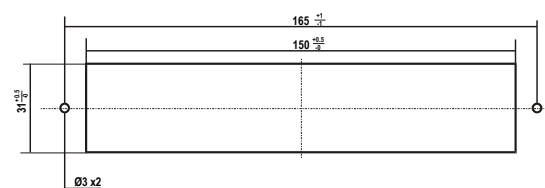
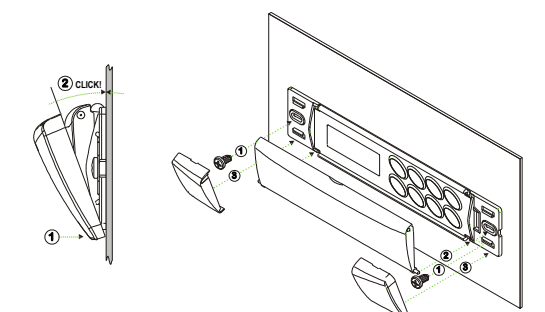


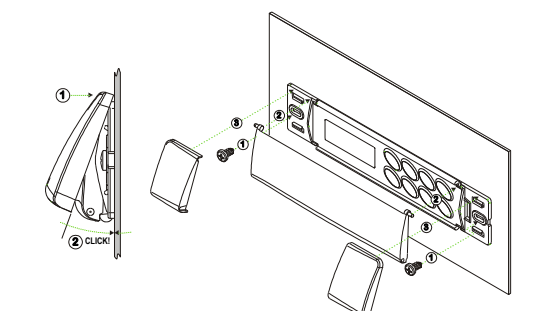
7.1 T820 CUT OUT



7.2 MOUNTING WITH KEYBOARD COVER OPENING DOWNWARD



7.3 MOUNTING WITH KEYBOARD COVER OPENING UPWARD



8. ELECTRICAL CONNECTIONS

XW230K is provided with screw terminal blocks to connect cables with a cross section up to 2,5 mm² for the RS485(optional) and the keyboard. Connecting other inputs, power supply and relays, **XW230K** is provided with 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.

8.1 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.

9. TTL/RS485 SERIAL LINE

The TTL connector allows, by means of the external module TTL/RS485 (XJ485), to connect the unit to a network line ModBUS-RTU compatible as the Dixell monitoring system XJ500 (Version 3.0). The same TTL connector is used to upload and download the parameter list of the "HOT KEY". The instruments can be ordered with the serial output RS485(Optional).

10. 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.

10.1 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.

10.2 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 \blacktriangle 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".

11. ALARM SIGNALS

Message	Cause	Outputs
"P1"	Thermostat probe failure	Alarm output ON; Compressor output according to parameters "CO" and "COF"
"P3"	Auxiliary probe failure	Alarm output ON; Other outputs unchanged
"HA"	Maximum temperature alarm	Alarm output ON; Other outputs unchanged
"LA"	Minimum temperature alarm	Alarm output ON; Other outputs unchanged
"EE"	Data or memory failure	Alarm output ON; Other outputs unchanged
"dA"	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

The alarm message is displayed until the alarm condition is recovery. All the alarm messages are showed alternating with the room temperature except for the "P1" which is flashing.
 To reset the "EE" alarm and restart the normal functioning press any key, the "rSt" message is displayed for about 3s.

11.1 SILENCING BUZZER / ALARM RELAY OUTPUT

If "tbA = y", once the alarm signal is detected the buzzer and the relay are silenced by pressing any key.
 If "tbA = n", only the buzzer is silenced while the alarm relay is on until the alarm condition recovers.
 Buzzer is mounted in the T820 keyboard and it is an option.

11.2 "EE" ALARM

The Dixell instruments are provided with an internal check for the data integrity. Alarm "EE" flashes when a failure in the memory data occurs. In such cases the alarm output is enabled.

11.3 ALARM RECOVERY

Probe alarms "P1" (probe1 faulty), and "P3"; they automatically stop 10s after the probe restarts normal operation. Check connections before replacing the probe. Temperature alarms "HA" and "LA" automatically stop as soon as the thermostat temperature returns to normal values or when the defrost starts. Door switch alarm "dA" stop as soon as the door is closed. External alarms "EAL", "BAL" stop as soon as the external digital input is disabled "PAL" alarm is recovered by switching OFF the instrument.

12. TECHNICAL DATA

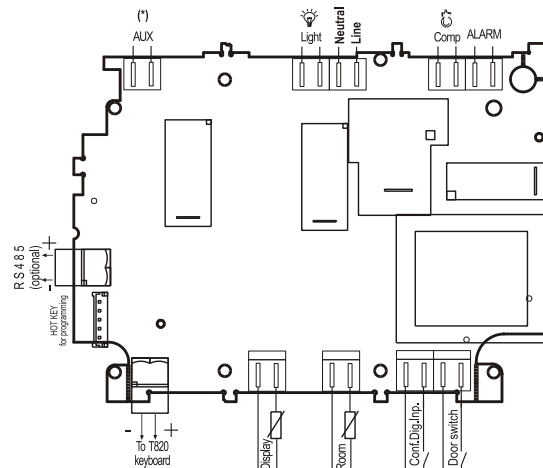
T820 keyboard
Housing: self extinguishing ABS.
Case: facia 30x185 mm; depth 23mm
Mounting:
 panel mounting in a 150x31 mm panel cut-out with two screws. \varnothing 3 x 2mm.
 Distance between the holes 165mm
Protection: IP20.
Frontal protection: IP65 with frontal gasket mod RG-L. (optional)
Connections: Screw terminal block \leq 2,5 mm² heat-resistant wiring and 6,3mm
Power supply: from XW230K power module
Display: 3 digits, red LED, 14,2 mm high.
Optional output: buzzer

Power module XW230K

Case:
 "OS": open board 132x 94 mm; height: 40mm.
 "OA": open board with aluminium protection 176x 123mm; height: 52mm.
 "GS": case 155x114; height 70mm. Self extinguishing ABS. IP55
 "PS": case 147x110; height 47mm. Self extinguishing ABS. IP55. UL approved
Connections: Screw terminal block \leq 2,5 mm² heat-resistant wiring and 6,3mm Faston
Power supply: 230Vac or. 110Vac \pm 10%
Power absorption: 10VA max.
Inputs: 2 NTC probes
Digital inputs: 2 free voltage
Relay outputs: Total current on loads MAX. 20A
compressor: relay SPST 20(8) A, 250Vac
light: relay SPST 16(3) A, 250Vac
alarm: SPST relay 8(3) A, 250Vac
auxiliary: SPST relay 16(3) A, 250Vac
Serial output: TTL standard. RS485 optional
Communication protocol: Modbus - RTU
Data storing: on the non-volatile memory (EEPROM).
Kind of action: 1B.
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): \pm 0,5 °C \pm 1 digit

13. CONNECTIONS

13.1 XW230K



T820 Keyboard



To XW230K

Connector number	Description	Connector number	Description
HOT KEY	Hot key for programming	9 - 10	Door switch
RS485 (Optional)	RS485 direct output	11 - 12	Alarm relay
KEY (+)	+ : connection for keyboard	13 - 14	Compressor relay
KEY (-)	- : connection for keyboard	15	Phase
1 - 2	Display probe	16	Neutral
5 - 6	Room probe	17 - 18	Light relay
7 - 8	Configurable digital input	18 - 19	Auxiliary relay

14. DEFAULT SETTING VALUES

Label	Name	Range	Default	Level
REGULATION				
Set	Set point	LS+US	3/37	Pr1
Hy	Differential	0,1+25,5 °C / 1+45°F	2/4	Pr1
LS	Minimum set point	-50,0°C+SET / -58°F+SET	-10/18	Pr2
US	Maximum set point	SET + 110°C / SET + 230°F	20/68	Pr2
OdS	Outputs activation delay at start up	0+255 min.	1	Pr2
AC	Anti-short cycle delay	0+30 min.	1	Pr1
CCt	Compressor ON time during fast freezing	0 + 23h 50 min.	0	Pr2
CO	Compressor ON time with faulty probe	0+255 min.	15	Pr2
COF	Compressor OFF time with faulty probe	0+255 min.	30	Pr2
DISPLAY				
CF	Temperature measurement unit	°C + °F	°C/°F	Pr2
rES	Resolution (integer/decimal point)	in + de	De	Pr1
Red	Remote display	P1 + 1r2	P1	Pr2
DEFROST				
EdF	Defrost mode	In, Sd	In	Pr2
ldF	Interval between defrost cycles	1+120h	8	Pr1
MdF	(Maximum) length for 1° defrost	0+255 min.	20	Pr1
dFd	Displaying during defrost	rt, it, SET, dEF, dEG	it	Pr2
dAd	MAX display delay after defrost	0+255 min.	30	Pr2
dPO	First defrost after start up	n + y	N	Pr2
dAF	Defrost delay after fast freezing	0 + 23h 50 min.	2	Pr2
ALARMS				
ALC	Temperature alarms configuration	rE+Ab	rE	Pr2
ALU	MAXIMUM temperature alarm	-50,0+110°C/ -58+230°F	10/20	Pr1
ALL	minimum temperature alarm	-50,0+110°C/ -58+230°F	10/20	Pr1
AFH	Temperature alarm and fan differential	0,1+25,5 °C / 1+45°F	2/4	Pr2
AlD	Temperature alarm delay	0+255 min.	15	Pr2
dAO	Delay of temperature alarm at start up	0 + 23h 50 min.	1,3	Pr2
EdA	Alarm delay at the end of defrost	0+255 min.	30	Pr2
dot	Delay of temperature alarm after closing the door	0+255 min.	15	Pr2
dOA	Open door alarm delay	0+255 min.	15	Pr2
tBA	Alarm relay silencing	y + n	Y	Pr2
nPS	Pressure switch activation number	0+15	0	Pr2
ANALOGUE INPUTS				
Ot	Thermostat probe calibration	-12,0+12,0°C / -21+21°F	0	Pr1
O3	Auxiliary probe calibration	-12,0+12,0°C / -21+21°F	0	Pr2
P3P	Auxiliary probe presence	n + y	N	Pr2
HES	Temperature increase during the Energy Saving cycle	-30+30°C / -22+86°F	0	Pr2
DIGITAL INPUTS				
Odc	Open door control	no, Fan, CPr, F_C	Fan	Pr2
I1P	Door switch polarity	CL+OP	CL	Pr2
I2P	Configurable digital input polarity	CL+OP	CL	Pr2
I2F	Digital input configuration	EAL, bAL, PAL, dFr, AUS, ES, OnF	EAL	Pr2
dId	Digital input alarm delay	0+255 min.	5	Pr2
OTHER				
Adr	Serial address	0+247	1	Pr1
rEL	Software release	---	1.0	Pr2
Ptb	Map code	---	---	Pr2
Prd	Probes display	Pb1+Pb3	---	Pr2
Pr2	Access parameter list	---	---	Pr2

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