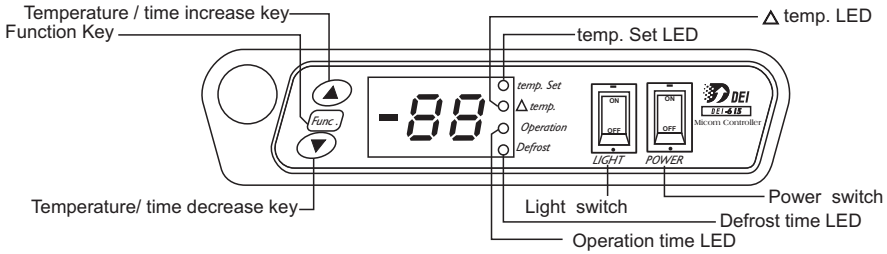
DEI-615E Instruction

5INS30183



615 is designed for refrigeration units and showcases at normal or low temperature. It contains a transformer and one compressor (25A resistive) relay output. Two rock switches are embedded in the front panel for power on/off and light. One input sensor probe connects to the room temperature. In the settings of parameters, 615 provides four parameters for the user to change the set temperature and defrost management. It also provides four parameters for the refrigeration manufacturers to set the special parameters prevent the user changing.

COMMANDS ON FRONT PANEL

The instrument is provided with two rock switches and three keys.
Func Key: to change the parameters.
▲ Key: to increase values.
▼ Key: to decrease values.
Light switch: to turn on or off the light.
Power switch: to turn on or off the power of the controller but not including Light.

KEYBOARD LOCKING

Keyboard can be disabled to change settings by holding Func and ▲ keys simultaneously for 3 seconds , "00" will be displayed and the keyboard is locked (no change).
To unlock the keyboard by holding Func and ▲ keys again, "33" will be displayed and the keyboard is unlocked.

COMPRESSOR OPERATION

Compressor operates between set temperature plus 1/2 differential and set temperature subtract 1/2 differential. (Find diagram1 below)
Compressor functions one minute after first time power on even the compressor delay protection is set at "0". During the compressor delay protection period, the Operation LED flashes. When sensor is failed, compressor operates for 15 minutes, and stops for 15 minutes.

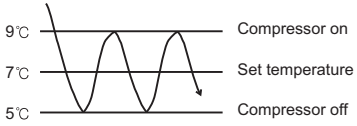


Diagram 1. When Set temperature = 7℃ differential = 4℃

MANUAL ACTIVATION OF THE DEFROST CYCLE

To enter manual defrost cycle by holding ▲ and ▼ keys simultaneously for more than 3 seconds. When either operation time or defrost time is set at "0", the manual defrost is disabled.

SETTING THE SETPOINT AND OTHER USER'S PARAMETERS

To hold Func key for more than 3 seconds to enter into the set temperature and other user's parameter setting. While setting set temperature value, the set temperature value is displayed and the temp. Set LED is on. To change to next parameter by pressing Func key again. When the required parameter is selected, use ▲ or ▼ key to adjust values. If no more command is given within 10 seconds, the controller will save new parameters and return to normal operation.

USER'S PARAMETER DESCRIPTION

Set temperature:
While setting "Set temperature" value, the temp. Set LED is on.
The compressor operates between set temperature plus 1/2 differential and set temperature subtract 1/2 differential.

Differential:
While setting "Differential" value, the △temp. LED is on.

Defrost cycle:
While setting "Defrost cycle" value, the Operation LED is on.

Defrost time:
While setting "Defrost time" value, the Defrost LED is on.

SETTING THE REFRIGERATOR MANUFACTURE'S PARAMETERS

The following four parameters are able to be set by holding the Func key at the same time supply the power into the unit.
The Minimum set temp. value is displayed and the temp. Set LED is on, while the minimum set temp. is been setting.
To change to next parameter by pressing Func key again. When the required parameter is selected, use ▲ or ▼ keys to adjust values.
If no more command is given within 10 seconds, the controller will save new parameters and return to normal operation.

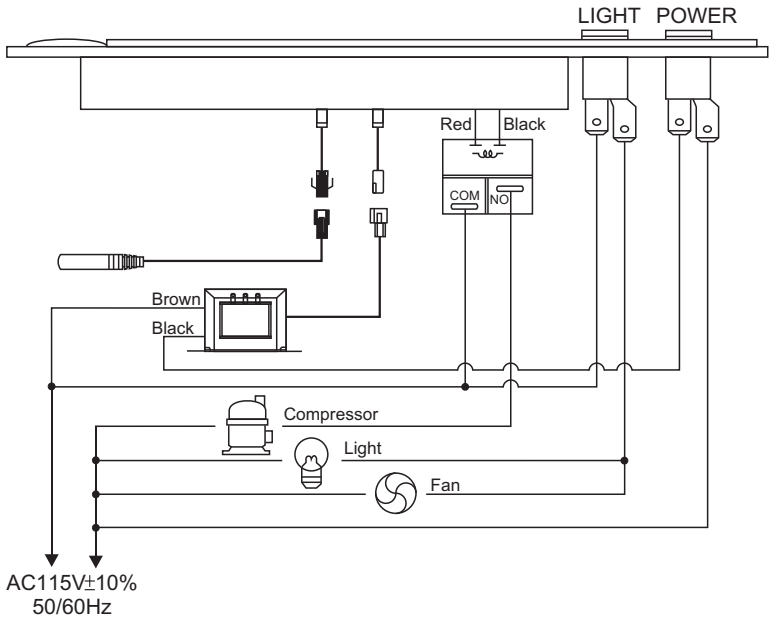
REFRIGERATOR MANUFACTURE'S PARAMETERS DESCRIPTION

Minimum set temperature:
This parameter is programmed for the manufacturer to limit set temperature in order to protect the compressor in case of an incorrect setting which over the efficiency of compressor. While setting "Minimum set temperature" value, the temp. Set LED is on.

Temperature calibration:
Allow to increase or decrease temperature display. If temperature calibration is set at "-1" with real room temperature 5℃, then "4℃" will be displayed. If temperature calibration is set at "2 " with real room temperature 5℃, then "7℃" will be displayed.
While setting this parameter, the △temp. LED is on.

Compressor delay protection:
While setting "Compressor delay protection" value, the operation LED is on.

Unit selection:
Allow to display the temperature in Fahrenheit.
While setting this parameter, the Defrost LED is on.



Set by user

Parameters & description	Range	Default	Unit
Set temperature	Min. Set temp.... 40℃ or 94℉	5 / 40	℃ / ℉
Differential	2....10	4	℃ / ℉
Defrost cycle	0....99	6	Hours
Defrost time	0....60	30	Minutes

Set by manufacturer

Parameters & description	Range	Default	Unit
Minimum set temperature	-50....10℃ or 20....50℉	0 / 30	℃ / ℉
Temp. Calibration	-8....7	0	℃ / ℉
Comp. delay protection	0....15	3	Minutes
Unit selection	℃ / ℉	℃	----------

CONNECTIONS

The room probe connects to the black terminal housing.
Terminal wafer of transformer output connects to the white terminal housing.

CAUTIONS

1.Avoid to install the unit around other equipment or heat.
2.Before supplying the power into the unit, always check if the power input wire of transformer is connected correctly.
3.If the equipment is used in a manner not specified by the the protection provided by the equipment may impaired.
4.Light switch wire can be connected with fan and light as shown on the wiring diagram under total amp 10A/230VAC.

ERROR MASSAGES

EE : The parameter memory is failed. (Replug-in, then the parameter will back tothe default)
E0 : The interior circuit is failed.(Send the controller back to the factory with a detailed description of the fault)
E1 : The probe is failed.(Check the sensor connection)

SPECIFICATION

Dimension :
Panel : 40mm(H) x 170mm(L) ± 1mm ,
Depth : 79mm ± 1mm
Mounting hole : 33mm (H) x 140mm (L) ±1mm
Operating temp.:-5℃ ~ 55℃, RH20% ~ 95%
Storage temp.:-10℃ ~ 65℃, RH20% ~ 95%
Input :
Power supply:AC 115V ± 10%, single phase 50/60Hz
Power consumption:Max. 5 watts (Controller only)
Sensor : NTC,PVC 1.5m (L)
Output:
Compressor contact:25A 250VAC Resistance
Light switch contact: 10A 125/250VAC Resistance
Power switch contact: 10A 125VAC Resistance
Display:
Display: on 2 digit display and 4 indicator leds.
Reading range: -10℃ ~ 45℃, ±1℃ or 10℉ ~ 99℉, ±1℉

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