	93%	86%	65%
5.5	3.54 ms	99%	95%	81%
6	4.80 ms	100%	98%	89%
6.5	5.51 ms	100%	99%	92%
7	5.54 ms	100%	99%	93%

Table 2: CD200SP Energy release as a function of weld load and pulse width

Pulse Width Dial Marker	Pulse Time in ms	1.0mΩ Load % of energy	1.5mΩ Load % of energy	4.0mΩ Load % of energy
1	0.47 ms	25%	19%	10%
1.5	0.50 ms	26%	20%	11%
2	0.81 ms	39%	30%	17%
2.5	1.07 ms	48%	37%	22%
3	1.34 ms	56%	44%	27%
3.5	1.63 ms	63%	51%	32%
4	1.90 ms	69%	56%	36%
4.5	2.57 ms	79%	67%	45%
5	4.02 ms	91%	83%	61%
5.5	6.37 ms	98%	94%	78%
6	8.68 ms	99%	98%	87%
6.5	9.92 ms	100%	99%	90%
7	9.98 ms	100%	99%	90%

Table 3: Peak weld current as a function of weld energy and external welding load

Energy (ws) (CD100 CD200)	1.0mΩ Load (Amps)	1.5mΩ Load (Amps)	4.0mΩ Load (Amps)
0.1 0.2	250	200	100
25 50	3953	3162	1581
50 100	5590	4472	2236
75 150	6847	5477	2739
100 200	7906	6325	3162

Table 4: Weld repetition rates in welds per minute

Weld Energy (% of maximum energy)	Nominal Rep Rate CD100SP welds/min	Nominal Rep Rate CD200SP welds/min
100%	40	20
75%	50	25
50%	60	30
25%	85	42
2.5%	120	120

Table 5: Weld pulse characteristics

Model	Energy Min - Max	Pulse Width Min - Max	Pulse Height Minimum
CD100SP	0.1ws - 100ws	0.26ms - 5ms	0.2 V
CD200SP	0.1ws - 200ws	0.47ms - 10ms	0.2 V

Table 6: Welder characteristics

	CD100SP		CD200SP	
	Inches	cm	Inches	cm
Height	8	20.3	8	20.3
Width	8.5	21.6	8.5	21.6
Depth	11	28	11	28
Weight	17 lbs	8 kg	19 lbs	9 kg



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