

19-14009

Walk-In Temp / Door / Alarm / Light Module

1. GENERAL WARNINGS

1.1 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.

1.2 SAFETY PRECAUTIONS

- Check if the supply voltage is correct before connecting the instrument.
- Do not expose 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.

2. GENERAL DESCRIPTION

Model XWA11V, 100x64 mm format, is a microprocessor based controller, suitable for temperature monitoring in a walk-in cooler or freezer. It is provided with two (2) relay outputs to control lights and signal an alarm. It is also provided with one (1) NTC probe input for temperature measurement. One (1) output allows the user to program the parameter list with the “Hot Key”.

3. INTERFACE



3.1 FRONT PANEL OPERATION



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**.



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



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. T ALARMS SETTING

4.1 HOW TO SET THE MIN TEMPERATURE ALARM




- **To modify the minimum (LOW) Temp ALARM:** hold the + keys pressed for 3 s until the minimum Temp alarm will be 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 + keys pressed for 3 s until the max Temp alarm will be 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  start blinking).
2. Select the required parameter.
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.
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 o 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.

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**)

6.2 LIGHT BUTTON REGULATION: I1L = N

The light button has a higher priority than digital inputs therefore:

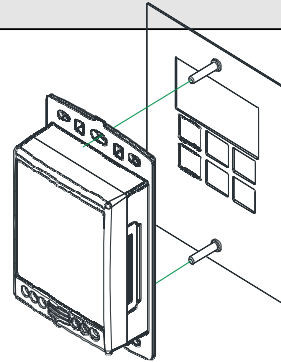
- if the light was switched on by button the digital input can not modify its status.
- if the light was switched on by digital input, the light button can modify its status.

7. INSTALLATION AND MOUNTING

7.1 MOUNTING OF XWA11V – PR10000

The XWA11V must be mounted on vertical panel.

The Temp range allowed for correct operation is 32 – 140°F. Avoid installation in places subject to strong vibrations, corrosive gases, excessive dirt or humidity. The same recommendations apply to probes. Let the air circulate by the cooling holes.



8. ELECTRICAL CONNECTIONS

The instrument is provided with screw terminal blocks to connect cables with a cross section up to 2,5 mm² for the digital and analog inputs. Relays and power supply have a Faston connection (6,3mm). Heat-resistant cables have to be used. 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 20A.

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.

9. USE OF THE PROGRAMMING “HOT KEY“

The Wing units can UPLOAD or DOWNLOAD the parameter list from its own E2 internal memory to the “Hot Key” and vice-versa.

10. ALARM SIGNALS

Message	Mode	Cause	Outputs
“P1”	Flashing	Thermostat probe failure	Alarm output ON
PoF	Flashing (3s)	Keyboard locked	Not changed
Pon	Flashing (3s)	Keyboard un-locked	Not changed
“HA”	Alternated with t	Maximum T° alarm	Alarm output ON;
“LA”	Alternated with t	Minimum T° alarm	Alarm output ON;
“dA”	Alternated with t	Door switch alarm	Alarm output ON;
“EA”	Alternated with t	External alarm	Alarm output ON;
“PAn”	Alternated with t	Serious external alarm	Alarm output ON;
dEF	Alternated with t	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.

11. TECHNICAL DATA

Housing: self extinguishing ABS

Case: face 100x64 mm; depth 45.5mm

Mounting: J-box or wall-mount option

Frontal protection: IP65

Connections: ¼" fastons for power, 18" fastons for probes and Digital Inputs

Power supply: 120Vac ± 10%, optional 230Vac ± 10%

Power absorption: 4VA max.

Display: 3 digits, red LED, 14,2 mm high.

Inputs: 1 NTC probe

Digital inputs: 2 free voltages

Relay outputs: Dry Contacts

Light: relay SPST 16A, 120Vac;

Alarm: relay SPST 8A, 120Vac

Other output: alarm buzzer

Data storing: on the non-volatile memory (EEPROM).

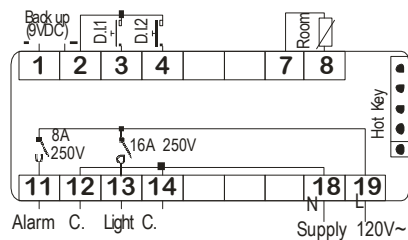
Measuring and regulation range:

NTC probe: -40÷110°C (-58÷230°F)

Resolution: 1 °F

Accuracy : ±1 °F

12. CONNECTIONS



Power supply: 230Vac ± 10% models, use the same terminals of the 120Vac version.

13. PARAMETER MAP

LABEL	DESCRIPTION	VALUE	LEVEL	RANGE
ot	Thermostat probe calibration	0	Pr2	[-12,0°C <> 12,0°C] [-21°F <> 21°F]
CF	T° measurement unit	F	Pr2	°C(0) - °F(1)
rES	Resolution (only °C)	in	Pr2	dE(0) - in(1)
UT	Display update	60	Pr2	0 <> 255 (s)
OnF	Off function enabling	y	Pr2	n(0) - Y(1)
ALU	High Temp alarm setting	50	Pr1	°C[ALL <> 150,0°] °F[ALL <> 302°]
ALL	Low Temp alarm setting	30	Pr1	°C[-50.0° <> ALU] °F[-58 <> ALU]
AFH	Temp alarm differential	2	Pr2	[0,1°C <> 25,5°C] [1°F <> 45°F]
ALd	Temp alarm delay	30	Pr1	0 <> 255 (min.)
dAo	Delay of Temp alarm at start-up	1.3	Pr2	0 <> 24H0(144)
EdA	Alarm delay at the end of defrost	30	Pr2	0 <> 255 (min.)
dot	Delay of Temp alarm after closing the door	15	Pr2	0 <> 255 (min.)
LHt	Light timer	15	Pr1	0 <> 255 (min.)
doA	Open door alarm delay	15	Pr1	0 <> 255 (min.)
OA1	First relay configuration	ALr	Pr2	ALr(0) - LHt(1) - OnF(2)
oA2	Second relay configuration	LHt	Pr2	ALr(0) - LHt(1) - OnF(2)
AOP	Alarm relay polarity	oP	Pr2	OP - CL
i1P	Digital input 1 polarity	oP	Pr2	OP(0) - CL(1)
i1L	Door switch to turn light ON	y	Pr2	n(0) - Y(1)
i1F	Digital input 1 operating mode	dor	Pr2	EAL(0) - dor(1) - dEr(2) - LHt(3)
i2P	Digital input 2 polarity	cL	Pr2	OP(0) - CL(1)
i2F	Digital input 2 operating mode	PA n	Pr2	EAL(0) - Pan(1) - dFr(2) - LHt(3)
did	Time interval/delay for digital input alarm	0	Pr2	0 <> 255 (min.)
tbA	Alarm relay disabling	n	Pr2	n(0) - Y(1)
PbC	Kind of probe	ntc	Pr2	PtC(0) - nTC(1)
dP1	Real T° 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.
- 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;
LHt = Keep light ON (signal from occupancy sensor) override 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.

15. PARTS LIST

M/B Part Number	Description
19-14009	WI therm, alarm, panic light, contr. #XWA11V-4N1F0
19-14012	PROBE, 18NB-NTC-1.5M, (5')
19-14013	PROBE, 18NB-NTC-1.5M, (50')
19-14014	PROBE, 18NB-NTC-1.5M, (75')

For more information, please contact our Technical Service Dept.
 @ 1-800-684-8988