

TECHNICAL DATA SHEET SENTRY SMART Self-Diagnostics System

File: SD0654 Rev. 6 09-08-05

SPECIFICATIONS:

Available in 120VAC or 347VAC input and 6VDC, 12VDC, or 24VDC output configurations

User Interface

Consists of a 16 character Liquid Crystal Display (LCD) to display text messages of current operational status including warning and error messages. Red and green LED's indicate error condition and AC power presence. Two external soft-keypad pushbuttons are used for menu navigation and test initiation. Single pushbutton switch mounted on the circuit board is used to access service menu. When alarm feature enabled, audible alarm can be heard during an error condition.

Battery Charging

System uses a microprocessor controlled economical linear type battery charger circuit that precisely controls the charging voltages and currents over a wide range of input line voltage and ambient temperature conditions to maximize battery capacity and battery life expectancy.

Line Power Failure

During a line power failure condition the lamps will immediately illuminate. The lamps shall stay illuminated until the battery discharges or the line power exceeds power threshold continuously for a minimum predetermined time.

Diagnostics

Microprocessor continuously monitors for the following error and warning conditions. During an error condition, red LED will illuminate, audible alarm will begin 'chirp' sequence if enabled and LCD will display appropriate error message:

- Battery missing error condition occurs if no battery voltage is detected.
- Battery discharged error condition occurs when battery is discharged. All lamps will automatically turn off if the battery
 reaches a discharged state and will not be permitted to turn on again until the battery has recharged. This prevents overdischarge or damage to battery.
- Line fuse failure error condition occurs if the voltage before line fuse and after fuse fail to meet required values.
- Lamp 1 & 2 fuse failure error condition occurs if, during lamp illumination, the lamp voltage after the fuse is less than specified values.
- Lamp power failure error condition occurs if, during lamp illumination, the lamp power is less than the calibrated lamp power. The current and calibrated lamp powers are normalized to the nominal battery voltage before comparison.
- **Battery low** warning condition occurs when battery is approaching a discharge state. During a battery low warning condition, the lamps shall 'blink' to indicate the batteries are approaching a discharged state. The duration of a battery low warning condition is dependent on battery current draw, which is dependent on the lamp wattage connected to the system.

Lamp Power Calibration

Calibration performed manually via the maintenance menu during installation. See Installation & Operation Manual.

Manual Test

Manual test illuminates all lamps. During manual test, lamp power is monitored after an initial delay to allow for the lamp power to stabilize. A single key press, from the high rate or float charges menu will initiate manual test.

Automated Self-Test

24-hour lamp power test, 30-day battery test and exercise, and 6-month battery capacity test.

- Displays: Load voltage and current, error/warning messages, test elapse time may also be accessed.
- Tests: Lamp failure detect. Battery connected. Battery capacity. (Battery also discharged on 30 day and 6 month tests)
- Logs: Load on duration in minutes and seconds. Time since last AC fail.

Cabinet size

Medium Commercial cabinet 12"(L) x 6.5"(D) x 16.5"(H) for 6V, 12V(up to 200W output), 24V(up to 200W output) Large Commercial cabinet 16"(L) x 8"(D) x 16.5"(H) for 12V(220W to 360W output), 24V(350W to 720W output)

Display Menus

Users can access various information and tests via the front panel display using system switches from menu navigation.

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Example:	SEN6V180C2M9T-1
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Series	DC Voltage	Capacity (1/2 hour)	Cabinet Type	# of Lamps	Lamp Head Type	Lamp Watt & Source	Options	AC Voltage
SEN	6V 12V 24V	50 (6V) 72 (6V) 100 (6/12V) 150 (6/12/24V) 180 (6V) 200 (12/24V) 250 (12V) 300 (12/24V) 350 (24V) 360 (12V) 400 (24V) 550 (24V) 720 (24V)	C : Commercial	0 1 2 3	S: Standard ¹ M: Mini ¹ D: Designer ²	9T : 9W Tungsten 18T : 18W Tungsten 8Q : 8W Quartz 12Q : 12W Quartz 50Q : 50W Quartz 50Q : 50W Quartz 50Q : 70W Quartz 70Q : 70W Quartz M10 : 10W Medium MR16 W10 : 10W Medium MR16 W20 : 20W Narrow MR16 M20 : 20W Medium MR16 M20 : 20W Wide MR16 M35 : 35W Narrow MR16 M35 : 35W Wide MR16 M35 : 35W Wide MR16 M35 : 35W Wide MR16 M42 : 42W Narrow MR16 M40 : 50W Marrow MR16 M41 : 42W Marrow MR16 M42 : 42W Medium MR16 M42 : 42W Medium MR16 M40 : 50W Marrow MR16 M40 : 50W Marrow MR16 M50 : 50W Medium MR16	TB : Terminal Block P : Twist Lock Plug	1:120 V 6:347 V

PROJECT:	
TYPE:	CATALOGUE NUMBER:

¹ Mini: 6 Volt (9T, 8Q, 12Q); 12 Volt(9T, 8Q, 12Q, 18T, M10, W10, N20, M20, W35, M35, W35); 24 Volt(9T, 18T, W20, W35); Standard: 6 Volt (9T, 8Q, 12Q, 20Q); 12 Volt (9T, 8Q, 12Q, 18T, 20Q, 50Q, 55Q); 24 Volt (9T, 18T, 20Q, 50Q, 70Q)

² Designer lamp head uses an MR16 lamp with following wattages: 12V/10W in Medium or Wide; 12V (20W, 35W, 42W, 50W in Narrow, Medium or Wide); 24V (20 W Wide, 35W Wide, 50W Narrow)

or Wide)