

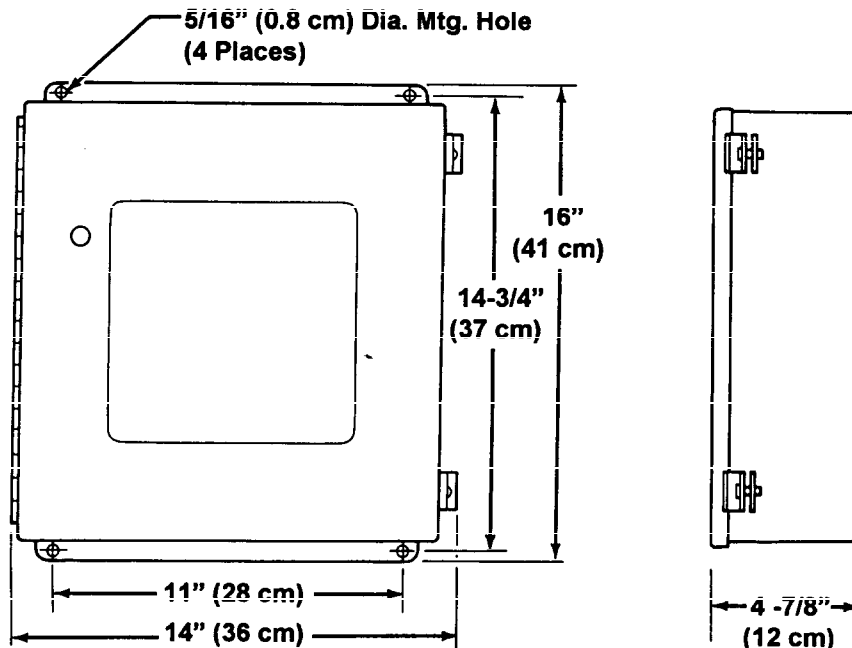
OWNER/OPERATOR MANUAL

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DESCRIPTION

Model 85510 will expand the sensor capabilities of Model 85500. Model 85510 comes with one sensor board installed and room for two more sensor boards. Each sensor board can monitor 16 lube points for a maximum total of 48 lube points per Satellite Controller.

A total of (31) thirty one Satellite Controllers can be used in one system. The total number of lube points that can be monitored is 1,536.



SPECIFICATIONS

Input Voltage	120 VAC 50/60 HZ (set power selector to "AC") 230 VAC 50/60 HZ (set power selector to "AC") 24 VDC (set power selector to "DC")
Current Consumption	400 MA at 120 VAC (48 sensors) 200 MA at 230 VAC (48 sensors) 1.5 AMP at 24 VDC (48 sensors)
Enclosure.....	Nema 12 Enclosure
Controller Ambient Temperature Range.....	0° F (-18° C) to 130° F (55° C)
Net Weight.....	18 lbs. (18.2 Kg)
Maximum Length of 22 Gage Sensor Wire	500 Ft (152 m)
Maximum Length of 4 Wire Flat Modular Cable	4000 Ft (1219 m)
Maximum Sensor Current	25 MA at 15 VDC
Lubricant Temperature Range for Sensors	32° F (0° C) to 145° F (63° C)
Minimum Amount of Lubricant Delivery to Sensor004 cu. in. (.066 cc) (32° F [0° C] to 125° F [52° C]) .008 cu. in. (.13 cc) 126° F [52° C] to 145° F [63° C]
Minimum Amount of Time Between Lube Events at Sensors	30 Seconds
F1 Fuse - Power Supply Fuse.....	5 Amp 250V Time Delay 1/4" (.63 cm) X 1-1/4" (3.2 cm)
Modular Jack.....	4 Contact Modular Phone Jack

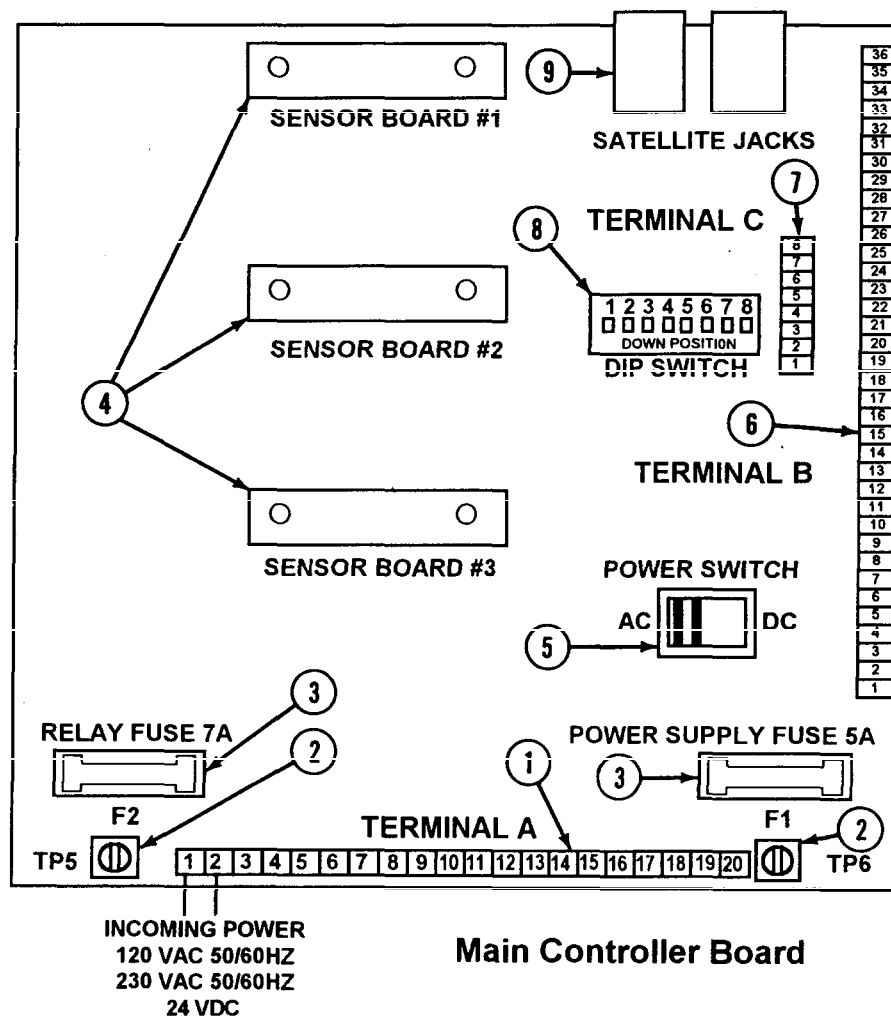


Figure 1.

MAIN BOARD COMPONENT LOCATION

- Item 1:** Terminal Strip A is used to connect the incoming Power Source.
- Item 2:** Grounding Terminals. Used to connect the green grounding wire.
- Item 3:** There are two fuses:
Fuse F1: Provides short circuit protection for the power supply. If this fuse opens, the controller will terminate operation.
Fuse F2: Not used in a Satellite Controller. For Safety, do not remove fuse or fuse cover.
- Item 4:** There are three sockets where Sensor Boards may be plugged in.
 - Sensor Board #1
 - Sensor Board #2
 - Sensor Board #3
- Item 5:** Power Switch is used to select either AC or DC incoming voltage. Set the Power Switch to the **left** for AC voltage and to the **right** for DC voltage.
- Item 6:** Terminal Strip B. Not used.
- Item 7:** Terminal Strip C. Not used.
- Item 8:** Dip Switches 1 thru 8. The first 5 Dip Switches identify the satellite number. Dip Switches 6, 7, and 8 are not used and should remain in the **up** position.
- Item 9:** Satellite Jacks are used to connect the Main Controller to the Satellite Controller. One or both Satellite Jacks may be used to daisy chain several Satellite Controllers together.

FIELD CONNECTIONS

TERMINAL STRIP A - HIGH VOLTAGE CONNECTIONS

(See Figure 1)

Incoming Power Source

	120/230 VAC	24 VDC
Terminal 1	Black Wire	Battery Plus
Terminal 2	White Wire - Neutral	Battery Minus
Power Switch	Push to Left - AC Position	Push to Right - DC Position

Terminals 1 and 7: Connected together internally.

Terminals 2, 4, 9, 12, 14, 16, 18, and 20: Connected together internally.

IMPORTANT: Connect **GREEN** grounding wire to either of the Grounding Terminals TP5 or TP6.

SATELLITE JACKS

Satellite jacks are used to connect the System Sentry II to a Satellite Controller or a Satellite Controller to a Satellite Controller. Either or both of the Modular Jacks located on the printed circuit board, see Figure 1 - Item # 9, can be used when connecting more than one Satellite Controller.

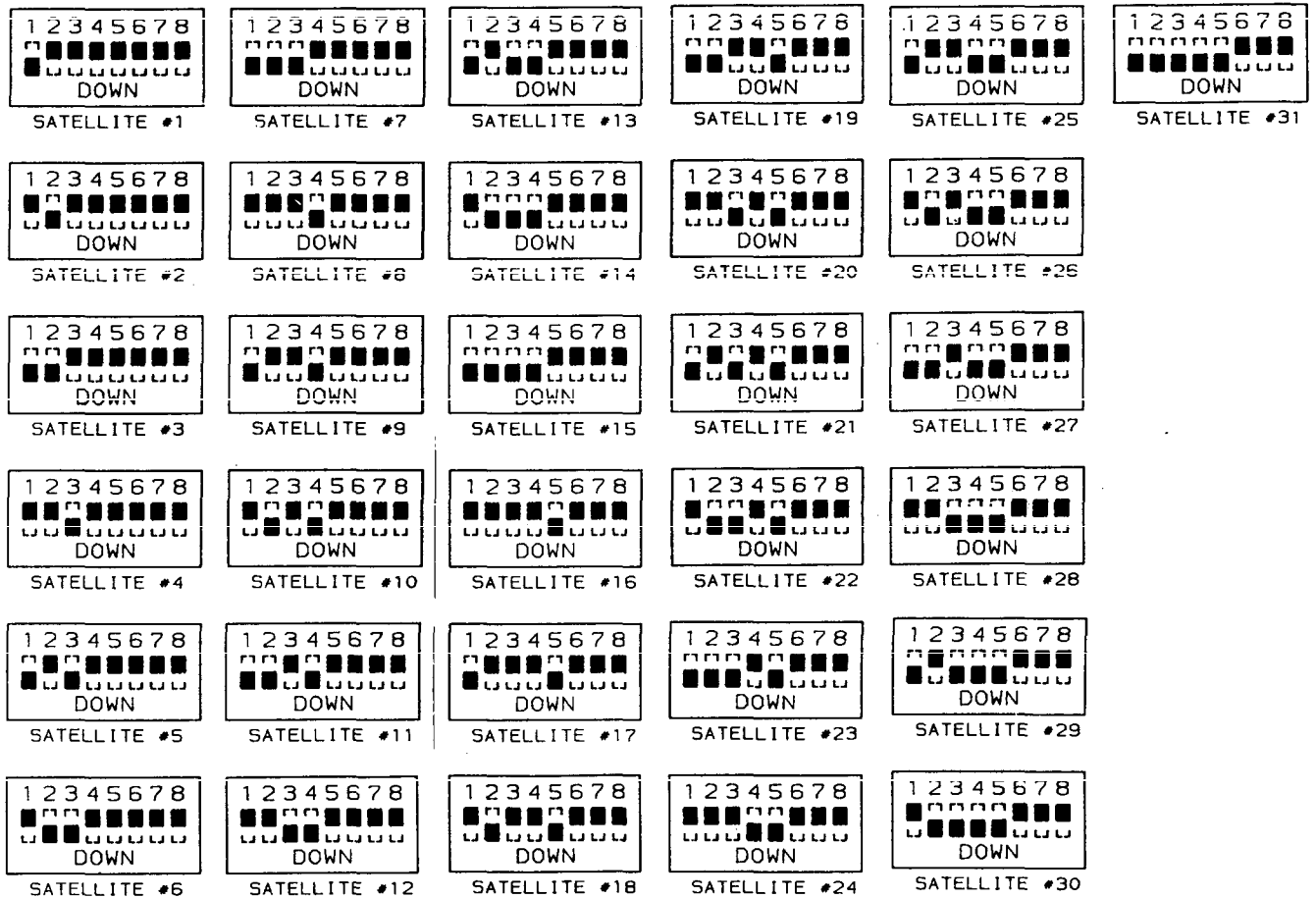
Connection is made with a flat 4 wire modular line cord with telephone modular plugs on both ends.

CAUTION

WIRE ORIENTATION MUST BE THE SAME FOR BOTH MODULAR PLUGS.

SETTING SATELLITE IDENTIFICATION SWITCH

Each satellite controller used in a system must have a unique identification number. Dip switches 1 thru 5 are used to identify each satellite controller. It is not necessary to number the satellite controllers sequentially. Dip switches 6 thru 8 should remain in the up position. The Satellite numbers range from 1 thru 31 as indicated in the following chart:



The sensors connected to the Satellite Controller are automatically assigned numbers according to the Satellite identification number:

Satellite Controller #1

- Sensor Board #1 - Sensors 49 thru 64
- Sensor Board #2 - Sensors 65 thru 80
- Sensor Board #3 - Sensors 81 thru 96

Satellite Controller #2

- Sensor Board #1 - Sensors 97 thru 112
- Sensor Board #2 - Sensors 113 thru 128
- Sensor Board #3 - Sensors 129 thru 144

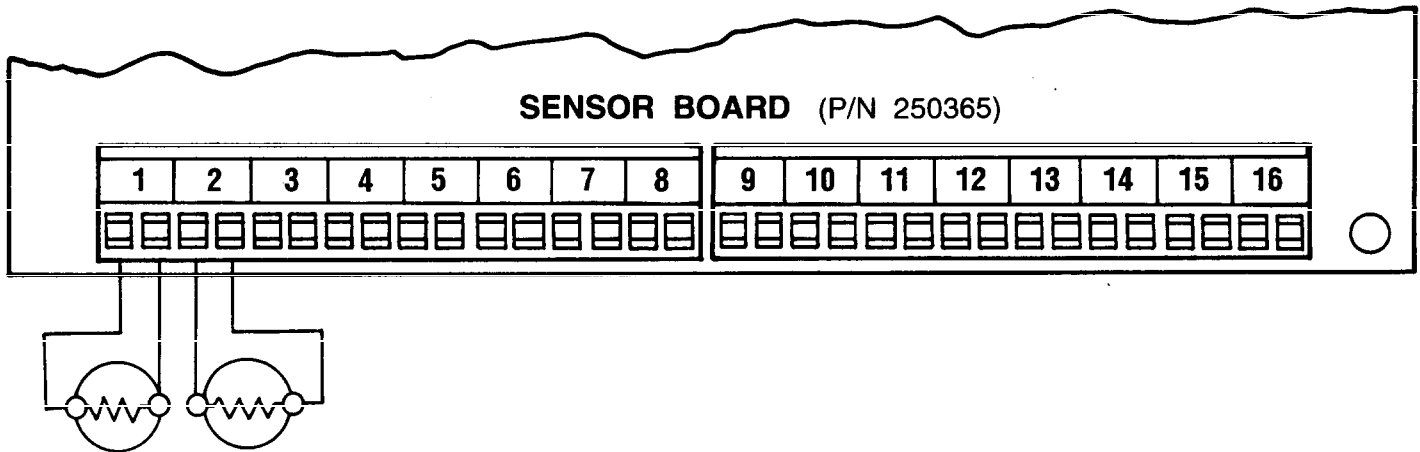
Satellite Controller #3

- Sensor Board #1 - Sensors 145 thru 160
- Sensor Board #2 - Sensors 161 thru 176
- Sensor Board #3 - Sensors 177 thru 192

Satellite Controller #31

- Sensor Board #1 - Sensors 1488 thru 1504
- Sensor Board #2 - Sensors 1505 thru 1520
- Sensor Board #3 - Sensors 1521 thru 1536

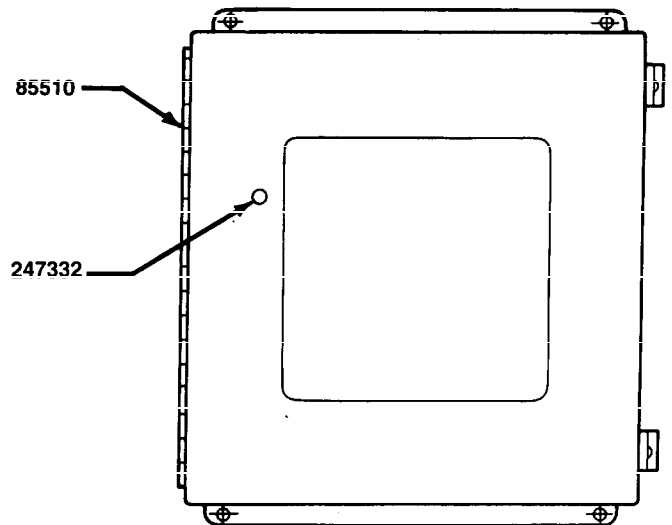
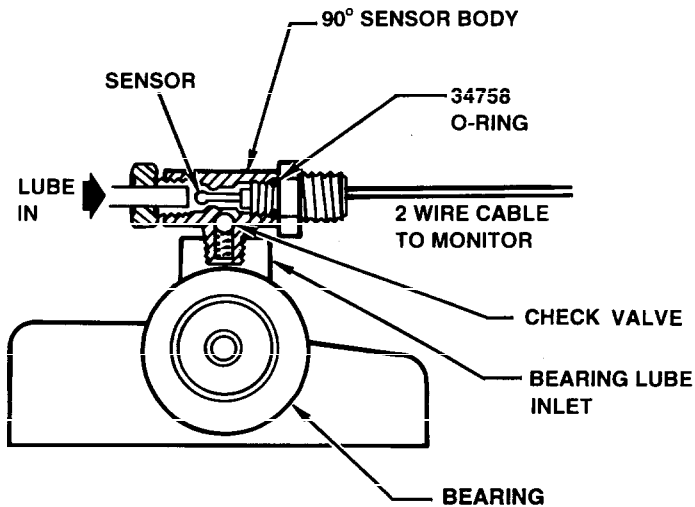
SENSOR BOARDS



Three Sensor Boards can be plugged in at the Satellite Controller for a total of 48 Sensors. The Sensor Board is held and fastened in place by using standoffs with hold-down nuts. Wiring sensors sequentially is not required.

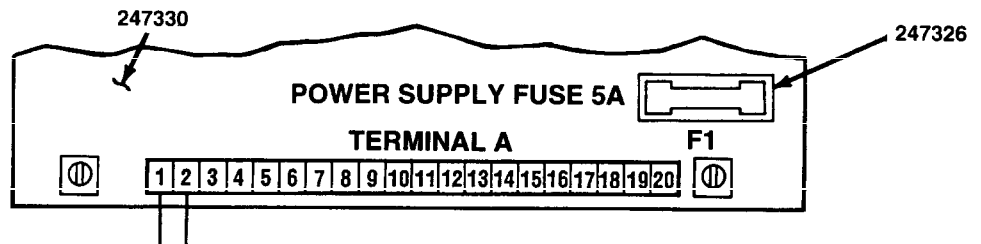
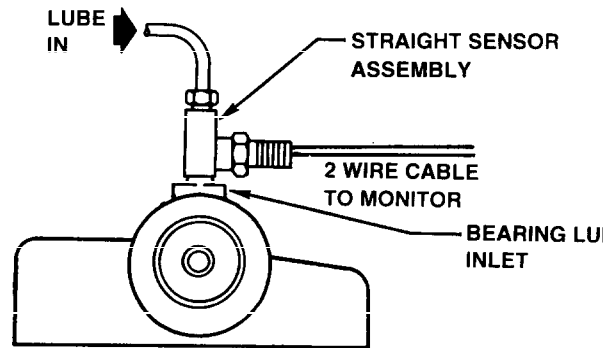
Zoning sensors is a programming option with System Sentry II. The following steps are guidelines for zoning sensors:

1. Each zone must contain a numerical range of sensors.
Example: Zone 1 would range from sensor locations 10 thru 20. Zone 2 would contain a range of sensors from 21 thru 42.
2. You may define a range of sensor numbers within a zone without using each sequential number. A defined zone does not have to be completely filled with sensors.
Example: Zone 1 is defined as sensor locations 1 thru 10. The current installation only uses 6 sensors, which are connected to sensor locations 2, 3, 5, 6 and 8.
3. All sensors used must be in one of the selected zones.



CAUTION

INADVERTENTLY SCREWING
SENSOR INTO LUBE INLET ON
STRAIGHT SENSOR BODY WILL
BREAK THE GLASS PROBE.



SERVICE PARTS

Part Number	Quantity	Description
34758	1	O-ring
237747	1	90° Stainless Steel Sensor Body
237748	1	Straight Stainless Steel Sensor Body
247326	1	Fuse, 5 amp (5 per Package)
247330	1	Main P.C. Board
247332	1	Green Light
250352	1	Brass Sensor, O-ring and 30 ft. Cable
250362	1	Stainless Steel Sensor, O-ring and 30 ft. Cable
350264	1	Straight Steel Sensor Body
350265	1	90° Steel Sensor Body

NOTE: Stainless Steel Sensors and Bodies are made from 316 material.

SYSTEM ACCESSORIES

Part Number	Quantity	Description
85510	1	Satellite Monitor
243100	100 ft.	2 conductor Sensor Wire
250365	1	Sensor Board
250400	1	Straight Sensor Assembly (body, sensor, and 30 ft. cable)
250490	1	90° Sensor Assembly (body, sensor, and 30 ft. cable)
250500	1	Stainless Steel Straight Sensor Assembly (body, sensor and 30 ft. cable)
250590	1	Stainless Steel 90° Sensor Assembly (body, sensor and 30 ft. cable)

----- RETAIN THIS INFORMATION FOR FUTURE REFERENCE -----

When ordering replacement parts, list: Part Number, Description, Model Number and Series Letter.
LINCOLN provides a Distributor Network that stocks equipment and replacement parts.