

Operating Instruction ANIO-SX-HP

1. GENERAL WARNING

1.1 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 here under. It cannot be used as safety device.
- Check the application limit before proceeding.

1.2 Safety Precaution

- Check the supply voltage is correct before connecting the instrument.
- 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.
- Consider the maximum current which can be applied to each relay.
- Ensure that the wires for probes, loads and the power supply are separated and far enough from each other, without crossing or intertwining.

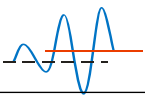
2. GENERAL DESCRIPTION

Economic simplified controller for heat pump application with two differential point setting for low power mode (Refrigeration based heating) and Instant heating (Hybrid mode). Available model comes with single and three phases.

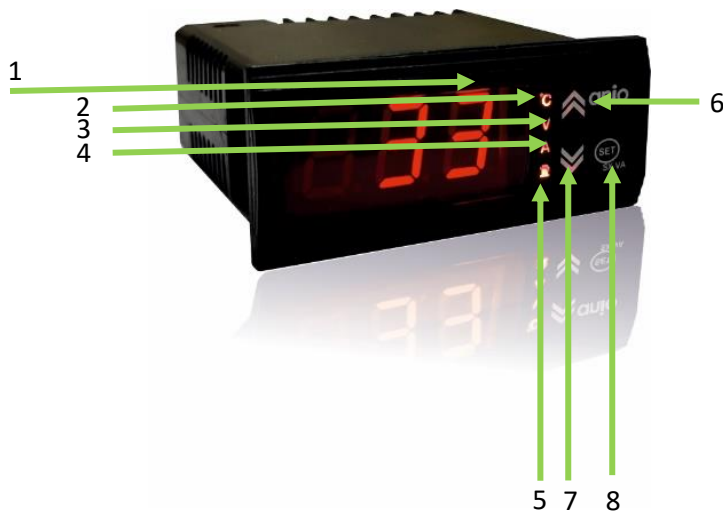
3. FEATUER & SPECIFICATION

- 7 Seg Display for long Distance view
- SPP and Phase Reverse Protection
- One Set point for heater and refrigeration heating
- Cooling Transfer Function
- HP FS and LP Protection
- HT/LT Protection
- On Site Settable Parameter
- Water temp lower limit lock
- Leakage Proof sensor
- Sensor Faulty alarm

Feature	Specification
Display	7 Seg Display
Temperature Display	7 Segment 0.56" LED Display
Power Supply	230 V AC 50 Hz
Temperature Probe NTC	
Water Temp:	-10°C to 99°C
Digital Input	
HP	Potential Free NO/NC Type
LP	Potential Free NO/NC Type
Flow Switch	Potential Free NO/NC Type
SPP	Potential Free NO/NC Type
Relay Output	
Pump 1	7A
Heater	5A
Fan	5A
Compressor	7A
Indication	
Temperature	LED 1
Pump	LED 2
Fan	LED 3
Compressor	LED 4
Error Indication	7 Seg Display



4. DISPLAY

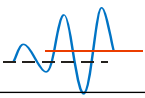


Sl. No.	Item	Function
1	7 Segment Display	Display Temperature and fault message
2	Temperature Indication	To indicate Temp and error indication (blinking LED)
3	Pump Indication	To indicate Pump ON
4	Fan Indication	To indicate Fan ON
5	Compressor Indication	To indicate Compressor ON
6	Increment Button	To increase the parameter value in Menu screen and to scroll the screen during normal running.
7	Decrement Button	To decrease the parameter value in Menu screen and to scroll the screen during normal running.
8	Enter Button	To go to next parameter in Menu screen and Reset during fault

5. DISPLAY CONTENT

Sl No.	Parameter	Details
1	Water Temp 33	Display Water Temp on 7 Segment.
2	Display Error Message	Display Phase voltage

Sl No.	Model Available	Description
1	ANIO-SX-HP	1. ANIO-SX-HPR (Heat Pump & Heater)
		2. ANIO-SX-HPT (Heat Pump and Pump Toggling)



5. PARAMETER

Parameter	Description	Default Value	Low Limit	High Limit
<i>tp</i>	Temperature limit setting (in °C)	40	-40	99
<i>Mode</i>	Controller Working Mode Display cL – Cooling HOt – Heating	cl	Hot	Hot
<i>tdF</i>	Temp Differential (in °C)	3	1	10
<i>Htr</i>	Heater Mode Selection	NO	YES	NO
<i>HdF</i>	Heater Temp Differential (in °C)	15	1	30
<i>PdL</i>	Time Delay for Pump ON (in Sec)	10 Sec	1 Sec	240 Sec
<i>FdL</i>	Time Delay for Fan ON (in Sec)	10 Sec	1 Sec	240 Sec
<i>cdL</i>	Time Delay for Compressor ON (in Sec)	10 Sec	1 Sec	240 Sec
<i>tdL</i>	Time Delay for Compressor (in Sec)	10 Sec	1 Sec	240 Sec
<i>HPt</i>	HP Switch Type	nO	nO	nC
<i>LPt</i>	LP Switch Type	nO	nO	nC
<i>SPT</i>	SPP Connection Type	nO	nO	nC
<i>FLt</i>	Flow Switch Type	nO	nO	nC
<i>FSd</i>	Flow Sens Delay (in Sec)	10 Sec	1 Sec	240 Sec
<i>Ht</i>	High Temp. Limit (in °C)	40	2	99
<i>Lt</i>	Low Temp Limit (in °C)	0	-40	99
<i>tOF</i>	Temp Offset	10	0	20

Note for *tOF* -Please consider 10°C as center point and to compensate -1 set it to 9°C and for +1 set it to 11°C

6. PARAMETER SETTING

To Set Temp. Press and hold Switch for 4 Sec to set Temp (Use / Key to change limit)

Parameter	Description	Default Value	Low Limit	High Limit
<i>tP</i>	Temperature limit setting (in °C)	40	-40	99

To See Mode: Press and hold Switch for 4 Sec to see working Mode

Parameter	Description
<i>Mode</i>	Controller Working Mode Display cL – Cooling HOt – Heating

7. ERROR MESSAGE

Sl. No.	Error Message	Description	Reset Option
1.	<i>Ht</i>	High Temp Limit Reach	Auto
2.	<i>Lt</i>	Low Temp Limit Reach	Auto
3.	<i>HP (1-3)</i>	HP Trip with Auto reset	Auto
4.	<i>HP</i>	HP Trip with Manual reset	Manual
5.	<i>LP (1-3)</i>	LP Trip with Auto reset	Auto
6.	<i>LP</i>	LP Trip with Manual Reset	Manual
7.	<i>SPP</i>	SPP Trip	Manual
8.	<i>PF</i>	Sensor/Probe fail	Manual
9.	<i>FLO</i>	Flow switch trip	Manual
10.	<i>nnC</i>	Memory Corrupt	Manual

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