1、Description

EN-301/EN-301Shas user menu and administrator menu. User menu is used to adjust the temperature .The administrator menu will be only active with the correct password , it can help the user avoid to operating the controller mistake.The controller range is particularly suitable for controlling refrigerating equipment, wall units, islands, cabinets, electrical panels, etc.

EN-301/EN-301S has 1 sensor for the room and with 17A(max)relay to control the compressor; it has a very big display screen with the compressor and defrost indicator light which help the user check the status of the refrigeration units easily.

Four touch key design, quick parameter setting , easy operation.(Only Touch Model)

2、User interfac

Install size: 71mm*29mm Controller size: 78.5*34.5mm*74mm(78.5*34.5mm*41mm)

3、Technical Parameters

power supply：230 Vac ±10% (50/60 Hz)
Maximum load current：COMP:17A/240VAC
Operation conditions：-10℃～55℃ 20%～85% (not condensing)
Storage conditions：-25℃～75℃
Probe wire length：2M
Temperature controlling range：-49℃～119℃ or -58℉～248℉

Display resolution：0.1℃ 1℃or 1℉
Accuracy：±1℃(-20℃～30℃)，±2℃(51℃～70℃)，others±3℃
or±2℉(-40℉～122℉),±4℉(123℉～158℉), others±6℉
Probe type：NTC(10KΩ/25℃，B value 3435K)
PTC(KTY81-120)

4、Display panel and LED

Light	Symbol	state	Meaning
Set light	set	Permanently on	Parameter setting
		off	Status of temperature measuring and controlling
Compressor light	❄	Permanently on	Compressor active
		off	Compressor turn off
		Flashing	A delay
Defrost light	❄	Permanently on	Defrost active
		off	Defrost turn off

5、Operation

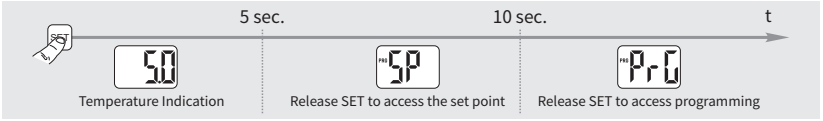
SET | key
Press for 5 seconds to modify the set point (SP).
Press for 10 seconds to go to the programming menu.
In the programming menu, go to the level displayed or accept the new value while setting a parameter.

❄ | key
Pressing for 5 seconds starts/stops defrosting.
In programming menu, allows you to scroll through the various levels or, during the setting of a parameter, to change the value.

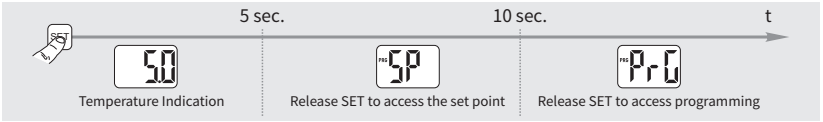
⏻ | key
Pressing for 5 seconds activates Standby mode, pressing for 2 seconds returns the equipment to normal mode. In Standby mode, the equipment performs no actions and only the m indicator is displayed on the screen.
In programming menu, allows you to scroll through the various levels or, during the setting of a parameter, to change the value.

↩ | key
In the programming menu, exit and saving parameter, return to previous level or exit programming.

5.1-Access to set point and programming
To change the set point ,press the SET button for 5 seconds, or until the “sp” is displayed on the screen.



5.2-Setting parameters
To access the programming menu,prss the SET button for 10 seconds, or until the “PRG” appears on the screen.



notes:If the access code function has been set as keypad lock (P2=2),or as parameter access block(P2=1),when trying to access either of the two functions, users will be prompted to enter the access code programmed in L5.If the code entered is not correct, the unit will revert to displaying the temperature.

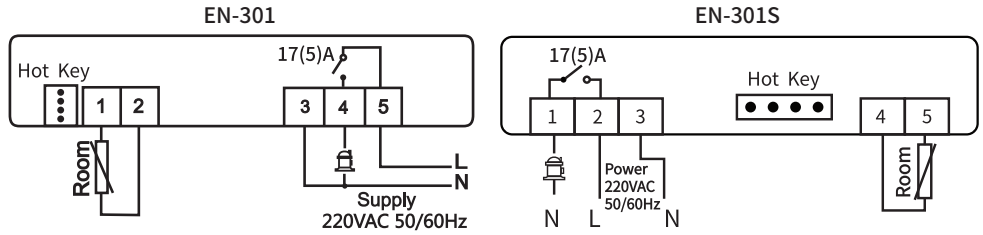
6、Parameters

Code	Description	Range	Def.	Values
	Parameter rE			
SP	Temperature Adjustment (Set Point)	NTC:-50.0~99.9℃/-58.0F~210F PTC:-50.0~150℃/-58.0F~302F	*	℃/℉
C0	Calibrating probe 1 (Offset)	-20.0~20.0	0.0	℃/℉
C1	Probe 1 differential (Histeresis)	0.1~20.0	2.0	℃/℉
C2	Upper blocking of the set point (cannot be set above this value)	NTC:C3~99.9/210F PTC：C3~150/302F	99.9 (210F)	
C3	Lower blocking of the set point (cannot be set below this value)	-50.0 (-58F) ~C2	-50.0(-58F)	
C4	Type of delay for protection of the compressor 0=OFF/ON (since the last disconnection);1=OFF-ON/ON-OFF (since the last shut-down /start-up)	0-1	0	
C5	Protection delay time (value of the option selected in parameter C4)	0-120	0	min
C6	Status of COOL relay with probe fault: 0=OFF; 1=ON; 2=Average based on last 24 hours prior to probe fault; 3=ON-OFF as prog. C7 and C8	0-2	2	
C7	Time relay ON in case of faulty probe: (If C7=0 and C8¹0, the relay will always be OFF deenergised)	0-120	10	min
C8	Time relay OFF in case of fault of probe 1: (If C8=0 y C7¹0, the relay will always be ON energised)	0-120	5	min
EP	Exit to Level 1			

6、Parametes table

Parameter DEF				
d0	Defrost frequency (Time between two starts)	0-96	6	hour
d1	Maximum defrost duration (0=defrost deactivated)	0~255	30	min
d2	Type of message during defrost: 0=Current temperature; 1=Temperature at start of defrost; 2=Display dEF message	0/1/2	2	/
d3	Maximum duration of message (time added at the end of the defrost)	0~59	0	min
d8	Calculated time between defrost period : 0=Total actual time; 1 =Sum of times the compressor is on	0~1	0	
EP	Exit to Level 1			
Parameter CnF				
P0	Type of operation 0=Direct, Cold;1=Inverted, Heat	0-1	0	
P1	Delay of all functions on receiving electrical power	0-255	0	min
P2	Access code (password) functions: 0=Inactive; 1=Block access to parameters; 2=Keyboard lock	0-2	0	
P5	Address (only systems with built-in communications)	1-255	1	
P7	Temperature display mode 0= Integer °C 1=One decimal in °C 2=Integer °F 3=One decimal in °F	0-3	1	
P9	Selection of probe type 0=NTC; 1=PTC	0-1	0	
EP	Exit to Level 1			
Parameter tid				
L5	Access code (Password)	0-99	0	
PU	Program version (Information)	-	-	
Pr	Program version (Information)	-	-	
EP	Exit to Level 1			

7、Wiring Diagram



8、Appendix 1 Character Set: