

OPERATING INSTRUCTIONS

SZ-2711



General Description

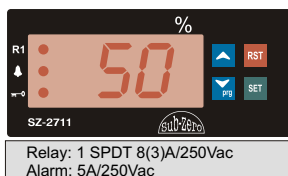
The Sub-Zero series SZ-2711 is aesthetically superior versions of their predecessors. The SZ-2711 is a single set point Humidity controller. A number of parameters are displayed alphanumerically to set the controller for specific application.

The controller can be used for several applications with a measuring range from 30% to 90% RH.

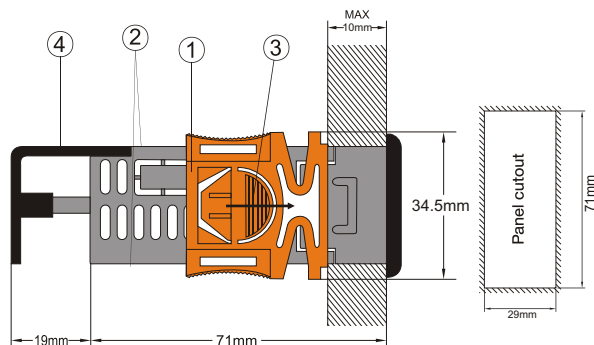
Technical Data

Housing	Black, ABS Plastic.
Front Cover	Red Polycarbonate plastic.
Dimensions	Front : 75 X 34.5 mm Depth : 71 mm (w/o back lid)
Panel Cutout	29 X 70.5 mm
Mounting	Flush panel mounting with fasteners.
Frontal protection	IP 65
Connections	Screw terminal blocks. ≤ 2.5 sq mm one wire/ terminal only.
Display	2 X 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).
Input	Humidity Sensor(SZ-HS-220).
Range	30% to 90%
Resolution	1%
Accuracy	+/- 5%

Front Panel View, Relay



Installation and Dimensions



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 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, which may affect the temperature to be controlled.

Operating Messages And Icon Status

Message	Mode	Description	Parameter
HH	Flashing	Humidity above the maximum value of the set value (H2).	H2
LH	Flashing	Humidity below the minimum value of the set value (H3).	H3
PP	Flashing	Probe short circuit, circuit open or without probe, or Humidity > 90% or <30%.	

Min = Minimum, Max = Maximum
Fac. = Factory Setting (Default)

1. Set Point : To set the cut out point.	Min	Max	Fac.
	30%	90%	70%



1. Press and hold the "SET" key for 2 Seconds.
2. The set value will start flashing.
3. Use ▲ or ▼ to set the desired value.
4. Press SET key & you will see "- -" which confirms that the set point has been stored in memory.

Parameter List

2. To set other Parameters.	Min	Max	Fac.



1. Press & hold the prg key for 2 seconds.
2. Display will show "H1" & flash.
3. To go to other parameters, use ▲ or ▼ keys.

3. H1 Parameter : To set Dehumidification / Humidification Mode.	Min	Max	Fac.
	0	1	0

1. To change the H1 parameter, press the "SET" key.
2. To go to desired value, use ▲ or ▼ keys.

0 : Dehumidification.
1 : Humidification.

3. To set desired value press "SET" key you will see "- -" which confirms that the value has been stored in memory.

4. H2 Parameter : To set maximum allowable high humidity limit.	Min	Max	Fac.
	XX%	90%	90%

1. To change the H2 parameter, press the "SET" key.
2. To go to desired value, use ▲ or ▼ keys.
3. To set desired value press "SET" key you will see "- -" which confirms that the value has been stored in memory.

HH
(Message on display)

Once set at a particular value, this will not allow the set point to go above this range and below set point setting.

Example : Setting this parameter at 80% will not allow the set point to go above 80%. Also, if the humidity reaches 80% the display will show **HH (High Humidity)** indicating that the Humidity has gone above the value in this parameter.

5. H3 Parameter : To set minimum allowable low humidity limit .	Min	Max	Fac.
	30%	XX%	30%

1. To change the H3 parameter, press the "SET" key.
2. To go to desired value, use ▲ or ▼ keys.
3. To set desired value press "SET" key you will see "- -" which confirms that the value has been stored in memory.

LH
(Message on display)

Once set at a particular range, this will not allow the set point to go below this value and above set point setting.

Example : Setting this parameter at 40% will not allow the set point to go below 40%. Also, if the humidity reaches 40%, the display will show **LH (Low Humidity)** indicating that the Humidity has gone below the value in this parameter.

OPERATING INSTRUCTIONS

6. H4 Parameter : To set the differential (Hysteresis).	Min	Max	Fac.
	1%	20%	1%

- To change the H4 parameter, press the "SET" key.
- To go to desired value, use ▲ or ▼ keys.
- To set desired value press "SET" key you will see "- -" which confirms that the value has been stored in memory.

Example: Dehumidification mode : If the set point is set at 60% and differential is set at 3, then when the system reaches 63%, the relay will cut in. Since the differential is 3, the relay will cut-off again at SET point.

Humidification mode : If the set point is set at 60% and differential is set at 3, then when the system reaches 57%, the relay will cut in. Since the differential is 3 the relay will cut-off again at SET point.

7. H5 Parameter : To set probe offset calibration.	Min	Max	Fac.
	-9%	10%	0%

- To change the H5 parameter, press the "SET" key.
- To go to desired value, use ▲ or ▼ keys.
- To set desired value press "SET" key you will see "- -" which confirms that the value has been stored in memory.

In time it may be possible that the display may be offset by a % RH or more. To compensate for this error, you may need to add or minus the %RH required to achieve the correct Humidity.

Example: The Humidity on the display is 55%, whereas the actual Humidity is 57%. You will need to set the H5 to 2, which means that once out of the programming mode, the controller will show Humidity will show 57% (55% + 2%).

8. H6 Parameter : To set time delay between relay restart time.	Min	Max	Fac.
	0Min	20Min	1Min

- To change the H6 parameter, press the "SET" key.
- To go to desired value, use ▲ or ▼ keys.
- To set desired value press "SET" key you will see "- -" which confirms that the value has been stored in memory.

This parameter is used to protect the De-Humidifier from restarting in a short period of time and can be set between 0 to 20 minutes.

Example: If this parameter is set at 1 minutes, the relay will cut off at the set Humidity, but will not restart for a minimum of 1 minutes, even if the differential is achieved earlier. This parameter is good to protect the life of the Dehumidifier/ Humidifier or even in applications where the probe is placed at places where there are sudden & short changes in Humidity.

9. LP Parameter : To lock keypad.	Min	Max	Fac.
	0	1	1

This parameter can lock the keypad so that tampering is not possible by by-standers.

- To change the LP parameter, press the "SET" key.
- To go to desired value, use ▲ or ▼ keys.

0 : keypad unlocked.
1 : keypad locked.



- To set desired value press "SET" key you will see "- -" which confirms that the value has been stored in memory.

Note: When locked all parameters can only be viewed, but not modified.

10. AL Parameter : To activate Alarm Relay.	Min	Max	Fac.
	0	1	1

Once set to on, the Alarm will come ON incase the Humidity reaches or goes above or below the values set in parameter H2 & H3 or if the probe fails.

- To change the AL parameter, press the "SET" key.
- To go to desired value, use ▲ or ▼ keys.

0 : Deactivate the Alarm.
1 : Activate the Alarm.



- To set desired value press "SET" key you will see "- -" which confirms that the value has been stored in memory.

This key will reset the Alarm relay.

RST

11. FS Parameter : To restore default settings of the controller.	Min	Max	Fac.
	0	1	0

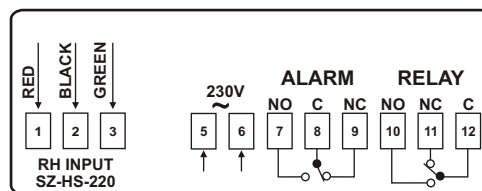
When set to 1 all parameters are programmed to factory values. Useful to debug setting related problems.

- To change the FS parameter, press the "SET" key.
- To go to desired value, use ▲ or ▼ keys.
- To set desired value press "SET" key you will see "- -" which confirms that the value has been stored in memory.

12. EP Parameter : To end programming.	Min	Max	Fac.
	0	1	0

Once the SET key is pressed, the control goes into the normal mode and displays the Humidity and all settings are recorded.

Connection Diagram



Caution: Wiring for 230Vac load only

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 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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