

The SPI1 is a powerful interruption controller for use with cathodic protection rectifiers. Precise timing accuracy and repeatability is attained with GPS and microprocessor technology. A small physical size, rugged case, and wide operating temperature range make this device ideally suited for portable field use.

Features:

- Interactive and detailed plain English menus provide easy and intuitive operation.
- Bright backlit alphanumeric display provides detailed presentation of all important parameters.
- Large dedicated function keys with audible annunciation facilitate accurate data entry.
- Color coded bright LED indicators focus the user's attention to important status conditions.
- A resolution of 1ms and maximum range of 60,000ms for OFF and Cycle Times provides the user with very fine timing selection.
- Accurate +/- 0.5ms timing is attained with a 20 channel GPS receiver and a temperature compensated crystal oscillator.
- Field programmable parameters allow device customization for use with a wide range of external relays.
- Can immediately operate in manual mode or be programmed with up to 7 user-defined schedules.
- Device configuration parameters and schedule are permanently stored in nonvolatile memory with auto-resume after a power disruption.
- A wide -30° to +70°C (-22° to +158°F) operating temperature range.
- Internal AC line synchronization provides rectifier switching at minimum primary current conditions.
- The front keypad and display are fully sealed and waterproof for maximum reliability.
- GPS satellite and internal diagnostic self test routines assure proper operation.
- Small size of 229 x 191 x 97 mm (9" x 7.5" x 3.8").
- Holds rectifier power on when not interrupting.



- Controls up to 3 separate external interruption relays simultaneously.
- Software can be field-upgraded using a standard PC.
- Low current solid state components provide maximum reliability.
- Cloning cable available for direct unit-to-unit parameter cloning.
- Can be upgraded to include a single channel data logger with high precision time stamping and simultaneous AC and DC measurements.

Specifications:

Operating temperature range -30 to +70 C (-22 to 158 F)
 Operating voltage range 10 to 22 volts AC or DC
 Power (less relay drive power) 2W maximum
 Power (including relay drive power) 20W maximum
 Internal Battery Rechargeable 6V sealed lead acid
 Operational Time on Battery Power 7 days typ.
 Physical size 229 x 191 x 97 mm (9" x 7.5" x 3.8")
 Device weight 2.6 kgs (5.72 lbs)
 Display 4 line by 20 character backlit LCD
 Keypad 20 key sealed membrane with annunciation
 Enclosure Water-tight durable plastic
 Timing accuracy (AC line sync disabled) +/-0.5ms
 Timing accuracy (AC line sync enabled) +8.8/-0.5ms
 Relay drive voltage 6 or 12 volts DC
 Relay drive current 1A maximum
 Relay contact close dwell 0-80ms
 Relay contact open dwell 0-80ms
 Relay contact type NO or NC
 Relay type External solid state or mechanical
 Off Time 1 – 59,999ms in 1ms steps
 Cycle Time 2 – 60,000ms in 1ms steps
 Interruption schedules (date and time) 7
 Interruption & schedule memory Nonvolatile EEPROM
 GPS Receiver Internal 20 channel
 GPS Antenna Low current magnetic mount with TNC
 GMT Time-zone offset +/- 12 hours
 Reference offset adjustment 5000mS in 1mS steps

Optional SDL1 Data Logger:

Operating temperature range: -30 to +70C (-22 to 158F)
 Installation: Factory only
 Channels: 1 (Simultaneous AC + DC)
 Input Ranges: +/-12Vpeak,
 +/-20Vpeak,
 +/-60Vpeak,
 +/-150Vpeak
 AC Measurement: True RMS

Analog to Digital Conversion
 Resolution: 16-bit
 Maximum sampling rate: 100ksps
 Storage Memory Type: Integral microSD card
 Storage Memory Size: Approx. 1GB
 (1GB=1,000,000,000 bytes)

PC Connection: USB 2.0 Full-Speed
 (Appears as a Mass Storage Device to the PC)

File Format: Mobiltex® binary proprietary.
 Conversion utility to spreadsheet CSV format is provided. Detailed binary file format specification (document SDL1-SDD-001) is available.

Ordering:

A15060182B1: Portable GPS interrupter, internal 3-way relay driver, magnetic-mount GPS antenna, and AC/DC power cords. Optional rectifier interconnect cables and interruption relays are available separately.

Optional External Relays:



MSR2 – 8 Amp 250 VAC / 150 VDC Mechanical
 With 1 meter (3.3 ft) cables and clips (A15060201B2)



HPR1 – 50 Amp 24 to 250 VAC / 8 to 300 VDC Solid-state
 With 3.1 meter (10 ft) cable and 3/8" lugs (A15000SPI06)



HPR2 – 100 Amp 8 to 300 VDC Solid-state
 With 3.1 meter (10 ft) cable and 3/8" lugs (A15000SPI05)



SSR1 – 100 Amp 24 to 280 VAC Solid-state
 With 1.8 meter (6 ft) cable and 3/8" lugs (A15000SPI07)
 With 1.8 meter (6 ft) cable and Twist Lock (A15000SPI01)
 With 1.8 meter (6 ft) cable and Straight Blade (A15000SPI02)