NA3546 Users' guide for Milk cans controller

(V2.12)

Main function and logical control

This controller is the dedicated one,which control two compressors, a mixer and a milk pump, and you can choose one compressor or use two compressors at the same time.compressor overload and deficient-phase protection,and one external warning signals,which can switch mixer. The logical control are as follows:

1、**Temperature Control**：when the temperature in milk cans is upper the temperature limit, it start cooling until the temperature is allow in.

2、**compresso**r: open the mixer before cooling. The compressor can't be open until 30 seconds.you can set one compressor and two compressors one time. When two compressors work together, the system will not make sure the two compressors start at the same time, instead, it will start one for the first time, and start another after 1 minute. In addition, compressors got the function of delayed protection, and ensure its open after 3 minutes with downtime.

3、**mixer**：the mixer will be always working when cooling, and keep its state after stopping cooling until the set time arrived. It works according to the set mixing interval and its time in normal state.

4、**Manual mixing function**：Under non-controlling state, press "power" for 5 seconds, you can switch mixer. After switch mixer by hand, it still switch on time according to the set mixing interval and its time. Under the cooling, the mixer keeps working, and has nothing to do with the manual switch.

5、**Milky pump**：press "switch"can start up or shut down the milky pump. It will be closed under wrongly operation.

6、**Overload and dificient-phase protection**:when there is something wrong with the power source, please shut down the compressor ,and milky pump immediately and show the warning system. .

7、**External alarm**： provide one signal for the external alarm, it can be set unlocked, always locked, always closed, closed or Prohibited .when the external alarm is effective , please shut down the compressor immediately , the light blinks and its external alarm doesn't influence the milky pump.

Technical Index

Temperature display range: -50～125° C（the unit is 0.1° C）

Temperature setting range: 0～10° C

Power supply: 380V±10%

Operation Environment: temperature -10℃～45℃,humidity≤85%

Relay contact capability:1A/380VAC (Pure resistive load)

Temperature sensor: NTCR25=5kΩ, B(25/50)=3470K

Executive standard:Q/320585 XYK 01 (NA3546-CTX)

Operating Guide

Meaning of the digital tube display

The digital tube usually displays temperature, if it shows “SHr”, it means the temperature sensor is short, and PE”means the temperature sensor is in disconnection..

How to set the upper limit and lower limit temperature?

Press the key “set”and hold it for at least 2 seconds, the Micro-controller displays temperature that is“upper limit”, also “Upper limit”LED lights, then using the key “?”or “?”can adjust the parameter.After setting, press “set”, then enter the “lower limit”, using the key“?”or “?”can adjust the parameter,press the key “set”, press the key “set”again, then exit the state of setting parameter.（the key“?”adds 0.1?C,thekey“?”minuses0.1?C,press and hold it over 0.5 seconds can add orminusrapidly）

How to choose the using quantitiy of compressors?

The same as above, press the “power” key after setting the “lower limit”, then exit the state of compressors quantity, press”up or down” to select the quantity.“1”stands for setting the first one，“2”stands for the second one，“12”means setting 2 compressors.

How to start up and shut down the mixer by hand?

Under non-controlling state, press“power”for 5 seconds, you can switch mixer. After switch mixer by hand, it still switch on time according to the set mixing interval and its time. Under the cooling, the mixer keeps working, and has nothing to do with the manual switch.

How to use external alarm?

The controller provide a series of switching as external alarm, which can be set 5 modes: unlocked, always locked, always closed, closed or Prohibited . “Always open” means that when external alarm is open-circuit state , the closed state will alarm. “Always closed” is on the contrary. “locked” means that when external alarm is in normal state, the controller is still in alarming, and there is need to press “power” to restore. When its external alarms, the controller will close the compressor and mixer at once. The “wrong signal” blinks, and you can check the reason according to the switching .If it’s “locked”, press “restore” to settle the problem.

Advanced operation

Use the code to enter the state of Advanced setting， the code is “up-down-up-down-up-up-down”.In the state of showing current temperature, press”” continuously and it must be finished within 1second，if the code is right, you can enter the state of parameter setting if your code is right. At the same time, the digital shows the parameter. You can choose the parameter code by pressing “”. Pressing“set”key can make it to show the value of the parameter, and you can set the parameter by pressing “or”,then press the “set” key to return to the state of showing parameter code.（Notice：The parameter which has been changed can be only preserved after returning to the state of“Fxx”by pressingthe key “set”）

Internal parameter codeis are as follows:

Sort	code	Parameter Name	Range	Factory Setting	unit	Remark
Temperature	F19	Temperature Correction	--10---+10	0	C	Correct temperature probe error
Compressor	F21	Compressor delay time	0---10	3	minute	
Mixer	F31	Intervals	0.5---100	15.0	minute	
	F32	Mixing time	0.5---100	5.0	minute	
alarm	F50	External alarm mode*	0---4	0	--	0:no external alarm 1:always opern; unlocked 2: always open, locked 3:always closed,unlocked 4: always closed，
Testing	F91	Factory preserved				
	F92					
	F98					
	F99	Self-testing	The function will suck all relay by turn. Online use is strictly prohibited			
	End					

Wiring Diagram: