Operator's Manual

NETWORK ANNUNCIATOR MODULE

PowerCommand

High Battery Voltage
Low Battery Voltage
Normal Battery Voltage
Generator Running
Normal Utility Power
EPS Supplying Load
Pre-Low Oil Pressure
Low Oil Pressure
Pre-High Coolant Temp
High Coolant Temp
Low Engine Temp
Overspeed
Overcrank
Not in Auto
Bat Chgr Malfunction
Low Fuel
Low Coolant Level

SystemAnnunciator

Silence/
Lamp Test

Power
Generation
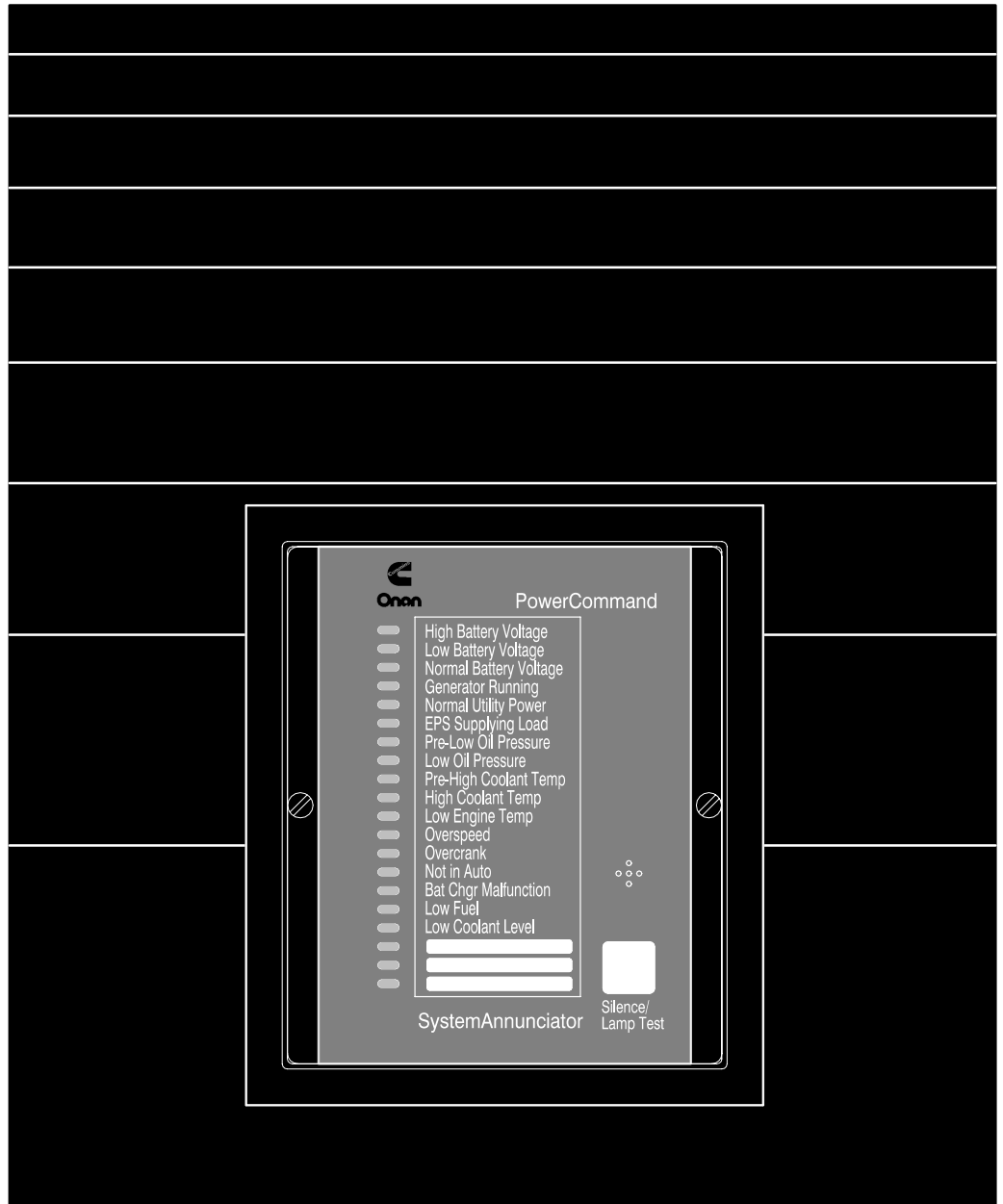
Safety Precautions

⚠WARNING *High voltage is deadly. Installation and service of the network annunciator involves working with high voltage equipment. Installation and service must be performed by qualified personnel. Disconnect the utility line from the transfer switch and disconnect power from the battery charger, day tank and any other power equipment where connections are to be made.*

⚠WARNING *Accidental starting of the generator set while working on it can cause severe injury or death. Disconnect the battery cables to prevent accidental starting. Always disconnect the negative (–) cable first, and connect it last, to prevent arcing if a tool accidentally touches the frame or other grounded metal parts of the set while connecting or disconnecting the positive (+) cable. Arcing can ignite explosive hydrogen gas given off by the battery and cause severe injury. Ventilate the battery compartment before removing cables.*

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Introduction

ABOUT THIS MANUAL

This manual provides information for mounting, annunciator wiring, operating, selecting customer options and troubleshooting the Network Annunciator Module. This manual does not cover installing this device on the PowerCommand™ network.

The Network Annunciator Module contains a negative logic system annunciator module and a digital I/O module. The digital I/O module is prewired to the annunciator. This manual describes wiring to the negative logic system annunciator. Network wiring must be done by a trained network installer.

Refer to the PowerCommand Network Installation and Operation Manual (900-0366) for instructions on network and power wiring the digital I/O module and for installation and connection of this module to the network.

All network data wiring must follow a specific network topology and must fall within distance limits. Network power wiring must be sized according to source voltage, distance and load. Refer to the PowerCommand Network Installation and Operation Manual (900-0366) for instructions on wiring, installation and connection of this module to the network.

A parts list is also included for all available service parts. Study this manual carefully and observe all warnings and cautions. Installing this module properly will contribute to better performance and safer operation.

HOW TO OBTAIN SERVICE

When the network annunciator module requires service, contact the nearest dealer or distributor. Factory-trained Parts and Service representatives are ready to handle all your service needs.

If you are unable to locate a dealer or distributor, consult the Yellow Pages. Typically, our distributors are listed under:

> GENERATORS-ELECTRIC or
> ELECTRICAL PRODUCTS

For the name of your local Cummins®/Onan® or Onan-only distributor in the United States or Canada, call 1-800-888-ONAN (this automated service utilizes touch-tone phones only). By entering your area code and the first three digits of your local telephone number, you will receive the name and telephone number of the distributor nearest you.

For outside North America, call Onan Corporation, 1-612-574-5000, 7:30 AM to 4:00 PM, Central Standard Time, Monday through Friday. Or, send a fax to Onan using the fax number 1-612-574-8087.

PowerCommand is a trademark of Onan Corporation.

⚠ **WARNING**

INCORRECT SERVICE OR PARTS REPLACEMENT CAN RESULT IN SEVERE PERSONAL INJURY, DEATH, AND/OR EQUIPMENT DAMAGE. SERVICE PERSONNEL MUST BE QUALIFIED TO PERFORM ELECTRICAL AND/OR MECHANICAL SERVICE.

Description

GENERAL

The Network Annunciator Module (Figure 1) contains a negative logic system annunciator module and a digital I/O module. The annunciator provides lamps and a horn to annunciate the operating status and fault conditions of an emergency power system. The annunciator is designed for connections to 12 VDC or 24 VDC control systems. Make certain that the polarity and voltage of the annunciator match that of the emergency power system. The annunciator is a negative (–) signal device.

This section describes the standard annunciator configuration. This module will allow any discrete digital PowerCommand Network signal to be visually and audibly annunciated through the digital I/O module. Refer to the PowerCommand Network Installation and Operation Manual (900-0366) for additional information on other uses.

OPERATION

- Normal status is annunciated by the NORMAL UTILITY POWER and NORMAL BATTERY VOLTAGE lamps.

- Table 1 lists the conditions monitored by the annunciator and the corresponding lamp/horn signals in the standard configuration.

- Push the SILENCE/LAMP TEST button to silence the horn. Several annunciators serving one emergency power system can be interconnected so that all the horns can be silenced from any location. Subsequent faults will cause the horn to sound again.

- All test lamps should light when the SILENCE/ LAMP TEST button is pressed.

- Pressing the SILENCE/LAMP TEST button does not reset the switch or sensor that is providing the fault signal. Correct the fault and the annunciator lamp will then go out.

⚠**WARNING** *Faulty service of the equipment monitored by the annunciator can lead to severe injury or death from electrocution and equipment or property damage due to fire. Service must be performed by qualified personnel.*
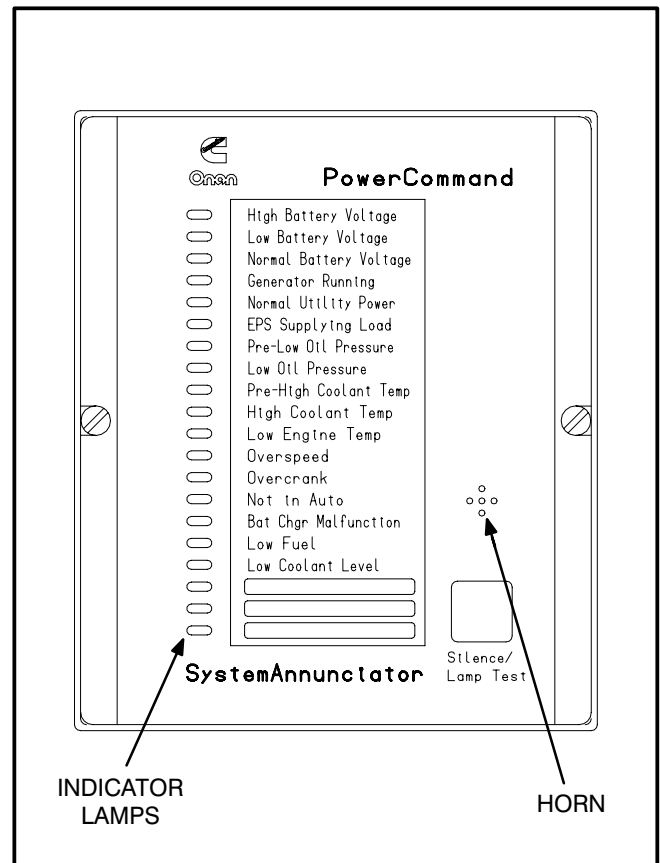

FIGURE 1. ANNUNCIATOR

TABLE 1. ANNUNCIATOR CONDITIONS MONITORED

STANDARD LEGEND (INPUT TERMINAL)	LAMP COLOR[1]	CONDITION INDICATED	HORN
High Battery Voltage	Red	Battery voltage too high (overcharging)	No
Low Battery Voltage	Red	Battery voltage too low (charger failure)	No
Normal Battery Voltage	Green	Battery voltage OK	No
Generator Running	Green	Generator has output voltage	No
Normal Utility Power	Green	Utility power suppling the load	No
EPS Supplying Load	Green	GenSet supplying the load	No
Pre-Low Oil Pressure	Yellow	Oil Pressure approaching Minimum	Yes[3]
Low Oil Pressure	Red	GenSet has shut down due to low oil pressure	Yes[3]
Pre-High Coolant Temp	Yellow	Engine coolant approaching maximum temp.	Yes[3]
High Coolant Temp	Red	GenSet has shut down due to high coolant temp.	Yes[3]
Low Engine Temp	Red	Engine coolant heater has malfunctioned	Yes[3]
Overspeed	Red	Engine has shut down due to overspeed	Yes[3]
Overcrank	Red	Engine fails to start after full cranking cycle	Yes[3]
Not in Auto will not start automatically	Red	Switch on control not in Auto position – GenSet	Yes[3]
Bat Chgr Malfunction	Red	Battery charger is signaling a failure	No[3]
Low Fuel	Red	Fuel Level below preset minimum	Yes[3]
Low Coolant Level	Red	Coolant level below preset minimum	Yes[3]
Customer Fault 1 (TB1-17)	Red[2]	Customer selected fault condition	Yes[3]
Customer Fault 2 (TB2-5)	Red[2]	Customer selected fault condition	Yes[3]
Customer Fault 3 (TB2-6)	Red[2]	Customer selected fault condition	Yes[3]

Notes:
1. The lamps are all replaceable and the lamp colors can be changed.
2. Annunciator lamp can be flashed with a 0.3 to 3 Hz square wave input signal. Refer to Customer Options and Signal Level Requirements.
3. Preset horn operation is shown. Horn annunciation is selectable, refer to Customer Options.

Installation

This section covers mounting the Network Annunciator Module and connecting customer faults to the negative logic system annunciator. Refer to the Customer Options section for additional negative logic system annunciator wiring options.

The digital I/O module is prewired to the negative logic annunciator (Figure 8). **Refer to the PowerCommand Network Installation and Operation Manual (900-0366) for instructions on network and power wiring the digital I/O module and for installation and connection of this module to the network.**

This module is available in two versions: one has an oversize cover for flush mounting and the other has a smaller cover for surface mounting.

1. Refer to Figure 2 for the outline and mounting hole locations. Remove the annunciator cover from the junction box. Prepare the mounting location. Be sure to check for wiring or plumbing behind the wall before cutting or drilling.

2. Mount the junction box securely to the desired location. For flush mounting, the front of the junction box should be flush with the surface of the wall.

3. Before making any wiring connections, disconnect the utility line from the transfer switch (if applicable). Make sure the genset cannot start by moving the RUN/OFF/AUTO switch to STOP and by disconnecting the starting battery (negative [–] battery cable[s] first). Disconnect the power to the battery charger. See the *Safety Precautions* section.

4. For additional customer fault annunciation, **connect the customer fault inputs to dry contacts only**, and return to ground (TB1-24). Refer to Figures 3 and 4.

   Customer Fault Inputs:
   TB1-17 (Customer Fault 1)
   TB2-5 (Customer Fault 2)
   TB2-6 (Customer Fault 3)
   TB1-20 (Silence/Lamp Test Input)

5. When two or more annunciators serve the same emergency power system, interconnect all the terminals marked TB1-20 so that the horns can all be silenced and lamps tested from any location.

6. The module is now ready for network wiring. Network wiring must be done by a trained network installer. Refer to the PowerCommand Network Installation and Operation Manual (900-0366) for instructions on network and power wiring the digital I/O module and for installation and connection of this module to the network.

7. When the network installation is complete, reconnect the utility line to the transfer switch, reconnect battery (negative [–] battery cable[s] last), reconnect battery charger and return the generator set to automatic standby.

8. When the installation is complete, secure the annunciator cover to the junction box. Push the SILENCE-LAMP TEST button. All indicator lamps should light.
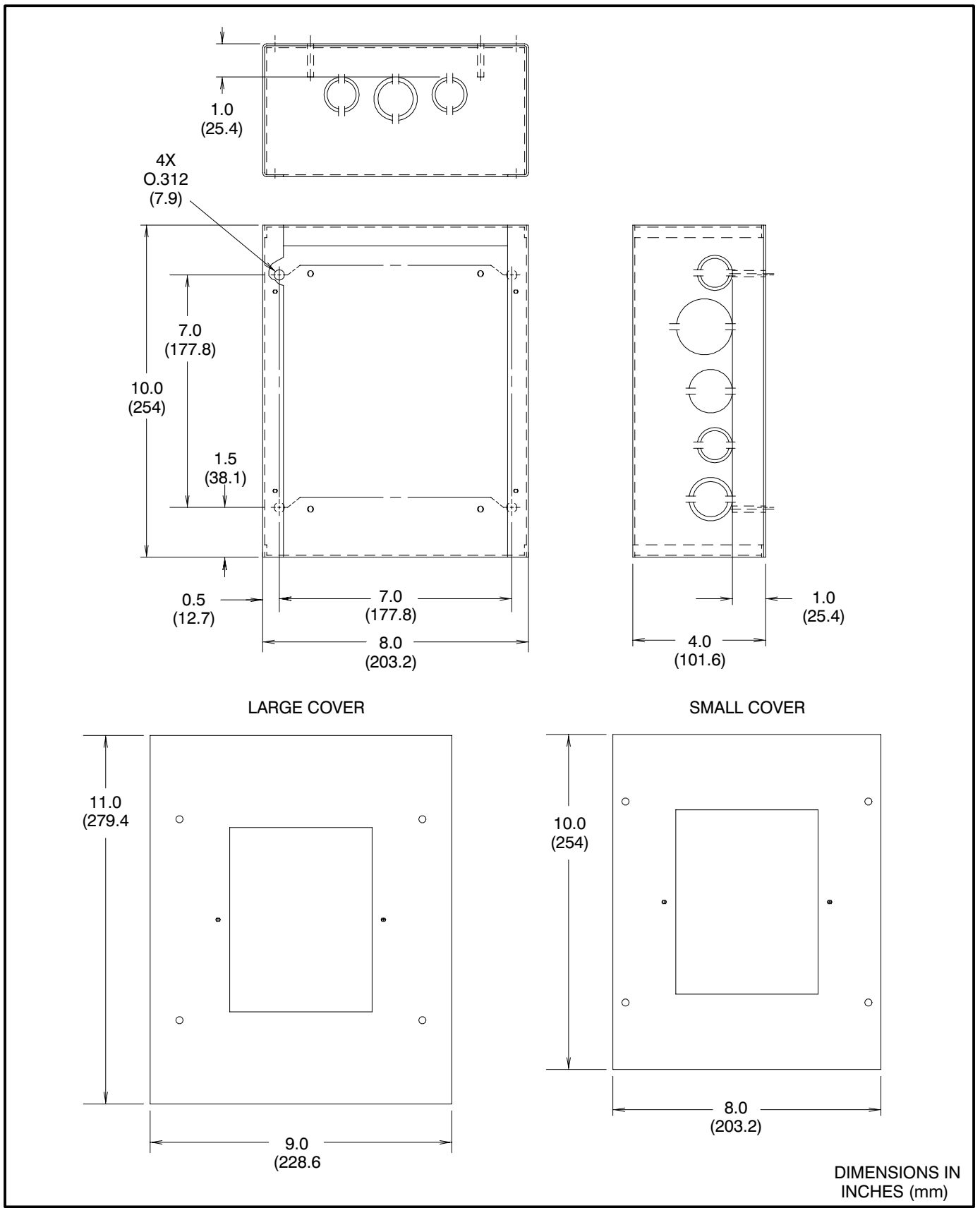
LARGE COVER

SMALL COVER

DIMENSIONS IN
INCHES (mm)

FIGURE 2. ANNUNCIATOR BOX OUTLINE

Power
Generation

SPECIFICATIONS

1. NET POWER
1.1 INPUT VOLTAGE = 10-36VDC
    (OPERATING RANGE)
1.2 INPUT CURRENT(NORMAL) = 40mA @ 36VDC
                            55mA @ 24VDC
                            80mA @ 12VDC
                            110mA @ 10VDC

1.3 INPUT CURRENT(LAMP TEST) = 200mA @ 36VDC
                               250mA @ 24VDC
                               500mA @ 12VDC
                               650mA @ 10VDC

1.4 INPUT CURRENT(MAX) = 1300mA @ 4VDC
1.5 INPUT CONNECTIONS = J2-3(NET POWER+)
                        J2-5(NET POWER-)
1.6 OUTPUT CONNECTIONS = J2-4(NET POWER+)
                         J2-6(NET POWER-)
                         (SHARED CONNECTIONS WITH
                          ANNUNCIATOR HARNESS)

2. NET DATA
2.1 TYPE = ECHELON LONTALK™
           78Kb TWISTED PAIR
           TRANSFORMER COUPLED
2.2 INPUT CONNECTIONS = J2-1(NET DATA1)
                        J2-2(NET DATA2)

3. DIM CUSTOMER INPUTS(NETWORK)
3.1 TYPE = DISCRETE
3.2 NUMBER = 4
    CONNECT TO DRY CONTACTS ONLY
    RETURN TO INPUT COMMON
3.3 OUTPUT = 5VDC (OPEN)
    5mA SOURCE MAX (CLOSED)
3.4 INPUT CONNECTIONS = J1-1(INPUT 1)
                        J1-2(INPUT 2)
                        J1-3(INPUT 3)
                        J1-4(INPUT 4)
                        J1-5,6(INPUT COMMON)

4. ANNUNCIATOR CUSTOMER INPUTS(HARD-WIRED)
4.1 TYPE = DISCRETE
4.2 NUMBER = 4
    CONNECT TO DRY CONTACTS ONLY
    RETURN TO TB1-24
4.3 OUTPUT = 5VDC (OPEN)
    20mA SOURCE MAX (CLOSED)
4.4 INPUT CONNECTIONS = TB1-17(CUSTOMER FAULT 1)
                        TB2-5(CUSTOMER FAULT 2)
                        TB2-6(CUSTOMER FAULT 3)
                        TB1-20(SILENCE/LAMP TEST INPUT)

5. ANNUNCIATOR OUTPUT RELAYS
5.1 TYPE = SEALED
5.2 NUMBER = 2
5.3 CONTACTS = 1 FORM C
               2A @ 30VDC
5.4 OUTPUT CONNECTIONS = TB2-7,8(N/C CONTACTS)
                         TB2-21,23(COMMON)
                         TB1-20,22(N/O CONTACTS)

6. ENVIRONMENTAL
6.1 STORAGE TEMPERATURE = -25 TO 70°C
6.2 OPERATING TEMPERATURE = -25 TO 70°C
6.3 HUMIDITY = 45 TO 85% RH

NOTES:

1. ALL RELAYS ARE SHOWN IN RESET OR DE-ENERGIZED POSITION.
2. DO NOT APPLY VOLTAGE TO CUSTOMER INPUTS.
3. REFER TO INTERCONNECTION PRINT(630-1670).
4. REFER TO POWERCOMMAND NETWORK INSTALLATION AND OPERATION MANUAL(900-0366).
5. REFER TO NETWORK ANNUNCIATOR MANUAL(900-0282) AND DRAWING 300-4731.
6. TB1-20 USED AS BOTH INPUT AND OUTPUT FOR SILENCE/LAMP TEST.
7. S3, WHEN SET TO TERMINATE, WILL TERMINATE THE TWISTED PAIR NETWORK BUS. DATA LINES MUST BE TERMINATED WHEN THE NAM. IS PHYSICALLY LOCATED AT THE END OF THE NETWORK BUS.
8. S1, RESET PUSH-BUTTON SWITCH, WILL MANUALLY RESET THE NAM.
9. DS2, STATUS LED(GREEN), INDICATES DIM PROCESSOR IS RUNNING.
10. S2, SERVICE PUSH-BUTTON SWITCH, USED TO GENERATE NETWORK MANAGEMENT MESSAGE FOR NODE LOGICAL INSTALLATION.
11. DS1, SERVICE STATUS LED(AMBER), INDICATES THE INSTALLATION AND ERROR STATUS.
12. ANNUNCIATOR FRONT PANEL LEDS,(1,2,4-17), ARE CONTROLLED OVER THE NETWORK.
13. IN THE NFPA-110 APPLICATION, ANNUNCIATOR FRONT PANEL LED 3 (NORMAL BATTERY) IS ON WHENEVER BOTH LED 1(HIGH BATTERY) AND LED 2(LOW BATTERY) ARE OFF. IN AN APPLICATION OTHER THAN NFPA-110, LED 3 IS CONTROLLED BY HARDWIRED INPUT (SEE NOT 15).
14. ANNUNCIATOR FRONT PANEL LEDS 18-20,(CUSTOMER FAULT), ARE NOT USED, BUT MAY BE HARD-WIRED FOR CUSTOM USE.
15. CUSTOMER INDICATION 3 MAY ONLY BE USED FOR APPLICATIONS OTHER THAN NFPA-110. TO USE NETWORK ANNUNCIATOR FOR OTHER APPLICATIONS, CHANGE SYSTEM ANNUNCIATOR SWITCH S3 AS FOLLOWS.

S3	FROM (NFPA-110)	TO (NON-NFPA-110)
S3-1	CLOSED	OPEN
S3-2	CLOSED	OPEN
S3-3	CLOSED	OPEN
S3-4	CLOSED	CLOSED
S3-5	OPEN	CLOSED
S3-6	CLOSED	CLOSED

FIGURE 3. NOTES FOR INTERCONNECTION DIAGRAM (FIGURE 4)

SEE FIGURE 3 FOR INTERCONNECTION DIAGRAM NOTES

NETWORK
ANNUNCIATOR
MODULE

TB1/TB2-ANNUNCIATOR RELAY
CONNECTIONS
(*NOTE 1)

SILENCE/LAMP TEST(NC)   K2.2 7|10   TB2-7
SILENCE/LAMP TEST(NO)   K2.3 7|12   TB1-20
                                       (*NOTES 5,6)
                         GND   TB1-21

REMOTE ALARM(NC)   K1.4 13|11   TB2-8
REMOTE ALARM(NO)   K1.5 13|9   TB1-22

                         GND   TB1-23

GND

NEGATIVE LOGIC
SYSTEM ANNUNCIATOR

DIGITAL I/O
MODULE

EXAMPLE
CONNECTIONS

J1-CUSTOMER INPUTS
(*NOTE 2)

J1-1   INPUT 1
J1-2   INPUT 2
J1-3   INPUT 3
J1-4   INPUT 4
J1-5   INPUT COMMON
J1-6   INPUT COMMON

GND

(*NOTE 5)

TB1/TB2-ANNUNCIATOR CUSTOMER
INPUTS
(*NOTES 2,14)

SILENCE/LAMP TEST(IN)   TB1-20
                         (*NOTES 5,6)
                                       EXAMPLE
                                       CONNECTIONS
CUSTOMER FAULT 1   TB1-17
CUSTOMER FAULT 2   TB2-5
CUSTOMER FAULT 3   TB2-6
CUSTOMER INDICATION 3   TB2-3
                         (*NOTE 15)
                GND   TB1-24
                GND

J2-NETWORK DATA/POWER
(*NOTES 3,4)

NET DATA2   J2-1   NET DATA1
NET DATA1   J2-2   NET DATA2

                                S3
                         TERM [====]
                         TERMINATOR
                         SWITCH
                         (*NOTE 7)

J2-3   NET POWER+(IN)
J2-4   NET POWER+(OUT)

(*NOTE 4)

J2-5   NET POWER-(IN)
J2-6   NET POWER-(OUT)

GND

         S1   STATUS   SERVICE   S2
        [ ]   DS2   DS1   [ ]
        RESET   Green   Amber   SERVICE
        (*NOTE 8)   (*NOTE 9)   (*NOTE 11)   (*NOTE 10)

NEGATIVE LOGIC
SYSTEM ANNUNCIATOR

TB1 →   ← TB2

View A-A

B

A

A

B

DIGITAL I/O
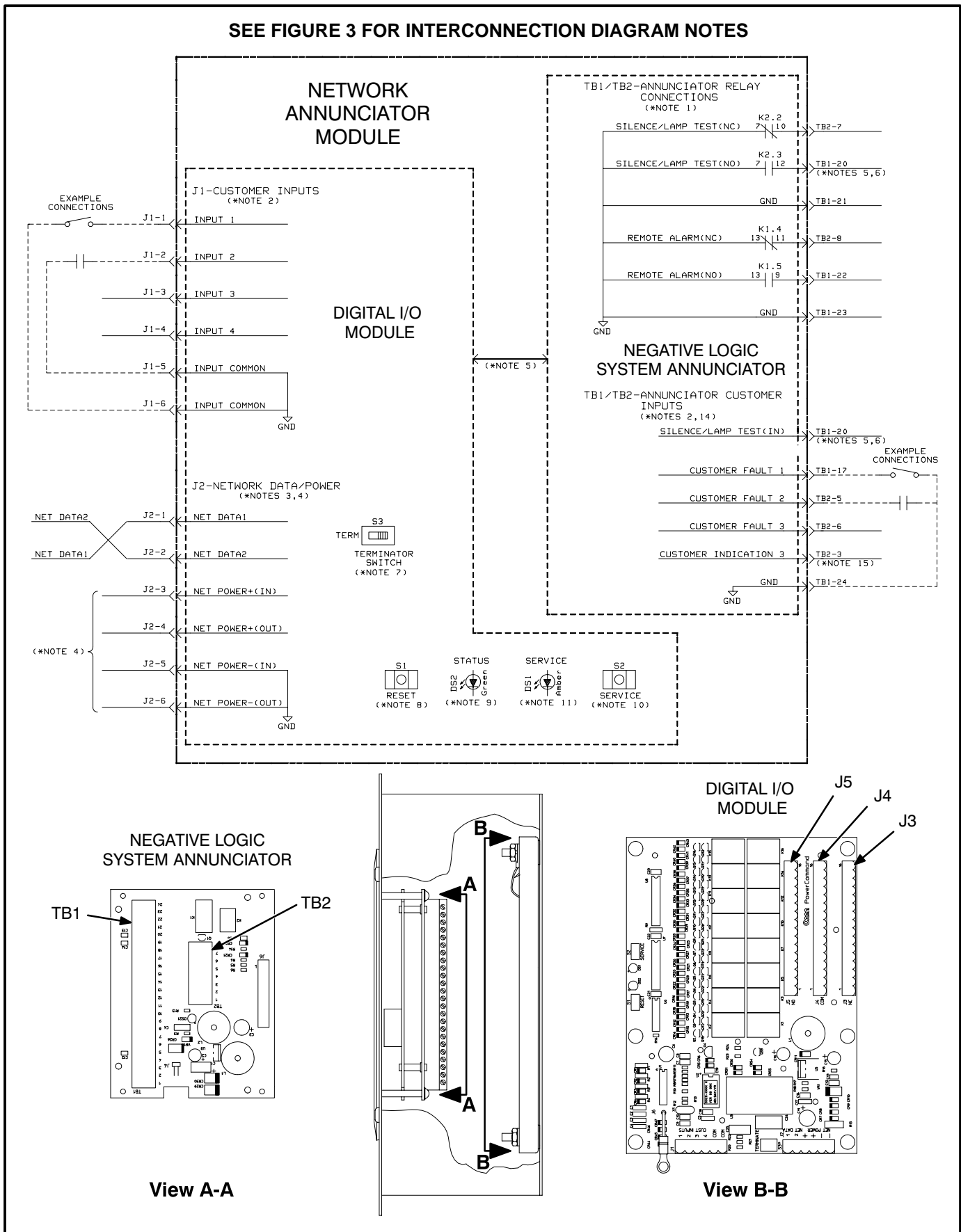MODULE   J5 J4 J3

View B-B

FIGURE 4. INTERCONNECTION DIAGRAM

Customer Options

OPTIONS

Modifications can be made to change some annunciator lamp and alarm indications. The individual LED lamp bars can be replaced to change color or for service repair (see Annunciator Lamp Replacement). Also, customer faults can be added. The annunciator has connections for remote Silence/ Lamp Test and Remote Alarm. The following sections describe how to make modifications and utilize optional features.

Annunciator Alarm Modification

Each of the bottom 14 annunciator audible alarms can be individually set to ON or OFF. Setting the individual switch (specified in Table 2) to the ON position allows the fault to turn the audible alarm on. Setting the individual switch to the OFF position turns the audible alarm feature off. Refer to Figure 5 for switch location and settings.

TABLE 2. AUDIBLE ALARM SETTINGS

| INPUT TERMINAL (FAULT LEGEND)	AUDIBLE ALARM SWITCH
TB1-7 (Pre-Low Oil Pressure)	S1-8
TB1-8 (Low Oil Pressure)	S1-7
TB1-9 (Pre-High Coolant Temp)	S1-6
TB1-10 (High Coolant Temp)	S1-5
TB1-11 (Low Engine Temp)	S1-4
TB1-12 (Overspeed)	S1-3
TB1-13 (Overcrank)	S1-2
TB1-14 (Not In Auto)	S1-1
TB1-15 (Bat Chgr Malfunction)	S2-6
TB1-16 (Low Fuel)	S2-5
TB2-4 (Low Coolant Level)	S2-3
TB1-17 (Customer Fault 1)	S2-4
TB2-5 (Customer Fault 2)	S2-2
TB2-6 (Customer Fault 3)	S2-1
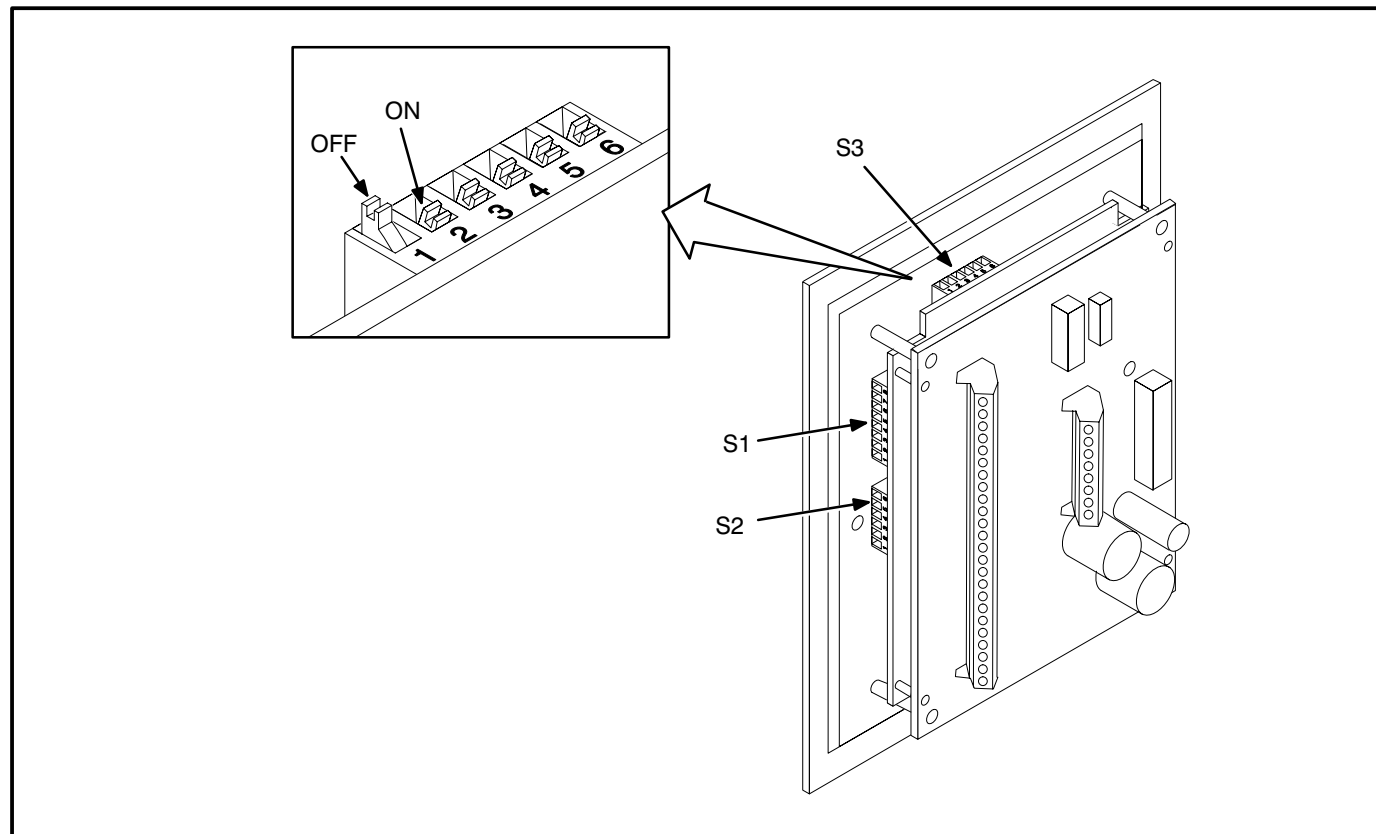
FIGURE 5. MODIFICATION SWITCH LOCATIONS

Annunciator Lamp Modification

The customer can supply flashing inputs for each of the customer fault lamps. For proper fault alarming, the bottom three lamps (TB1-17, TB2-5 and TB2-6) must receive a square wave input signal of 0.3 to 3 Hz. Refer to Figures 3 and 4, and Table 1.

Annunciator Lamp Replacement

To access the lamps, remove the annunciator panel from the junction box. Disconnect the ribbon cable connector J4 from the PCB assembly and remove the PCB assembly mounting screws (Figure 6). Pull the old lamp out from the socket. Insert the new lamp making sure the polarizing dot on the replacement lamp is aligned with the corresponding dot on the printed circuit board (Figure 6).

Customer Faults

Three customer faults are available for annunciation (both light and audible alarm) of the customers specified conditions. Add the fault description to the control panel. Refer to the Installation section and to Figures 3 and 4 for interconnect specifications and locations.

Customer Indication

The Normal Battery Voltage indication can be replaced with a customer specified indication (light indication only). Add the fault description to the control panel. Refer to Figures 3 and 4 for interconnect information. Change the S3 switch settings as shown in Table 3 to change from the normal battery voltage indication to a customer specified indication (see Figure 5).

TABLE 3. CUSTOMER INDICATION SWITCH S3 SETTINGS

S3	FROM (NFPA 110)	TO (NON-NFPA 110)
S3-1	ON	OFF
S3-2	ON	OFF
S3-3	ON	OFF
S3-4	ON	ON
S3-5	OFF	ON
S3-6	ON	ON
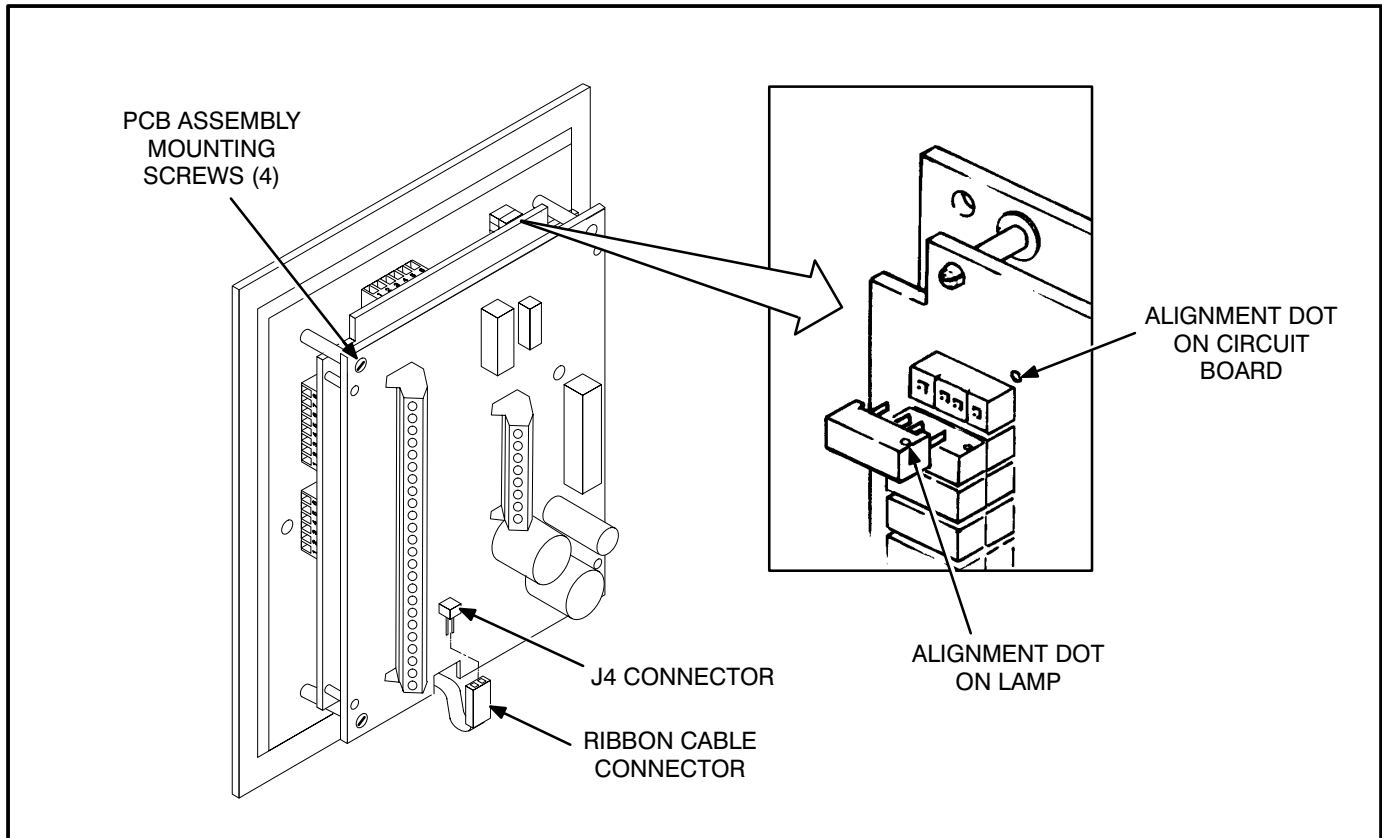
FIGURE 6. MODIFICATION SWITCH LOCATIONS

Remote Silence/Lamp Test

Two remote Silence/Lamp Test connections are available (refer to Figure 4). One Silence/Lamp Test has normally open contacts (connection TB1-20) and is used as both input and output for the Silence/Lamp Test function. The other Silence/Lamp Test has normally closed contacts (connection TB2-7) and can only be used as an output for the Silence/Lamp Test function. Both contacts provide ground to an external circuit and are rated at 2 amps maximum at 30 VDC.

Remote Alarm

Two remote alarm connections are available (refer to Figure 4). One remote alarm has normally open contacts (connection TB1-22) and the other has normally closed contacts (connection TB2-8). Both contacts provide ground to an external circuit and are rated at 2 amps maximum at 30 VDC.

Troubleshooting

⚠WARNING *Many troubleshooting procedures present hazards that can result in severe personal injury or death. Only qualified service personnel with knowledge of power generating systems should perform service procedures.*

PRE-CHECK

Verify that the power supply voltage is between 10 and 34 VDC at the network annunciator terminal strip J2. See Figures 3, 4 and 8 for wiring connection information.

Make sure that all connections are secure and that nothing is miswired. Review the specifications and notes in Figure 3.

TROUBLESHOOTING

This section describes basic troubleshooting for the negative logic system annunciator only. Refer to the PowerCommand Network Installation and Operation Manual (900-0366) for troubleshooting the digital I/O module and for general network troubleshooting.

Incorrect Battery Voltage Sensing

If incorrect or no battery voltage indication appears, perform the following checks.

1. Verify that for 24-volt systems, B+ is connected to TB1-1 and for 12-volt systems, B+ is connected TB1-2. Also make sure that the ground (Gnd) connection is made to TB1-3.

   Only one B+ connection should be made, TB1-1 or TB1-2, the other connection should be open.

2. Confirm that S3 switch settings are in the positions shown in table 3 (refer to Figure 5).

3. Verify that nothing is connected to TB2-3.

4. Verify that "High or Low Battery Voltage" signal from digital I/O module is not activated. This can be done by removing the leads from TB2-1 and TB2-2. If the signal is from the digital I/O module, then refer to the PowerCommand Network Installation and Operation Manual (900-0366) for troubleshooting.

5. If the failure still exists, the PCB assembly is defective.

All Indicators Fail to Light

If the indicators fail to light when the Silence/Lamp Test button is pressed, then perform the following checks:

1. Verify that the J4 connector (membrane panel ribbon cable to PCB assembly) is secure (Figure 6). Press the Silence/Lamp Test pad.

2. If the problem continues, momentarily jumper the J4 pins together. If all the indicators light when J4 pins are jumpered together, the membrane touch panel is defective.

3. If the failure still exists, the PCB assembly is defective.

One or More Failed Indicators

If one or more indicators fail to light when the Silence/Lamp Test button is pressed, perform the following checks:

1. Remove the PCB assembly from the front panel and disconnect the J4 ribbon cable from the PCB assembly.

2. Verify the orientation of each failed lamp. Make sure the polarizing dot on the lamp is aligned with the corresponding dot on the printed circuit board (Figure 6).

3. If the lamp still fails to light, replace the lamp. If the failure still exists, the PCB assembly is defective.

Input Fails to Light Lamp

If a lamp fails to light when the corresponding input is activated, but the lamp does light during the lamp test, then verify the input connections.

1. Apply ground (Gnd) to the respective input and verify that the lamp fails to light.

2. If the lamp lights with the proper input, check for a poor connection or defective lead back to the signal source. If the lamp does not light and the lamp is good, the PCB assembly is defective.

Alarm Failure

If a fault fails to signal an audible alarm, but does light the lamp, perform the following checks.
Note: If both the alarm and lamp fail to light, perform the checks under Input Fails to Light Lamp.

1. Check S2 and S3 switch positions using Table 3 and Figure 5. Verify that the input's corresponding audible alarm switch (S1 or S2) is set to ON.

2. Apply power to the annunciator and verify that the control is running, LED DS21 should be flashing (Figure 7). If LED DS21 is not flashing, the PCB assembly is defective.

3. Verify that during the fault input condition, the remote alarm (N.O.) output (TB-22) becomes grounded.

4. If steps one through three check good, insert a pin through the holes in the membrane switch and tap the horn. This action may free the piezo element and allow it to vibrate. Sometimes after extreme temperature changes the piezo element becomes jammed and is unable to vibrate.

5. If the audible alarm still fails to sound, the PCB assembly is defective.

Remote/Silence Lamp Test Connection

If the local annunciator fails to silence the alarm horns or test the lamps of the remote interconnected annunciators, then verify that the Silence/Lamp Test (N.O.) terminals (TB1-20) are interconnected.
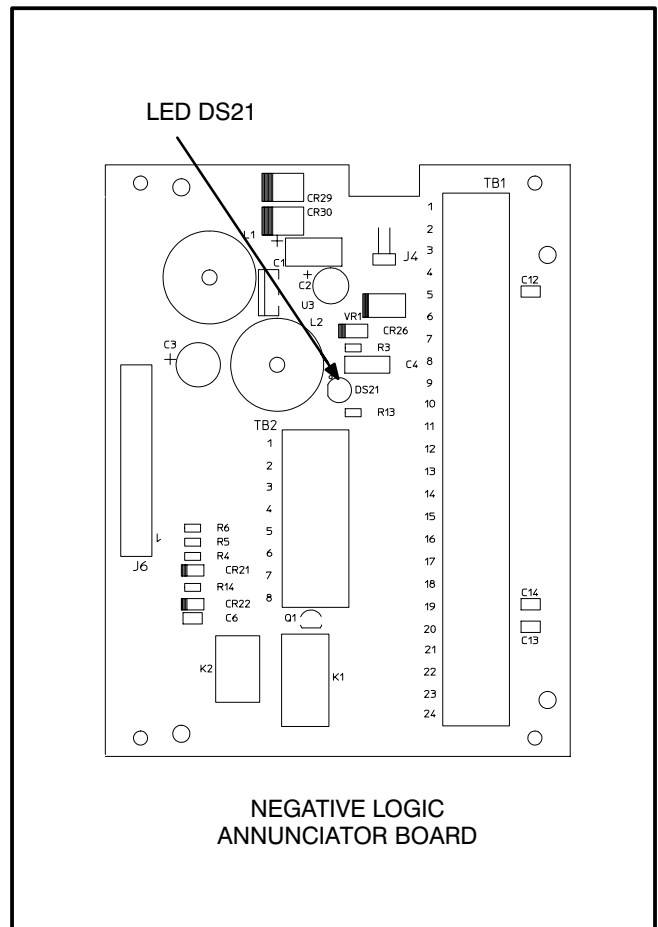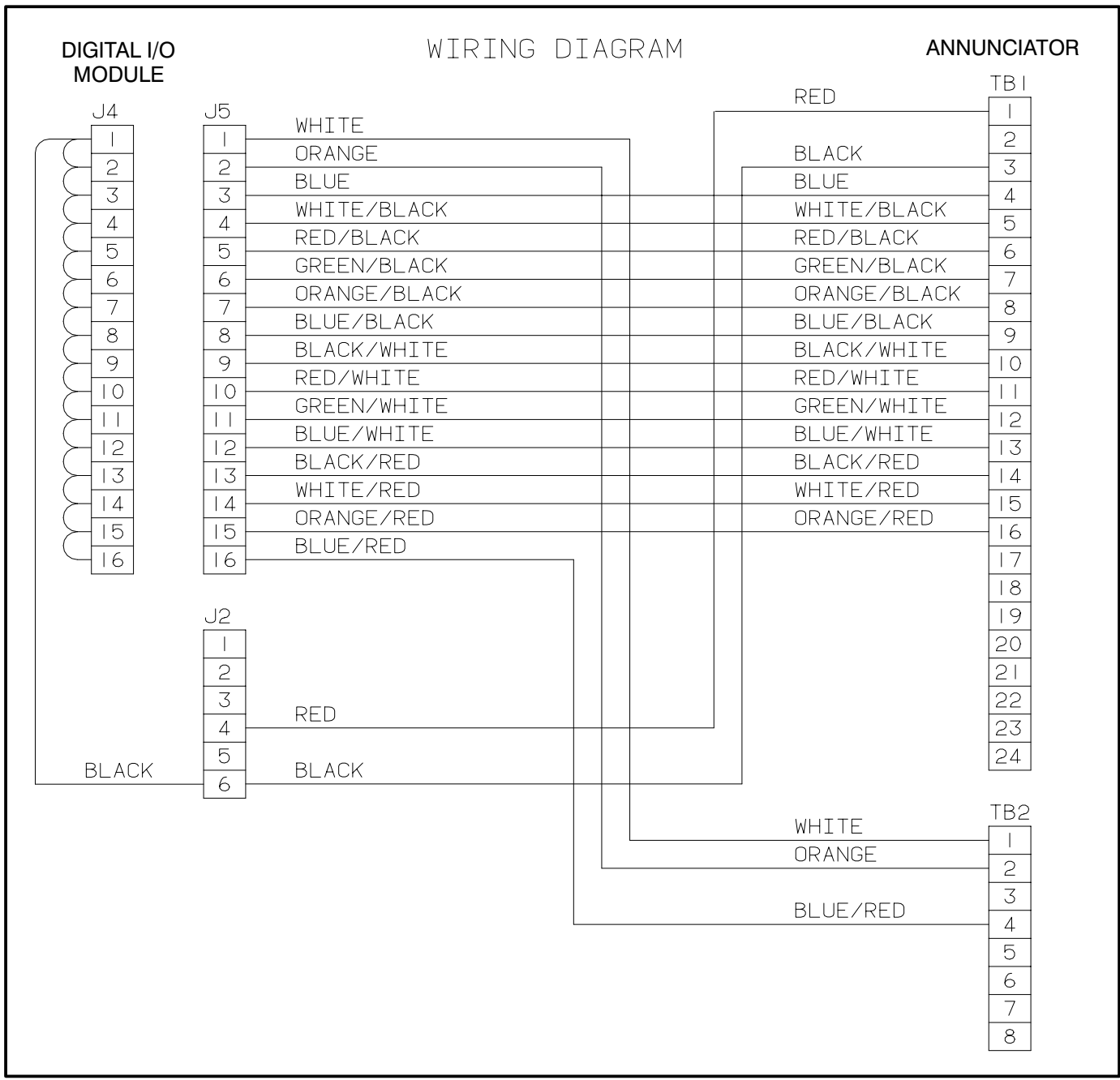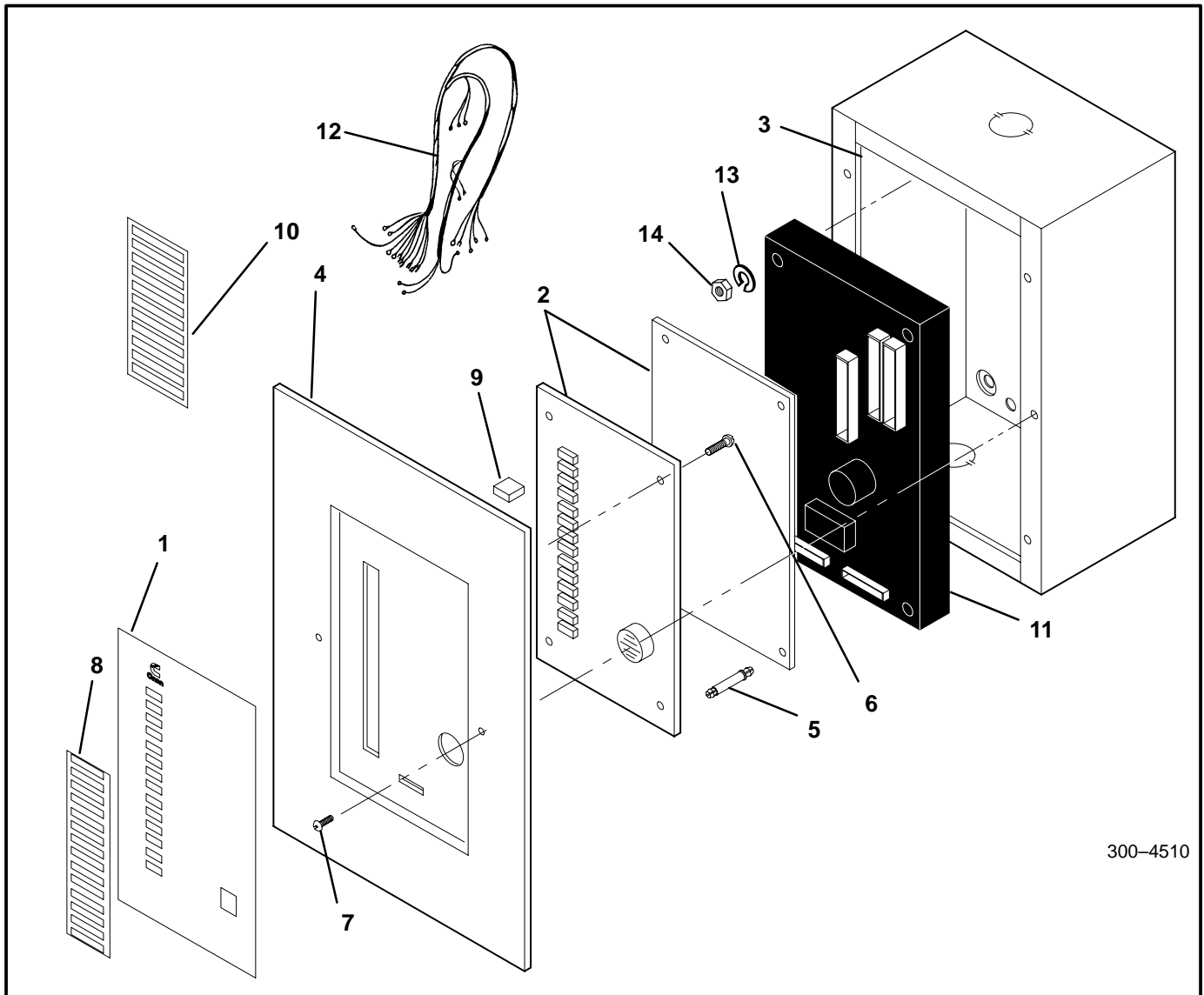
LED DS21

NEGATIVE LOGIC
ANNUNCIATOR BOARD

FIGURE 7. LED DS21 LOCATION

WIRING DIAGRAM

DIGITAL I/O MODULE

ANNUNCIATOR

J4: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16

J5:
Pin	Wire
1	WHITE
2	ORANGE
3	BLUE
4	WHITE/BLACK
5	RED/BLACK
6	GREEN/BLACK
7	ORANGE/BLACK
8	BLUE/BLACK
9	BLACK/WHITE
10	RED/WHITE
11	GREEN/WHITE
12	BLUE/WHITE
13	BLACK/RED
14	WHITE/RED
15	ORANGE/RED
16	BLUE/RED

J2:
Pin	Wire
1	
2	
3	
4	RED
5	
6	BLACK

BLACK

TB1:
Terminal	Wire
1	RED
2	
3	BLACK
4	BLUE
5	WHITE/BLACK
6	RED/BLACK
7	GREEN/BLACK
8	ORANGE/BLACK
9	BLUE/BLACK
10	BLACK/WHITE
11	RED/WHITE
12	GREEN/WHITE
13	BLUE/WHITE
14	BLACK/RED
15	WHITE/RED
16	ORANGE/RED
17	
18	
19	
20	
21	
22	
23	
24	

TB2:
Terminal	Wire
1	WHITE
2	ORANGE
3	
4	BLUE/RED
5	
6	
7	
8	

FIGURE 8. NETWORK ANNUNCIATOR MODULE WIRING DIAGRAM

Parts Information

300–4510

FIGURE 9. NETWORK ANNUNCIATOR ASSEMBLY

REF NO.	PART NO.	QTY USED	PART DESCRIPTION	REF NO.	PART NO.	QTY USED	PART DESCRIPTION
			Annunciator Assembly, Complete	7	812–0863	2	Screw, Machine – Round Head (#6–32 x 1/4) (Black)
	300–4510–02	1	Negative (Ground) Signal	8	326–5376	1	Card, Insert – Membrane
1	300–4507	1	Panel, Membrane	9			Lamp, Indicator
2	300–4651–01		Board, PC – Annunciator		322–0435	14	Red
			Negative (Ground) Signal		322–0434	2	Amber
3	319–2759	1	Box, Control		322–0433	4	Green
4			Panel, Annunciator	10	098–6902	1	Label, Self Adhesive
	319–2760–01	1	Large Cover	11	300–4485–01	1	Module, Digital I/O
	319–2760–02	1	Small Cover	12	338–3314	1	Harness, Wiring
5	332–3332–04	4	Post, Circuit Board	13	850–0030	4	Washer, Lock (#10)
6	812–0029	4	Screw, Machine – Round Head (#6–32 x 3/8)	14	870–0053	4	Nut, Hex (#10)

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Notes

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