WING

XW264L

1. GENERAL WARNING

- PLEASE READ BEFORE USING THIS MANUAL
- This manual is part of the product and should be kept near 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.

SAFETY PRECAUTIONS 1.2

- Check the supply voltage is correct before connecting the instrumer 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 formation of condensation
- Warning: disconnect all electrical connections before any kind of maintenance. Fit the probe where it is not accessible by the End User. The instrument must not be opened.
- In case of failure or faulty operation send the instrument back to the distributor or to "Dixell s.r.l." (see address) with a detailed description of the fault.
- Consider the maximum current which can be applied to each relay (see Technical Ensure that the wires for probes, loads and the power supply are separated and
- far enough from each other, without crossing or intertwining. In case of applications in industrial environments, the use of mains filters (our mod. FT1) in parallel with inductive loads could be useful.

2. GENERAL DESCRIPTION

Models XW264L, 38x185 mm format, is microprocessor based controller suitable for applications on medium or low temperature refrigerating units. It is provided with six relay outputs to control compressor, two defrosts - which can be either electrical or hot gas - the evaporator fans, the lights and an ON/OFF output. It is also provided with three NTC probe inputs, one for temperature control, two to control the defrost end temperature of two evaporators. There are two digital inputs (free contact) for the door switch and configurable by parameter.

The standard TTL output allows the user to connect, by means of a TTL/RS485 external module, a ModBUS-RTU compatible monitoring system and to programme the parameter list with the "Hot Key".

An output for remote display XW-REP, a 4÷20 mA output to control evaporator or condenser fans and the direct serial output RS485 are available as options.

3. CONTROLLING LOADS

3.1 THE COMPRESSOR

The regulation is performed according to the temperature measured by the thermostat probe with a positive differential from the set point: if the temperature increases and reaches set point plus differential the compressor is started and then turned off when the temperature reaches the set point value again In case of fault in the thermostat probe the start and stop of the compressor are timed

through parameters "COn" and "COF"

3.2 FAST FREEZING

When defrost is not in progress, it can be activated the keypad by holding the è key pressed for about 3 seconds. The compressor operates in continuous mode for the time set through the "CCt" parameter. The cycle can be terminated before the end of the set time using the same activation key, è for about 3 seconds.

3.3 DEFROST

Three defrost modes are available through the "tdF" parameter: defrost with electrical heater, hot gas or thermostatic defrost. The defrost interval is control by means of parameter "EdF": (EdF=in) the defrost is made every "IdF" time, (EdF=Sd) the interval "IdF" is calculate through Smart Defrost algorithm (only when the compressor is ON and the evaporator temperature is bigger than "SdF" parameter). At the end of defrost the drip time is controlled through the "Fdt" parameter.

This instrument can menage a defrost on two different evaporators. It waits the defrost end on both evaporators before starting normal regulation

3.4 CONTROL OF EVAPORATOR FANS

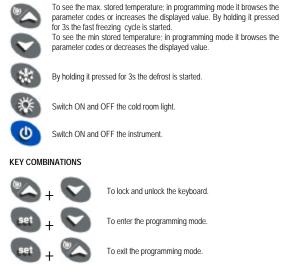
- The fan control mode is selected by means of the "EnC" parameter
- C-n fans will switch ON and OFF with the compressor and not run during defrost;
- C-y fans will switch ON and OFF with the compressor, also during defrost After defrost, there is a timed fan delay allowing for drip time, set by means of the "Fnd" parameter.
- O-n fans will run continuously and not run during defrost;
- O-y fans will run continuously also during defrost

An additional parameter "FSt" provides the setting of temperature, detected by the evaporator probe, above which the fans are always OFF. This can be used to make sure circulation of air only if his temperature is lower than set in "FSt"

3.5 ON/OFF RELAY

1592009050 XW264 GB doc

The ON/OFF relay is switched ON when the instrument is ON and it is OFF when the instrument is switched OFF. This relay cuts the common of the defrost relays, so that,



parameter or confirm an operation

vlaguz

set

4. KEYBOARD

USE OF LEDS

LED	MODE	Function		
淋	ON	The compressor is running		
淋	FLASHING	- Programming Phase (flashing with LED		
ş	ON	The fan is running		
\$	FLASHING	Programming Phase (flashing with LED 🔆)		
懋	ON	The defrost is enabled		
懋	FLASHING	Drip time in progress		
⊛	ON	The Fast Freezing cycle is enabled		
	ON	- ALARM signal - In "Pr2" indicates that the parameter is also present in "Pr1"		

S 🖸 🔘

To display and modify target set point; in programming mode it selects a

By holding it pressed for 3s when max or min temperature is displayed it

Function of the LEDs placed on the left top side of buttons:

	· · · · · · · · · · · · · · · · · · ·				
BUTTON		MODE	FUNCTION		
	SET	FLASHING	The Set point is displayed and it can be modified		
	SET	SLOW FLASHING	The Energy Saving is enabled		
	DEFROST	ON	The Manual Defrost is activated		
	LIGHT	ON	The Light is ON		
	ON/OFF	ON	The instrument is OFF		

4.2 HOW TO SEE THE MIN TEMPERATURE

Press and release the à key. The "Lo" message will be displayed followed by the minimum 2 temperature recorded.

3. By pressing the a key or waiting for 5s the normal display will be

4.3 HOW TO SEE THE MAX TEMPERATURE

Press and release the è key

- The "Hi" message will be displayed followed by the maximum temperature recorded. 3. By pressing the è key or waiting for 5s the normal display will be

4.4 HOW TO RESET THE MAX AND MIN TEMPERATURE RECORDED To reset the stored temperature, when max or min temperature is displayed Press SET key until "rST" label starts blinking.

N.B. After the installation RESET the temperature stored

HOW TO SEE AND MODIFY THE SET POINT

1. Push and immediately release the SET key: the display will show the

Installing and Operating Instructions when the instrument is switched OFF by keyboard button none of the loads have power Set point value

set The SET LED start blinking: To change the Set value push the è or à arrows within 10s.

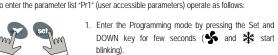
To memorise the new set point value push the SET key again or wait

TO START A MANUAL DEFROST

1. Push the DEF key for more than 2 seconds and a manual defrost will star

TO ENTER IN PARAMETERS LIST "PR1"

2.



- DOWN key for few seconds (🐝 and 🗱 start
- The instrument will show the first parameter present in

TO ENTER IN PARAMETERS LIST "PR2"

- To access parameters in "Pr2" Enter the "Pr1" level.
- Select "Pr2" parameter and press the "SET" key.
- The "PAS" flashing message is displayed, shortly followed by "0 -" with a flashing
- Use è or à to input the security code in the flashing digit; confirm the figure by pressing "SET". The security code is "321". If the security code is correct the access to "Pr2" is enabled by pressing "SET" on
- the last digit

Another possibility is the following: after switching ON the instrument the user can push Set and DOWN keys within 30 seconds.

NOTE: each parameter in "Pr2" can be removed or put into "Pr1" (user level) by pressing "SET" + à . When a parameter is present in "Pr1" LED (() is on.

HOW TO CHANGE THE PARAMETER VALUE

- Enter the Programming mode 2. Select the required parameter with è or à
- 3. Press the "SET" key to display its value (🗱 and 🛸 LED starts blinking).
- 4. Use è or à to change its value.
- 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 new programming is stored even when the procedure is exited by waiting the time-out

HOW TO LOCK THE KEYBOARD

- Keep the $\grave{\mathrm{e}}$ and $\grave{\mathrm{a}}$ keys pressed together for more than 3 s the $\grave{\mathrm{e}}$ and à keys.
 - The "POF" message will be displayed and the keyboard is locked. At this point it is only possible the viewing of the set point or the MAX o Min temperature stored and to switch ON and OFF the light and the instrument

TO UNLOCK THE KEYBOARD

Keep the è and à keys pressed together for more than 3s.

ON/OFF FUNCTION

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T

- By pushing the ON/OFF key, the instrument shows "OFF" for 5 sec, and the ON/OFF LED is switched ON.
- During the OFF status, all the relays are switched OFF and the regulations are stopped: if a monitoring system is connected, it does not record the instrument data and alarms.

N.B. During the OFF status the Light button is active

TO SEE THE PROBE VALUES

- Enter in "Pr2" leve
- Select "Prd" parameter with è or à
- Press the "SET" key to display "Pb1" label alternate with Pb1 value. 3.
- 4. Use è and à keys to display the other probe values.
- 5. Press "SET" to move to the following parameter.

PARAMETER LIST

- REGULATION Hy Differential: (0,1+25,5°C; 1+45°F): Intervention differential for set point, always
- positive. Compressor Cut IN is Set Point Plus Differential (Hy). Compressor Cut OUT is when the temperature reaches the set point. LS Minimum set point limit: (-50,0°C+SET; -58°F+SET) Sets the minimum
- acceptable value for the set point. Maximum set point limit: (SET+110°C; SET+230°F) Set the maximum US acceptable value for set point
- OdS Outputs activation delay at start up: (0÷255 min) This function is enabled at the initial start up of the instrument and inhibits any output activation for the period
- of time set in the parameter. (Light can work) Anti-short cycle delay: (0÷30 min) interval between the compressor stop and the
- following restart. CCt Thermostat override: (0min ÷23h 50min) allows to set the length of the continuous cycle. Can be used, for instance, when the room is filled with new products

XW2641

- Con Compressor ON time with faulty probe: (0+255 min) time during which compressor is active in case of faulty thermostat probe. With COn=0 compre is always OFF
- COF Compressor OFF time with faulty probe: (0+255 min) time during which compressor is off in case of faulty thermostat probe. With COF=0 compress always active. DISPLAY

FANS

ALARMS

DEFROST

		rel.1.0 19/02/01 - cod. 1592009050
Con	Compressor ON time with faulty probe: (0+255 min) time during which the	nPS Pressure switch number: (0 +15) Number of activation of the pressure switch,
	compressor is active in case of faulty thermostat probe. With COn=0 compressor is always OFF.	during the *did [*] interval, before signalling the alarm event (I2F= PAL). ANALOGUE OUTPUT 4÷20 mA (OPTIONAL)
COF	Compressor OFF time with faulty probe: (0+255 min) time during which the	AOS Analogue output start point: (-50÷110°C or -58°÷230°F). Sets the temperature
	compressor is off in case of faulty thermostat probe. With COF=0 compressor is always active.	at which the analogue output begins. APB Analogue output band width: (-50÷110°C or -58°÷230°F) sets the width of the
DISP		regulation band for the analogue output. If APb is positive then it is above the
CF	Temperature measurement unit: $^{\circ}C = Celsius$; $^{\circ}F = Fahrenheit$. When the measurement unit is changed the SET point and the values of the regulation	start point and the kind of action is direct (condenser application). If APb is negative then it is below the start point and the kind of action is inverse
rES	parameters have to be modified Resolution (for °C): (in = 1°C; de = 0,1°C) allows decimal point display.	(evaporator application). CAO Input type for the analogue output: four input types can be selected:
	$\mathbf{de} = 0,1^{\circ}\mathrm{C}; \ \mathbf{in} = 1^{\circ}\mathrm{C}$	P1 = room probe temperature; P2 = evaporator probe temperature; P3 =
Lod	Local display : select which probe is displayed by the instrument: P1 = Thermostat probe; P2 = Evaporator probe; P3 = 2 nd evaporator probe	temperature of the third probe 1r2 = temperature difference between the room probe and the evaporator probe
Ded	1r2 = difference between P1 and P2 (P1-P2)	PROBE INPUTS
Reu	Remote display : select which probe is displayed by the remote display (XW-REP)	Ot Thermostat probe calibration: (-12.0+12.0°C/ -21+21°F) allows to adjust possible offset of the thermostat probe.
	P1 = Thermostat probe; P2 = Evaporator probe; P3 = 2 nd evaporator probe 1r2 = difference between P1 and P2 (P1-P2)	OE 1st Evaporator probe calibration: (-12.0+12.0°C/ -21+21°F) allows to adjust
		possible offsets of the evaporator probe. O3 2 nd Evaporator probe calibration: (-12.0+12.0°C/ -21+21°F) allows to adjust
DEFI tdF	Defrost type:	possible offsets of the 2 nd evaporator probe. P2P 1 st Evaporator probe presence:
	rE = electrical heater (Compressor OFF)	n= not present: the defrost stops only by time; y= present: the defrost stops by
	rT = thermostat defrost. During the defrost time "MdF", the heater switches On and OFF depending on the evaporator temperature and "dtE" value.	temperature and time. P3P 2 nd Evaporator probe presence: n= not present; y= present.
EdF	in = hot gas (Compressor and defrost relays ON) Defrost mode:	HES Temperature increase during the Energy Saving cycle : (-30,0°C + 30,0°C / 22+86°F) sets the increasing value of the set point during the Energy Saving
	in = interval mode. The defrost starts when the time "Idf" is expired.	cycle.
	Sd = Smartfrost mode . The time IdF (interval between defrosts) is increased only when the compressor is running (even non consecutively) and only if the	DIGITAL INPUTS
	evaporator temperature is less than the value in "SdF" (set point for SMARTFROST).	<pre>odc Compressor and fan status when open door: no = normal; Fan = Fan OFF; CPr = Compressor OFF; F_C = Compressor and</pre>
SdF	Set point for SMARTFROST: (-30+30 °C/ -22+86 °F) evaporator temperature	fan OFF. I1P Door switch input polarity:
	which allows the IdF counting (interval between defrosts) in SMARTFROST mode.	CL : the digital input is activated by closing the contact;
dtE	Defrost termination temperature 1st evaporator: $(-50,0\pm110,0^{\circ}C; -58\pm230^{\circ}F)$ (Enabled only when the evaporator probe is present) sets the temperature	OP : the digital input is activated by opening the contact. I2P Configurable digital input polarity:
4+6	measured by the first evaporator probe which causes the end of defrost. Defrost termination temperature 2 nd evaporator: (-50,0÷110,0°C; -58÷230°F)	CL : the digital input is activated by closing the contact; OP : the digital input is activated by opening the contact
uis	(Enabled only when the 2 nd evaporator probe is present) sets the temperature	I2F Digital input operating mode: configure the digital input function:
ldF	measured by the 2 nd evaporator probe which causes the end of defrost. Interval between defrosts: (1÷120h) Determines the time interval between the	EAL = generic alarm; bAL = serious alarm mode; PAL = Pressure switch; dFr = Start defrost;
	beginning of two defrost cycles. (Maximum) duration of first defrost: $(0 \div 255 \text{ min})$ When P2P = n, no	AUS = Not used; Es = Energy Saving; onF = remote On/OFF. did Time interval/delay for digital input alarm:(0+255 min.) Time interval to
wur	evaporator probe, it sets the defrost duration, when P2P = y, defrost end based on	calculate the number of the pressure switch activation when I2F=PAL. If I2F=EAL
MdS	temperature, it sets the maximum length for defrost. (Maximum) duration of second defrost: $(0 \div 255 \text{ min})$ When P3P = n, no 2 nd	or bAL (external alarms), "did" parameter defines the time delay between the detection and the successive signalling of the alarm.
	evaporator probe, it sets the defrost duration, when P3P = y, 2 nd defrost end	SAA Set Point for anti-condensing heater: (-50,0+110,0°C; -58+230°F) defines the room temperature setpoint to switch on the anti-condensing heater.
dFd	based on temperature, it sets the maximum length for 2 nd defrost. Display during defrost:	OTHER
	rt = real temperature; it = temperature reading at the defrost start; Set = set point; dEF = "dEF" label;	Adr RS485 serial address (1÷247): Identifies the instrument address when
d۸d	dEG = "dEG" label; Defrost display time out: (0+255 min) Sets the maximum time between the end	connected to a ModBUS compatible monitoring system. Rel Release software: (read only) Software version of the microprocessor.
	of defrost and the restarting of the real room temperature display.	Ptb Parameter table: (read only) it shows the original code of the diXEL parameter map.
Fdt L	Drain down time: (0+60 min.) time interval between reaching defrost termination temperature and the restoring of the control's normal operation. This time allows	Prd Probes display: (read only) display the temperature values of the evaporator probes Pb2 and Pb3.
dPO	the evaporator to eliminate water drops that might have formed due to defrost. First defrost after start-up:	Pr2 Access to the protected parameter list (read only).
	\mathbf{y} = Immediately; \mathbf{n} = after the IdF time	DIGITAL INPUTS
UAF	Defrost delay after fast freezing: (0min÷23h 50min) after a Fast Freezing cycle, the first defrost will be delayed for this time.	The Wing series can support up to 2 free contact digital inputs. One is always configured
FAN		as door switch, the second is programmable in seven different configurations by the "I2F" parameter.
FNC	Fan operating mode: C-n = running with the compressor, OFF during the defrost;	DOOR SWITCH INPUT
	C-y = running with the compressor, ON during the defrost; O-n = continuous mode, OFF during the defrost;	It signals the door status and the corresponding relay output status through the "odc"
End	O-y = continuous mode, ON during the defrost; Fan delay after defrost: (0+255 min) The time interval between the defrost end	parameter: no = normal (any change);
	and evaporator fans start.	Fan = Fan OFF; CPr = Compressor OFF;
FSt	Fan stop temperature: (-50÷110°C; -58÷230°F) setting of temperature, detected by evaporator probe, above which the fan is always OFF.	F_C = Compressor and fan OFF.
ALA		Since the door is opened, after the delay time set through parameter "dOA", the alarm output is enabled and the display shows the message "dA". The alarm stops as soon as
ALC	Temperature alarm configuration rE = High and Low alarms related to Set Point	the external digital input is disabled again. During this time and then for the delay "dot" after closing the door, the high and low temperature alarms are disabled.
ΔΗΗ	Ab = High and low alarms related to the absolute temperature. High temperature alarm setting: ($ALC=rE$, $0 \div 50^{\circ}C$ or $90^{\circ}F$; $ALC=Ab$, ALL	
/ILO	÷ 110°C or 230°F)	CONFIGURABLE INPUT - GENERIC ALARM (EAL) As soon as the digital input is activated the unit will wait for "did" time delay before
	when this temperature is reached and after the ALd delay time the HA alarm is enabled.	signalling the "EAL" alarm message. The outputs status don't change. The alarm stops
ALL	Low temperature alarm setting: (ALC = rE , 0 + 50 °C or 90°F; ALC = Ab , - 50°C or -58°F + ALU)	just after the digital input is de-activated.
	when this temperature is reached and after the ALd delay time, the LA alarm is	CONFIGURABLE INPUT - SERIOUS ALARM MODE (BAL) When the digital input is activated, the unit will wait for 'did' delay before signalling the
AFH	enabled,. Temperature alarm and fan differential: (0,1÷25,5°C; 1÷45°F) Intervention	"BAL" alarm message. The relay outputs are switched OFF. The alarm will stop as soon
	differential for temperature alarm set point and fan regulation set point, always positive.	as the digital input is de-activated.
ALd	Temperature alarm delay: (0÷255 min) time interval between the detection of an	CONFIGURABLE INPUT - PRESSURE SWITCH (PAL)
dAO	alarm condition and the corresponding alarm signalling. Delay of temperature alarm at start-up: (0min÷23h 50min) time interval between	If during the interval time set by "did" parameter, the pressure switch has reached the number of activation of the "nPS" parameter, the "PAL" pressure alarm message will be
	the detection of the temperature alarm condition after the instrument power on and the alarm signalling.	displayed. The compressor and the regulation are stopped. When the digital input is ON the compressor is always OFF.
EdA	Alarm delay at the end of defrost: (0+255 min) Time interval between the	
	detection of the temperature alarm condition at the end of defrost and the alarm signalling.	CONFIGURABLE INPUT - START DEFROST (DFR) It executes a defrost if there are the right conditions. After the defrost is finished, the
dot	Delay of temperature alarm after closing the door : (0+255 min) Time delay to signal the temperature alarm condition after closing the door.	normal regulation will restart only if the digital input is disabled otherwise the instrument
doA	Open door alarm delay:(0+254min,nu) delay between the detection of the open	will wait until the "Mdf" safety time is expired.
	door condition and its alarm signalling: the flashing message "dA" is displayed. If doA=nu the door alarm will be not signalled.	

CONFIGURABLE INPUT - ENERGY SAVING (ES) The Energy Saving function allows to change the set point value as the result of the SET+ HES (parameter) sum. This function is enabled until the digital input is activated.

CONFIGURABLE INPUT - REMOTE ON/OFF (ONF)

This function allows to switch ON and OFF the instrument.

DIGITAL INPUTS POLARITY

- The digital inputs polarity depends on "I1P" and "I2P" parameters.
- CL : the digital input is activated by closing the contact. OP : the digital input is activated by opening the contact

ANALOGUE OUTPUT 4÷20 mA (OPTIONAL)

The analogue output is obtained through a 4+20mA signal proportional to the input selected in parameter "CAO". Through the analogue output the speed of fans can be regulated according to the input variable.

- The following input types can be selected through the "CAO" parameter: "CAO" = P1 room temperature
 - "CAO" = P2evaporator temperature
 - "CAO" = P3 third probe temperature
 - "CAO" = 1r2 room temperature - evaporator temperature

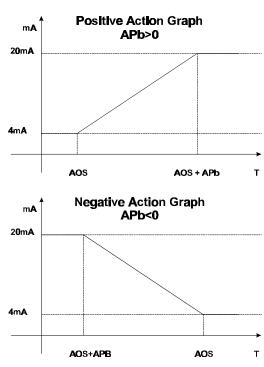
To adjust the analogue output the following parameters are available:

"AOS" = Start point for analogue output $"\ensuremath{\textbf{APb}}"$ = Band width for analogue output can be either positive (direct action) and

negative

(inverse action)

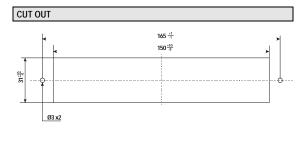
Named T the input, the relationship input-output is given by the following charts



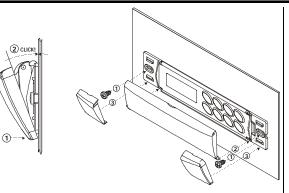
 $\ensuremath{\mathsf{NOTE}}$: When the defrost is in progress, the analogue output is set to the minimum value (4 mA). This condition lasts until the defrost terminates.

INSTALLATION AND MOUNTING

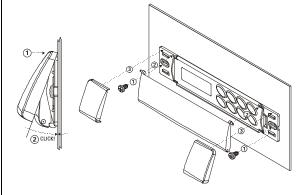
Instruments XW264L shall be mounted on vertical panel, in a 150x31 mm hole, and fixed using two screws Ø 3 x 2mm. To obtain an IP65 protection grade use the front panel rubber gasket (mod. RG-L). The temperature range allowed for correct operation is - 60 °C. Avoid places subject to strong vibrations, corrosive gases, excessive dirt or humidity. The same recommendations apply to probes. Let the air circulate by the cooling holes.



MOUNTING WITH KEYBOARD COVER OPENING DOWNWARD



MOUNTING WITH KEYBOARD COVER OPENING UPWARD



ELECTRICAL CONNECTIONS

The instruments are provided with screw terminal block to connect cables with a cross section up to 2,5 mm² for the digital and analogue 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's 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, in case of heavier loads use a suitable external relay. N.B. Maximum current allowed for all the loads is 20A.

PROBE CONNECTIONS

The probes 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. Place the defrost termination probes among the evaporators fins in the coldest places, where most ice is formed, far from heaters or from the warmest place during defrost, to prevent premature defrost termination.

TTL SERIAL LINE

The TTL connector allows, by means of the external module TTL/RS485, to connect the unit to a network line ModBUS-RTU compatible as the dIXEL monitoring system XJ500 (Version 3.0).

The same TTL connector is used to upload and download the parameter list of the "HOT KEY". These instruments can be ordered with direct serial output RS485 (Optional).

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.

DOWNLOAD (FROM THE "HOT KEY" TO THE INSTRUMENT)

- Turn OFF the instrument by means of the ON/OFF key, remove the TTL serial cable if present, insert the "Hot Key" and then turn the Wing ON.
- Automatically the parameter list of the "Hot Key" is downloaded into the Wing memory, the "DoL" message is blinking. After 10 seconds the instrument will restart working with the new parameters
- Turn OFF the instrument remove the "Hot Key", plug in the TTL serial cable, then turn it ON again.

At the end of the data transfer phase the instrument displays the following messages: "end " for right programming. The instrument starts regularly with the new programming. "err" 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.

UPLOAD (FROM THE INSTRUMENT TO THE "HOT KEY")

- Turn OFF the instrument by means of the ON/OFF key and remove the TTL serial cable if present; then turn it ON again.
- When the Wing unit is ON, insert the "Hot key" and push $\stackrel{>}{\ominus}$ key; the "uPL" message appears Push "SET" key to start the UPLOAD; the "uPL" message is blinking.
- Turn OFF the instrument remove the "Hot Key", plug in the TTL serial cable, then turn it ON again.
- At the end of the data transfer phase the instrument displays the following messages: "end " for right programming.

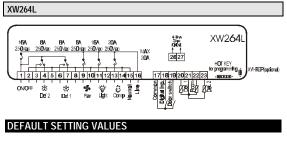
"err" for failed programming. In this case push "SET" key if you want to restart the programming again or remove the not programmed "Hot key".

Message		
	Cause	Outputs
"P1"	Thermostat probe failure	Alarm output ON; Compressor output accordin
		to parameters "COn" and "COF"
"P2"	1st Evaporator probe	Alarm output ON; Other outputs unchanged
D2	failure	Alexes as the st ON
"P3"	2 nd Evaporator probe	Alarm output ON;
"HA"	failure Max tomporature clarm	Other outputs unchanged Alarm output ON; Other outputs unchanged
	Max. temperature alarm	
"LA"	Min. temperature alarm	Alarm output ON; Other outputs unchanged
"EE"	Data or memory failure	Alarm output ON; Other outputs unchanged
"dA"	Defrost timeout alarm	Alarm output ON; Other outputs unchanged
"dAL"	Door switch alarm	Alarm output ON; Other outputs unchanged
"EAL"	External alarm	Alarm output ON; Other outputs unchanged
"BAL"	Serious external alarm	Alarm output ON; Other outputs OFF
"PAL"	Pressure switch alarm	Alarm output ON; Other outputs OFF ne alarm condition is recovery.
"P1" which To reset t	n is flashing.	ernating with the room temperature except for th the normal functioning press any key, the " rS
	NG BUZZER	
		uzzer can be silenced by pressing any key
Unce the a	alarm signal is delected the b	uzzer can be silenced by pressing any key.
"EE" AL	ΛDM	
The dixe	L instruments are provided	with an internal check for the data integrity. Alar
		ory data occurs. In such cases the alarm output
enabled.		
AI ARM I	RECOVERY	
Droho olor	man . "D1" (mach a1 fault) "D	2" and "P3"; they automatically stop 10s after th
temperatu	re returns to normal values o	
temperatu Door swito External a	re returns to normal values o h alarm "dA" stop as soon a larms "EAL", "BAL" stop a	automatically stop as soon as the thermost r when the defrost starts. is the door is closed. as soon as the external digital input is disable
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Installing and Operating Instructions

Communication protocol: Modbus - RTU Data storing: on the non-volatile memory (EEPROM). Kind of action: 18 Pollution grade: normal Software class: A. Operating temperature: 0+60 °C. Storage temperature: -25+60 °C. Relative humidity: 20+85% (no condensing) Measuring and regulation range: NTC probe: -40+110°C (-58+230°F) Resolution: 0,1 °C or 1 °C or 1 °F (selectable). Accuracy (ambient temp. 25°C): ±0,5 °C ±1 digit

CONNECTIONS



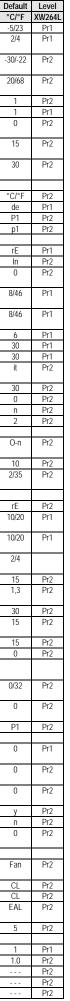
Label Name	Range	Default	Level	

REGULATION °C/°F XW264L Set Set point -5/23 0,1÷25,5 °(1÷45°F 2/4 IS Minimum set point -50,0°C÷SE 30/-22 -58°F÷SET Maximum set point SET ÷ 110°C SET ÷ 230°F US 20/68 OdS Outputs activation delay at start up 0÷255 min. AC Anti-short cycle delay 0÷30 min. 1 Compressor ON time during fas 0 ÷ 23h 50 min. CCt 0 eezing COn Compressor ON time with fault 0÷255 min 15 robe COF 0÷255 min Compressor OFF time with fault 30 DISPLAY CF Temperature measurement unit rES Resolution (integer/decimal point) in ÷ de de Pr1 Lod Local display P1 ÷ 1r2 P1 Red Remote display P1 ÷ 1r2 p1 Pr2 DEFROST dF Defrost type rE, rT, in rΕ EdF Defrost mode In, Sd In Set point for SMART DEFROST SdF -30 ÷ +30°0 0 22∸+86°F dtF Defrost termination temperatur -50.0÷110°(8/46 (1°Evaporator) -58÷230°F dtS -50.0÷110°C Defrost termination temperatur 8/46 (2°Evaporator) -58÷230°F IdF Interval between defrost cycles 1÷120h 6 MdF (Maximum) length for 1° defrost 0.-255 min 30 MdS (Maximum) length for 2° defrost $0 \pm 255 \text{ min}$ 30 dFd Displaying during defrost rt, it, SEt dEF, dEG dAd MAX display delay after defr 0÷255 min 30 Fdt Draining time 0÷60 min 0 dPO First defrost after start up n ÷ y n dAF Defrost delay after fast freezing 0 ÷ 23h 50 mir 2 FANS FnC Fans operating mode C-n, C-y O-n 0-n, 0-y Fnd Fans delay after defrost 0÷255 min. 10 2/35 -50,0÷110°0 St Fans stop temperature -58÷230°F ALARMS ALC Temperature alarms configuration rF÷Ab rF ALLI MAXIMUM temperature alarm -50 0÷110°0 10/20 -58÷230°F ALL minimum temperature alarm -50,0÷110°(10/20 -58-230°F AFH Temperature alarm and fai 0,1÷25,5 °C 2/4 1÷45°F lifferential ALd Temperature alarm delay 0÷255 min. 15 dAO 0 ÷ 23h 50 mir Delay of temperature alarm at sta 1.3 EdA Alarm delay at the end of defrost 0÷255 min 30 dot Delay of temperature alarm after 0÷255 min 15 closing the door dOA Open door alarm delay 0÷254 min.,nu 15 0÷15 ation numbe ANALOGUE OUTPUT 4÷20mA (Optional) AOS Analogue output start point -50.0÷110°C 0/32 58÷230°F APb Analogue output band width 50,0÷110°0 0 -58÷230°F CAO Input type for the analogue output P1÷1r2 P1 ANALOGUE INPUTS -12.0÷12.0°C hermostat probe calibration -21÷21°F st evaporator probe calibratior -12,0÷12,0° -21 - 21°F 2nd evaporator probe calibration -12.0÷12.0°C 03 0 -21÷21°F P2P 1st evaporator probe presence n ÷ y V P3P 2nd evaporator probe presence n ÷ y n HES Femperature increase during -30÷30° 0 ergy Saving cycl 22÷86°F DIGITAL INPUTS Odc Open door control no, Fan, Fan CPr, F_C I1P Door switch polarity CL÷OP CL I2P Configurable digital input polarity CL ÷OP CL Digital input configuration EAL, bAL, PAL EAL dFr. AUS. ES. On dld Digital input alarm delay 0÷255 min. 5 OTHER Adr 0÷247 Serial address 1.0 Software release Ptb Map code Pb1÷Pb3 Prd Probes display Pr2 Access parameter list

Range

Label Name

rel.1.0 19/02/01 - cod. 1592009050



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