

Reach-in Refrigerators

Installation, operation and service



Representative current XR-1-HC unit.

2027 EDITION

Model _____

Serial number _____

Installed location _____

Controller for this category

XR03CX-4N0F1 - refrigerator / cooler application

Read safety and installation instructions before use. Match the cabinet nameplate and controller label to the equipment.

Find your task

Click a title below, or use the PDF bookmarks. Click a footer page number to return here.

Customer guide: safety	03
Receive and install	04
Allow ventilation space	05
Set up the cabinet	06
Daily operation	07
Load without blocking air	08
Use the temperature control	09
Cleaning schedule	10
Clean the condenser	11
Clean interior and stainless steel	12
Troubleshoot the cabinet	13
Technician service: diagnosis	15
Controller programming	16
Alarm codes and digital inputs	17
Controller mounting and probes	18
Controller parameters	19
Controller wiring	22
Hot key transfer	23
Maintenance record	24

Customer guide: safety



Read warnings



Disconnect power



Use trained help

DANGER Fire or explosion

Flammable refrigerant may be used. Do not puncture refrigerant tubing. Repairs must be performed by trained service personnel. Identify the refrigerant on the nameplate.

Electrical safety

- Use a grounded outlet and dedicated supply that match the nameplate. No extension cords or adapter plugs. Never remove the ground prong.
- Unplug before cleaning or service. A zero setting or an OFF display may leave lights, fans or heaters energized.
- Keep hands dry when handling the plug. Grip the plug, not the cord. Keep the cabinet and casters off the cord.
- Have damaged cords replaced by an authorized service agent. Do not alter wiring or electrical components.

Protect people and equipment

- Keep children from climbing inside or hanging on doors, drawers and shelves. Do not stand inside the cabinet.
- Do not put hands under equipment while moving it. Never lift a bar cabinet by the countertop.
- Do not store or use flammable, explosive or corrosive materials in or near the unit. Do not spray the unit with water.

- Do not touch very cold surfaces with wet hands. Use the appliance for its intended purpose.

When disposing of a cabinet

Remove doors and leave shelves in place to discourage child entry. Arrange refrigerant handling and disposal through a qualified technician. Keep unused equipment inaccessible to children.

Receive and install



Inspect delivery



Level the cabinet



Allow airflow

01 Inspect delivery and reject damaged freight

Inspect the carton, cabinet and accessories before accepting delivery. **Always reject freight if damaged.** Photograph the damage, record the refusal on the delivery receipt, and notify the carrier and seller promptly.

02 Move to the final location

Keep the cabinet safely supported while moving. Avoid using the countertop as a lifting point.

03 Remove packaging

Remove cardboard, plastic and internal packing. Keep all supplied accessories and fasteners.

04 Fit and level

Install accessories before connection. Level front-to-back and side-to-side. Check that doors and drawers close correctly.

05 Verify the electrical supply

Use a dedicated grounded circuit matching the nameplate. Confirm the voltage, frequency and circuit protection.

Tools commonly needed

A suitable screwdriver, adjustable wrench and level. Use proper lifting equipment and adequate help for the cabinet weight.

After transport

After side transport, keep the cabinet upright for at least 24 hours before connecting power. Follow any stricter instruction supplied with your unit.

After unplugging

Wait at least 10 minutes before reconnecting, unless the unit instructions require a longer delay.

Allow ventilation space

Install indoors on a dry, level surface. Keep the cabinet away from direct sunlight, ovens and steam. Stay within its rated room temperature and humidity limits.

Required space

6 in at each side and rear.

Nameplate instructions, supplied spacers and the model-specific installation requirements take priority. Leave access for cleaning and service.

Set up the cabinet



Representative current XR-1-HC unit.

01 Fit accessories before connection

Install shelves, pan dividers, drawers, casters and feet as supplied.

02 Support every shelf corner

Fit each clip fully into a matching support slot. Use the same height at all corners. Lower the shelf onto the clips.

03 Check for stability

Press gently at every shelf corner. Lock fitted caster brakes or adjust the feet as designed. Confirm that the cabinet is level and stable.

Do not overload

Use the model shelf and drawer ratings. Remove product if a shelf bends or flexes. Do not hang on shelves or use them as steps.

Daily operation



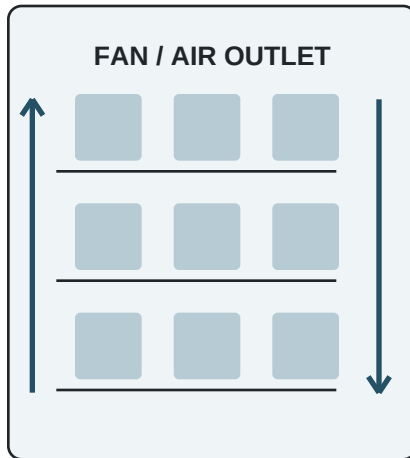
Representative current XR-1-HC unit.

Let the cabinet reach its intended operating temperature before loading. Arrange products with room for circulating air. Close the doors promptly after use.

Defrost is normal

Freezer cabinets commonly use electric defrost; refrigerator cabinets commonly use an off-cycle stop of the compressor. Match the actual controller and approved cabinet configuration.

Load without blocking air



Airflow principle; actual cabinet layout varies.

Keep the fan and duct clear.

Leave space around products.

Do not pack the rear wall.

Close doors after loading.

Load after cooling

- Leave at least 4 in between products and the upper fan or air duct.
- Do not block evaporator fans or pack products against interior walls.
- Avoid large warm loads. Use the cabinet for its intended storage and holding purpose.
- Keep doors, drawers and lids closed during non-use. Check the gasket if a closure will not seal.

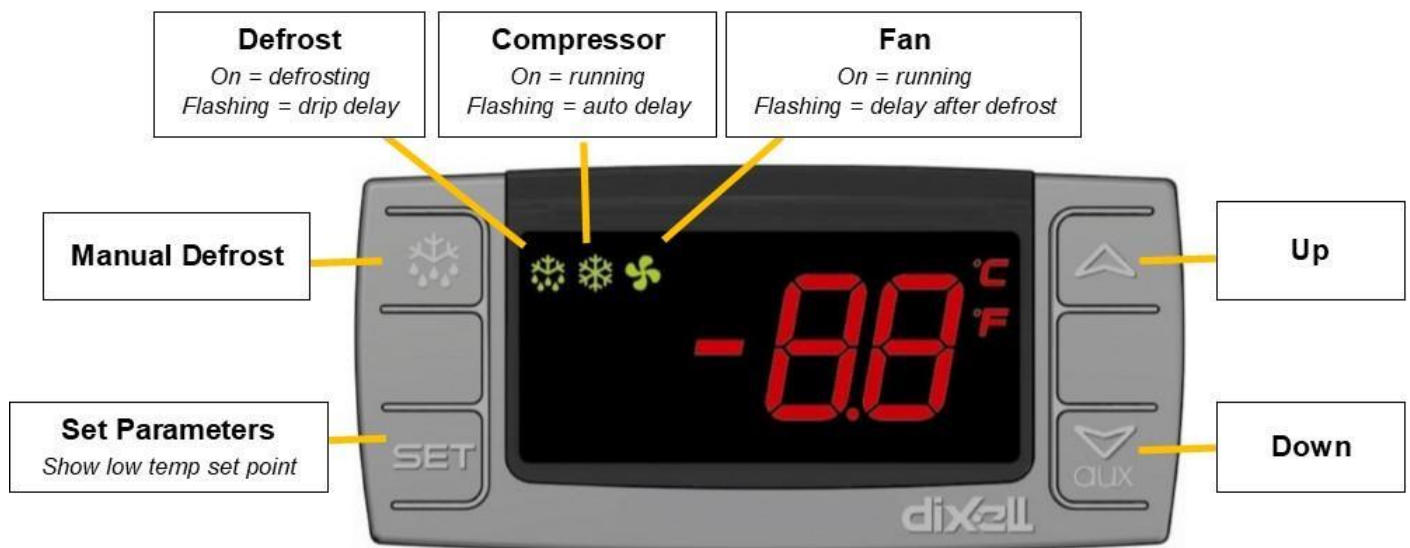
Display temperature

The controller display is a probe reading. It is not a direct food-temperature measurement. Check product temperature using the method required for your operation.

Use the temperature control



XR03CX-4N0F1 - refrigerator / cooler application



Identify SET, the arrows and the defrost key on the installed control.

Leave factory settings in place

The cabinet arrives preset. A change should follow the approved operating requirement for the unit. The generic controller defaults are not cabinet operating temperatures.

01 View the setpoint

Press and release SET. Press SET again or wait about five seconds to return to the temperature display.

02 Change only when needed

Hold SET until the temperature-unit indicator flashes. Adjust with UP or DOWN.

03 Save the change

Press SET to store the new value. Check that the displayed unit is correct.

In cooling mode, the compressor stops at SET and restarts at SET + Hy. For example, SET 33°F and Hy 4°F gives a nominal 33-37°F probe-control band. This example is not a recommended setting for every cabinet.

Cleaning schedule

When	Task
After spills and daily use	Wipe food and liquid residue from the interior, pan surfaces and drip areas. Rinse and dry.
Preferably weekly	Wash removable door or drawer gaskets and check the complete seal.
At least monthly / every 30 days	Inspect and clean the condenser coil and fins. Check accessible fans and ventilation openings.
As needed	Remove and clean shelves, brackets, bins, dividers and pan supports. Inspect corrosion, seals and drain paths.

Disconnect power first

Unplug before cleaning the cabinet. Keep motors and electrical components dry. Have a technician handle cleaning that exposes electrical parts or requires moving the compressor assembly.

Clean the condenser



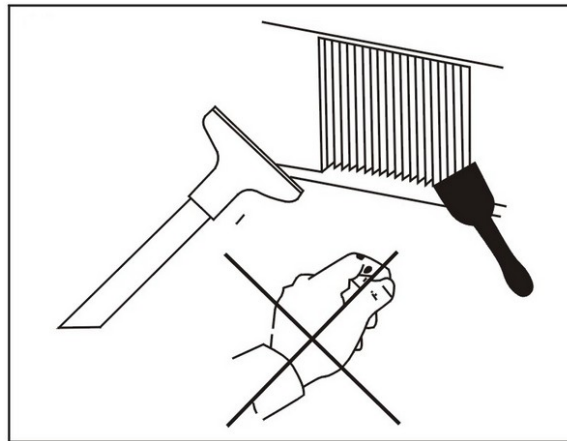
Unplug first



Clean coil gently



Check airflow



Brush with the fin direction; use a vacuum to remove loosened debris

01 Disconnect power

Unplug the unit. Open only the access panel intended for routine cleaning.

02 Remove dust and lint

Use a soft brush and vacuum. Brush top-to-bottom along fins, not across them.

03 Check the fins

Avoid bending fins. Use a fin comb where appropriate to straighten damaged sections.

04 Refit the access panel

Confirm that grilles, fasteners and guards are secure before reconnecting power.

Fan blades and motors

Clean accessible blades with a soft cloth. Keep water away from the motor and electrical parts. Do not spray the cabinet or fan assembly.

If access is difficult

Do not pull out a compressor assembly or bend tubing for customer cleaning. Request technician service when debris cannot be removed through the approved access area.

Clean interior and stainless steel



Disconnect power



Wash / rinse / dry



Inspect the seal

01 Use mild soap and warm water

Clean interior surfaces and removable parts with a soft cloth or non-abrasive pad.

02 Clean in the direction of the grain

Wipe stainless steel parallel to its visible polish lines. Avoid wire brushes, steel pads and metal scrapers.

03 Rinse and dry

Remove cleaner residue, standing water, salt and food deposits promptly. Dry surfaces and removable components.

04 Wash and refit gaskets

Where the gasket is removable, wash it gently. A 30-minute soak in warm soapy water is used for the covered removable-gasket arrangements. Dry, refit and check the complete seal.

Avoid damaging cleaners

Do not use steel wool, caustic soap, abrasive cleaners, bleach or hydrochloric acid. Choose cleaners compatible with stainless steel and plastic. Do not use solvents or polishing agents that damage plastic.

Why stainless steel can rust

Scratches, mineral deposits and chlorides from salt, food, water or cleaners can damage the protective surface. Frequent gentle cleaning and prompt rinsing reduce these risks.

Hard water and surface restoration

If deposits recur, consult a water-treatment specialist. Have a qualified provider select any restoration or passivation product for the material. Do not apply an unverified chemical simply because it is sold as a metal cleaner.

Troubleshoot the cabinet

Problem	Check first	When to request service
Compressor not running	Plug and power supply; normal defrost or restart delay; controller display.	Persistent no-start, repeated circuit trips or electrical faults.
Warm cabinet / long run time	Door closure, gasket, blocked air, warm loading and condenser cleanliness.	Persistent warming or icing after accessible checks.
Noisy cabinet	Level footing, required clearance and loose stored items.	Internal mounting or tubing vibration.
Interior light off	Light switch; note whether refrigeration still operates.	Switch fault or approved lamp replacement beyond user access.
Condensation / water	Door closure, gasket, humidity and visible drain condition.	Persistent leakage, blocked drain or failed seal.

Give support a clear picture

Record the model, serial number, controller display and symptom. Note recent outages, transport, heavy loading or door-opening changes. Photographs of the nameplate and display help identify the configuration.

Leave these checks to technicians

Electrical testing, refrigerant charge, internal tubing, hidden parameters and sealed-system repair are service work. Do not repeatedly reset a tripping circuit or change settings at random.

Technician service: diagnosis

For qualified technicians

Identify the model, serial number, refrigerant, electrical supply and controller before service. Isolate electrical connections. Follow the flammable-refrigerant warnings.

01 Check installation first

Confirm nameplate supply, grounding, cabinet level, ventilation, ambient conditions and condenser cleanliness.

02 Inspect doors and airflow

Check gasket contact, door or drawer closure, evaporator airflow, loading and frost pattern.

03 Identify the operating state

Record cooling, defrost, fan delay, compressor delay and any alarm. Photograph the display before changing anything.

04 Inspect controls and connections

Use the cabinet wiring diagram. Check probe connections, switches, fans and outputs against the installed controller version.

05 Record and verify changes

Keep a record of original settings, adjustments and measured results. Confirm normal cycling and sealing before return to use.

Cabinet wiring comes first

Controller drawings show controller terminals only. They do not replace the wiring diagram installed on the cabinet or the equipment-specific service procedure.

Controller programming



SET + DOWN



Select / edit



SET to save

Qualified technicians

Record the complete controller model, cabinet nameplate and existing settings. Disconnect electrical connections before servicing. The controller cannot be used as a safety device.

01 Enter the menu

Hold SET + DOWN for about three seconds until the temperature-unit indicator flashes.

02 Select and edit

Select a parameter with the arrows. Press SET to view its value, change it with the arrows, and press SET to store.

03 Exit

Press SET + UP or wait about 15 seconds. The stored value remains saved; exiting does not undo a change.

Hidden menu and keyboard

After first-level entry, release the keys, then hold SET + DOWN for more than seven seconds to reach L2. If nP appears, continue to the hidden level. SET + DOWN can move a parameter between hidden and first-level menus; the decimal point marks first-level visibility.

Hold UP + DOWN for more than three seconds to lock or unlock. OF indicates locked; On indicates unlocked.

Manual defrost

Hold DEF for more than two seconds to start manual defrost when conditions permit. Do not change the defrost type without matching the cabinet system.

This controller uses off-cycle defrost: the compressor stops. The interval is controlled by id and duration by Md.

Alarm codes and digital inputs

Display	Meaning	What to check
P1	Room probe fault	Probe connections first; the compressor uses its configured fault ON/OFF timing.
HA / LA	High / low temperature alarm	Check load, doors, airflow and the configured alarm limits. Outputs normally remain unchanged.
EA	External alarm	Check the external input and delay. Outputs normally remain unchanged.
CA	Serious external alarm	Check the external input. Outputs switch off.
dA	Door-open alarm	Check the door and switch. Output behavior follows the installed door-input configuration.

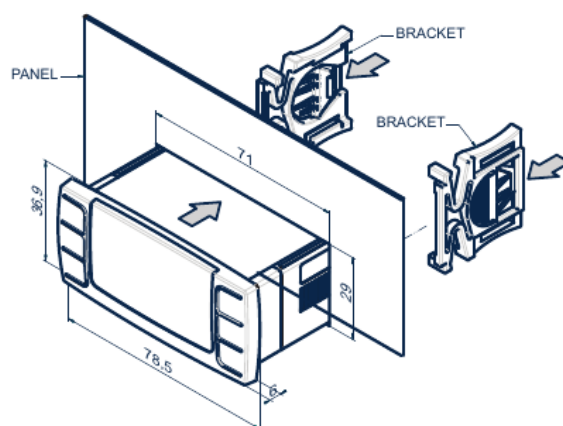
Check before replacing a probe

Probe alarms clear after the probe returns to normal operation. Inspect connections first. Temperature alarms clear when the reading returns to the permitted range.

Digital-input options and labels depend on controller version. Door input can suppress high and low temperature alarms while active. Do not confuse an alarm label with a parameter that uses the same letters.

Controller mounting and probes

3. DIMENSIONS AND CUT OUT



Panel opening and retaining bracket for the XR controller family.

Item	Requirement
Panel opening	71 x 29 mm, on a vertical panel. Fit the supplied retaining bracket.
Front / depth	32 x 74 mm front; 60 mm depth in the referenced controller family. Confirm the actual instrument.
Operating conditions	0 to 60°C; avoid moisture, condensation, vibration, dirt and corrosive gas. Keep ventilation openings clear.
Terminals	Up to 2.5 mm ² cable in the illustrated screw terminals. Match supply voltage and relay rating.
Probe placement	Mount bulbs upward. Keep the room probe away from direct air streams.

Protect the instrument

Do not open the housing. Keep probe, power and output wiring separate. Match the complete instrument label before replacement.

Controller parameters

Use the installed configuration

The following values are generic controller-chart defaults from the matching Dixell family. They are not approved cabinet setpoints. Check firmware, units and the stored values before any change.

Code / function	Range / chart default	Purpose
Set Setpoint	LS-US Default: 3.0	Compressor cut-out target in cooling mode.
Hy Differential	0.1 to 25°C/ 1 to 45°F Default: 2.0°C/4°F	Compressor restarts at SET + Hy in cooling mode.
LS Minimum setpoint	-55°C to SET/ -67°F to SET Default: -55°C/ -55°F	Restricts the permitted setpoint range; Fahrenheit range depends on display units.
US Maximum setpoint	SET to 99°C/ SET to 99°F Default: 99°C/99°F	Restricts the permitted setpoint range; Fahrenheit range depends on display units.
ot Room probe offset	-9.9 to 9.9°C/ -17 to 17°F Default: 0.0	Offsets room / evaporator probe readings.
od Startup output delay	0 to 99min Default: 0	Inhibits outputs immediately after startup.
AC Anti-short-cycle delay	0 to 50min Default: 1	Minimum compressor stop-to-restart interval.
Cy Fault ON time	0 to 99min Default: 15	Compressor ON / OFF times with a failed room probe. Cy=0 means off; Cn=0 means continuously on.

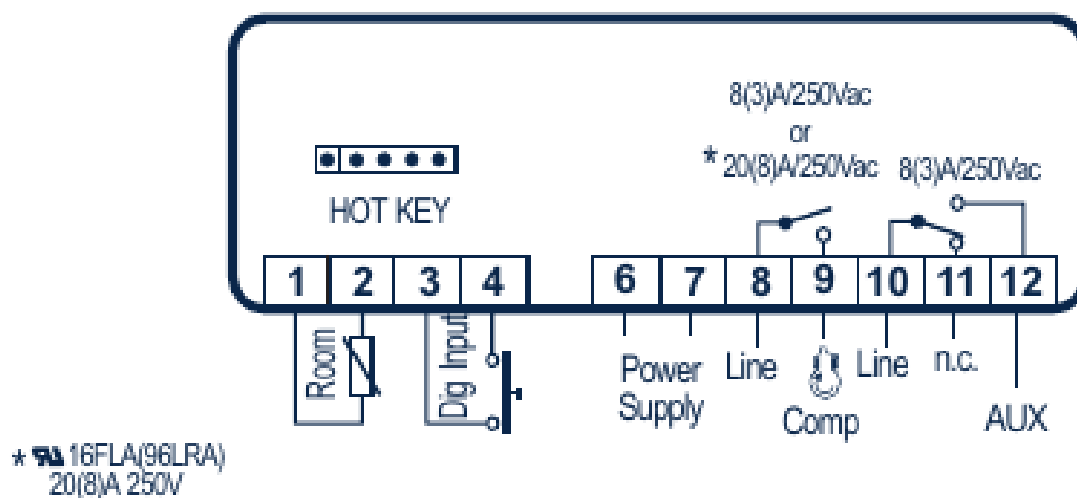
Code / function	Range / chart default	Purpose
Cn Fault OFF time	0 to 99min Default: 30	Compressor ON / OFF times with a failed room probe. Cy=0 means off; Cn=0 means continuously on.
CH Heating / cooling	cL to Ht Default: cL	Available on certain versions; reverses regulation action.
CF Temperature units	°C/°F Default: °C/°F	Check SET, Hy, limits, offsets and alarm values after changing units.
rE Display resolution	dE-in Default: dE	Decimal or integer Celsius display.
dy Display delay	0 to 15min Default: 0	Delays display increases by the configured interval.
id Defrost interval	0 to 99h Default: 8	Time between starts of consecutive defrost cycles; verify units on the installed firmware.
Md Defrost duration	0 to 99min Default: 20	Timed duration without a probe; maximum duration with probe termination. Zero can disable defrost.
dF Defrost display	rt-in-SP-dF Default: it	Live temperature, initial temperature, setpoint or defrost label.
AU High alarm limit	ALL to 99°C/ ALL to 99°F Default: 99°C/ 99°F	Enables alarms after the configured delay.
AL Low alarm limit	-55°C to ALU/ -67°F to ALU Default: -55°C/ -55°F	Enables alarms after the configured delay.

Code / function	Range / chart default	Purpose
Ad Alarm delay	0 to 99min Default: 15	Temperature alarm delay / alarm exclusion after startup.
dA Startup alarm exclusion	0 to 99min Default: 90	Temperature alarm delay / alarm exclusion after startup.
tb Buzzer / alarm silence	y-n Default: y	Where supported, controls whether a key silences the alarm relay.
o1 Auxiliary relay	dF/Fn/AL/ Au/db Default: AU	Defrost, fan, alarm, auxiliary or neutral-zone action on applicable versions.
Ap Alarm relay polarity	cL-OP Default: cL	Closed or open active alarm contact on applicable versions.
iP Input polarity	cL-oP Default: cL	Defines activation by opening or closing the external contact; verify firmware mapping.
iF Input function	EA/bA/do/ dF/Au/db/ Hc Default: do	External alarm, serious alarm, door, defrost, auxiliary or heating/cooling inversion; options vary.
di Input / door alarm delay	0 to 99min Default: 15	Delay before external or door alarm signaling.
dC Door-open outputs	no/Fn/cP/ Fc Default: no	Normal, fans off, compressor off, or both off.
rd Door-open regulation	n-Y Default: y	Whether regulation restarts after the input delay with a door alarm.

Controller wiring

Controller terminals only

Match the complete controller label and terminal markings. This drawing does not replace the full cabinet wiring diagram. Isolate power before making connections.



Match the supply voltage and relay ratings on the actual controller.

Probe wiring must remain separate from power and load wiring. Use an external relay if the load exceeds the permitted contact rating. Do not identify terminals by cabinet appearance.

Hot key transfer

Upload from a programmed controller

- 01 Confirm the configuration**
Verify the cabinet settings before copying.
- 02 Insert while powered on**
Insert the hot key and press UP. The display shows uP, then flashing Ed.
- 03 Confirm and remove**
Press SET. Switch off, remove the key and switch on again.

Download into a matching controller

- 01 Switch off and insert**
Match the target controller and cabinet application.
- 02 Switch on**
The display flashes do, then Ed. After about 10 seconds the controller restarts.
Remove the key and verify the values.

If Er appears

Programming failed. Use the controller-specific retry procedure or remove the hot key to abort. Recheck stored values before service.

Maintenance record

Keep this record with the cabinet. Record the model, serial number and service contact for future checks.

Model _____

Serial number _____

Service provider _____

Phone _____

Date	Task / observation	Completed by

Long periods without use

Unplug, clean and dry the cabinet. Leave the door slightly open only when the stored cabinet is secured against unauthorized access. Protect against moisture and odor.

Keep purchase details and service records. Ask your seller for the warranty that applies to your cabinet and purchase.