

OPERATING INSTRUCTIONS



SZ-7522-P

Introduction



Features:

- 2 NTC probes for Room temp + Evap.Coil temperature.
- Room Temp Range: -50°C to 99°C.
- Coil Temp Range: -50°C to +50°C.
- Relay outputs: Compressor + Heater.
- Digital Input - Door Switch.
- Auto/ Man defrosting facility (Time/Temp based).

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Parameter	Parameter setting method.	Pg. No.
Set point	Function: To set the cut-out point of the controller.	1
To set others parameters.		1
P2 parameter.	Function: To set maximum allowable high temperature limit.	1
P3 parameter.	Function: To set minimum allowable low temperature limit.	1
P4 parameter.	Function: To set the Compressor differential.	2
P5 parameter	Function: To set probe 1 offset (cold room temp.) calibration.	2
P6 parameter.	Function: To set time delay between Compressor relay reset time.	3
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P8 parameter.	Function: To set Compressor relay status on probe (room probe) failure.	3
E1 parameter	Function: To set type of defrost.	4
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E5 parameter	Function: To set defrost stop temperature (Evap. Coil probe).	4

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Parameter	Parameter setting method.	Pg. No.
E8 parameter	Function: To set Maximum Defrost duration on Coil probe fail.	5
LP parameter	Function: To Lock Keypad.	5
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Description of parameters and functions.					
Sr.No.	Parameter	Parameter setting method.	Range		
			Min	Max	Fact. Set
1	Set Point	Function: To set the cutout point of the Controller.	P2	P3	0
	 Press and hold set key for 2 seconds and release.	Display will change to set range. The set point now can be changed by using UP/DOWN key. After achieving the desired range, press the SET key and you will see "----" which confirms that the set point has been stored in the memory.			
	To set others parameters				
	 Hold PRG key for 2 seconds and release.	Display will show P2 & will flash. To go to other parameters, use up/ down keys.			
2	P2 parameter.	Function: To set maximum allowable high temperature limit.	xx°C	99°C	99°C
	To change the P2 parameter, press the set key.	Use UP/DOWN keys to set desired range.			
3	P3 parameter.	Function: To set minimum allowable low temperature limit.	-50°C	xx°C	-50°C

Description of parameters and functions.					
Sr.No.	Parameter	Parameter setting method.	Range		
			Min	Max	Fact. Set
	To change P3 parameter, press the set key.	Use UP/DOWN keys to set desired range.			
4	P4 parameter.	Function: To set the Compressor differential.	1°C	20°C	2°C
	To change P4 parameter, press the set key.	Use UP/DOWN keys to set desired range. Example: If the set point is set at 10°C and differential is set as 2°C, then when the system reaches 10°C, the comp. relay will cutout. Since the differential is 2°C, the comp. relay will cut in at 12°C (10°C + 2°C).			
5	P5 parameter	Function: To set probe 1 offset (cold room temp.) calibration.	-10°C	10°C	0°C
	To change P5 parameter, press the set key.	Use UP/DOWN keys to set desired range. In time it may be possible that the display may be offset by a degree or so. To compensate for this error you may need to add or minus the degrees required to achieve the correct temperature.			


Description of parameters and functions.					
Sr.No.	Parameter	Parameter setting method.	Range		
			Min	Max	Fact. Set
6	P6 parameter.	Function: To set time delay between Compressor relay reset time.	0 Min	20 Min	3 Min
	To change P6 parameter, press the set key.	Use UP/DOWN keys to set desired range. This parameter is used to protect the Compressor from restarting in a short period of time.			
7	P7 parameter	Function: To set drip time for defrost water to drain out.	1 Min	10 Min	1 Min
	To change P7 parameter, press the set key.	Use UP/DOWN keys to set desired range. This is the time for which the Compressor, heater will stay off so that the defrost water can drip & drain out.			
8	P8 parameter.	Function: To set Compressor relay status on probe (room probe) failure.	0	2	1
	To change P8 parameter, press the set key.	Use UP/DOWN keys to set desired range. 0 - Compressor relay ON. 1 - Compressor relay performs a duty cycle of 10 minutes ON and 4 minutes OFF. 2 - Compressor relay OFF			

Description of parameters and functions.					
Sr.No.	Parameter	Parameter setting method.	Range		
			Min	Max	Fact. Set
9	E1 parameter	Function: To set type of defrost.	0	1	0
	To change E1 parameter, press the set key.	Use UP/DOWN keys to set desired range. 0 - Heater defrost in which case comp. is off. 1 - Hot gas defrost where compressor is on.			
10	E3 parameter	Function: To set defrost frequency.	1 HRS	31 HRS	6 HRS
	To change E3 parameter, press the set key.	Use UP/DOWN keys to set desired range. This is the amount of time between two defrost cycles.			
11	E4 parameter	Function: To set Maximum Defrost duration.	0 Min	99 Min	30 Min
	To change E4 parameter, press the set key.	Use UP/DOWN keys to set desired range. This is the maximum amount of time allowed for a defrost. If this is to 0, there will be no defrost cycle.			
12	E5 parameter	Function: To set defrost stop temperature (Coil probe).	-50°C	50°C	8°C
	To change E5 parameter, press the set key.	Use UP/DOWN keys to set desired range. This is the maximum temperature allowable at which the defrost process will stop.			







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Description of parameters and functions.					
Sr.No.	Parameter	Parameter setting method.	Range		
			Min	Max	Fact. Set
13	E8 parameter	Function: To set Maximum Defrost duration on Coil probe fail.(Manual Defrost)	1 Min	10 Min	5 Min
	To change E8 parameter, press the set key.	Use UP/DOWN keys to set desired range. This is the maximum amount of time allowed for a defrost during Coil probe fail.			
14	LP parameter	Function: To Lock Keypad.	0	1	0
	To change LP parameter, press the set key.	This parameter can lock the keypad so that tempering is not possible by by-standers. 0 - keypad unlocked. 1 - keypad locked. When locked all parameters can only be viewed, but not modified.			
15	do parameter	Function: Compressor status on Door Open.	0	1	0
	To change do parameter, press the set key.	This parameter controls the Compressor on/off status depending on the digital input. 0 - Deactivates. 1 - Compressor trips according to digital input.			

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Description of parameters and functions.					
Sr.No.	Parameter	Parameter setting method.	Range		
			Min	Max	Fact. Set
16	FS parameter	Function: Revert to factory set parameter.	0	1	0
	To change FSparameter, press the set key.	Use UP/DOWN keys to set desired range. 1 - Revert to factory set parameter. Useful to debug setting related problems.			
17	EP Parameter	Function: To End programming			
	To End Programming press the set key.	Once the SET key is pressed the control goes into the normal mode and displays the temperature.			
	 Manual Defrost	To force a Manual defrost, press this key for 2 seconds. This unit will go into defrost mode. If E4 parameter is set to 0, or Coil temp. is greater than defrost stop temp. this key will remain inactive.			

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Operating messages and Icon status		
Message	Description	Parameter
Ht	Temperature above the maximum limit of the setpoint.	P2
Lt	Temperature above the minimum limit of the setpoint.	P3
PP	Probe short circuit, circuit open or without probe, or temperature > 50°C or <-50°C	
 On/Off	Comp. Relay on/off	SP, P4
 On/Off	Keypad locked/unlocked	LP
	Defrosting in progress	E3, E4, E5
 On/Off	Heater Relay on/off	E1
 Flashing	Comp. Relay in Timedelay	P6
 Flashing	Heater Relay in Timedelay	E1
do	Door Open	Digital input

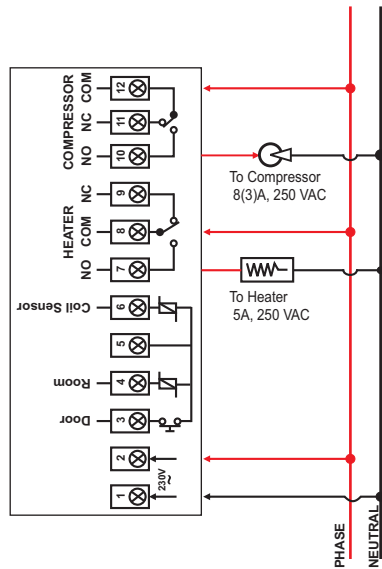
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Technical Data:

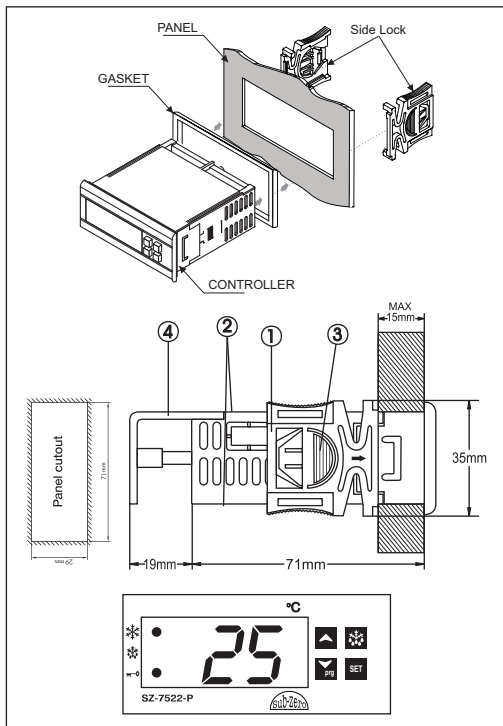
Housing: Black ABS plastic.
Front cover: Red Polycarbonate plastic.
Dimensions: Front - 75 x 34.5 mm,
 Depth - 71 mm (w/o back lid).
Mounting: Flush panel mounting with fasteners.
Protection: Front panel is waterproof & I.P 65 rated.
Connections: Screw terminal blocks.
 ≤2.5 mm², one wire / Terminal only
Display: 14.2 mm (0.56") LED.
Data storage: Non-volatile EEPROM memory
Power input: 230Vac, +/-10%, 50-60Hz. Others on request.
Operating temp.: 5°C to 50°C (non-condensing).
Storage temp.: -20°C to 70°C (non-condensing).
Output: 1 SPDT Comp. relay 8(3)A, 250Vac
 1 SPDT Heater relay 5A, 250Vac
Input: 2 NTC probe, SZ-N75
Range: Coil Probe : - 50°C to 50°C
 Room Probe : - 50°C to 99°C
Resolution: 1°C
Accuracy: +/-1°C
Probe tolerance: +/-0.3°C at 25°C

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WIRING DIAGRAM



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Installation: Fixing and dimensions of panel models:
 To fix the unit, slide the fastener ① through the guides ② as per the position shown in the figure. Move the fastener in the direction of the arrow, pressing tab ③ it permits to move the fastener in the opposite direction of the arrow. Once the controller has been connected, they should be covered with the lid ④.
 Silicon sealant should be applied along the perimeter of the panel cut out or a rubber 'O' ring supplied before the unit is fitted to increase protection against water seepage.
Controller: Controller should be installed in a place protected by vibration, water and corrosive gasses and where ambient temperature does not exceed the values specified in the technical data.
Probe: To give a correct reading, the probe must be installed in a place protected from thermal influences,

CAUTION

WIRING: The probe and its corresponding wires should never be installed in a conduit next to control or power supply lines. The electrical wiring should be done as shown in the diagram. The power supply circuit should be connected to a protection switch. The terminals admit wires of upto 2.5sq mm.

WARNING: Improper wiring may cause irreparable damage and personal injury. Kindly ensure that wiring is done by qualified personnel only.

Maintenance: Cleaning: Clean the surface of the controller with a soft moist cloth. Do not use abrasive detergents, petrol, alcohol or solvents.

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INDIA

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Chiller Controller
Two Compressors Controller
Heating Controller
Humidity Controller
Pressure Controller



Ball Valves,
Globe Valves,
Hand Valves,
Flow Switches,
Solenoid Valves”