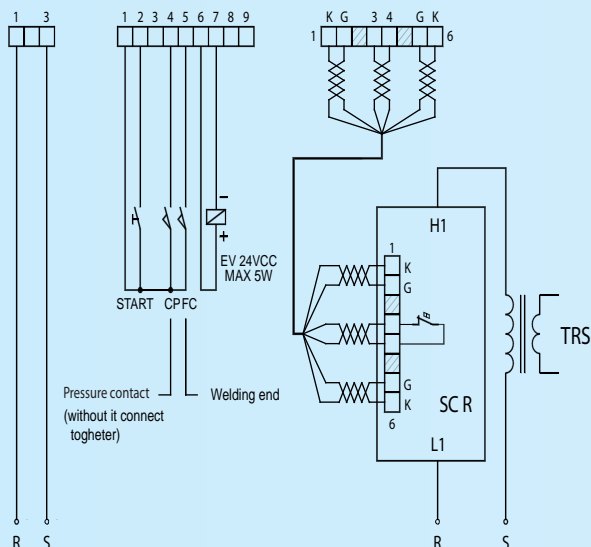
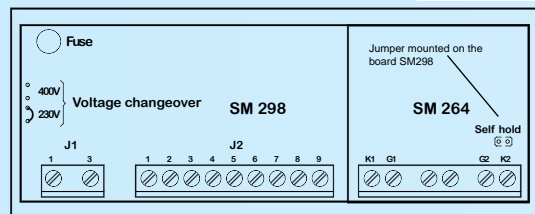




## Technical Data



- **Inputs:** Cycle start, pressure contact, weld end, SCR thermostat.
- **Outputs:** Short circuit protected solenoid valve drive, Synchronous SCR firing.
- **Supply Voltage:** 230/400 V +/- 20%.
- **Automatic power line frequency recognition:** 50 / 60 Hz.
- **Power line fluctuation compensation.**
- **Self Hold:** The driver voltage is cut off in Standby mode.
- **Suitable to drive pivoting machines**
- **Current cut off management**

All times can be set with a resolution of 1/2 cycle up to 10 cycles, and of 1 cycle above 10 cycles.

- **Squeeze time range:** 0 / 99 cycles.
- **Weld time range:** 0.5 / 99 cycles or continuous (Co).
- **Weld current range:** 10% - 99%.
- **Hold time range:** 0.5 / 99 cycles.
- **Off Time range:** 0 / 99 cycles.
- **Direct setting for Weld / no Weld.**
- **Malfunction check.**
- **Solenoid valve drive:** voltage: 24 V D.C. 5W max; short circuit protected.
- **Sizes:** 175 x 90 x 60.



# CS-2

Two times  
digital electronic control  
for spot welding machines

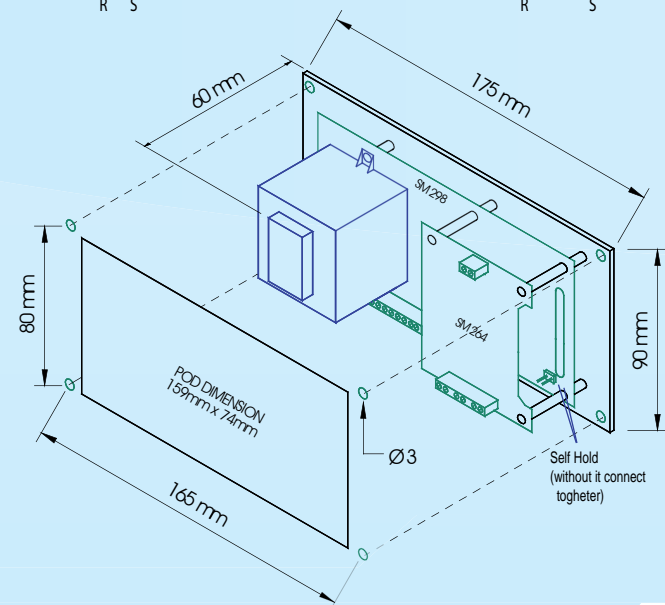
## Warranty

Warranty: the product is guaranteed one year from purchase date  
Quick unit replacement.  
Daily shipping  
Working schedule for customer servicing from 8 am to 6 pm.

E-mail: [support@safcosys.it](mailto:support@safcosys.it)



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[www.safcosys.com](http://www.safcosys.com)



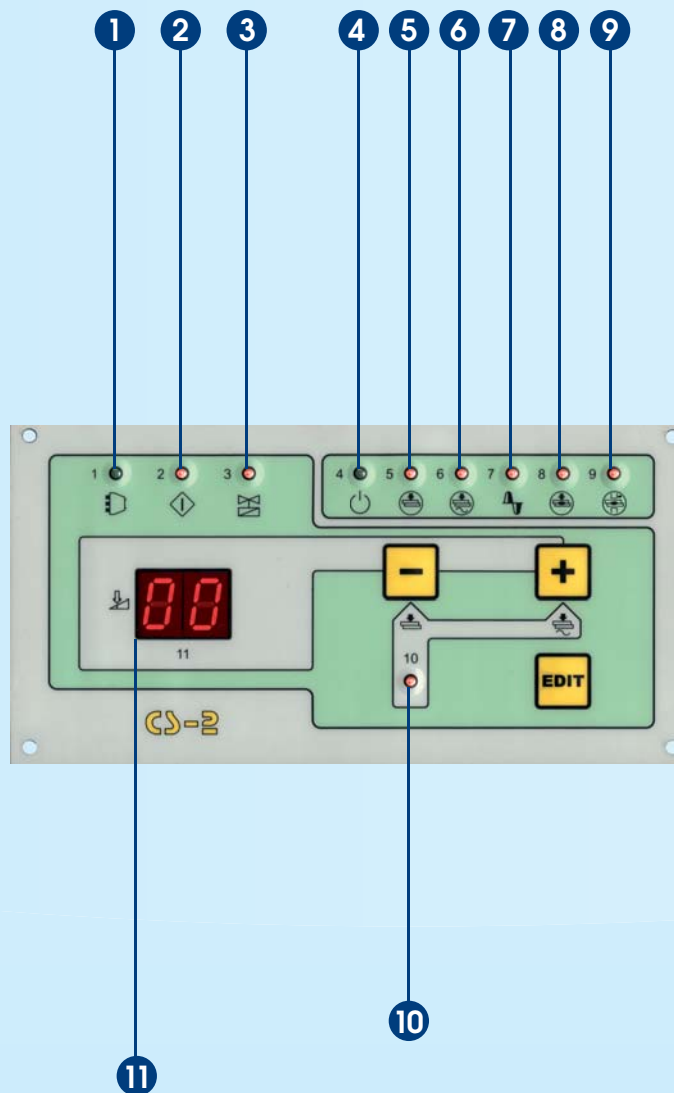
## Leds: function descriptions and trouble shooting.

- Power line Led:** if on it means that power supply line is ok. If it is off it means line voltage failure. Check the main power line voltage, the internal fuse and the voltage selection jumper.
- Start Led:** if on it means the start cycle input closed. (The weld cycle starts when the input closes). If the start cycle input is in "start" condition and the Led is still off, check the start cycle input contact and its wiring.
- Solenoid valve Led:** if on it means the valve is excited. In case of problems, check the voltage at the pins of the valve when the Led is on.
- Standby Led:** it must be on to start the welding cycle. If it remains off once the unit is powered, check that the start cycle input is open. The unit could also be in "Edit" mode: open the contact or quit the edit mode.
- PU:** appears on the display at switch on: A keyboard button got stuck: fix the problem.
- IC:** appears on the display at switch on or after the cycle: The start cycle is still present; remove it.
- CP:** appears on the display: Contact pressure input is open. If no contact pressure is used place a wire jumper on its input.

**NOTE:** Before powering on the unit the cycle end must be removed otherwise the control remains in RESET mode.

**The compliance certification for the safety device**  
"Dual button concomitance start," if used, must be at customer care since it depends on the total safety regulations that are applicable to the global safety of the welding machine. The safety compliance for valves is also at customer care.

# CS-2



## Weld Cycle Parameters

- Press the key **Edit** to select the parameter to be modified (squeeze time, weld time, current, hold time and off time). With the buttons "+" or "-" set the parameter to the desired value. When the Led standby goes on again the values are stored and the unit is ready to weld.
- Squeeze Led:** if on the unit displays the squeeze time and allows its setting. Press the "+" or "-" button to modify the electrodes closure time (time range from 0 to 99 in 1/2 cycle steps up to 10 cycles and above in 1 cycle steps. During the working cycle the led indicates that the squeeze time is in progress).
  - Welding Time Led:** if it is on the unit displays the weld time and allows its setting. Press "+" or "-" to modify the weld time/Co. The display is in cycles from 0,5 to 99. (Up to 10 cycles the resolution is 1/2 cycle.) During the weld cycle the display counts the number of weld cycles or indicates the continuous mode "Co". By selecting "Co", the continuous mode is activated and the weld stops at the re-opening of the start input or when the time limit of 199 cycles is reached.
  - Welding Current Led:** if on the unit displays the welding current or allows its setting. Press the "+" or "-" buttons to modify the change the current percentage. (The range is from 10% to 99%).
  - Hold time Led:** The parameter determines the hold time after the weld with closed electrodes (electrodes drive valve remains activated). The set range is from 0.5 up to 99 cycles and up to 10 the resolution is 1/2 cycle.
  - Off time Led:** The parameter determines the off time, starting when the hold time is over. The set range is from 0 up to 99 cycles, and up to 10 the resolution is 1/2 cycle.

## Unit Start-up

- Weld Enable Led:** if on it means that the current is on during the weld cycle. If it is off, the weld current is deactivated: that causes the run of working cycles without current (no weld). To change the current condition, press "+" (led 10 on) or "-" (led 10 off).
- Display:** when the unit is turned on, it performs a self check test first and then the power line frequency detection. The display shows the software version first, and then the recognized power line frequency. If the power line frequency is not stable the unit shows the error message "Fr." and locks itself.

