



**KEYSTONE**  
RV COMPANY

V2022-03-23

## Drawer Refrigerator

Instruction Manual

**20008-101**



*Shown with Optional Frame and Feet Mounting Brackets*

## NOTES

Please read this operating manual carefully before installing and operating the refrigerator. Keep this document in a safe place for future reference. If the device is passed on to another person, this operating manual must be handed over to the user along with it.

The manufacturer cannot be held liable for damage resulting from improper use.

Content

1 Important Safety Instructions..... 4

    1.1 General safety..... 4

    1.2 Operating safety .....4

2 Refrigerator Application ..... 5

3 Refrigerator Function ..... 5

4 Installation ..... 6

    4.1 Unit Dimensions..... 6

    4.2 Rough opening..... 7

    4.3 Air Gap requirements..... 7

    4.4 Mounting options.....8-9

5 Electrical Connection.....10

    5.1 Wire Connection Diagram.....10

    5.2 Wire size and allowable length.....10

6 Display Elements and Operation .....11

    6.1 Display & control panel .....11

    6.2 Refrigerator switch on/off .....11

    6.3 Temperature setting .....11

    6.4 Low voltage protection battery monitor setting .....12

    6.5 Refrigerator working mode setting..... 13

    6.6 Explanation for error code shown on display screen .....14

    6.7 Energy saving tips .....14

7 Using the Refrigerator ..... 15

    7.1 Switch on the Refrigerator..... 15

    7.2 Switch off the Refrigerator ..... 15

    7.3 Defrost the Refrigerator..... 15

8 Cleaning and Maintenance..... 16

    8.1 Cleaning the cooling device..... 16

9 Troubleshooting..... 16

10 Disposal ..... 17

11 Technical data..... 17

# 1. Important Safety Instructions

## 1.1 General Safety

### WARNING!

- Do not operate the refrigerator if it is visibly damaged.
- Do not operate the refrigerator if power supply is damaged.
- Do not store or use gasoline or any flammable vapors and liquids in the vicinity of this refrigerator.
- This cooling device may only be repaired by qualified personnel.
- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
- Children should be supervised to ensure that they do not play with the appliance.

### CAUTION!

- Disconnect device from the power supply before service.
- Food must be stored in original package or suitable containers.

### NOTICE!

- Check that the voltage specification on the rating label corresponds to that of the power supply.
- Only connect the refrigerator to a DC power supply as defined by this manual (5.1).
- The refrigerator is not suitable for transporting caustic materials or solvents.

## 1.2 Operating safety

### CAUTION!

- Before starting the cooling device, ensure that the power supply line has been installed by qualified technician.

### NOTICE!

- Do not use electric device inside the refrigerator unless recommended by the manufacturer for the purpose.
- Do not install the refrigerator near open flames or other heat sources (heaters, direct sunlight, ovens etc.)
- Danger of overheating!
- Ensure installation allows for sufficient air circulation and ventilation.
- Ensure that the ventilation openings are not covered.
- Do not fill the inner container with ice or fluid.
- Do not immerse the cooling device into water.
- Protect the refrigerator and the cable from heat and moisture.

## 2. Refrigerator application.

The cooling device is designed for use in Recreational Vehicles, the Drawer Refrigerator offers OEMs a low-profile and space saving refrigerator that operates on 12VDC with low current draw. The sleek design allows for the unit to be secured in place by the exterior frame or by anchoring the removable foot brackets for frameless applications, such as in a kitchen island. Holding up to (qty. 24) 12oz cans or (qty. 5) 750mL wine bottles, the pull out drawer is lockable and features a removable tray for easy loading and unloading refreshments of choice at the aid of interior lighting. Super quiet operation and user friendly digital controls round out this Drawer Refrigerator making it a complementary product for RVers on the go.

Power to be supplied by:

- 12V DC Starter battery.
- 12V DC Auxiliary battery.

### CAUTION! Health hazard!

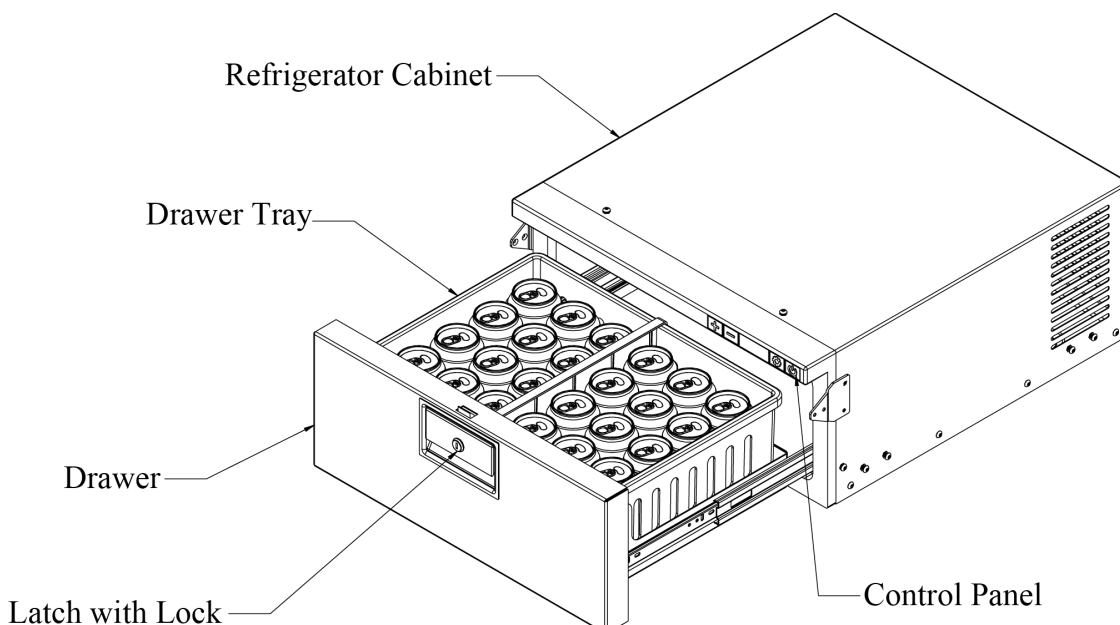
Please check if the cooling capacity of the device is suitable for the food or medicine you wish to cool.

## 3. Refrigerator Function.

The device can refrigerate food products. A fast-acting and efficient cooling system provides maintenance-free cooling performance with a compressor and control module. The refrigerator is designed for installation in recreational vehicles and subjected to various harsh conditions.

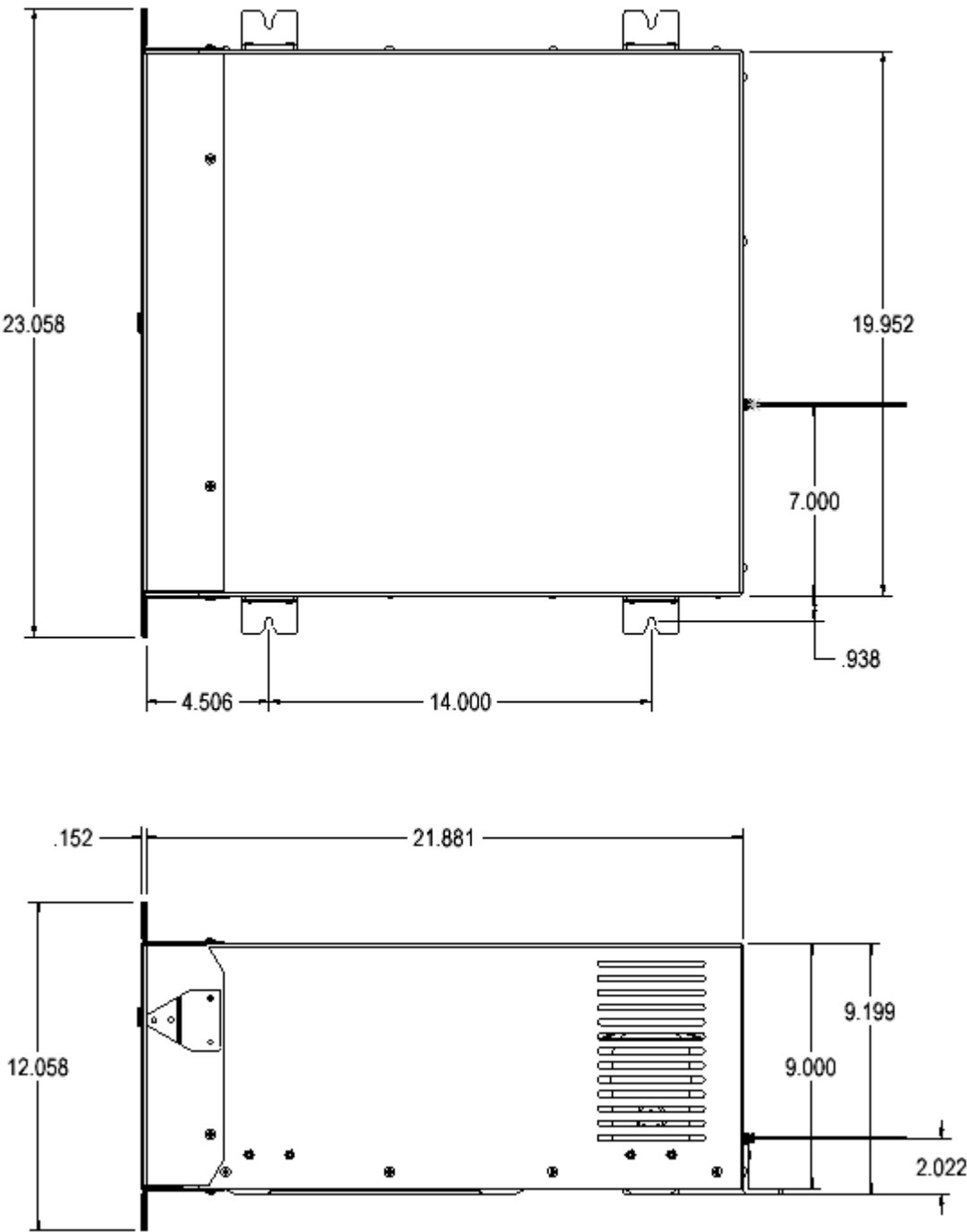
### Function description:

- 3-level battery monitor for protecting the vehicle battery.
- Display with temperature gauge (switch off automatically at low battery voltage)
- Temperature adjustment.
- Locking Drawer Latch



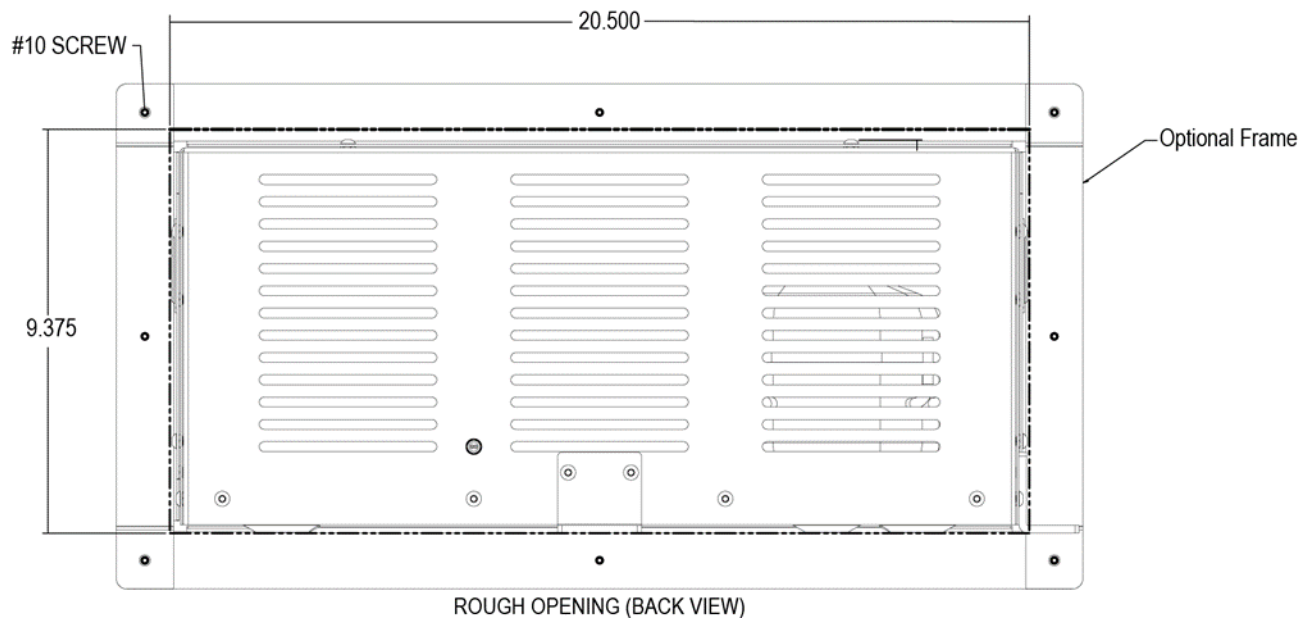
# 4. Installation

## 4.1 Unit dimensions



## 4.2 Rough opening

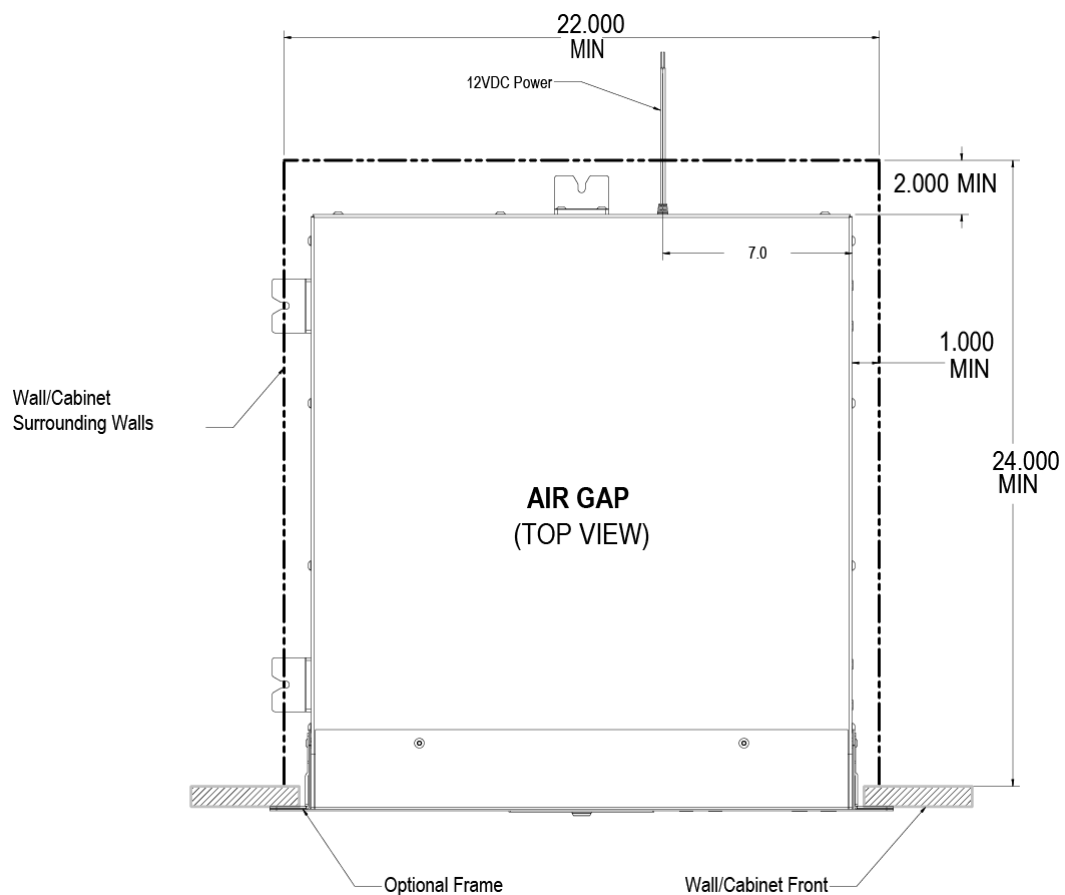
- Cut out size, 20.5 Wide X 9.375 High



## 4.3 Air Gap requirements

Clearances for airflow around the unit.

- **1" gap** on both sides
- **2" gap** between back of unit and back wall of enclosure



## 4.4 Mounting options

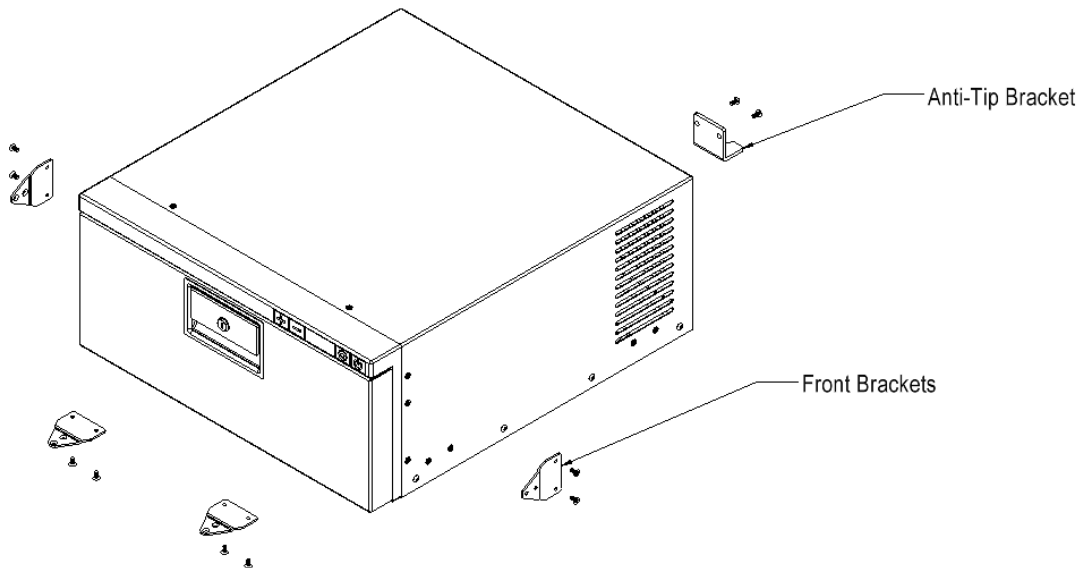
### Standard Mounting Kit

#### NOTICE!

#8 screws are required for installation of Side Brackets.

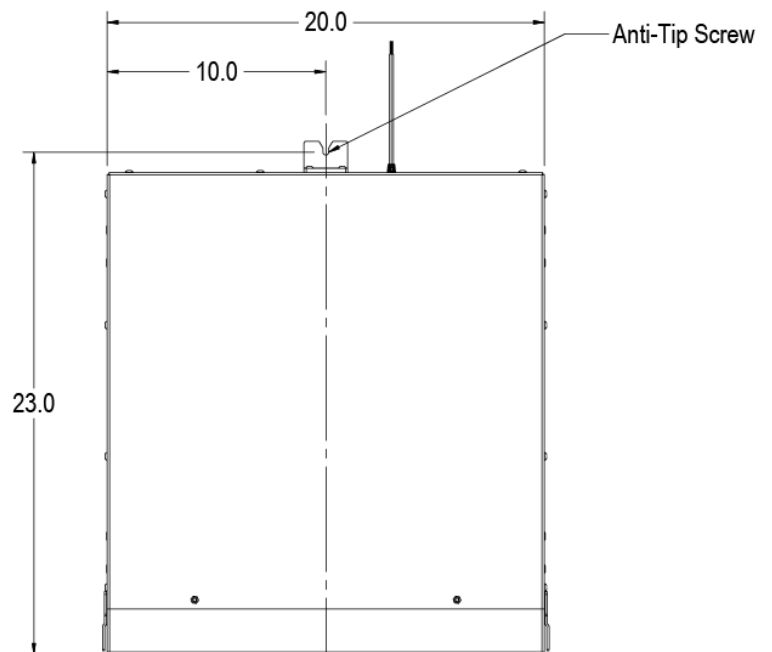
#10 screws are required for installation of Anti-Tip Brackets.

- Standard Mounting Kit requires at least 1 screw in each of the 5 mounting brackets.
- With Drawer OPEN, install screws for Front Brackets.



#### NOTICE!

- Anti-Tip Screw must be installed before inserting refrigerator into cabinet.
- Allow 3/16" gap under screw head.
- Anti-tip bracket must be able to slide under screw.





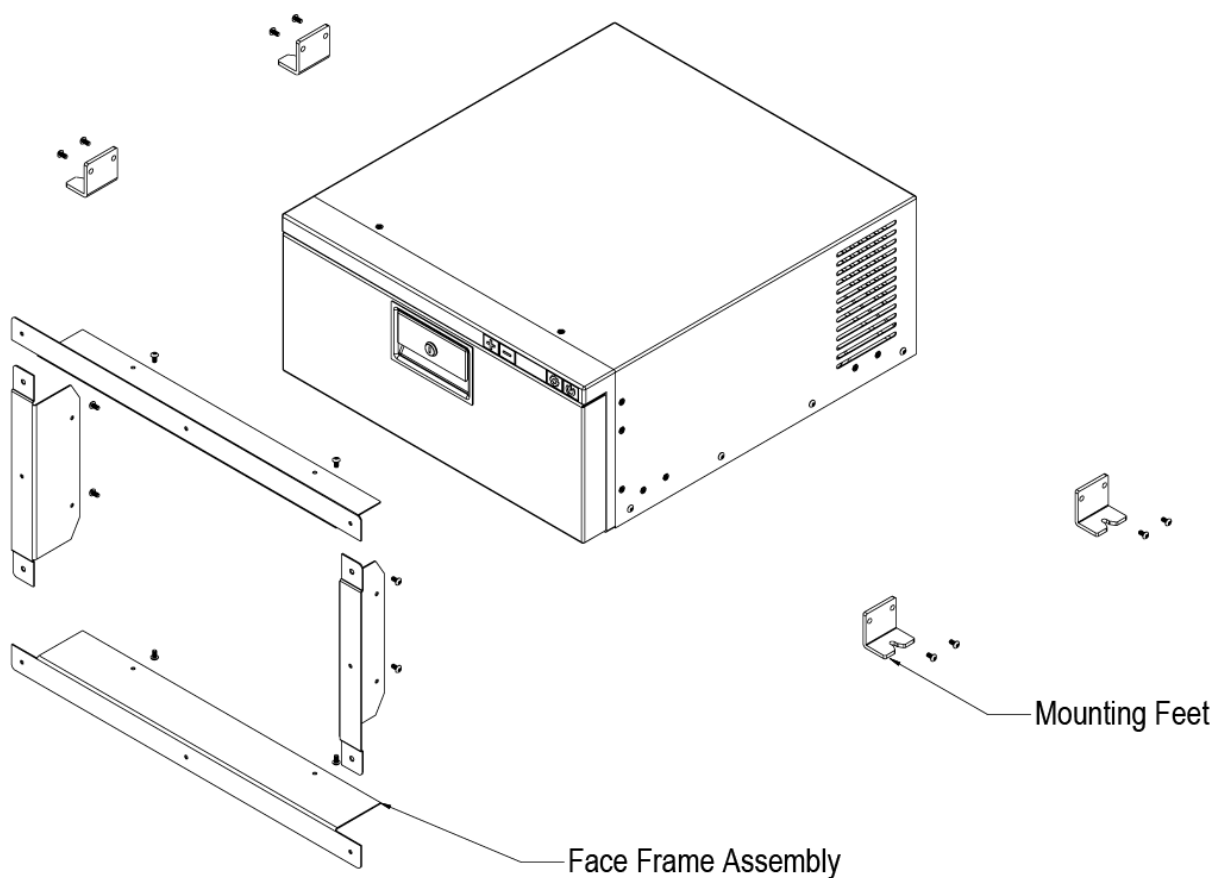
## 4.4 Mounting options (cont.)

### Optional Mounting Kit

#### NOTICE!

**#10 screws are required for installation of Foot Brackets and Face Frame.**

- Optional Mounting Kit requires at least 1 screw in each of the 4 foot brackets.
- Optional Mounting Kit requires 8 screws in the Face Frame Assembly



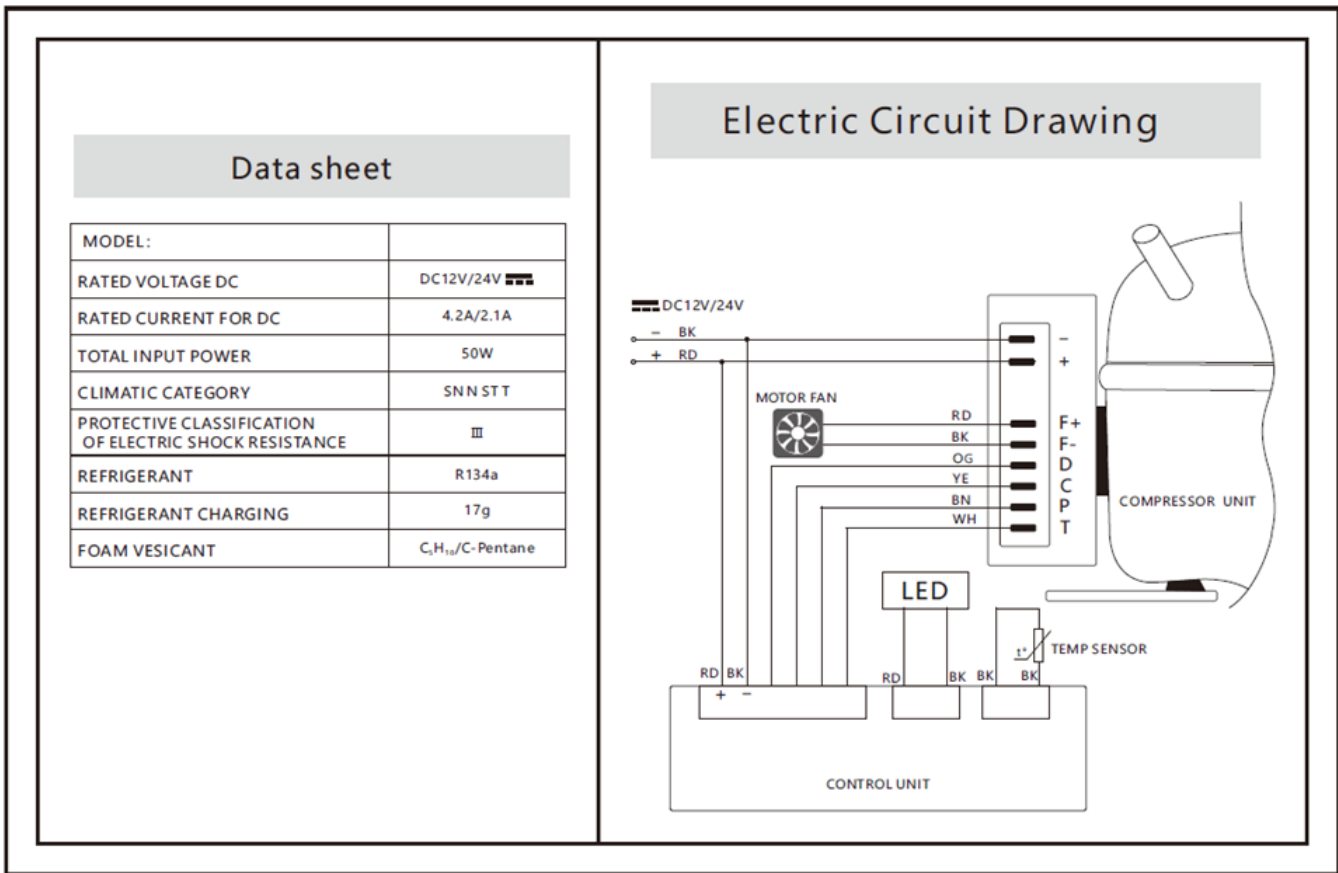
## 5. Electrical Connection:

### WARNING!

DC circuit protection required.

- Refrigerator power supply must include circuit protection.
- 20AMP circuit interrupt must be accessible to user.
- Seek installation advice from a trained technician.
- **Operating Voltage:**
  - Nominal..... 12 VDC ( 16 VDC MAX / 10 VDC MIN )
- **Operating Current**
  - Nominal..... 2.5 A ( 5.0 A MAX / 0.1 A MIN )

### 5.1 Wire Connection Diagram



### 5.2 Wire size and allowable length

- Wire gauge must be **10 AWG minimum**.
- Wire length **35ft maximum**.

NOTICE! Danger of damage!

- The refrigerator is equipped with an electronic system to prevent polarity reversal.

## 6. Display elements and operation.

### NOTICE!

- After buying your new refrigerator, please lay device right side up for more than 24 hours before starting.
- Before staring your new refrigerator for the first time, you should clean it inside and outside with a damp cloth. Please also refer to Chapter 8 "Cleaning and Maintenance".

### 6.1 Display & control panel:



### 6.2 Refrigerator switch ON/OFF:

- Switch on: Touch the button "POWER" once lightly with finger.
- Switch off: Push and hold "POWER" for about five seconds.

### 6.3 Temperature setting:

- Switch on the refrigerator.
- Select temperature display unit:
  - Push and hold (10sec) "SET" and DOWN".
  - Flashing "C" or "F" will appear in the display screen.
  - Release then press "UP" or "DOWN" to select the temperature unit Celsius or Fahrenheit.
  - When flashing stops selected units will be displayed.
- Cooling temperature setting:
  - Touch "SET" button once, then touch "UP" or "DOWN" button to set cooling temperature.
  - The selected temperature number will flash in the display screen for a few seconds.
- Display screen will return to current temperature automatically.

## 6.4 Low voltage protection battery monitor setting:

The refrigerator is equipped with a 3-level battery monitor which protects vehicle battery against excessive discharge when the device is connected to the on-board DC supply.

If the refrigerator is operated when the vehicle ignition is switched off, the refrigerator switches off automatically as soon as the supply voltage falls below a set level. The refrigerator will switch back on once the battery has been re-charged to the restart voltage level.

### NOTICE! Danger of damage!

When switched off by the battery monitor, the battery will no longer be fully charged. Avoid starting repeatedly or operating without longer charging phases. Ensure that the battery is recharged.

Monitor Level	H1	H2 *	H3
Switch-off voltage	10.3V	10.8V	11.3V
Restart voltage	11.1V	11.8V	12.6V

\* Factory Default

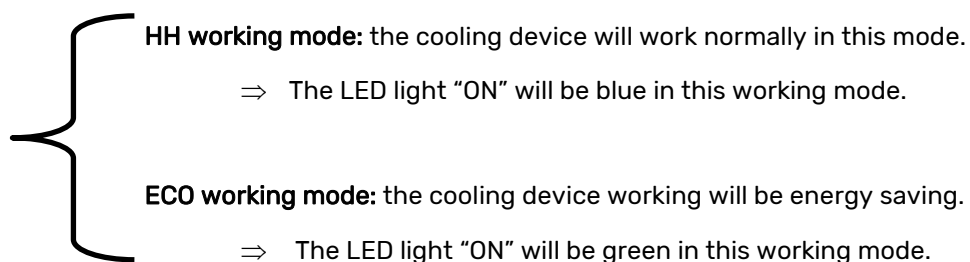
When the refrigerator power is supplied by the starter battery, select the battery monitor level **"H2"**, if the cooling device is connected to an auxiliary supply battery, the battery monitor level **"H1"** will suffice.

**Voltage monitoring is displayed by press and hold up and set buttons for about 10 seconds.**

- Switch on the refrigerator.
- There are 3-level low voltage protection battery monitor setting: H1, H2 and H3.
  - Push and hold (5sec) "UP" and "DOWN"
  - Display screen will flash "H1", "H2" or "H3".
  - Touch "UP" or "DOWN" buttons to select desired battery monitor level.
  - "H1", "H2" or "H3" will flash on display screen for a few seconds after setting.
  - Display screen will return to current temperature automatically.

## 6.5 Refrigerator working mode setting:

There are two working modes in the device:



- Double tap "SET" button.
- "HH" or "ECO" will display in the screen.
- Use "UP" or "DOWN" button to select desired mode.
- Working mode letter "HH" or "ECO" will flash in the screen for a few seconds after setting.
- Display screen will return to current temperature automatically.

## 6.6 Explanation for error code shown on display screen:

Error Code	Possible Reason	Suggested Solution
E0	Sensor circuit is broken or short	Connect or replace the sensor
E1	Input voltage is low	Check the battery voltage or adjust the Battery Monitor Level.
E2	Ventilating fan problem	Check if the ventilating fan is blocked or short
E3	Compressor started self-protection	Disconnect the device from power supply for 30 minutes, and re-start the device.
E4	Compressor protect itself against unusual running speed.	Change the working mode by device control panel
E5	Control panel's overheating warning	Move the device to a place with well-ventilated installation environment.

## 6.7 Energy saving tips:

- Choose a well-ventilated installation location which is protected from direct sunlight.
- Allow warm food to cool down first before placing it in the cooling device to keep cool.
- Do not open the cooling device more often than necessary.
- Do not leave the cooling device open for longer than necessary.
- Defrost the cooling device once a layer of ice forms.
- Avoid unnecessary low temperature settings.

## 7. Using the Refrigerator.

### 7.1 Switch on the cooling device.

**NOTICE! Danger of overheating!**

Proper installation requires sufficient clearances and ventilation so that the heat which generated during the operation can dissipate. Ensure that the ventilation slots are not covered.

- Make sure that the ventilation slots are not covered and that the heated air can dissipate.
- Close the cooling device.
- Switch on the refrigerator.

**NOTICE! Danger from excessively low temperature!**

Ensure that the only those objects are placed in the refrigerator that are intended to be cooled at the selected temperature.

- The temperature displayed in the screen is that of the middle in the interior.
- The temperature elsewhere can deviate from this temperature.

### 7.2 Switch off the refrigerator.

- Empty the refrigerator.
- Switch off the refrigerator.

**Storage!**

- If refrigerator is to be placed in storage for a longer period of time, turn off local breaker or central disconnect.
- Leave the door slightly open, this will prevent odor build-up.

### 7.3 Defrost the refrigerator.

Humidity can form frost in the interior of the cooling device or on the vaporizer. This will reduce the cooling capacity of device. Defrost the refrigerator if ice buildup is detected.

**NOTICE! Danger of damage!**

Never use hard or pointed tools to remove ice or to loosen objects which have frozen in the device.

Follow steps to defrost the refrigerator:

- Take out the contents of the refrigerator.
- If necessary, place them in another device to keep them cool.
- Switch off the device.
- Leave the door open.
- Wipe off the defrosted water before restarting refrigerator.

## 8. Cleaning and Maintenance.

### 8.1 Cleaning the refrigerator.

NOTICE! Risk of damage.

- Do not use ammonia based cleaning products
- Occasionally clean the device interior and exterior with a damp cloth.
- Make sure that the air inlet and outlet vents in the device are free of any dust and dirt, so that heat can be released and the device is not damaged.

WARNING!

Always disconnect the device from the power supply before you clean and service it.

NOTICE! Risk of damage.

Never clean the refrigerator with running water.

Do not use abrasive cleaning agents or hard objects during cleaning as these can damage the refrigerator.

## 9. Troubleshooting

Fault	Possible cause	Suggested remedy
Device does not function, LED light does not glow.	No voltage was detected in the DC power supply.	Verify 12V supply battery has adequate voltage.
	The circuit breaker is defective	Replace circuit breaker.
The device does not cool (circuit is powered, “ON” LED is lit)	Defective compressor	This can only be repaired by an authorized repair center.
The device does not cool (circuit is powered, display screen shows Error Code “E1”). Please also refer to chapter “ <b>6.6 Explanation for error code shown in the display screen</b> ”:	Low voltage protection battery monitor is set too high.	Select a lower level for battery monitor.
	Battery voltage is too low.	Test the battery and charge it if needed.
Refrigerator not operating, (circuit is powered, but LED is not lighted)	The DC circuit is faulty	Verify connections are clean/dry/correct
	The circuit breaker is defective	Replace circuit breaker.
	The vehicle fuse has blown	Replace the vehicle’s DC outlet fuse, please refer to your vehicle’s manual
The display screen shows the Error Code and the device does not cool. Please refer to “ <b>6.6 Explanation for the error code shown in the display screen</b> ”	Please refer to “ <b>6.6 The explanation for the running code shown in the display screen</b> ”	This should only be repaired by an authorized repair center.



## 10. Disposal.

- Place the packaging material in the appropriate recycling waste bins wherever possible.
- The insulation of the refrigerator contains flammable materials and requires special disposal procedures.
- The coolant circuit contains R134a and requires special disposal procedures.
- If you wish to dispose of your device, ask your local recycling center or dealer for details about how to comply with applicable disposal regulations.

## 11. Technical data.

### NOTE.

- The coolant circuit contains R134a.
- Contains fluorinated greenhouse gases.
- Hermetically sealed equipment.

Connection Voltage:	DC 12V
Related current	4.2
Cooling capacity	+10°C to -25°C (+50°F to -13°F)
Volume	0.8 Cubic Feet
Climate class	SN N ST T
Refrigerant quantity	17g
Power consumption	50W
Refrigerant	R134A
Insulation	Polyurethane
Cooling System	Compressor
Ambient temperature	+16°C to +43°C (+61°F to 110°F )

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