

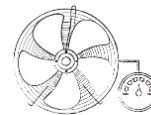


EMERSON™

XWi70K

Controller for variable speed compressors

PN 12/18 AUGUST



VARIABLE
SPEED FAN
MANAGEMENT



INVERTER
COMPRESSOR
MANAGEMENT

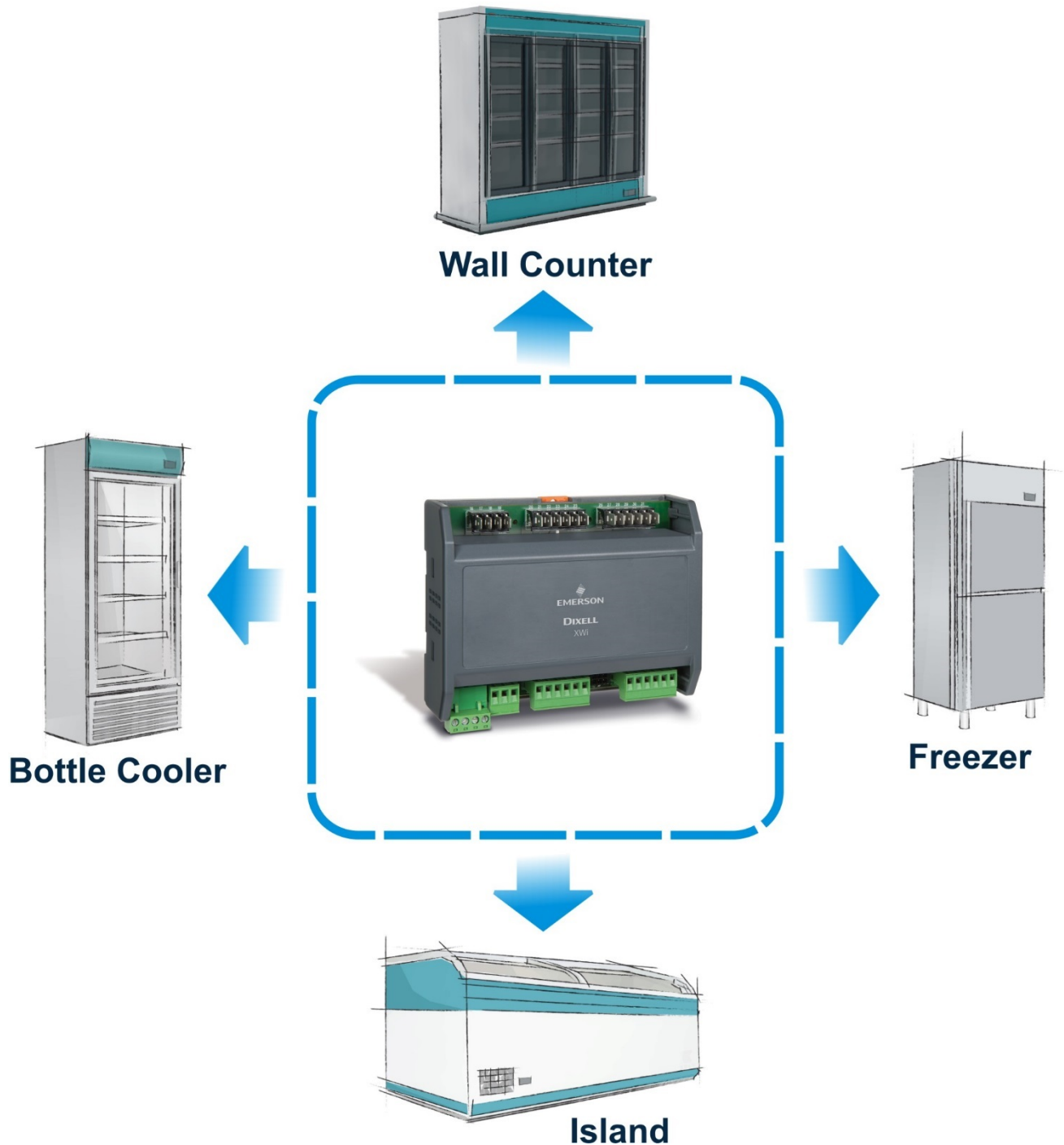
The new XWi70K controller is the solution designed for optimal management of plug-in units with variable speed compressors.

XWi70K guarantees high energy savings, increases reliability of the compressors and fans and, at the same time, ensures efficient management of the product's maintenance temperature.

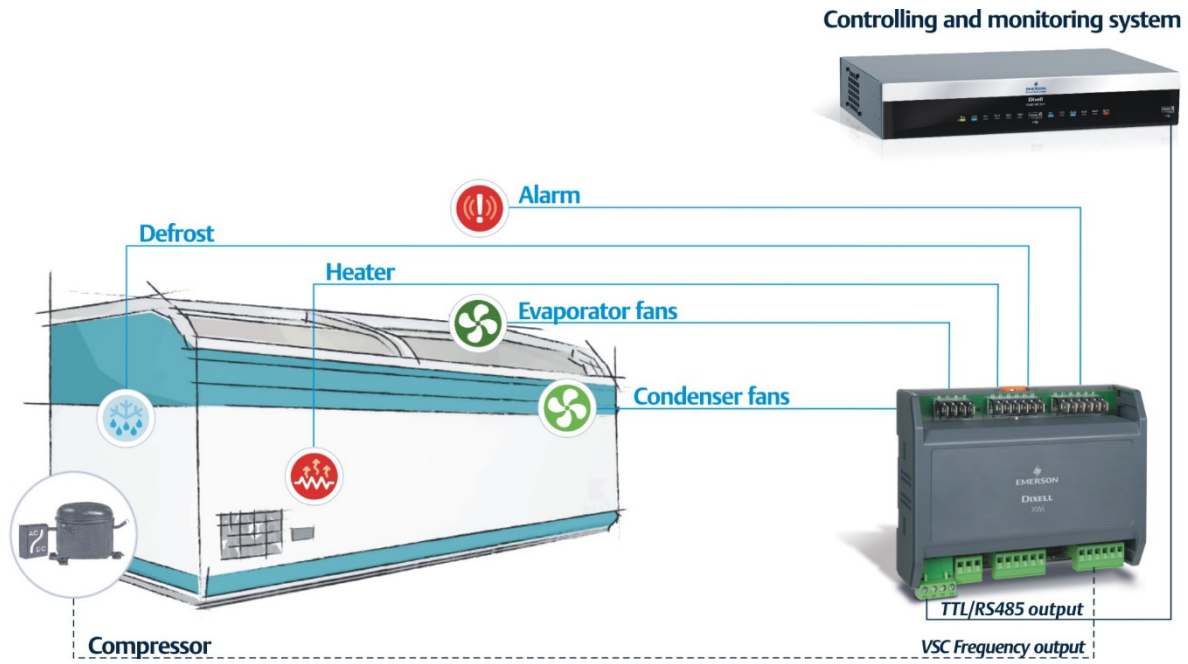
Designed for refrigerated cabinets such as open islands and bottle/wine coolers, XWi70K is available in a split version and can be coupled with different types of keyboards, thus fulfilling any type of application.

1. Main plug-in applications

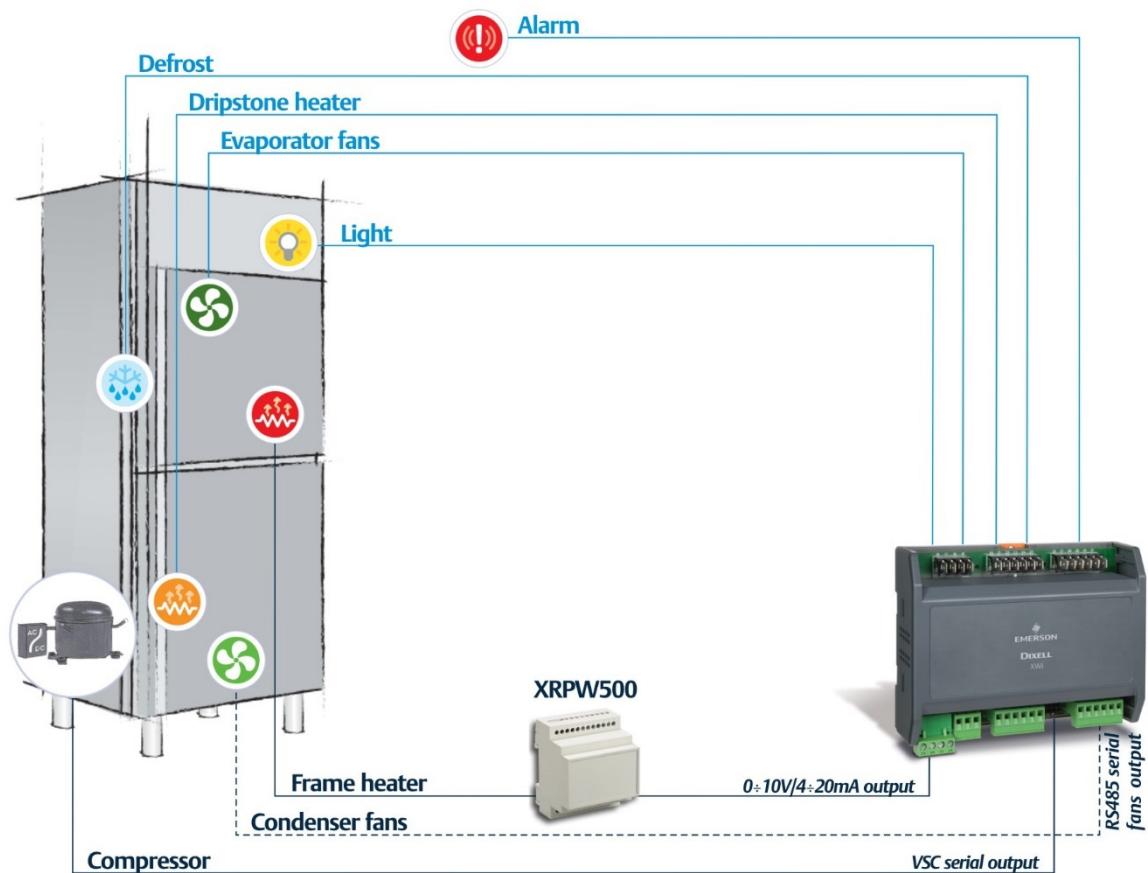
XWi70K is the ideal solution in terms of cooling and retail since it can be assembled on any type of bottle cooler, island, cabinet and counter equipped with an inverter-controlled compressor with frequency or serial control.



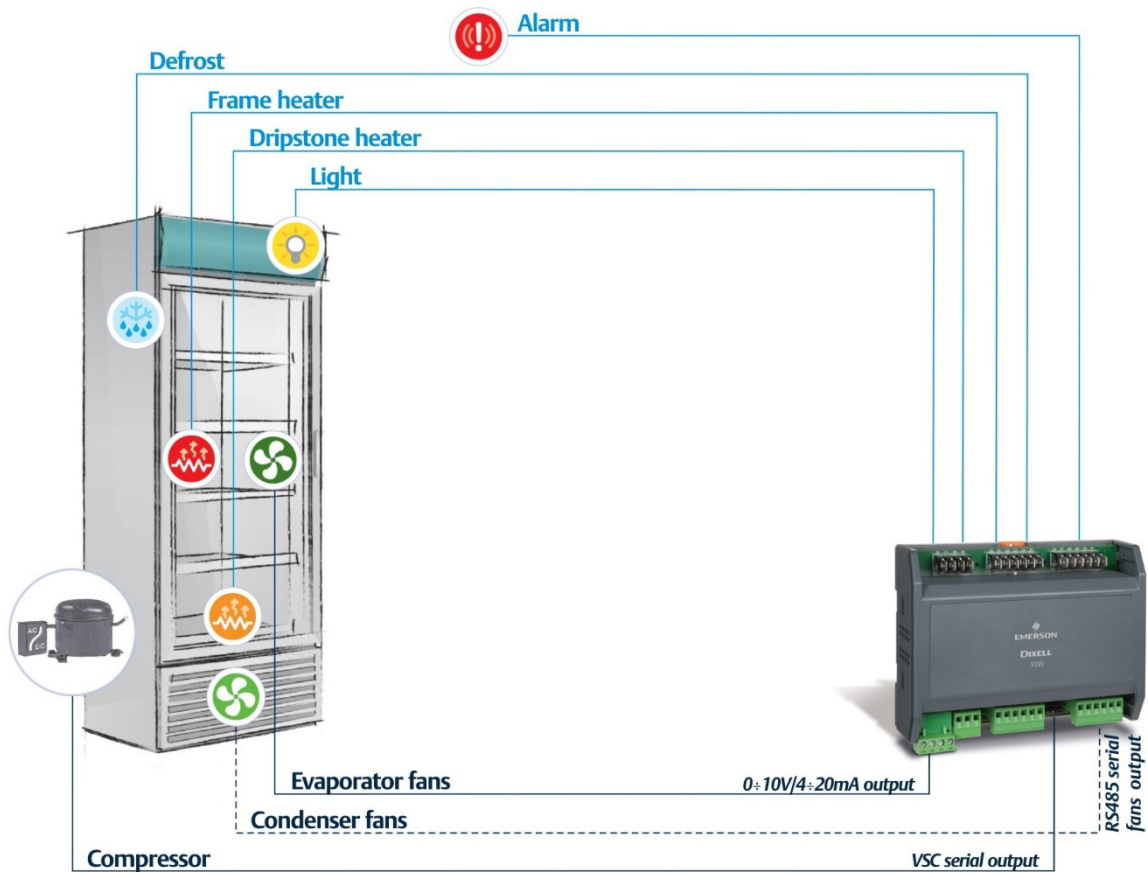
1.1 Horizontal closed, low temperature counters (ISLAND)



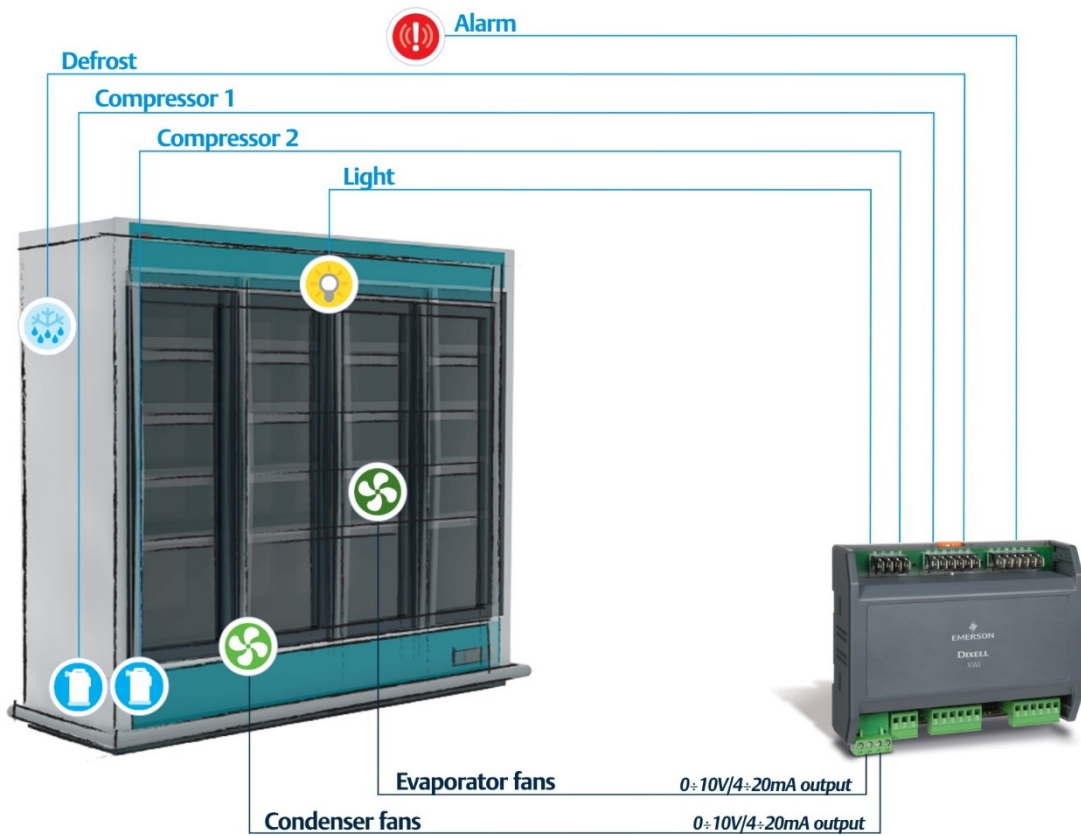
1.2 Vertical, low temperature cabinets (FREEZER)



1.3 Wine & bottle coolers







1.4 Wall, low temperature cabinets with ON/OFF compressor



2. Advantages and benefits

The advanced features of XWi70K enable perfect management of plug-in units.

	<p>VERSATILITY</p> <p>The controller has a double parameter map, can manage circuits with a single or double compressor and can be used in applications with R290 and R600a gas.</p>
	<p>EFFICIENCY</p> <p>The high grade of efficiency is guaranteed by the constant control of the compressors, fans and condensation temperature.</p>
	<p>RELIABILITY</p> <p>Additional reliability of the controller is obtained by compliance with UL and ENEC approval, as well as by the option to reset the default settings by loading one of the pre-set configuration parameters.</p>
	<p>ENERGY SAVING</p> <p>Designed and optimised for all applications in which consumption control is an essential requirement.</p>

3. Main features

3.1 High compatibility with Dixell keyboards

XWi70K is compatible with different types of keyboards, both vertical and horizontal, membrane and glass touch. For more information, refer to the section regarding “Accessories”.

3.2 Keyboard lock

To guarantee additional safety, it is possible to enable the keyboard lock function, both partially by only locking certain keys, and completely.

3.3 Double compressor ON/OFF management

XWi70K enables adjustment with a double compressor ON/OFF. This type of adjustment manages activation rotation of the compressors, parallel start-up of compressors (with delay between activation of the first and second compressor) or installing a second compressor with proportional logic.

3.4 Management of compressors with variable speed (Variable Speed Compressors)

XWi70K can control a variable speed compressor (VSC) equipped with a frequency control input, or up to a maximum of two VSC compressors with serial control.

With regard to management of a circuit with a double VSC compressor, they are controlled in parallel. The same speed control is sent to both compressors.

3.5 Analogue outputs

The XWi70K controller is equipped with maximum two analogue outputs that can be set from parameter to supply a 0÷10Vdc or 4÷20mA signal in output.

NOTE: if both analogue outputs are configured, the frequency output is disabled.

3.6 Type of regulators

XWi70K has different regulators to optimise system operation, such as:

- evaporator fan regulator to manage electronic fans with fixed or variable speed;
- condenser fan regulator to manage electronic fans with fixed or variable speed;
- a maximum of two auxiliary regulators for hot/cold adjustment, for activation of a relay or analogue output.

3.7 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.

3.8 Advanced defrost control

The controller manages the defrost mode in different ways:

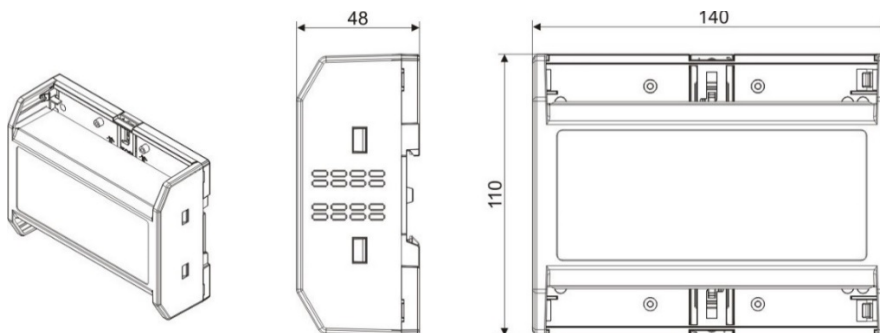
- **automatic:** it is possible to set defrost start-up simultaneously with activation of the energy saving mode;
- **synchronised:** the defrost occurs simultaneously in a network of up to maximum 20 devices;
- **de-synchronised:** the defrost start-up of one of the devices involves the starting delay of the defrost phases of the other devices on the same network (max 20 devices);
- **random:** maximum 20 controllers that are only virtually connected to the same network and defrost is carried out at “random”; this minimises the system’s mains power supply overload due to simultaneous start-up of multiple defrosting modes.

4. Hardware features

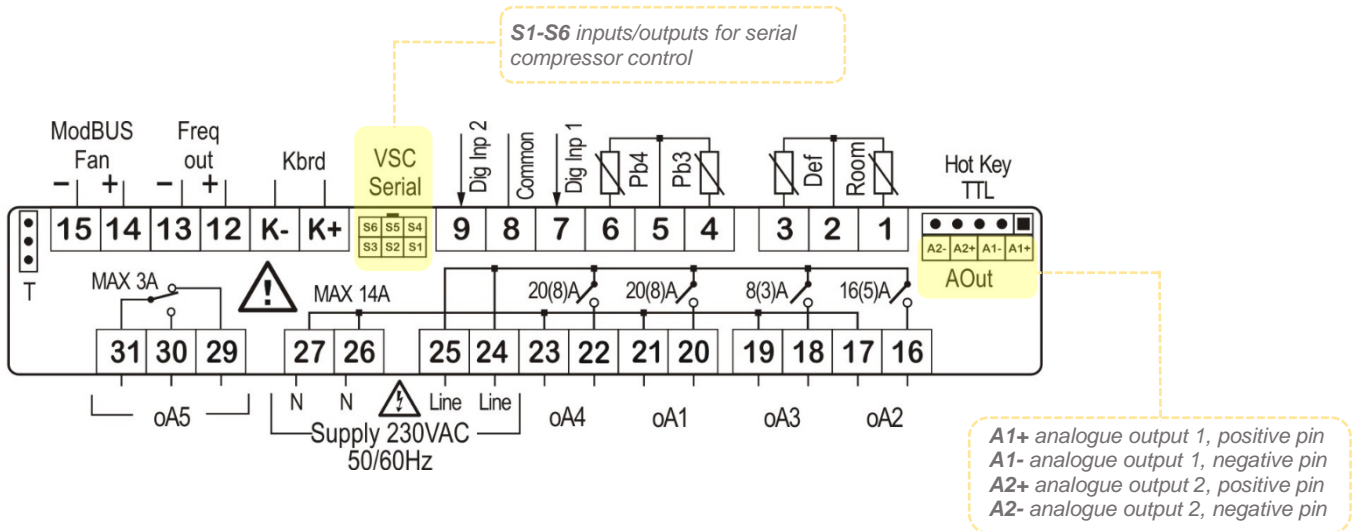
Housing	Self-extinguishing ABS
Mounting	On DIN bar
Connections	Screw connectors, disconnectable or faston
Power Supply	110, 230Vac
Power consumption	10VA max
Analogue inputs	4 x NTC, PTC, PT1000
Digital inputs	2 x free voltage
Relay outputs	20+20+8+16+7 AMP
Serial outputs	TTL 5-wire slave RS485 2-wire (optional, Modbus fan control) VSC master (optional)
Other outputs	2x 0-10Vdc or 4-20mA (optional)
Real time clock	Optional

4.1 Dimensions

8 DIN format

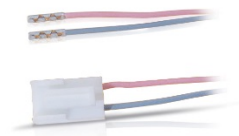






4.2 Wiring diagrams



5. Main accessories

	<p>CH620 Compact keyboard with 6 keys</p>
	<p>T620H Horizontal membrane keyboard with 6 keys</p>
	<p>T820H Horizontal membrane keyboard with 8 keys</p>
	<p>V620H Vertical membrane keyboard with 6 keys</p>
	<p>D60 Vertical or horizontal membrane keyboard or with mechanical keys</p>
	<p>T620GT Glass touch keyboard with 6 capacitive and backlit keys</p>

	CAB/HK-EM1 2m adapter cable for frequency control of Embraco compressors
	CAB/HK-EM2 1,5m adapter cable for serial control of an Embraco compressor
	CAB/SE1 2m adapter cable for frequency control of SECOP compressors
	CAB/SE2 1,5m adapter cable for serial control of a SECOP compressor
	KIT1 CONN. XWi70K Kit 1 comprising connectors for a standard version
	KIT2 CONN. XWi70K Kit 2 comprising connectors for versions with analogue outputs
	KIT3 CONN. XWi70K Kit 3 comprising connectors for complete versions

6. Order code

XWi70K-ABCDEF

A		B		C		D			E		F	
Power Supply		Inputs		Box/ Terminals		Measure ment unit		Comp. serial	RTC		Options	
4	110Vac	A	PT1000	8	No/Faston + Disconnectable	D	°C	No	0	No	0	None
5	230Vac	N	NTC	9	Bottom/Faston + Disconnectable	G	°F	No	2	Supercap	1	2 analogue outputs
		P	PTC	A	Box/Faston + Disconnectable	I	°C	Yes	4	Lithium battery	2	Frequency output
						J	°F	Yes			3	Frequency output + 1 analogue output
											4	RS485 master output
											5	2 analogue outputs + RS485 master
											6	Frequency outputs + RS485 master
											7	Frequency outputs + 1 analogue output + RS485 master

7. Prices

Contact our Sales Department for prices or for further information.

8. Availability and orders

The XWi70K model is available; contact our Sales Department for delivery times.