Changzhou Xionghua Tongtai Automation Equipment Co., Ltd

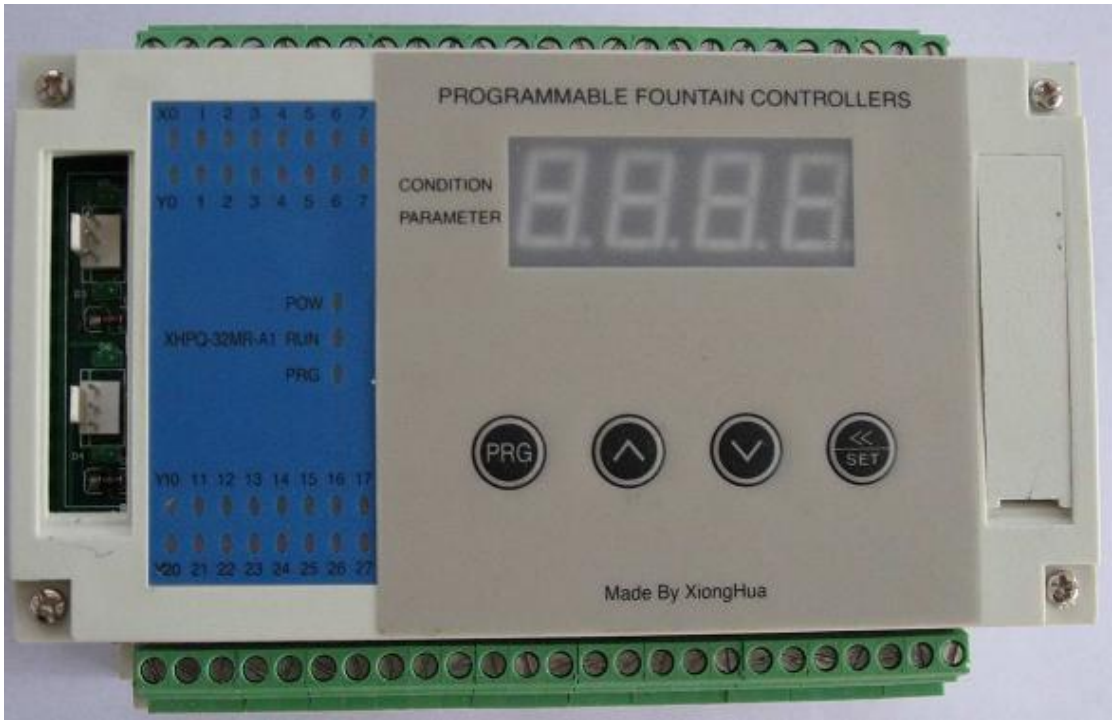
User's Guide
Multichannel Temperature Controller
XHWK-4/8/12

Feature

- With high-performance single monitoring chip ensuring the accuracy and the stability
- Can connect with multichannel sensor
- Realize multiple control for one environment or independently monitor and control several environments
- Includes 3 types(4 channels,8 channels and 12 channels)
- Display the monitoring temperature values of 12 channels(Max.12 channels)
- Control type ： P.I.D auto tuning / ON/OFF
- The function of computer communication
- Dimension ： Width 110mm, height 110mm, length 156mm
- Power supply ： 220VAC 50/60Hz
- Input ： PT100/Thermocouple
- Output ： 12VDC ±2V max.30mA
- Communication ： RS232
- Button setting ： Use the push-button to set

Structure and Specifications

Operation panel

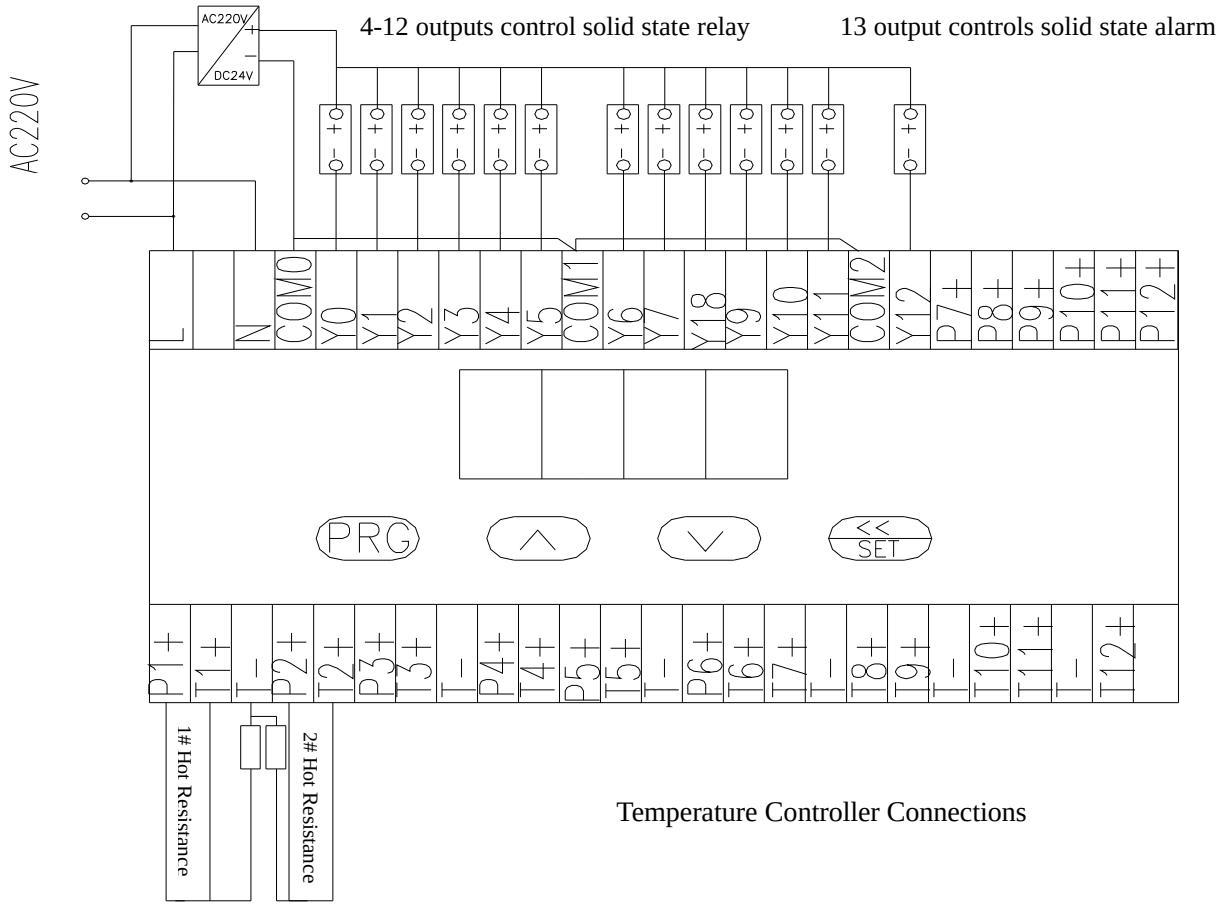


4-digital display: show the monitoring temperature
PRG : select the set modes
SET :move the setting cursor / confirm the setting
Press for 1.5s: enter or exit the setting status
Press once : move the setting cursor to next digit.
Increment ∧ and decrement ∨ : set up/down “1”, if press and hold, the date will continuously increase or decrease.

Parameter table

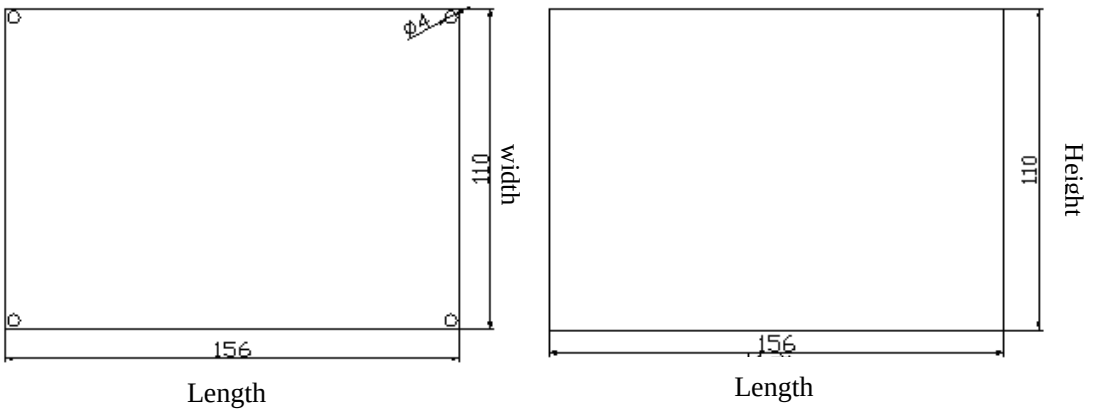
Model	XHWK-4 4-channel	XHWK-8 8-channel	XHWK-12 12-channel
Dimension	Width 110mm, height 110mm, length 156mm		
Power supply	220VAC 50/60Hz		
Display	Temperature display range 0-999 degrees Measured values (PV) is red color		
Input Sensor	1.K type 2.J type metallic thermocouple 3.PT100 platinum resistance（3-wire）		
Control type	1. ON/OFF upper and lower limit control 2. Manual set the output power（equipped with the voltage output module） 3.PID control		
Output	Transistor/NPN collector/12VDC ±2V /max.30mA		
Communication	RS232 、RS485、MODBUS-RTU standard protocol		
Display accuracy	± 0.3% on the basic of SV values		
Button Setting	Use the push-button to set		
Alarm Type	Digital display over temperature warning		

Terminal Diagram



Temperature Controller Connections

Dimensions and installation



Installation type: Din-rail mounted or bottom plate fixed by screw

Program setting table

Function mode	Function	Set value	Instruction
Cd00	PID self-tuning set	101~112	1-12 channel shelf tune separately in order
Cd01-12	1-12channel temperature set	0-999.9 度 0-999.9 degrees	Set temperature separately in order
Cd13	Temperature over-deviation	5.0 degrees	Alarm for over 5 degrees
Cd14	PID work range	30.0 30.0	The output is 100% out of the range
Cd15	Temperature over-deviation	2.0 degrees	Shut down
Cd16			
Cd17	Integral range	10.0 degrees	
Cd20	Start up PID	0-100 0-100	Set the output power
Cd21	Display minimum	0	0-11 actual temperature 12-23 setting temperature
Cd22		23	
Cd23	Circularly display time	3.0s	Circularly display 12-channel temperature
Cd24	Temperature display type	0 follows one decimal 1 follows nothing	
Cd27	proportionality Coefficient	36	Cd0=5 Modify the coefficient of the group
Cd28	Integral time	80s	Cd0=5 Modify the time of the group
Cd29	Differential time	10s	Cd0=5 Modify the differential time of the group
Cd31-Cd66	PID use		
Cd31	proportionality coefficient	36	
Cd32	Integral time	80s	
Cd33	Differential time	10s	
Cd34	proportionality coefficient	36	
Cd35	Integral time 2	80s	
Cd36	Differential time 2	10s	
Cd37	proportionality coefficient	36	
Cd38	Integral time 3	80s	
Cd39	Differential time 3	10s	
Cd40	proportionality coefficient 4	36	
Cd41	Integral time 4	80s	

Cd42	Differential time 5	10s	
Cd43	proportionality coefficient 5	36	
Cd44	Integral time 5	80s	
Cd45	Differential time 5	10s	
Cd46	proportionality coefficient 5	36	
Cd47	Integral time 6	80s	
Cd48	Differential time 6	10s	
Cd49	proportionality Coefficient 7	36	
Cd50	Integral time 7	80s	
Cd51	Differential time 7	10s	
Cd52	proportionality coefficient 8	36	
Cd53	Integral time 8	80s	
Cd54	Differential time 8	10s	
Cd55	proportionality coefficient 8	36	
Cd56	Integral time 9	80s	
Cd57	Differential time 9	10s	
Cd58	proportionality coefficient 10	36	
Cd59	Integral time 10	80s	
Cd60	Differential time 10	10s	
Cd61	proportionality coefficient 11	36	
Cd62	Integral time 11	80s	
Cd63	Differential time 11	10s	
Cd64	proportionality coefficient 12	36	
Cd65	Integral time 12	80s	
Cd66	Differential time 12	10s	
Cd71-82	1-12 work mode	0	0-PID, 1 on/off
Cd 83	Upper limit deviation	2.0	switch shut down
Cd 84	Lower limit deviation	2.0	switch work

Trouble alarm :

CD13 temperature over-deviation ,the output Y12 will output warning

The temperature of the unused channel need to be set 0