NL708 (XWA11V)
Walk-In Temp / Door /Alarm / Light Module

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Operating Instructions Alarm/Light Module XWA11V

XWA11V
Walk-In Temp / Door /Alarm / Light Module

1. GENERAL DESCRIPTION

Model **XWA11V, 100x64 mm** format, is a microprocessor-based controller, suitable for temperature monitoring and alarming in a walk-in cooler or freezer. It is provided with two (2) Relay Contacts to control lights and an external alarm. It is provided with one (1) NTC probe input for temperature measurement. The unit has 2 Digital Inputs, one for a Door Switch and the 2nd as an optional Panic Switch. See the catalog for optional accessories. One 5Pin Input allows the user to program the parameter list with a **"Hot Key" (see section 9)**

Note: The default settings are listed in the back of this manual. They are set for Coolers (Medium Temp). For Freezers (Low Temp) you MUST Change the ALL and ALU settings. See Section 4.0

2. GENERAL WARNINGS

2.1 ⚠ PLEASE READ BEFORE USING THIS MANUAL

- This manual is part of the product and should be kept close to the instrument for easy and quick reference.
- The instrument shall not be used for purposes different from those described hereunder. It cannot be used as a safety device.
- Check the application limits before proceeding.

Note: If equipped with a battery backup, the battery must be installed after the walk-in has reached its operating temperature.

2.2 ⚠ SAFETY PRECAUTIONS

- Check if the supply voltage is correct before connecting the instrument.
- Do not expose the back of the instrument to water or moisture: use the controller only within the operating limits avoiding sudden temperature changes with high atmospheric humidity to prevent the formation of condensation.
- Warning: disconnect all electrical connections before performing any maintenance operation.
- Fit the probe where it is not damaged by the end-user. The instrument must not be opened.
- In case of failure or faulty operation send the instrument back to the distributor (see address) with a detailed description of the fault.
- Consider the maximum current that can be applied to each relay (see Technical Data).
- Ensure that the wires for probes, loads and the power supply are separated and far enough from each other, without crossing or intertwining, or you may get bad temperature readings.
- Be sure to seal any J-box with RT sealant to prevent cold and moisture intrusion.

Operating Instructions Alarm/Light Module XWA11V

3. INTERFACE

3.1 KEY FRONT PANEL OPERATION

set — In Programming Mode press to **select** a parameter or to **confirm** an operation.
Press and hold this key for more than 5 s **to turn the controller OFF.**
Press and hold this key for more than 1 s **to turn the controller back ON.**

HIGH — Press to see the HIGH Temp ALARM (**ALU** parameter)

LOW — Press to see the LOW Temp ALARM (**ALL** parameter)

In Programming Mode press to browse parameter codes.
Press to increase the displayed value.
Press to mute the buzzer (+ relay) when an ALARM is happening.
Hot key programming: with the instrument on, insert the hot key and then press the UP button.

In Programming Mode press to browse parameter codes.
Press to decreases the displayed value.

Switch ON and OFF the light of the cold room

KEY COMBINATIONS: PRESS SIMULTANEOUSLY

To lock and unlock the Keyboard.

To enter the Programming Mode.

To exit the Programming Mode.

To enter a new value for the HIGH Temp ALARM (**ALU**).

To enter a new value for the LOW Temp ALARM (**ALL**).

3.2 USE OF LEDS

Each LED function is described in the following table:

LED	MODE	Function
	ON	ALARM signaling
	ON	The light is on
°C	ON	Celsius degrees operation
°F	ON	Fahrenheit degrees operation

4. TEMP ALARM SETTINGS

4.1 HOW TO SET THE MIN TEMPERATURE ALARM

- **To modify the minimum (LOW)** Temp **ALARM:** hold the set + LOW keys pressed for 3 s until the minimum Temp alarm is displayed.
- Change the value using the **UP** and **DOWN** keys.
- Press the **SET** key to confirm the new value and exit.

4.2 HOW TO SET THE MAX TEMPERATURE ALARM

- **To modify the max (HIGH) Temp ALARM:** hold the set + HIGH keys pressed for 3 s until the max Temp alarm is displayed.
- Change the value using the **UP** and **DOWN** keys.
- Press the **SET** key to confirm the new value and exit.

5. PROGRAMMING

5.1 HOW TO CHANGE A PARAMETER VALUE MAIN MENU

1. Enter the Programming Mode by pressing the **SET** and **DOWN** key for **3s** (and will start blinking).
2. Select the required parameter. By using the **UP or DOWN** KEY
3. Press the "**SET**" key to display its value (now only the LED is blinking).
4. Use "**UP**" or "**DOWN**" to change its value.

Press "**SET**" to store the new value and move to the following parameter.
To exit: Press **SET + UP** or wait 15 s without pressing a key.
NOTE: the set value is stored even when the procedure is exited, by waiting the time-out to expire.

5.2 THE HIDDEN MENU (PR2)

The hidden menu includes all the parameters of the instrument.

5.2.1 HOW TO ENTER THE HIDDEN MENU (PR2)

1. Enter the Programming Mode by pressing the Set + **down** key for **3s** (and starts blinking).
2. When a parameter is displayed, **release and re-press** the **SET + down** for more than **7s**.
3. The **Pr2** label will be displayed immediately followed from the HY parameter. **NOW YOU ARE IN THE HIDDEN MENU.**
4. **Select** the required parameter as above
5. Press the "**SET**" key to display its value (Now only the LED is blinking).
6. Use "**UP"** or "**down"** to change its value.
7. Press "**SET**" to store the new value and move to the following parameter.

To exit: Press **SET + up** or wait **15s** without pressing a key.
NOTE: the set value is stored even when the procedure is exited by waiting the time-out to expire.

5.2.2 HOW TO MOVE A PARAMETER FROM THE HIDDEN MENU TO THE FIRST LEVEL AND VICEVERSA

Each parameter present in the HIDDEN MENU can be removed or put into "THE FIRST LEVEL" (user level) by pressing **"SET + down"**.
In HIDDEN MENU when a parameter is present in First Level the **decimal point LED is on**.

5.3 HOW TO LOCK THE KEYBOARD

1. Keep pressed for more than **3s** the **UP** and **DOWN** keys.
2. The "**POF**" message will be displayed and the keyboard will be **locked**. At this point it will be possible only to see the Set Point or the MAX or MIN Temp stored
3. If a key is pressed more than **3s** the "**POF**" message will be displayed.

5.4 TO UNLOCK THE KEYBOARD

Keep pressed together for more than **3s** the **UP** and **DOWN** keys. The **"PON"** message is displayed

6. LIGHT MANAGEMENT

6.1 TIMED REGULATION: I1L = Y

With **i1L = y** the light remains on at least for the **LHt** parameter.
The **LHt** timer is re-initialized every time the light button is pushed.
With **LHt=0** the light remains on until the light button is pushed again.

The light is switched on every time one of the following conditions happens:

- the door is open (**i1F = dor**)
- the presence sensor is activated (**i2F = LHt**)
- the light button is pushed

The light is switched off when all the following conditions happen:

- the **LHt** timer is exhausted
- the door is closed (**i1F = dor**)
- the presence sensor is de-activated (**i2F = LHt**)
- Light button regulation: i1L = n

The lights will flash (for 2 minutes) every 20 seconds for the **FLH** time (0-5 min) at the end of the **LHt** time as a warning that the lights are about to turn off (for incandescent and LED lights only).

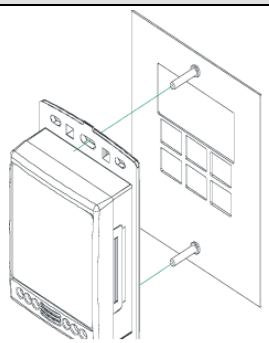
The **light button has a higher priority than digital inputs** therefore:
- if the light was switched on by button the digital input can not modify its status.
- if the light was switched on by digital input, the light button can modify its status.

7. INSTALLATION AND MOUNTING

7.1 MOUNTING OF XWA11V – PR10000

The **XWA11V** must be mounted on vertical panel, in a J-Box (Steel City PN 68371-1/2) or equal or wall mounted using an appropriate enclosure.

The Ambient Temp range for correct operation is 32 – 131°F (0-55°C). Avoid installation in places subject to strong vibrations, corrosive gases, excessive dirt or humidity. The same recommendations apply to probes.



8. ELECTRICAL CONNECTIONS

The instrument is provided with ¼" fast-on terminal blocks to connect cables with a cross section up to .110" for the digital and analog inputs. Relays and power supply have a Fast-on connection (.250"). For supply connections, use 14 AWG or larger copper or CU wire only rated at least 90˚C (194˚F). Before connecting cables make sure the power supply complies with the instrument requirements. Separate the probe cables from the power supply cables, from the outputs and the power connections. Do not exceed the maximum current allowed on each relay and in case of heavier loads use a suitable external relay.
N.B. Maximum current allowed for all the loads is 15A.

8.1 PROBE CONNECTIONS

The probe shall be mounted with the bulb upwards to prevent damages due to casual liquid infiltration. It is recommended to place the thermostat probe away from air streams to correctly measure the average room temperature. The probe can be extended up to 300 ft. Check calibration when running long lengths over 100ft.

9. USE OF THE PROGRAMMING "HOT KEY "

9.1 HOW TO PROGRAM A HOT KEY FROM THE INSTRUMENT (UPLOAD)

1. Program one controller with the front keypad.
2. When the controller is ON, insert the "**Hot key**" and push **UP** key; the **"uPL"** message appears followed a by flashing **"End"**
3. Push "**SET"** key and the **End** will stop flashing.
4. Turn OFF the instrument remove the **"Hot Key",** then turn it ON again.

NOTE: the "**Err**" message is displayed for failed programming. In this case push UP key again if you want to restart the upload again or remove the "**Hot key**" to abort the operation.

9.2 HOW TO PROGRAM AN INSTRUMENT USING A HOT KEY (DOWNLOAD)

1. Turn OFF the instrument.
2. Insert a **programmed "Hot Key" into the 5 PIN receptacle** and then turn the Controller ON.
3. Automatically the parameter list of the **"Hot Key"** is downloaded into the Controller memory, the "**doL**" message is blinking followed a by flashing **"End".**
4. After 10 seconds the instrument will restart working with the new parameters.
5. Remove the **"Hot Key".**

NOTE the message "**Err**" is displayed for failed programming. In this case turn the unit off and then on if you want to restart the download again or remove the "**Hot key**" to abort the operation.

10. ALARM SIGNALS

Message	Mode	Cause	Outputs
"P1"	Flashing	Probe failure	Alarm output ON
"PoF"	Flashing (3s)	Keyboard locked	Not changed
"Pon"	Flashing (3s)	Keyboard un-locked	Not changed
"HA"	Alternated with temp	Maximum T° alarm	Alarm output ON;
"LA"	Alternated with temp	Minimum T° alarm	Alarm output ON;
"dA"	Alternated with temp	Door switch alarm	Alarm output ON;
"EA"	Alternated with temp	External alarm	Alarm output ON;
"PAn"	Alternated with temp	Serious external alarm	Alarm output ON;
dEF	Alternated with temp	Defrost is running	Not changed

The alarm message is displayed until the alarm condition is reset.

10.1 SILENCING BUZZER

Once the alarm signal is detected the buzzer can be silenced by pressing the **UP** key.

10.2 ALARM RECOVERY

Probe alarms: "**P1**" (probe1 faulty), "**P2**"; they automatically stop 10s after the probe restarts normal operation. Check connections before replacing the probe.

T° alarms "**HA**" and "**LA**" automatically stop as soon as the thermostat T° returns to normal values or when the defrost starts.

Door switch alarm "**dA**" stops as soon as the door is closed.

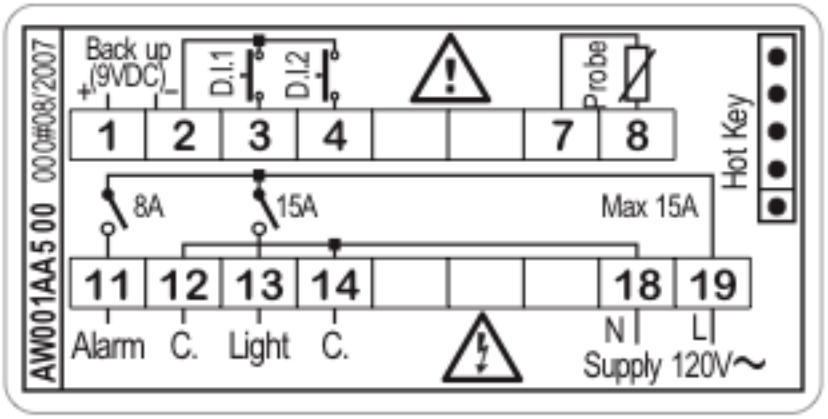
External alarms "**EAL**", "**BAL**" stops as soon as the external digital input is disabled.

Operating Instructions Alarm/Light Module XWA11V

11. TECHNICAL DATA

Housing: self extinguishing ABS
Case: face 100x64 mm; depth 45.5mm
Mounting: J-box or wall-mount in suitable enclosure
Frontal protection: IP65
Connections: ¼" fast-on for power, 1/8" fast-on for probes and Digital Inputs
Power supply: 120Vac ± 10%, optional 230Vac ± 10% MAX 15A
Power absorption: 4VA max.
Ambient Temperature: 32-131°F (0-55°C)
Display: 3 digits, red LED, 14,2 mm high.
Inputs: 1 NTC probe
Digital inputs: 2 free voltages
Relay outputs: Relay Contacts
Light: relay SPST 15A, 120Vac;
Alarm: relay SPST 8A, 120Vac
Other output: alarm buzzer
Data storing: on the non-volatile memory (EEPROM).
Measuring and regulation range:
NTC probe: -40÷110°C (-58÷230°F)
Resolution: 1 °F
Accuracy : ±1 °F

12. CONNECTIONS



Power supply: 120Vac +/- 10% 15A MAX current

13. PARAMETER MAP

LABEL	DESCRIPTION	VALUE	LEVEL	RANGE
ot	Thermostat probe calibration	0	Pr2	[-21°F - 21°F]
CF	Temperature measurement unit	F	Pr2	°C - °F
rES	Resolution (only for °C)	in	Pr2	dE - in
UT	Display update	60	Pr2	0 - 255 (sec.)
OnF	Off function enabling	y	Pr2	n - Y
ALU	High temperature alarm setting (med temp / low temp)	50 / 30	Pr1	ALL-302° F
ALL	Low temperature alarm setting (med temp / low temp)	30 / -20	Pr1	°-58 - ALU
AFH	Temperature alarm differential	2	Pr2	1°F - 45°F
ALd	Temperature alarm delay	30	Pr1	0 - 255 (min.)
dAo	Delay of temperature alarm at start-up	1.3	Pr2	0.0 - 24.0 Hrs.
EdA	Alarm delay at the end of defrost	30	Pr2	0 - 255 (min.)
dot	Delay of temperature alarm after closing the door	15	Pr2	0 - 255 (min.)
LHt	Light timer	15	Pr1	0 - 255 (min.)
FLH	Light Flashing Timer (time before light goes out that it will flash) (for incandescent & LED lights only)	2	Pr1	0 - 5 (Min)
doA	Open door alarm delay	15	Pr1	0 - 255 (min.)
oA1	First relay configuration	ALr	Pr2	ALr - LHt - OnF
oA2	Second relay configuration	LHt	Pr2	ALr - LHt - OnF
AOP	Alarm relay polarity	oP	Pr2	OP - CL
i1P	Digital input 1 polarity	CLoP	Pr2	OP - CL
i1L	Door switch to turn light ON	y	Pr2	n - Y
i1F	Digital input 1 operating mode	dor	Pr2	EAL - dor - dEr - LHt
i2P	Digital input 2 polarity	cL	Pr2	OP - CL
i2F	Digital input 2 operating mode	PAn	Pr2	EAL - Pan - dFr - LHt
did	Time interval/delay for digital input alarm	0	Pr2	0 - 255 (min.)
tbA	Alarm relay disabling	n	Pr2	n - Y
PbC	Kind of probe	ntc	Pr2	PtC - ntC
dP1	Real temperature Probe 1		Pr2	(probe value)
rEL	FW release		Pr2	read only
Ptb	Parameter map		Pr2	read only

14. PARAMETER LIST

Ot **Thermostat probe calibration:** (-12.0÷12.0°C/ -21÷21°F) allows to adjust possible offset of the thermostat probe.

CF **T measurement unit**: °C = Celsius; °F = Fahrenheit. When the measurement unit is changed the Set Point and the values of some parameters have to be modified.

rES **Resolution (for °C)**: (in = 1°C; dE = 0.1 °C) allows decimal point display.

Ut **Display update**: The time delay of the T readout (0÷255s)

onF **Off function enabling**: **n =** off function disabled; **y =** off function enabled;

ALU **High T° alarm setting**: (ALL ÷ 150°C or 302°F);
when this T° is reached and after the ALd delay time the HA alarm is enabled.

ALL **Low T° alarm setting**: (- 50°C or -58°F ÷ ALU)
when this T° is reached and after the ALd delay time, the LA alarm is enabled,.

AFH **T° alarm differential**: (0,1÷25,5°C; 1÷45°F) differential for T° alarm Set Point and fan regulation Set Point, always a positive value

ALd **T° alarm delay**: (0÷255 min) time interval between the detection of an alarm condition and the corresponding alarm signaling.

dAO **Delay of T° alarm at start-up**: (0min÷23h 50min) time interval between the detection of the T° alarm condition after the instrument power on and the alarm signaling.

EdA **Alarm delay at the end of** defrost: (0÷255 min) Time interval between the detection of the T° alarm condition at the end of defrost and the alarm signaling.

dot **Delay of T° alarm after closing the door**: (0÷255 min) Time delay to signal the T° alarm condition after closing the door.

LHt **Light timer**: (0-255 min) The time the light will stay on after pressing the light switch on the keyboard.

FLH **Light Flashing**: (0-5 min) The light will “double flash” every 20 seconds during the FLH time period before turning off after the LHt time. (For incandescent and LED lights only.)

doA **Open door alarm delay**:(0÷255 min) delay between the detection of the open door condition and its alarm signaling: the flashing message “dA” is displayed.

oA1 **First relay configuration: (14-15): ALr =** alarm; **LHt** = light; **onF =** on/off relay

oA2 **Second relay configuration: (14-16): ALr =** alarm; **LHt** = light; **onF =** on/off relay

AOP **Alarm relay polarity:** cL = closing contacts; oP = opening contacts.

i1P **Digital input 1 polarity (1-2)**: CL : the digital input is activated by closing the contact;
OP: the digital input is activated by opening the contact

i1L **Door switch to turn light ON(1-2):** (y / no) To turn the light ON automatically when the door is open. The light will turn off based on LHt . Keyboard switch must be turned ON first.

i1F **Digital input 1 operating mode(1-2): EAL** = external alarm; **dor** = door switch; **dFr** = A defrost is running; **LHt** = keep light ON (signal from occupancy sensor) override LHt.;

i2P **Digital input 2 polarity (1-3)**: CL : the digital input is activated by closing the contact;
OP: the digital input is activated by opening the contact

i2F **Digital input 2 operating mode**: configure the digital input function:
EAL = External alarm;
PAn =Panic alarm;
dFr = A defrost is running; (need external CT’s)
LHt = Keep light ON (signal from occupancy sensor) overrides LHt.

did **Time interval/delay for digital input alarm**:(0÷255 min.) If I2F=EAL or PAn (external alarms), “did” parameter defines the time delay between the detection and the successive signaling of the alarm.

tbA **Alarm relay & Buzzer disabling:** (**y** ; **no**)

Pbc **Type of probe (PTC, NTC)**

dP1 **Probe 1 T**

rEL **Software release** for internal use.

Ptb **Parameter table code:** read only.

QUICK SHEET
XWA11V Walk-in Alarm / Door / Alarm / Light Unit Operation Manual

In Normal Operation the Indicator will display the temperature. 36° F

CHECK ALARM SETPOINTS (Cooler HA = 50°F, LA = 30°F **/ Freezer** HA = 30°F, LA = -20°F**)**

To SEE the HIGH Alarm Set Point Press and release the HIGH Key, It will display the High Set Point for 5 seconds. The Temp alarm will go ON if the temp exceeds the Set Point after 15 minutes. The display will read HA alternating with the Temp.

To SEE the LOW Alarm Set Point Press and release the LOW Key it will display the Low Set Point for 5 seconds. The Temp alarm will go ON if the temp exceeds the Set Point after 15 minutes. LA, alternating with the Temp.

CHANGE ALARM SETPOINTS

1. To Change the HIGH Alarm Set Point Press BOTH the HIGH + set for 7 seconds and the LED above the will blink.
2. Release and scroll UP to adjust the Set Point up, or Scroll DOWN to adjust the Set point down.
3. Press set to confirm the change.
4. For Low Set Point repeat the procedure with the LOW + set

LIGHT OPERATION

Press the light switch to turn ON the inside light; it will automatically go OFF after 15 minutes.

DOOR SWITCH

If the door switch is used opening the door will automatically turn the light ON, and will automatically go OFF after 15 minutes.

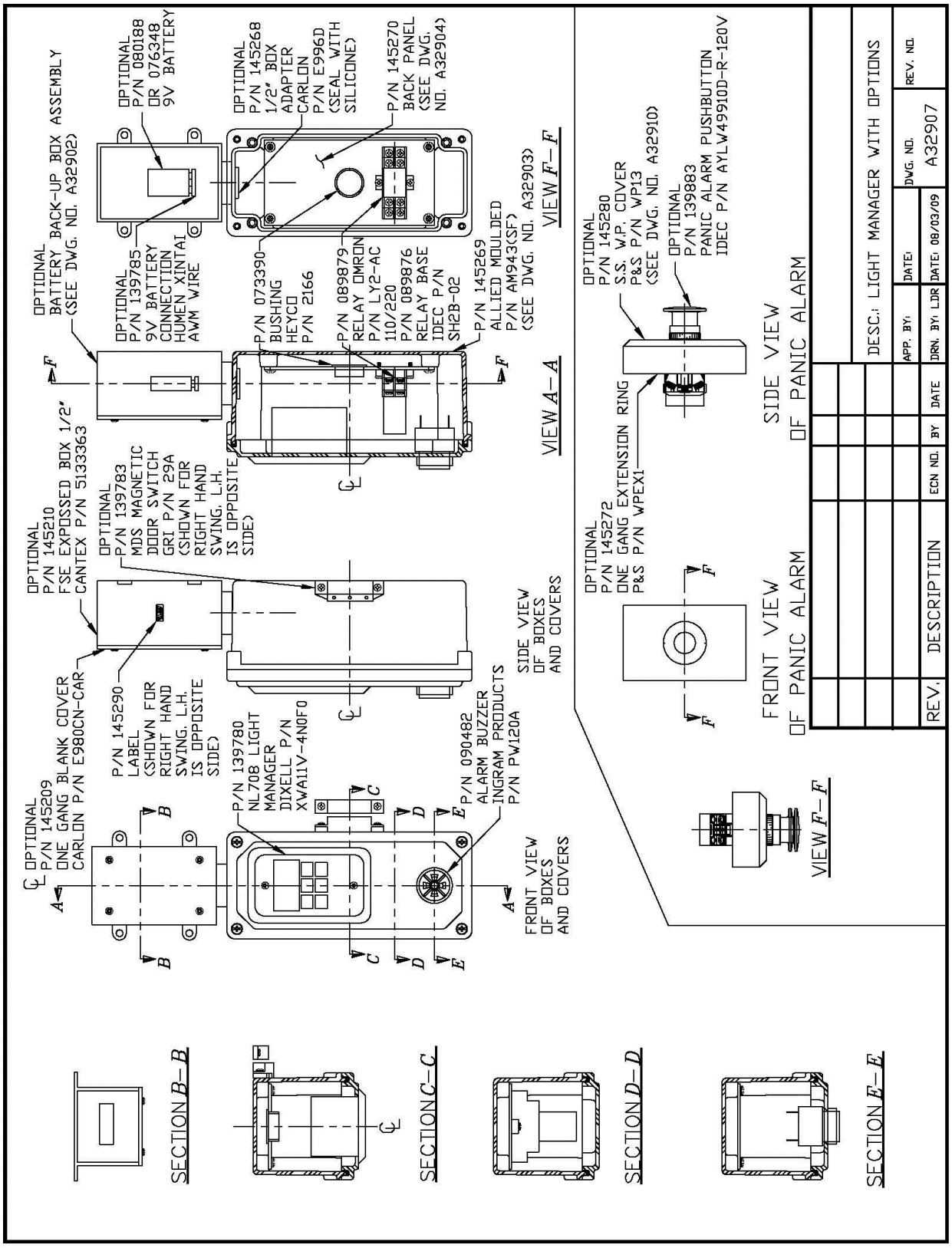
If the Door is left open longer than 15 minutes the DOOR Alarm will go off, dA alternating with the temperature reading.

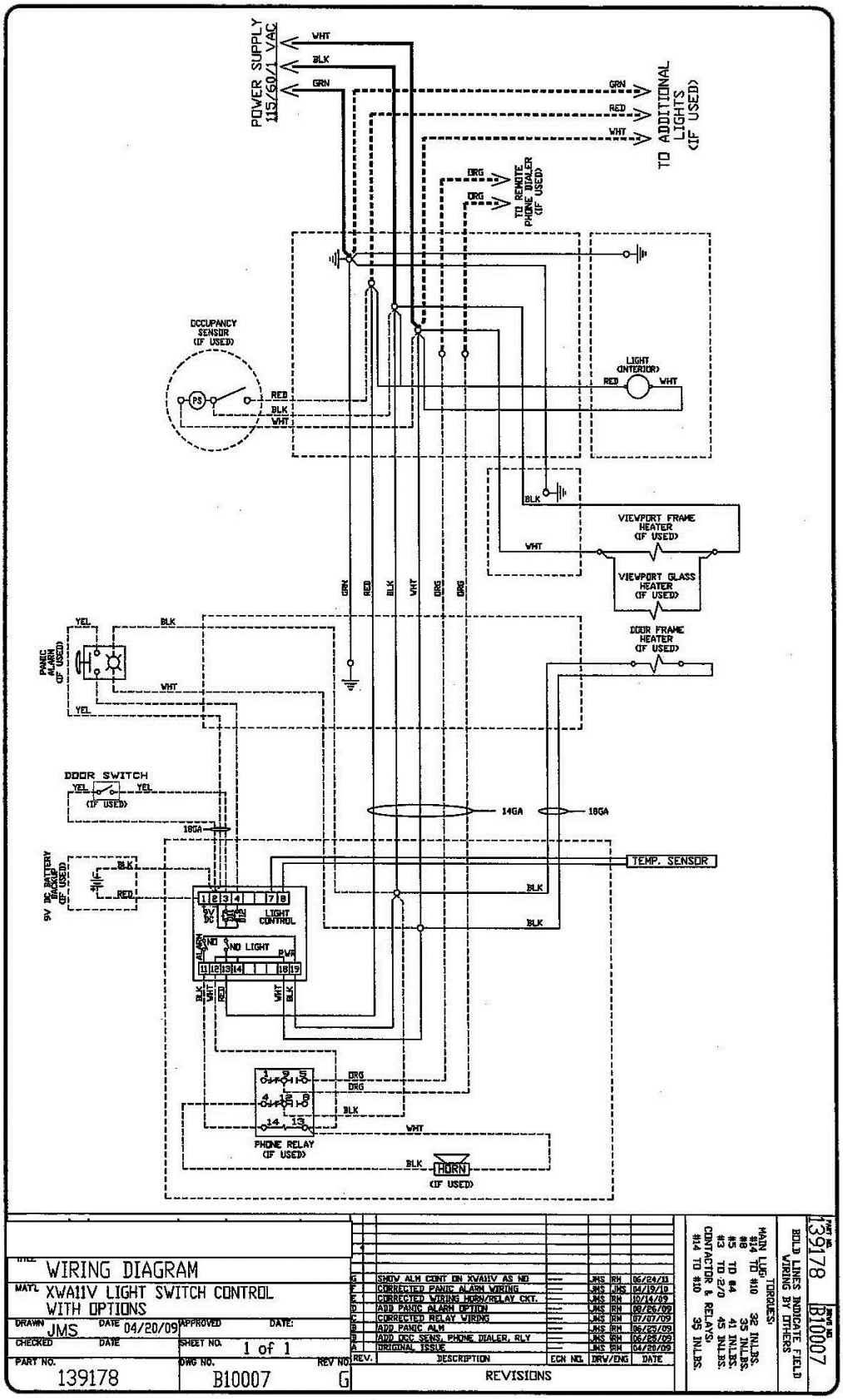
ALARM SIGNALS

P1	Flashing	PROBE FAILURE
HA	Alternated with temp	HIGH TEMP ALARM
LA	Alternated with temp	LOW TEMP ALARM
dA	Alternated with temp	DOOR OPEN ALARM
PAn	Alternated with temp	PANIC ALARM (need opt. panic switch)

Walk-In Alarm System Parts List

NOR-LAKE P/N	Description
139780	XWA11V Walk-In Alarm Module
145288	5 Foot Probe
139807	30 Foot Probe
139783	MDS Magnetic Door Switch – Door Open Alarm
090482	EXT/BUZ Alarm Buzzer
139809	'iDial2' Two Zone Phone Dialer
089879	Relay for 'iDial2'
139883	PAN Panic Alarm Switch
139785	9V Battery Holder
145267	Occupancy Sensor
089876	Relay Base
142469	Remote 2 x 4 Buzzer Box (includes buzzer)
080188	Battery, 9V, Alkaline

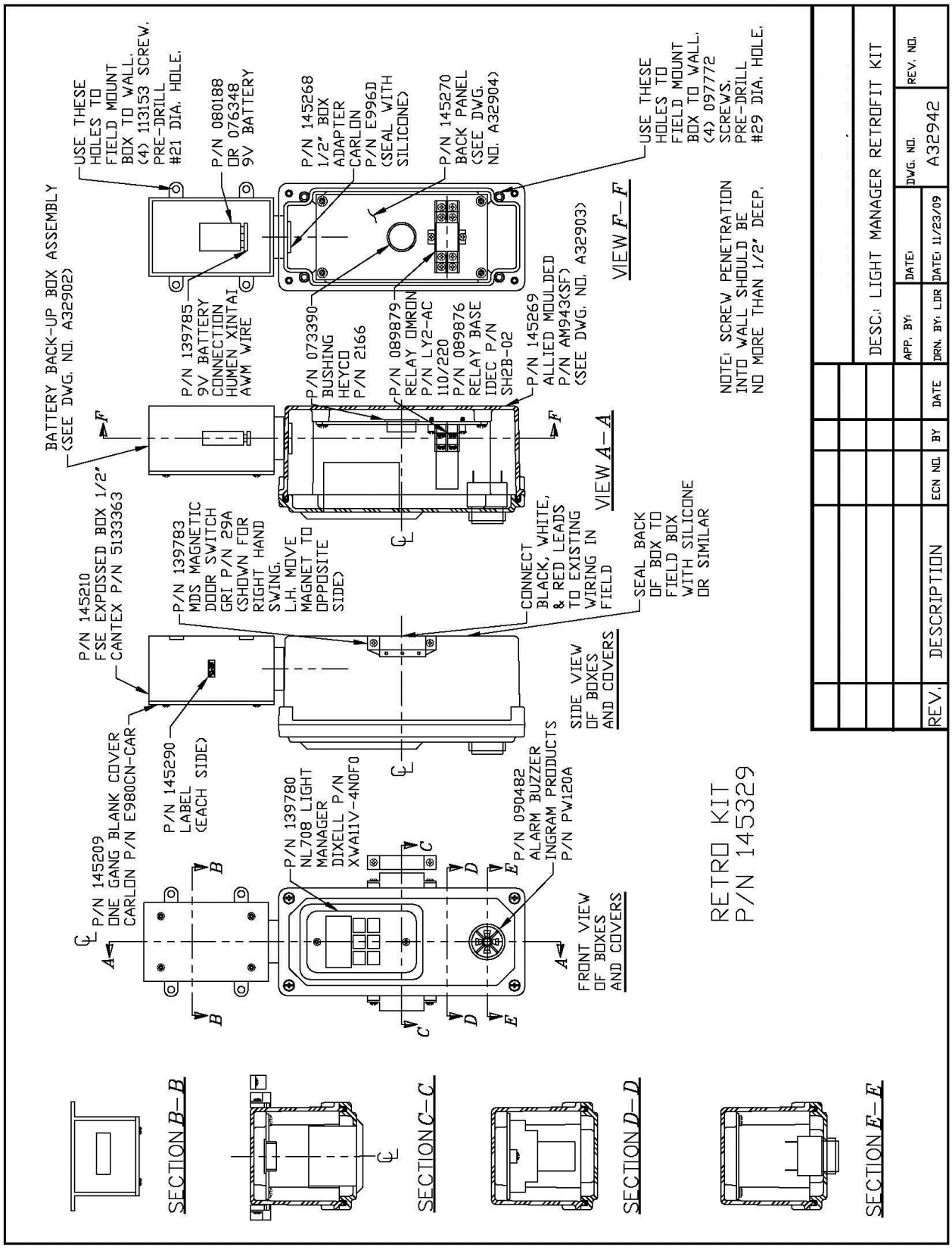

OPTIONAL BATTERY BACK-UP BOX ASSEMBLY (SEE DWG. NO. A32902)
OPTIONAL P/N 080188 OR 076348 9V BATTERY
OPTIONAL P/N 145268 1/2" BOX ADAPTER CARLON P/N E996D (SEAL WITH SILICONE)
P/N 145270 BACK PANEL (SEE DWG. NO. A32904)
OPTIONAL P/N 139785 9V BATTERY CONNECTION HUMEN XINTAI AWM WIRE
P/N 073390 BUSHING HEYCO P/N 2166
P/N 089879 RELAY OMRON P/N LY2-AC 110/220
P/N 089876 RELAY BASE IDEC P/N SH2B-02
P/N 145269 ALLIED MOULDED P/N AM943(SF) (SEE DWG. NO. A32903)
VIEW F-F
VIEW A-A
OPTIONAL P/N 145210 FSE EXPOSSED BOX 1/2" CANTEX P/N 5133363
OPTIONAL P/N 139783 MDS MAGNETIC DOOR SWITCH GRI P/N 29A (SHOWN FOR RIGHT HAND SWING. L.H. IS OPPOSITE SIDE)
OPTIONAL P/N 145209 ONE GANG BLANK COVER CARLON P/N E980CN-CAR
P/N 145290 LABEL (SHOWN FOR RIGHT HAND SWING. L.H. IS OPPOSITE SIDE)
P/N 139780 NL708 LIGHT MANAGER DIXELL P/N XWA11V-4N0F0
P/N 090482 ALARM BUZZER INGRAM PRODUCTS P/N PW120A
SIDE VIEW OF BOXES AND COVERS
FRONT VIEW OF BOXES AND COVERS
OPTIONAL P/N 145280 S.S. W.P. COVER P&S P/N WP13 (SEE DWG. NO. A32910)
OPTIONAL P/N 139883 PANIC ALARM PUSHBUTTON IDEC P/N AYLW49910D-R-120V
OPTIONAL P/N 145272 ONE GANG EXTENSION RING P&S P/N WPEX1
SIDE VIEW OF PANIC ALARM
FRONT VIEW OF PANIC ALARM
VIEW F-F
SECTION B-B
SECTION C-C
SECTION D-D
SECTION E-E
DESC.: LIGHT MANAGER WITH OPTIONS
APP. BY: DATE: DWG. NO. A32907 REV. NO.
DRN. BY: LDR DATE: 08/03/09
REV. DESCRIPTION ECN NO. BY DATE

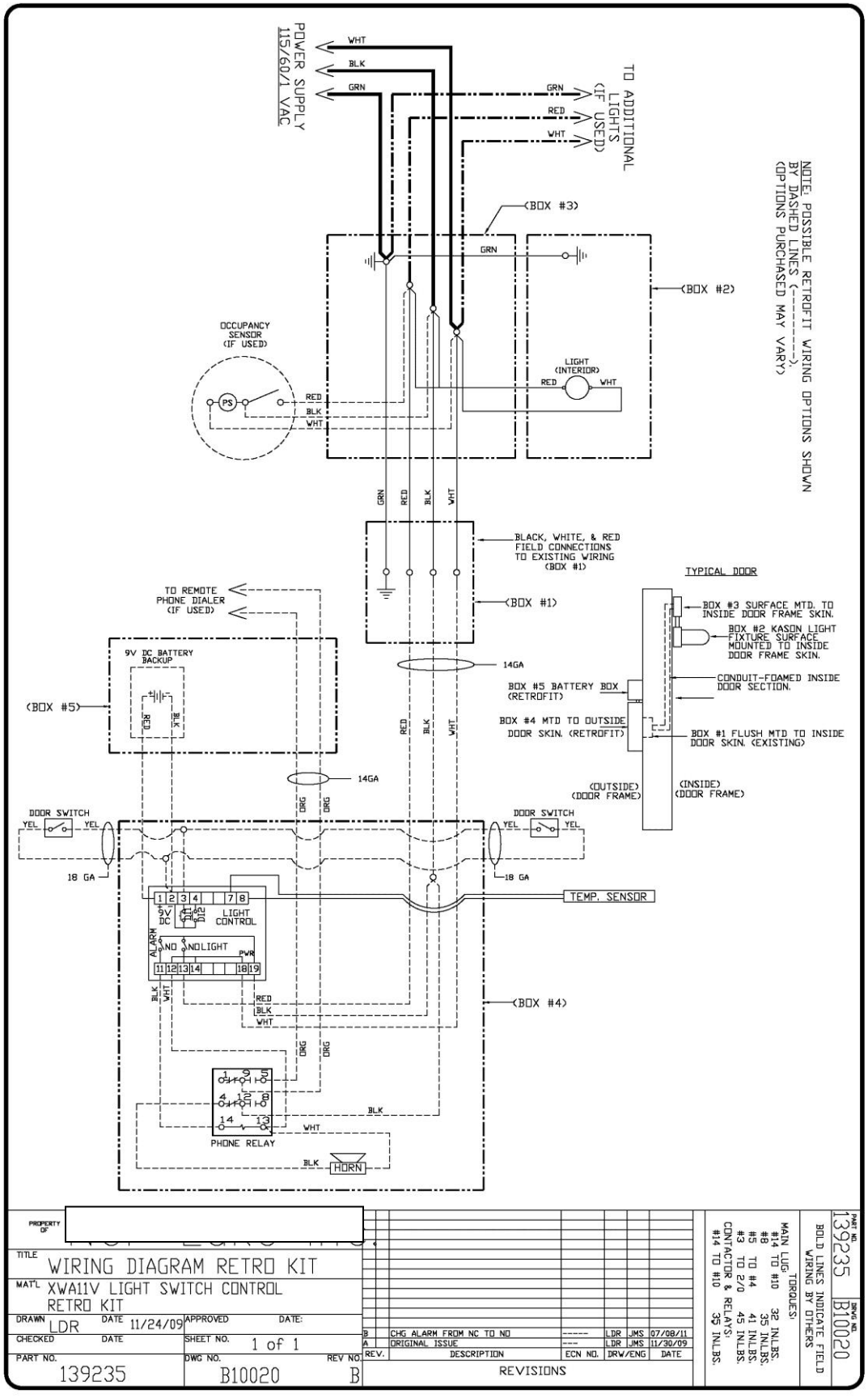


TITLE	WIRING DIAGRAM			PART NO. 139178	REV NO. B10007
MAT'L	XWA11V LIGHT SWITCH CONTROL WITH OPTIONS			BOLD LINES INDICATE FIELD WIRING BY OTHERS	
DRAWN JMS	DATE 04/20/09	APPROVED	DATE:	TORQUES: MAIN LUGS #14 TO #10 32 INLBS. #8 TO #6 35 INLBS. #5 TO #4 41 INLBS. #3 TO 2/0 45 INLBS. CONTACTOR & RELAYS: #14 TO #10 35 INLBS.	
CHECKED	DATE	SHEET NO. 1 of 1			
PART NO. 139178		DWG NO. B10007	REV NO. G		

REV.	DESCRIPTION	ECN NO.	DRV/ENG	DATE
G	SHOW ALM CONT ON XWA11V AS NO		JMS RH	06/24/11
F	CORRECTED PANIC ALARM WIRING		JMS JMS	04/19/10
E	CORRECTED WIRING HORN/RELAY CKT.		JMS RH	10/14/09
D	ADD PANIC ALARM OPTION		JMS RH	08/25/09
C	CORRECTED RELAY WIRING		JMS RH	07/07/09
B	ADD PANIC ALM		JMS RH	06/25/09
B	ADD OCC SENS, PHONE DIALER, RLY		JMS RH	06/22/09
A	ORIGINAL ISSUE		JMS RH	04/20/09

REVISIONS


USE THESE HOLES TO FIELD MOUNT BOX TO WALL. (4) 113153 SCREW. PRE-DRILL #21 DIA. HOLE.
P/N 080188 OR 076348 9V BATTERY
P/N 145268 1/2" BOX ADAPTER CARLON P/N E996D (SEAL WITH SILICONE)
P/N 145270 BACK PANEL (SEE DWG. NO. A32904)
USE THESE HOLES TO FIELD MOUNT BOX TO WALL. (4) 097772 SCREWS. PRE-DRILL #29 DIA. HOLE.
BATTERY BACK-UP BOX ASSEMBLY (SEE DWG. NO. A32902)
P/N 139785 9V BATTERY CONNECTION HUMEN XINTAI AWM WIRE
P/N 073390 BUSHING HEYCO P/N 2166
P/N 089879 RELAY OMRON P/N LY2-AC 110/220
P/N 089876 RELAY BASE IDEC P/N SH2B-02
P/N 145269 ALLIED MOULDED P/N AM943(SF) (SEE DWG. NO. A32903)
VIEW F-F
NOTE: SCREW PENETRATION INTO WALL SHOULD BE NO MORE THAN 1/2" DEEP.
P/N 145210 FSE EXPOSSED BOX 1/2" CANTEX P/N 5133363
P/N 139783 MDS MAGNETIC DOOR SWITCH GRI P/N 29A (SHOWN FOR RIGHT HAND SWING. L.H. MOVE MAGNET TO OPPOSITE SIDE)
CONNECT BLACK, WHITE, & RED LEADS TO EXISTING WIRING IN FIELD
SEAL BACK OF BOX TO FIELD BOX WITH SILICONE OR SIMILAR
VIEW A-A
SIDE VIEW OF BOXES AND COVERS
P/N 145209 ONE GANG BLANK COVER CARLON P/N E980CN-CAR
P/N 145290 LABEL (EACH SIDE)
P/N 139780 NL708 LIGHT MANAGER DIXELL P/N XWA11V-4N0F0
P/N 090482 ALARM BUZZER INGRAM PRODUCTS P/N PW120A
FRONT VIEW OF BOXES AND COVERS
RETRO KIT P/N 145329
SECTION B-B
SECTION C-C
SECTION D-D
SECTION E-E
REV. DESCRIPTION ECN NO. BY DATE
DESC.: LIGHT MANAGER RETROFIT KIT
APP. BY: DATE: DWG. NO. REV. NO.
DRN. BY: LDR DATE: 11/23/09 A32942

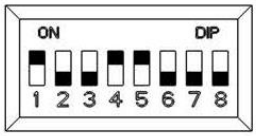

POWER SUPPLY 115/60/1 VAC
WHT
BLK
GRN
TO ADDITIONAL LIGHTS (IF USED)
GRN
RED
WHT
NOTE: POSSIBLE RETROFIT WIRING OPTIONS SHOWN BY DASHED LINES (<--------->). (OPTIONS PURCHASED MAY VARY)
(BOX #3)
GRN
(BOX #2)
OCCUPANCY SENSOR (IF USED)
PS
RED
BLK
WHT
LIGHT (INTERIOR)
RED
WHT
GRN
RED
BLK
WHT
BLACK, WHITE, & RED FIELD CONNECTIONS TO EXISTING WIRING (BOX #1)
(BOX #1)
TYPICAL DOOR
TO REMOTE PHONE DIALER (IF USED)
BOX #3 SURFACE MTD. TO INSIDE DOOR FRAME SKIN.
BOX #2 KASON LIGHT FIXTURE SURFACE MOUNTED TO INSIDE DOOR FRAME SKIN.
9V DC BATTERY BACKUP
14GA
BOX #5 BATTERY BOX (RETROFIT)
CONDUIT-FOAMED INSIDE DOOR SECTION.
(BOX #5)
RED
BLK
BOX #4 MTD TO OUTSIDE DOOR SKIN. (RETROFIT)
BOX #1 FLUSH MTD TO INSIDE DOOR SKIN. (EXISTING)
RED
BLK
WHT
14GA
(OUTSIDE) (DOOR FRAME)
(INSIDE) (DOOR FRAME)
DOOR SWITCH
YEL
YEL
ORG
ORG
DOOR SWITCH
YEL
YEL
18 GA
18 GA
TEMP. SENSOR
1 2 3 4 7 8
9V DC
D11
D12
LIGHT CONTROL
ALARM
GND
GND
LIGHT
PWR
11 12 13 14 18 19
BLK
WHT
RED
BLK
WHT
(BOX #4)
ORG
ORG
1
9
10
4
12
8
14
13
BLK
WHT
PHONE RELAY
BLK
HORN
PROPERTY OF
TITLE
WIRING DIAGRAM RETRO KIT
MAT'L
XWA11V LIGHT SWITCH CONTROL RETRO KIT
DRAWN
LDR
DATE
11/24/09
APPROVED
DATE:
CHECKED
DATE
SHEET NO.
1 of 1
PART NO.
139235
DWG NO.
B10020
REV NO.
B
B CHG ALARM FROM NC TO NO ----- LDR JMS 07/08/11
A ORIGINAL ISSUE --- LDR JMS 11/30/09
REV. DESCRIPTION ECN NO. DRW/ENG DATE
REVISIONS
MAIN LUG TORQUES:
#14 TO #10 32 INLBS.
#8 35 INLBS.
#5 TO #4 41 INLBS.
#3 TO 2/0 45 INLBS.
CONTACTOR & RELAYS:
#14 TO #10 35 INLBS.
BOLD LINES INDICATE FIELD WIRING BY OTHERS
PART NO. 139235
DRWG NO. B10020

Operating Instructions Alarm/Light Module XWA11V

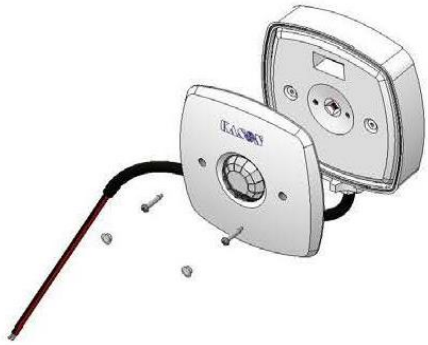
Installation:

1. The ideal location for the sensor is above door aimed to 8' in front of the doorway. To limit false tripping keep away from fans and vent ports. See "Sensor Set Up and Testing."
2. Thread the ½ NPT arm into a threaded 90° elbow, junction box or into light fixture housing. It is best to be able to adjust rotation and tilt of the sensor.
3. Connect the line voltage, neutral and load wires to the sensor leads as shown in wiring diagram (pg. 2).
4. Test the sensor for sensitivity and range (pg. 2). This unit is pre-set based on typical walk-in applications for a 1 minute delay and 80% sensitivity. If your application requires alternate settings, simply remove the front cover (2 screws & seals) and make the necessary changes. Remember to reinstall the two screw seals when finished.

Factory Settings



1 2 PIR Sensitivity	**3 4 5 Delay**	**6 7 8 Sensor**
↓ ↓ 100% high	↓ ↓ ↓ 10 seconds	↓ ↓ ↓ (factory)
↓ ↑ 90%	↓ ↓ ↑ 20 seconds	
↑ ↓ 80% (factory)	↓ ↑ ↓ 30 seconds	
↑ ↑ 70%	↓ ↑ ↑ 1 minute (factory)	
	↑ ↓ ↓ 2 minutes	
	↑ ↓ ↑ 5 minutes	
	↑ ↑ ↓ 10 minutes	
	↑ ↑ ↑ 20 minutes	



Sensor Assembly

Specifications:

Voltage: 120 / 277 VAC @ 60 Hz
Load: 120 VAC / 0- 800W ballast
277 VAC / 0-1200W ballast
Time Delay: 10 seconds – 20 minutes
Size: 4"H x 4"W x 2.16"D
[102.58cm*102.58cm*55cm]
Weight: 0.5 lbs [227 grams]
Temperature:
Min: -20 °F [-28.9 °C]
Max: 160 °F [60 °C]
Electrical Connection:
½" conduit connection
18" 18 AWG wire
IP 65
Wire temperature 105 deg C max *
cULus Wet location -Indoor Use Only
NSF
Protective Device:
A fast blow fuse or circuit breaker mounted within 25 feet from sensor (**Line** side) is required.

***Some incandescent fixtures may require higher temperature wires. Remote mounting or adding fiberglass sleeves over the wires may be required.**

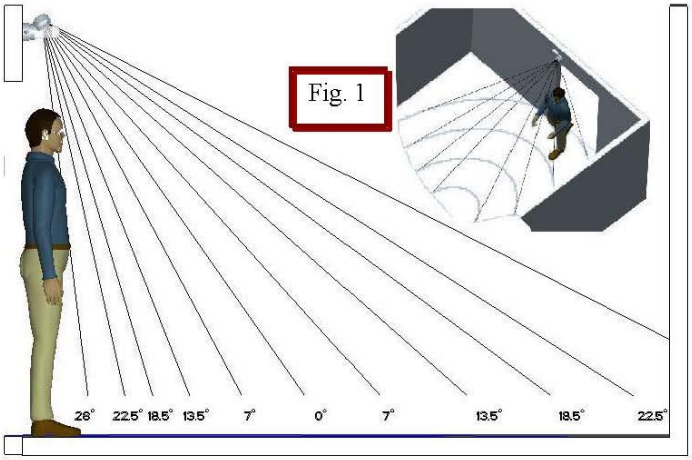
WARNINGS AND CAUTIONS:

- All installation must comply with local and National Electrical Codes.
- The manufacturer assumes no responsibility for improper installation or application.
- Turn off electricity at the breaker or fuse box before installation.

Special Note from the field:

Always disable any existing light switches. The motion sensor will not function as intended if the customer can turn the circuit off or has the ability to override the motion sensor.

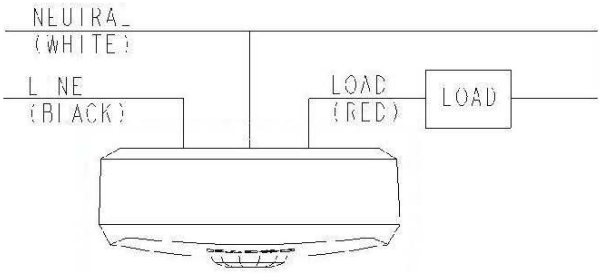
Sensor Set Up and Testing



Location:
Sensor should be placed above the door. Sensor should be angled toward the center of the room without any obstructions. Sensor lens is designed to work in zones. If occupant crosses a zone the sensor will turn the lights on. Zones are represented by the rings on the floor in (Fig. 1).

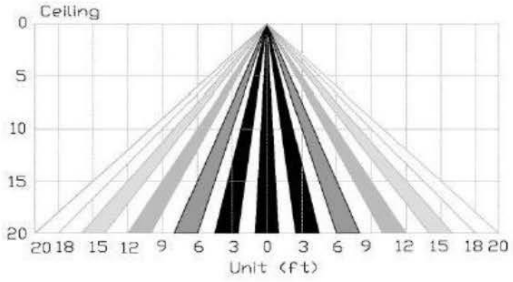
Testing:
Allow a few minutes for the sensor to warm up then ENTER room. The sensor is equipped with a "Red LED" indicator that will activate when motion is sensed. Make note where the sensor sees motion and turns on the light. Repeat movement after allowing lights to turn off.
Adjust sensor head for best room coverage. If the LED indicator is not visible then wait for the lights to go off.
Additional sensor may be required for large / long rooms.

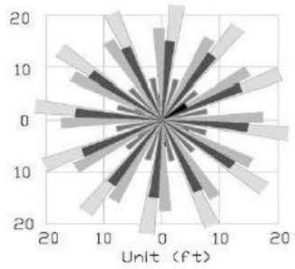
Wiring for Single



Replacement Parts List:

11901A00005	Low Bay sensor module (up to 20')
11901000009	Wall mounting kit with cord grip

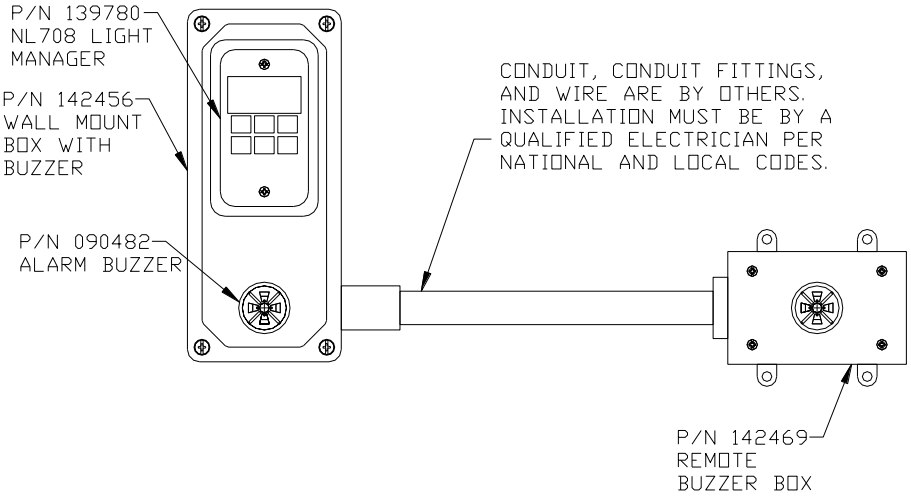


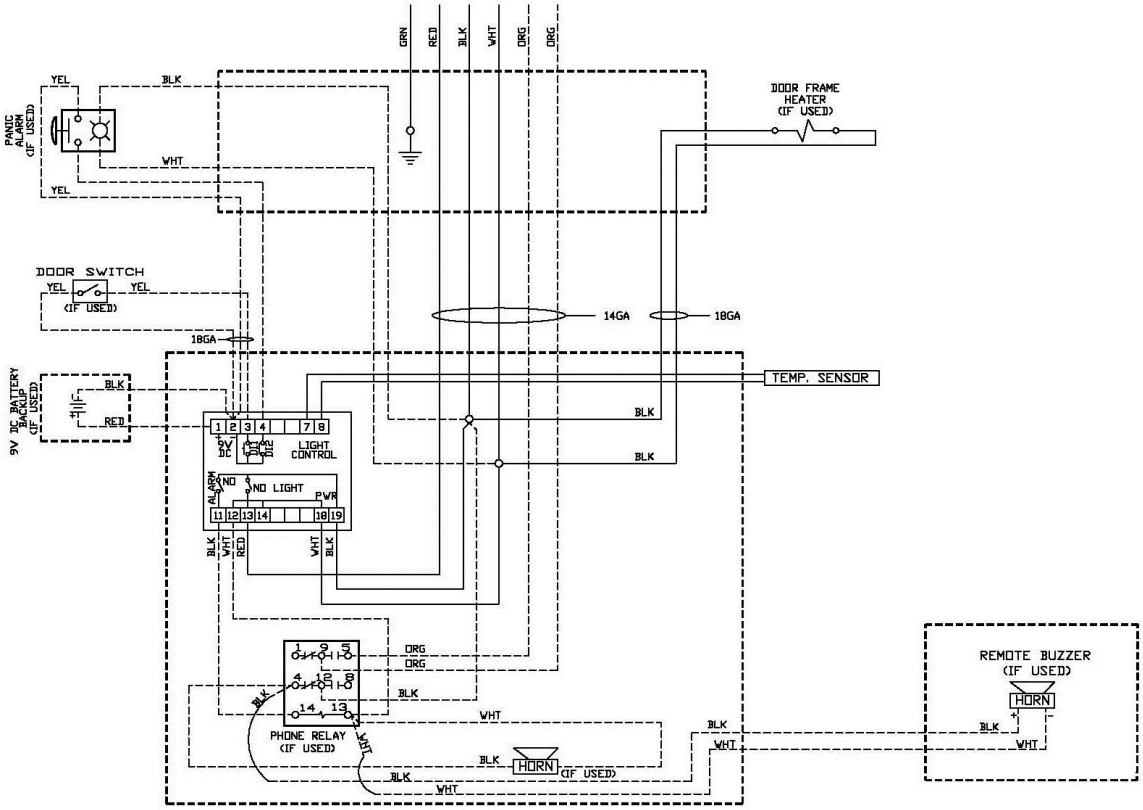


Remote Buzzer Box Installation

Installation:

1. Mount the remote buzzer box in the location desired.
2. Drill the appropriate size hole for the conduit fitting into the Wall Mount Box P/N 142456.
3. Conduit, conduit fittings, and wire are by others.
   Installation must be by a qualified electrician per the applicable national and local codes.
4. Connect a black wire to terminal #4 and a white wire to terminal #13 of the Phone Relay in the Wall
5. Mount Box.





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