SZ-7505T

Operating Instructions

sub-zero ®
Controlled cooling, **always**

Touch Sensitive Temperature Indicator

Introduction :
The new SZ-7505T is the next generation of Subzero indicators. Their IP ratings are greatly improved and have an excellent iconic display. The touch feature whilst increasing reliability also gives a great user experience.

Their operation is very user friendly and is easily understood with the examples in the instructions below.

The SZ-7505T can be used as a indicator with a temperature range from -45°C to 99°C. Calibration via keypad is possible.

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 indicator with a soft moist cloth. Do not use abrasive detergents, petrol, alcohol or solvents.
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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.

Indicator : Indicator 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.
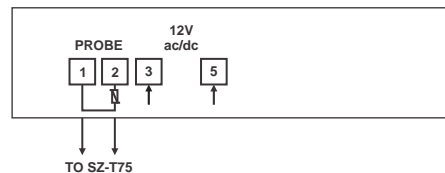
Panel Cutout and Dimensions :
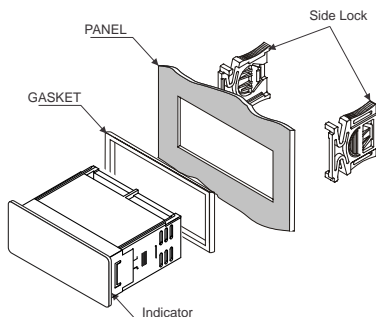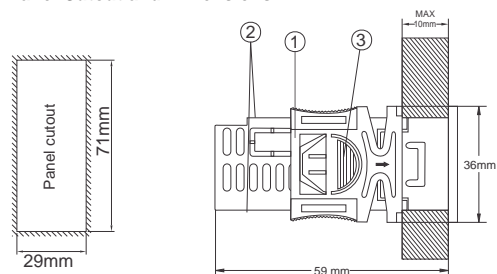
Suggested Wiring SZ-7505T (230Vac)
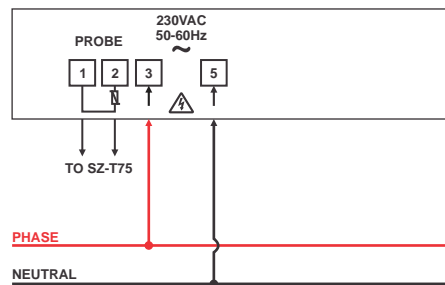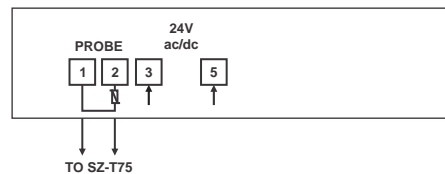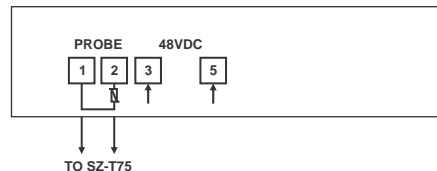

Caution:Wiring for 230Vac load only

Suggested Wiring SZ-7505T (12Vac/dc)
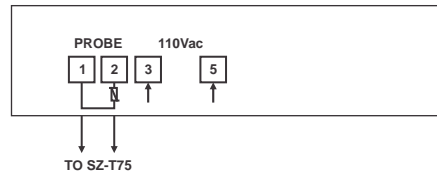

Suggested Wiring SZ-7505T (24Vac/dc)

Suggested Wiring SZ-7505T (48VDC)

Suggested Wiring SZ-7505T (110Vac)

TECHNICAL DATA

Housing	: Black ABS Plastic, Auto-extinguish
Front Cover	: Polycarbonate Plastic
Dimensions	: Frontal : 78 X 36mm, Depth : 59mm
Panel Cutout	: 29 X 71mm
Mounting	: Flush panel mounting with fasteners
Protection	: IP65 Front (with gasket)
Connections	: Screw terminal blocks. $\leq$ 2.5sq mm terminal only.
Display	: 2 X 17mm 7 segment display & 1 LED for Indication
Data storage	: Non-volatile EEPROM memory
Power input	: 230 Vac ±15 %, 50-60Hz. Others on request.
Operating temp.	: 0°C to 60°C (non-condensing)
Operating humidity	: 20% to 85% (non-condensing)
Storage temp	: -25°C to 60°C (non-condensing)
Measuring Range	: -45°C to 99°C
Input	: NTC probe, SZ-T75
Resolution	: +/- 1°C
Accuracy	: +/- 1°C

USER INTERFACE

∧	**UP**	In Program mode: **Scroll through parameters** & **Increases parameter value.**
PRG ∨	**Down/ Program**	Touch and hold for 2sec **to enter into program mode.** In program mode: **Decreases parameter value**
SET	**Set**	In program mode : **set/save the changed value of parameter.**

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Sr. No.	Para.	Description
1	P5	Probe calibration.
2	dd	Delay the display of temperature.
3	PA	Change Password
4	LP	Keypad Lock
5	FS	Restore factory defaults
6	EP	End Programming
7		Operating Messages
		Password Function
		Temperature Logging

Parameter List :

1 P5 Parameter Function: To set probe calibration.

Touch & hold PRG key for 2 seconds.

In time it may be possible that the display may be offset by a degree or so.
To compensate for this error, user may need to add or minus the degrees required to achieve the correct temperature.

Example : The temperature on the display is 28°C, whereas the actual temperature is 30°C. User will have to set the P5 parameter to 2, which means that once out of the programming mode, the temperature on display will be 30°C (28°C+ 2°C).

Min	Max	Fac.
-10°C	10°C	0°C

2 dd Parameter Function : This parameter is used to delay the display of temperature by the set in this parameter.

Each value corresponds to 5 seconds, if the value is set to 1, it corresponds to 5 seconds, if it is set to 2, it corresponds to 10 seconds and so on.

For example, if this parameter is set to 1, temperature on the display will be updated after 5 seconds. The same value will be considered for calculation and logging.

Display delay parameter is applicable only when temperature is increasing (rising). When temperature is decreasing (falling) this parameter will not be applicable.
If this parameter is set to 0, this feature will be disabled.

Min	Max	Fac.
0	36	0

3 PA Parameter Function : To change Password.

User cannot enter into program mode, if correct password is not entered.

If the password is kept other then 0, user need to enter correct password to enter into program mode.

If password is 0, user can directly access program mode.

Min	Max	Fac.
-99	99	0

4 **LP Parameter**	Function: To lock keypad.

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

0 = keypad unlocked
1 = keypad locked

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

Note : If LP parameter is set to 1 and if user tries to change any parameter value, " LP" will flash on the display.

LP	Min	Max	Fac.
Flashing	0	1	0

5 **FS Parameter**	Function : To restore default settings of the indicator.

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

When set to,
0 = FS is disable.
1 = FS as per default value.

Min	Max	Fac.
0	1	0

6 **EP Parameter**	Function: To end programming.
To end programming press "**SET**" key	Once the key is pressed, the indicator goes into the normal mode and displays the temperature and all settings are recorded.

7 OPERATING MESSAGES

PP **Probe fail**
Probe short circuit, circuit open or without probe, or temperature is > 99°C or <-45°C

LL **Last low temperature**
Last low temperature logged.

LH **Last high temperature**
Last high temperature logged.

Password function
● **In Program mode:**
Touch & hold " PRG ∨ " key for 2sec. Display will flash "P5" parameter if "PA" value is kept "0". If other than "0", then "PA' and "0" will flash. Use " ∧ "and " PRG ∨ " keys to enter the password. On entering correct value, display will flash the first parameter "P5". User can scroll through parameters using " ∧ " or " PRG ∨ " keys.

High and Low temperature logging function
● **How to see the logged values:**
LL : Last Low temperature
LH : Last High temperature
Touch and hold " ∧ " key for 1sec. display will flash "LL" and the corresponding temperature for 4 seconds. After this, display will flash "LH" and the corresponding temperature for 4 seconds and come out of Log mode and will display Control probe temperature.

● **How to reset the Logged values**
While the display is showing the logged values, if user touches & holds the "**SET**" key for 1sec, the logged values will be cleared and "**rS**" will be displayed.
Log Values will get reset after Power ON/OFF.

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