



- Electronic controller for normal and high temperature static refrigeration units
115/230 Vac switching power supply
16 A compressor relay
Management of NTC (-50 to +90°C) and PTC (-50 to +150°C) sensors
Simple and intuitive installation and configuration
4 pre-loaded configurations for the most common refrigeration applications

READ ME NOW!!!

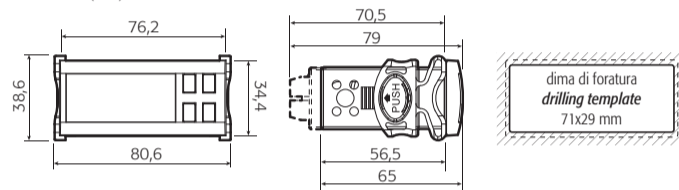
With reference to the label on the rear of the instrument and the required application

- Check that power supply, probes and loads (compressor, heaters, etc.) are suitable for the instrument.
Fasten the instrument to the panel as shown in the following figure.
Make all the required electrical connections.
Power up the unit.
After around 2 seconds, if the instrument displays the temperature read by the probes connected to the device, go directly to point 7. If nothing is displayed or an alarm is signalled (alarm codes on the display), power down, check the connections and the power supply and go to point 6.
Power the unit up again. If the instrument now correctly displays the temperature, go to point 7. If, on the other hand, the problem described in point 5 is repeated, see the table "Alarms and signals: display, buzzer and relay" to identify the cause of the problem.
ir33 smart is now ready to be configured. For correct configuration based on the required application, see the section "How to select and load a configuration".

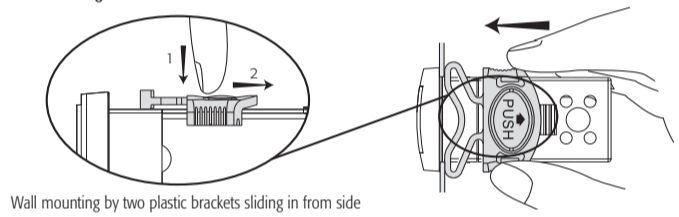


IMPORTANT: separate the probe and digital input cables from the cables to inductive loads and power cables to avoid electromagnetic disturbance. Never run power cables (including electrical panel cables) and signal cables in the same conduits.

Dimensions (mm)

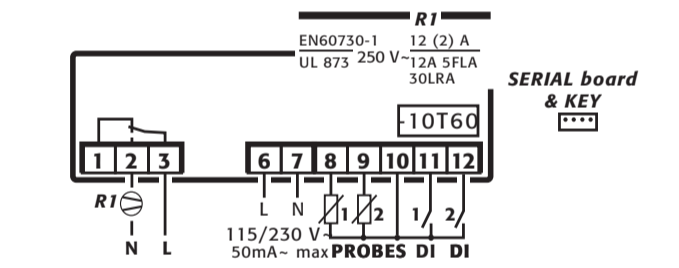


Wall mounting ir33

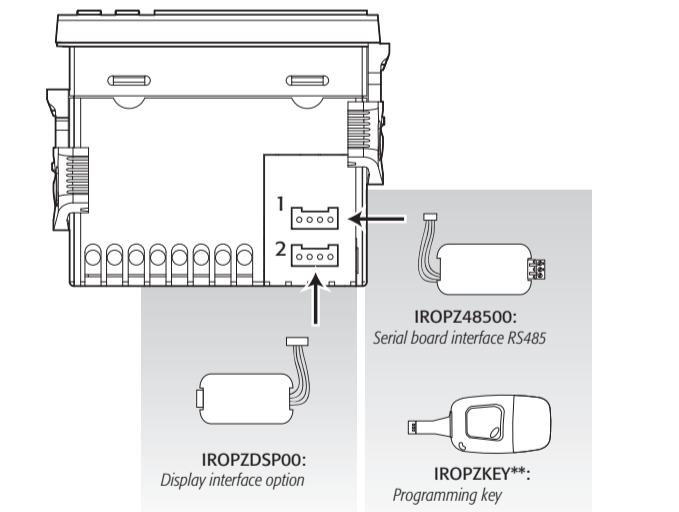


Wall mounting by two plastic brackets sliding in from side

Wiring diagram IR33S7HR0E



Optional connections



How to select and load a user configuration

Table with 4 columns: Step, Action, Effect, Meaning. Describes the procedure to switch configurations (bn0 to bn4).

This procedure can only be performed once: the most suitable configuration for the application, once loaded, will remain active the next time the instrument is started.

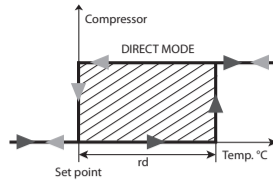
Configurations

ir33 SMART is loaded with 4 default configurations (sets of parameters). Each configuration identifies a specific refrigeration application, and can be identified simply by the index (bn*) when switching the instrument on.

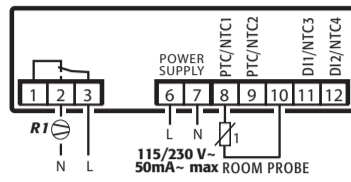
Table with 5 columns: Ind., Application, Op. temp. range, Inputs, Relay output. Lists configurations bn1 to bn4.

bn1: normal temperature (2T10 °C) static refrigeration units (no defrost)

Temperature range: 2T10 °C
Temperature control



Connection diagram

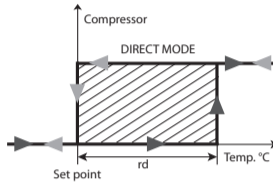


Inputs/Outputs table for bn1. Lists Room probe, Compressor, and Main parameters (type F) with descriptions and default values.

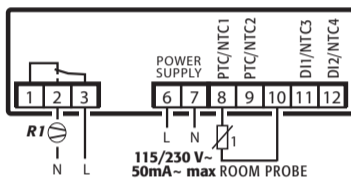
(* absolute alarm thresholds)

bn2: normal temperature (2T10 °C) static refrigeration units with defrost (timed) by stopping the compressor

Temperature range: 2T10 °C
Temperature control



Connection diagram

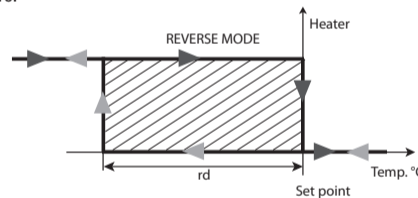


Inputs/Outputs table for bn2. Lists Room probe, Compressor, and Main parameters (type F) including defrost parameters.

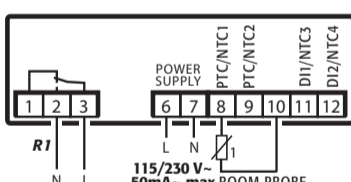
(* absolute alarm thresholds)

bn3: high temperature (20T150 °C) thermostat (reverse mode)

Temperature range: 20T150 °C
Temperature control



Connection diagram

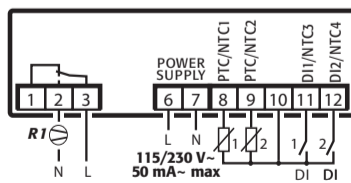


Inputs/Outputs table for bn3. Lists Room probe, Heater/Alarm, and Main parameters (type F) for thermostat mode.

(* absolute alarm thresholds)

bn4: standard CAREL (default configuration)

Connection diagram



Main parameters (type F) table for bn4. Lists parameters like Set point, Control differential, and various alarm thresholds.

Indications on the display

When flashing, the signals on the display indicate a request that cannot be implemented until the delay timers have expired.

Table with 4 columns: Icon, Function, Normal operation (ON/OFF), Flashing. Lists indicators for COMPRESS., DEFROST, ALARM, SERVICE, and CONT. CYCLE.

Buttons on the keypad

Table with 3 columns: Button, Pressing the button alone, Pressing together with other buttons. Describes functions of Prg mute, aux, def, and Set buttons.

How to set the set point

Table with 4 columns: Step, Action, Effect, Meaning. Describes the 3-step process to set the temperature set point.

Another way of changing the set point is to set parameter "St" (see the tables below)

How to access and set type "F" parameters (FREQUENT, not protected by password)

Table with 4 columns: Step, Action, Effect, Meaning. Describes the 7-step process to access and set frequent parameters.

How to access and set type "C" parameters (CONFIGURATION, password protected)

Table with 4 columns: Step, Action, Effect, Meaning. Describes the 9-step process to access and set configuration parameters.

For both types of access (type "F" and type "C") there is a timeout (no button on the keypad pressed for 1 min), the procedure is ended without saving the parameters.

Accessing the parameters divided by functional blocks (allows the user to scroll the list of parameters in blocks)

Once having accessed the type "F" or "C" parameters (see tables above)

Table with 3 columns: Step, Action, Effect, Meaning. Describes how to navigate through functional blocks of parameters.

