XRi_CH

DIGITAL CONTROLLER FOR FREQUENCY CONTROL

EMERSON.

XRi_CH Series
General Description

These controllers are the ideal solution for the refrigeration and retail market. They have been developed for optimal management of cabinets with variable capacity compressors by using frequency signal command.

XRi_CH Series
Main Features

FOOD QUALITY
The accurate temperature regulation, the display of events and the alarm management assure the best quality of fresh and frozen food

INTEGRATED FUNCTIONS FOR ENERGY SAVING
The controllers have integrated functions for energy savings, such as the optimization of fan management

PROTECTION & HYGIENE GUARANTEED
The flat surface is easy to clean for much better hygiene. The IP65 high level of front protection is guaranteed

BETTER VISIBILITY AND AESTHETICAL SOLUTIONS
A look that stands out for its elegance and sophisticated detail, a variety of color displays give the controllers an unmatched aesthetic appeal. Controllers have a wider display with integrated icons for the display of data in real time and provide measurement units for clear and continuous monitoring

ECO

Dedicated icon for energy saving status information

Larger display for improved visibility display (+40% compared to the CX version).
Available in multiple colors: red (standard), white, or blue.

XRi_CH Series
Main Features

✓ **HIGH FLEXIBILITY**
XRi77CH has 2 different configurations (parameter maps) onboard. It is possible to control, for example, both counters in LT and NT by changing the functional configuration, and also to manage NTC, PTC and PT1000 temperature sensors.

✓ **LESS NOISE AND MECHANICAL STRESS**
The inverter + compressor system is characterized of lower vibrations: this minimizes the mechanical stress for the whole cooling system and ensures a longer life of the various components. This technology ensures a considerable reduction of noise levels of the application.

✓ **REDUCED DEPTH**
Often shallow mounting spaces require custom-fit controllers, which can mean high costs. The XRi20CH model is designed to satisfy limited space requirements in commercial refrigeration with elegance and powerful hardware.

✓ **IMPROVED RELIABILITY**
Reduction of the absorption peaks at startup thanks to the inverter-controlled compressor.

✓ *DOUBLE PARAMETER MAP*

As a result of the two parameter configurations (maps) available to the customer, the controller can be used in different applications. In fact, the same instrument can control, for example, low temperature counters as well as normal temperature counters. The default setting can be changed from a duly configured key. NTC, PTC and PT1000 temperature probes can also be managed.

XRi_CH Series
Main Features

✓ **ADVANCED HOT-GAS DEFROST CONTROL**
The hot-gas defrost operations have been optimized through the introduction of specific functions able to control the pre- and post-defrost phases. It also possible to directly control the activation time of the heating resistors, which are normally placed under the drainpipe, in order to melt the ice that may be present before starting any defrost phase.

✓ **STABILIZATION OF THE TEMPERATURE OF THE PRODUCTS**
Varying the compressor speed, and then the cooling capacity of the system, allows controlling in a more precise way the temperature of the product. It is also possible to drastically reduce the fluctuation of the temperature of the products due to the use of standard ON-OFF compressors. This permits a better preservation of the product itself.

✓ **REGULATION BASED ON THE AVERAGE OF 2 TEMPERATURES**
These models can regulate temperatures by using a value which is the average between 2 different points. This function is useful in wall cabinets where it is important to monitor both suction and discharge temperatures

✓ **SERIAL COMMUNICATION**
The communication with monitoring systems is becoming even more important also in the commercial refrigeration. For this reason these controllers have a TTL serial communication port with ModBUS-RTU protocol

✓ **ENVIRONMENTALLY FRIENDLY**
We firmly believe in the respect and safeguard of the environment and respond to the requests of environmental-friendly gas usage, such as Propane.
All Dixell controllers have the CE certification. As regards UL and ENEC, it depends on the specific model.
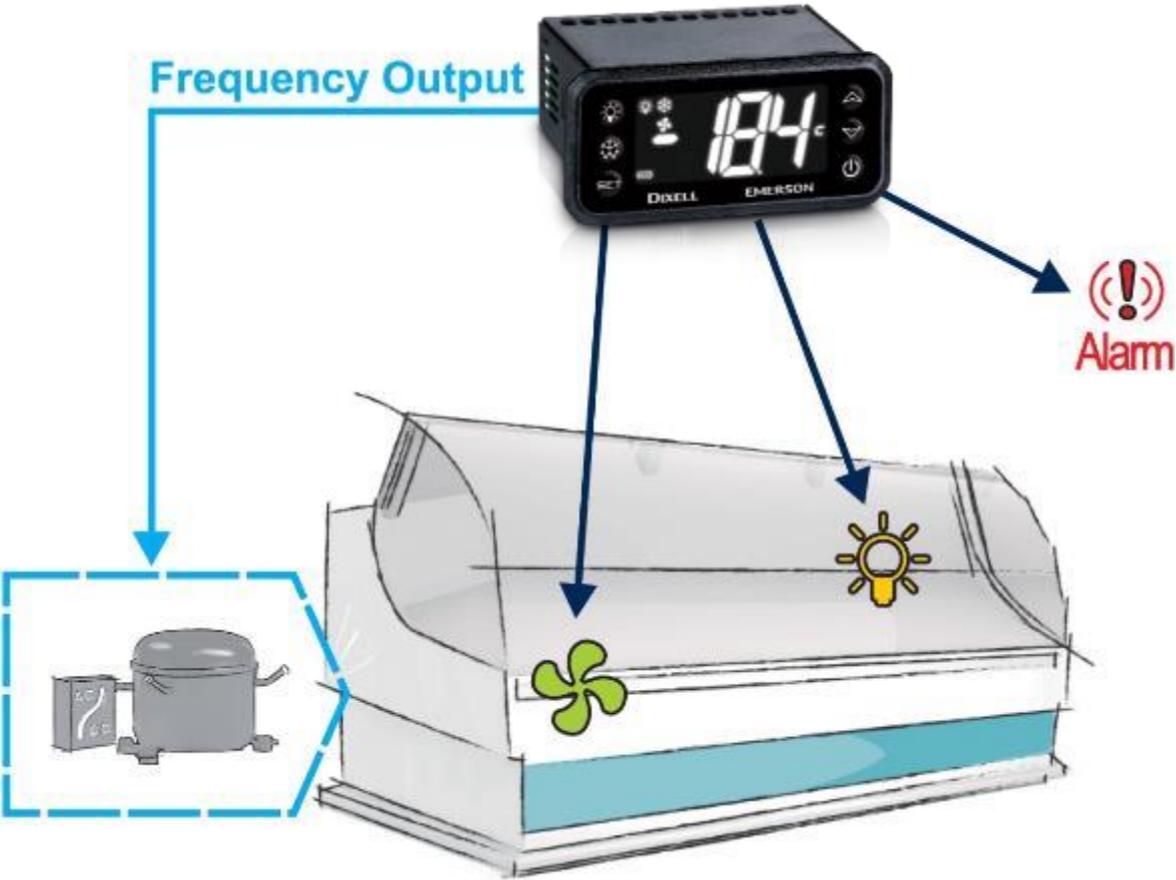All controllers mount relays suitable for ATEX applications as they have been tested following **EN60079-15**.

Example of XRi_CH application
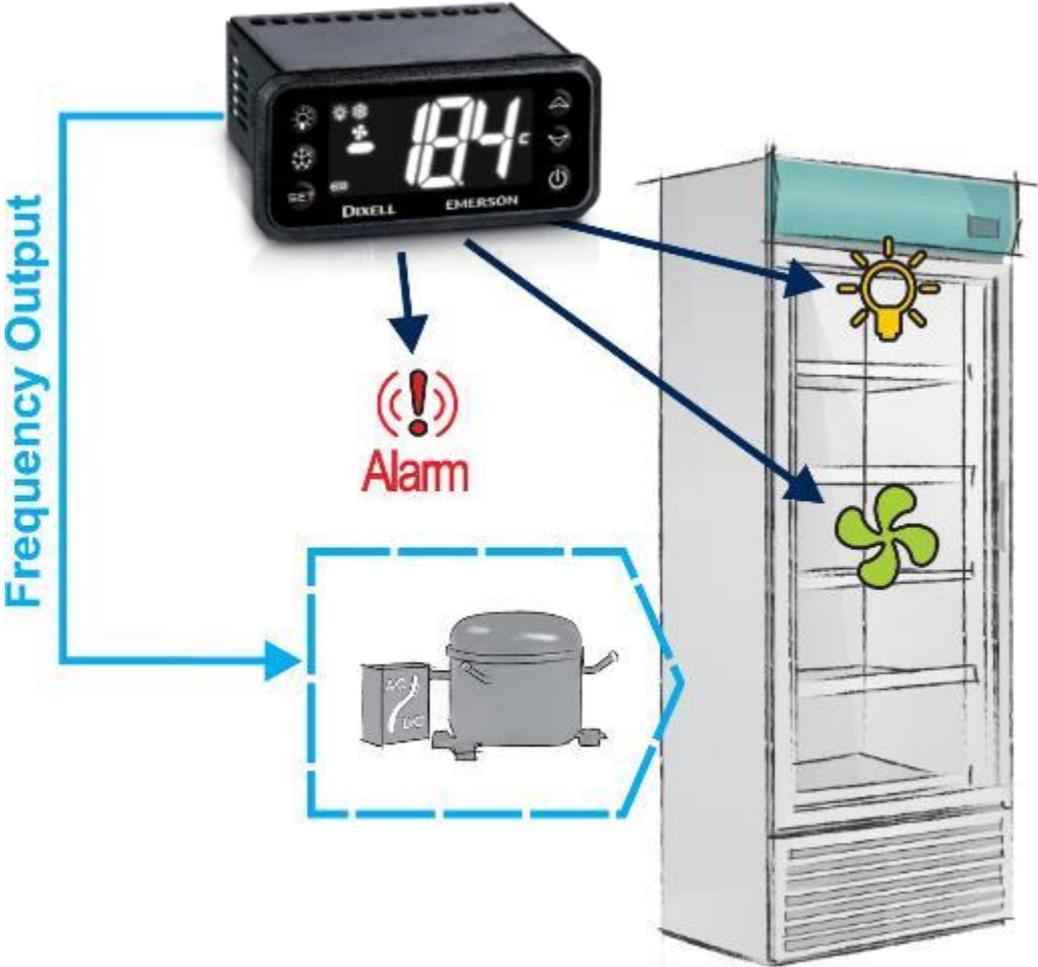
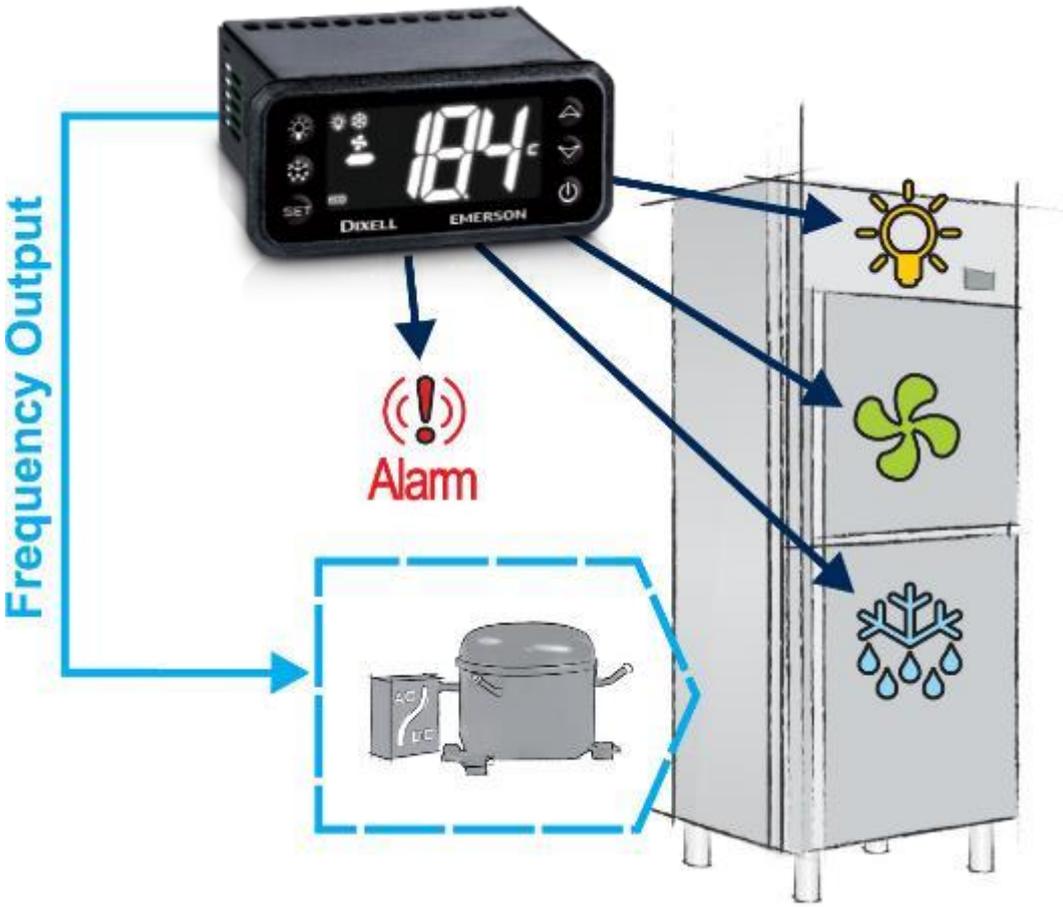**HORIZONTAL CLOSED TRANSPARENT EQUIPMENT**
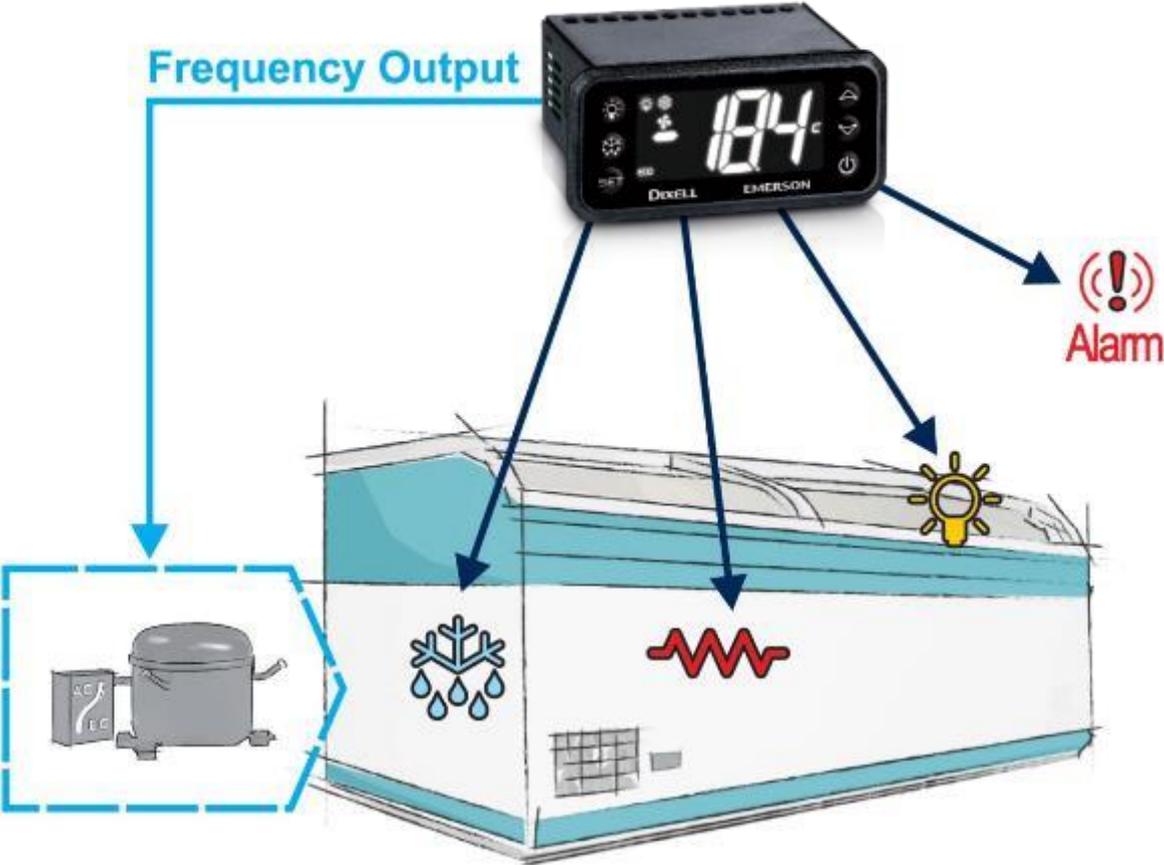
SERVICE OVER COUNTER

Example of XRi_CH application

**WINE & BOTTLE COOLER**

VERTICAL CLOSED SOLID EQUIPMENT (FREEZER)

XRi_CH Models
Technical Data

	XRi20CH	XRi60CH	XRi77CH
Housing	Self-extinguishing PC+ABS	Self-extinguishing PC+ABS	Self-extinguishing PC+ABS
Dimensions	32x74mm, depth 50mm	32x74mm, depth 59,5mm	32x74mm, depth 59,5mm
Display type	± 3 digits with decimal point	± 3 digits with decimal point	± 3 digits with decimal point
Power Supply	110 or 230Vac	110 or 230Vac	110 or 230Vac
Probes Inputs	1x NTC/PTC/PT1000	Up to 3x NTC/PTC/PT1000	Up to 4 x NTC/PTC/PT1000
Digital Inputs	1 x configurable	1 x configurable	Up to 2 x configurable
Relay outputs (nominal ratings)	8A SPDT	20+8+5A	16+16+5+7A
Serial output	TTL 5-wire slave	TTL 5-wire slave	RS485 2-wires slave
Buzzer	Optional	Optional	Optional
Hot Key	Available	Available	Available
RTC	Not available	Optional	Optional

XRi_CH
Dimensions and Cut-Out

XRi20CH model

REDUCED DEPTH
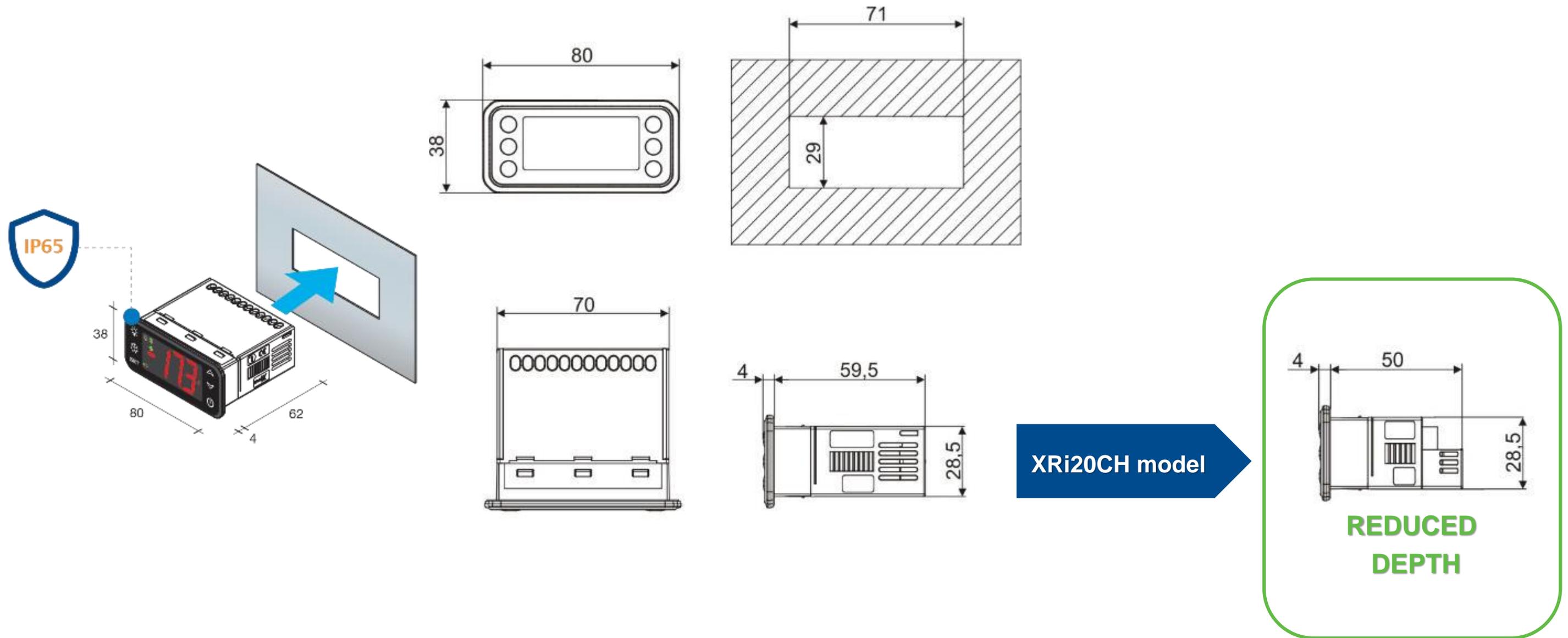
XRi_CH
Main Accessories

HOT-KEY

Key for a quick and easy upload (from device to HOT-KEY) or download
(from HOT-KEY to device) of the parameter map.

CAB/EM5

2m adapter cable for frequency control of Embraco
compressors

CAB/SE5

2m adapter cable for frequency control of SECOP
compressors

XJ485USB-KIT

USB to RS485 serial (2-wire) converter for monitoring a single or multiple controller
connected via the network to a computer with a USB port and with Wizmate®
software installed