

# CS3 Cardio stimulator

Cardiac stimulator

## Easy handling

- Intuitive and easy handling
- Emergency stimulation

## Versatil

- Three independent and isolated stimulation channels
- Output in Current or Voltage ( mA / V )
- Four extra-stimulus selectionable in two channels
- Pace programs
- Five pace modes
- AC powered
- Portatil

## Reliable

- Totally digital
- Lyquid cristal display with retroillumination



D-7303-036 R0

A.S.P. Electronic

Technical data

Stimulation parameters	
Stimulation channels	3 independent and isolated channels
Cycle length S1	30 ms - 9999 ms
Cycle length unit	ms / ppm
Extra-stimulus	4 Extra-stimulus S2,S3,S4,S5 ( Independently selectionable in Ch1 and Ch2 )
Extra-stimulus coupling	60ms - 999 ms
Output	mA / V ( current or voltage )
Output value	0.1 mA – 30 mA 0.1 V – 10 V
Pulse width	0.1 ms - 10.0 ms
Interval Ch1-Ch2	-300 ms( Ch2→ Ch1 ), +300 ms ( Ch1→ Ch2 )
Interval Ch2-Ch3	-300 ms( Ch1→ Ch3→ Ch2 ),+300 ms ( Ch1→ Ch2→ Ch3 )
Delay value	1 s - 60 s
Pulse form	Biphasic , asymmetric

Pace modes	
	Asynchronous pace with extra-estimulus ( Ch1 or Ch2 )
	Synchronous pace with extra-estimulus ( Ch1 or Ch2 )
	Asynchronous continuous pace ( Ch1 , Ch2 or Ch3 )
	Synchronous continuous pace ( Ch1 , Ch2 or Ch3 )
	Sense pace ( extra-stimulus over spontaneous rate ) ( Ch1 or Ch2 )
	Emergency pace ( Ch1 or Ch2 )

Additional characteristics	
	Portatil
	Cardiac rate measure in synchronous modes ( Ch1 )
	AC Powered 110-230 V~, 50-60 Hz
	Desfibrillation – proof as per UNE –EN 60601-1

Pace programs	
<b>Resynchronization protocol</b>	
<b>-Atrium paced ( Ch1 )</b>	
<ul style="list-style-type: none"> <li>Synchronous continuous stimulation ( DDD mode ) in three channels ( A,RV,LV ) with independent intervals for paced and sensed events.</li> <li>Ventricular sense response inhibited or triggered (RV,LV)</li> </ul>	<b>Sense interval A – RV</b> -300 ms - +300 ms <b>Sense interval RV – LV</b> -300 ms - +300 ms <b>Pace interval A – RV</b> -300 ms - +300 ms <b>Pace interval RV – LV</b> -300 ms - +300 ms
<b>-Atrium sensed ( Ch1 )</b>	
<ul style="list-style-type: none"> <li>Synchronous continuous stimulation ( VDD mode , Atrium sensed and one or two ventricles paced ) in three channels (A,RV,LV).</li> <li>Ventricular sense response inhibited or triggered (RV,LV)</li> </ul>	<b>Sense interval A – RV</b> -300 ms - +300 ms <b>Sense interval RV – LV</b> -300 ms - +300 ms <b>Pace interval RV – LV</b> -300 ms - +300 ms
<b>Parameters decrement program</b>	
<b>Decrement value</b> 1 ms – 300 ms ( 1 ms steps )	Automatic decrement of S1 Automatic decrement of S2 Automatic decrement of S3 Automatic decrement of S4 Automatic decrement of S5 Automatic simultaneous decrement of S2,S3,S4,S5
<b>Recovery time measure program</b>	
Continuous pace with sequential decrement of S1 at the end of every sequence.	<b>Pace time</b> 1s - 60s <b>Wait time</b> 1s - 60s
<b>Parameter limits modification</b>	
<b>S1 limits</b>	30 ms – 190 ms
<b>Refractory time limit</b>	150 ms – 350 ms

Dimensions and weight	
Dimensions	190 mm x 254 mm x 350 mm
Weight	6.3 Kg

## A.S.P. Electronic

Avda. Dr. Severo Ochoa, 43 – Local I  
 Polígono Industrial Casablanca II  
 28100 Alcobendas MADRID  
 Tel. 91 6619795  
 Fax. 91 6624339  
 Email. info@asp-electronic.com

