

DOMETIC

REFRIGERATION COOLERS

EN

CF Series and CFX Series

Technical Specifications and Trouble Shooting

USA & Canada

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Read these instructions carefully.

1 EXPLANATION OF SYMBOLS AND SAFETY INSTRUCTIONS

This manual has safety information and instructions to help you eliminate or reduce the risk of accidents and injuries.

1.1 Recognize safety information



This is the safety alert symbol. It is used to alert you to potential physical injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death. Refer to this product's installation/operation manual for additional relevant safety information.

1.2 Understand signal words

A signal word will identify safety messages and property damage messages, and will indicate the degree or level of hazard seriousness.

⚠ WARNING indicates a hazardous situation that, if **not** avoided, could result in death or serious injury.

⚠ CAUTION indicates a hazardous situation that, if **not** avoided, could result in minor or moderate injury.

NOTICE is used to address practices **not** related to physical injury.



indicates additional information that is **not** related to physical injury.

1.3 Supplemental directives



Failure to follow these directives could result in property damage, serious injury, or death.

Do **not** alter this product beyond what is described in these technical specifications.

This product must comply with all applicable local or national codes, including the latest edition of the following standards:

U.S.A.

- ANSI/NFPA70, National Electrical Code (NEC)
- ANSI/NFPA 1192, Recreational Vehicles Code

Canada

- CSA C22.1, Parts I & II, Canadian Electrical Code
- CSA Z240 RV Series, Recreational Vehicles

1.4 General safety messages

⚠ WARNING Failure to obey the following warnings could result in death or serious injury:

- ELECTRICAL SHOCK HAZARD. Do **not** immerse the product in water, or use it in an area that is excessively muddy.
- Do **not** use the cooler for any purpose other than as a mobile cooling device.

⚠ CAUTION FALL HAZARD. Do **not** stand on the cooler. Doing so could damage the unit or cause minor to moderate injury.

NOTICE Failure to obey the following notices could result in property damage:

- Keep sand or dirt away from the cooling system ventilation area.
- Do **not** leave the cooler on the deck of a boat for an extended period. Salt water damage to the cooling system, electronics, or metal hardware could occur.
- Do **not** expose the cooler to extreme heat.
- Only use mild soap and water to clean the cooler.
- Do **not** use a DC extension cord.
- Do **not** use a power strip or two-way splitter.
- Do **not** use power cord adapters of any kind other than those provided by the manufacturer.
- Do **not** use ice cubes or fill the cooler with water. If ice does accumulate at the bottom of the cooler, defrost the unit and use the drain plug to drain the water.
- Do **not** modify the unit in any way.
- Do **not** place hot materials (75 °F or higher) in the cooler. Allow materials to cool (50 °F or less) before placing them inside the cooler.
- Do **not** tip or store the cooler at an angle greater than 30° for extended periods. Compressor oil contamination of the cooling system could occur.
- Allow 2–4 inches of space around the cooler at all times for proper ventilation of the cooling system.
- The cooler must be secured at all times using straps or a mounting plate, especially in mobile applications.

2 GENERAL INFORMATION

i Refer to the following for general information regarding CF and CFX series coolers.

CF series:

- Emergency override will cause all contents to freeze.
- The degree variance for cooler operation is 3 °F average, and 5 °F maximum.
- All coolers prioritize 120 VAC over 12 VDC or 24 VDC.

CFX series:

- USB chargers are 5 VDC, 0.5 amp.
- All new coolers are shipped with a 12', 12 VDC cord.
- The CFX wireless display has a range of 20'.
- All coolers prioritize 120 VAC over 12 VDC or 24 VDC.
- If the ambient temperature is above 90 °F, the cooler will not reach the minimum temperature.
- These coolers do not include an auto-defrost function. The user must manually defrost the cooler.

3 SPECIFICATIONS

3.1 Temperature ranges

| Series | In box temperature range | Ambient temperature range |
|------------|--------------------------|---------------------------|
| CF series | 0 °F–50 °F | 61 °F–109 °F |
| CFX series | -8 °F–50 °F | 61 °F–109 °F |

3.2 Storage and empty weight

| Model | Storage | Empty weight |
|----------|-------------|--------------|
| CF-18 | 0.7 cu. ft. | 27.0 lbs. |
| CF-25 | 0.9 cu. ft. | 26.5 lbs. |
| CF-35 | 1.1 cu. ft. | 33.0 lbs. |
| CF-40 | 1.3 cu. ft. | 37.0 lbs. |
| CF-50 | 1.7 cu. ft. | 44.0 lbs. |
| CF-80 | 2.8 cu. ft. | 62.0 lbs. |
| CF-110 | 3.7 cu. ft. | 73.0 lbs. |
| CFX-28 | 0.9 cu. ft. | 29.0 lbs. |
| CFX-35 | 1.1 cu. ft. | 39.0 lbs. |
| CFX-40 | 1.4 cu. ft. | 41.0 lbs. |
| CFX-50 | 1.8 cu. ft. | 45.0 lbs. |
| CFX-65W | 2.2 cu. ft. | 49.0 lbs. |
| CFX-65DZ | 1.8 cu. ft. | 51.0 lbs. |
| CFX-75DZ | 2.6 cu. ft. | 68.3 lbs. |
| CFX-95DZ | 3.0 cu. ft. | 70.6 lbs. |
| CFX-100 | 3.3 cu. ft. | 70.6 lbs. |

3.3 Energy ratings



The cooler will draw less energy than listed if other products are running on the same electrical system. For best results, do not run any other appliances on the electrical system with the cooler.

| Model | 12 VDC | 24 VDC | 120 VAC |
|----------|--------|--------|-------------|
| CF-18 | 3.1 A | 1.9 A | — |
| CF-25 | 6.8 A | 3.0 A | — |
| CF-35 | 6.0 A | 3.0 A | 1.3 - 0.7 A |
| CF-40 | 6.0 A | 2.0 A | 1.3 - 0.7 A |
| CF-50 | 7.0 A | 3.0 A | 1.3 - 0.7 A |
| CF-80 | 7.5 A | 3.5 A | 1.3 - 0.7 A |
| CF-110 | 7.5 A | 3.5 A | 1.3 - 0.7 A |
| CFX-28 | 6.5 A | 3.2 A | 0.7 A |
| CFX-35 | 7.0 A | 3.2 A | 0.86 A |
| CFX-40 | 7.0 A | 3.2 A | 0.86 A |
| CFX-50 | 7.8 A | 3.6 A | 0.95 A |
| CFX-65W | 8.2 A | 3.8 A | 1.0 A |
| CFX-65DZ | 5.5 A | 2.6 A | 0.75 A |
| CFX-75DZ | 7.9 A | 3.6 A | 0.75 A |
| CFX-95DZ | 7.5 A | 3.6 A | 0.9 A |
| CFX-100 | 10.5 A | 5.0 A | 1.25 A |

4 INSTRUCTIONS

4.1 Selecting the battery monitor mode

- Turn on the cooler.
- Press the **SET** button three times.
- Use the UP (+) and DOWN (-) buttons to select the desired mode. The selected mode appears on the display for a few seconds.

 The following tables show the cut-off and cut-in voltage for coolers in battery mode.

CF-18 battery controller cut-off and cut-in voltage

| Monitor Mode | Low | High |
|----------------|--------|--------|
| Cut-Off 12 VDC | 10.4 V | 11.5 V |
| Cut-In 12 VDC | 11.5 V | 12.5 V |
| Cut-Off 24 VDC | 22.1 V | 24.0 V |
| Cut-In 24 VDC | 23.6 V | 25.4 V |

CF (25 - 110) battery controller cut-off and cut-in voltage

| Monitor Mode | Low | Medium | High |
|----------------|--------|--------|--------|
| Cut-Off 12 VDC | 10.4 V | 11.0 V | 12.0 V |
| Cut-In 12 VDC | 11.2 V | 11.0 V | 12.9 V |
| Cut-Off 24 VDC | 24.6 V | 23.3 V | 25.0 V |
| Cut-In 24 VDC | 23.0 V | 24.5 V | 26.3 V |

CFX (28 - 100) battery controller cut-off and cut-in voltage

| Monitor Mode | Low | Medium | High |
|----------------|--------|--------|--------|
| Cut-Off 12 VDC | 10.1 V | 11.4 V | 11.8 V |
| Cut-In 12 VDC | 11.1 V | 12.2 V | 12.6 V |
| Cut-Off 24 VDC | 21.5 V | 24.1 V | 24.6 V |
| Cut-In 24 VDC | 23.0 V | 25.3 V | 26.2 V |

4.2 Using the CFX Wi-Fi function

CFX Series coolers can be controlled via Wi-Fi using an app installed on a compatible device. The app has control, display, and alarm functions. Visit www.dometic.com for further information.

Switching the Wi-Fi signal on or off

- Press the **Set** button five times.
- Use the UP (+) and DOWN (-) buttons to switch the Wi-Fi signal on or off. The desired setting appears on the display for a few seconds, the display flashes several times and then the current temperature is displayed.

Connecting to the cooler Wi-Fi

- Open the Wi-Fi settings of the compatible device (tablet or phone).
- Select the Wi-Fi of the cooler. The Wi-Fi name will begin with the model of the cooler (**CFX**_**).
- Enter the Wi-Fi password. The default password is **00000000**.

Changing the Wi-Fi name and password

- Access **Tools/Settings** in the CFX App and follow the on-screen instructions.

Resetting the Wi-Fi to factory settings

- Press the **Set** button five times.
- Hold the UP (+) button for at least five seconds. **RES** will blink several times. The default password returns to **00000000**.

5 TROUBLESHOOTING

5.1 CF flashing error codes

| | Fault | Possible cause | Suggested remedy |
|----------------------|--------------------------------------|--|--|
| One flash | Insufficient cable size | <ul style="list-style-type: none"> • There are too many connections. • The connections are poor. | Battery cut-out (see "Battery cutout" on page 7). |
| Two flashes | Fan over-amperage error (over 0.5 A) | <ul style="list-style-type: none"> • The fan may be jammed. • The fan may be burnt out. | Contact the service center. Do not attempt repair. |
| Three flashes | Motor error start | The motor may be blocked. | <ul style="list-style-type: none"> • Turn the cooler off for 15 minutes. • If the cooler is still showing an error after turning it back on, contact the service center. Do not attempt repair. |
| Four flashes | Minimum motor speed fault | The compressor is running slower than 1,850 RPM. | Contact the service center. Do not attempt repair. |
| Five flashes | Thermal cutout of electronic unit | <ul style="list-style-type: none"> • The refrigeration system has been overworked. • The surrounding temperature is too high or there is poor ventilation. | Check the outside ambient temperature and make sure the fan is vented properly. |

Battery cutout

i If the light on the CF Series cooler flashes once every five seconds, it is indicating a voltage drop problem. The wiring in the vehicle may be inadequate to carry the needed amount of volts to the unit.

- ▶ Test the CF Series cooler by plugging it into a suitable AC adapter. If the cooler operates properly, the problem is not with the CF Series cooler.
- ▶ Check the car wiring configuration or plug connections.

i Dometic Corporation recommends car, RV, or truck wiring be a minimum of 6–8 mm cross-section wire for up to four meters. Above this length, the wiring would need an extra millimeter for every meter.

5.2 CFX flashing error codes

| | Fault | Possible cause | Suggested remedy |
|---------------------|-------------------------------------|--|---|
| One flash | Line Voltage | Too many devices are drawing power.. | Power down, and then power up the cooler. |
| | Excessive fan current | The fan load on the electronics unit is more than 1 A. | Contact the service center. Do not attempt repair. |
| Two flashes | Too many start attempts | The compressor or fan has been started too often within a short period of time. | Contact the service center. Do not attempt repair. |
| | The motor doesn't start | <ul style="list-style-type: none"> • The rotor is jammed. • The pressure difference in the cooling system is too high (>5 bar). | Contact the service center. Do not attempt repair. |
| Four flashes | Speed too low | If the cooling system is overloaded, the minimum speed of the motor (1,850 RPM) cannot be maintained. | Contact the service center. Do not attempt repair. |
| Five flashes | Overheating of the electronics unit | The cooling system is loaded too heavily or the temperature is set too high. | Contact the service center. Do not attempt repair. |

5.3 CFX display error codes

| Error Code | Meaning |
|-------------------|--|
| ERR1 | NTC open circuit/temperature in component is lower than -30 °C |
| ERR2 | NTC short circuit/temperature in component is higher than 50 °C |
| A | A = 10, B = 11, C = 12, D = 13 (e.g., A4 means the temperature is 104 °F) |
| B | |
| C | |
| D | |

5.4 General troubleshooting

| Fault | Possible cause | Suggested remedy |
|--|--|--|
| Device does not function, LED does not glow. | No voltage was detected in the DC power outlet. | In most vehicles the ignition must be turned on before power will be supplied to the DC power outlet. |
| | No voltage is present in the AC voltage outlet. | Try using another plug outlet. |
| | The device fuse is defective. | Replace the device fuse. |
| | The integrated mains adapter is defective. | Contact the service center. Do not attempt repair.. |
| The device does not cool (plug is inserted, POWER LED is lit). | The compressor is defective. | Contact the service center. Do not attempt repair. |
| The device does not cool (plug is inserted, POWER LED flashes orange, display is switched off). | The battery monitor is set too high. | Select a lower battery monitor setting. |
| | The battery voltage is too low. | Test the battery and charge it, as needed. |
| The ignition is on, the device is not working, and the LED is not lit. (When operating from the DC outlet) | The DC outlet is dirty. There is poor electrical contact. | Clean the DC outlet. |
| | The fuse of the DC plug has blown. | Replace the fuse in the DC plug. |
| | The vehicle fuse has blown. | Replace the vehicle's DC outlet fuse. Refer to the vehicle's operating manual. |
| The display shows an error message (e.g., ERR1) and the appliance does not cool. | The appliance has switched off due to an internal fault. | Contact the service center. Do not attempt repair. |
| The interior light of a compartment flashes. | The lid of the compartment has been left open for more than three minutes. | Close the lid of the compartment. |
| The contents of the cooler are freezing with no error light. | The cooler is in emergency override. | Verify that the cooler is not in emergency override. If the cooler is not in emergency override, contact a service center. |