dixell

GENERAL Catalogue

EMERSON
Climate Technologies

INDEX

THE COMPANY

HEADQUARTERS

Dixell, situated in Pieve d'Alpago (Belluno) and now part of the **Emerson Climate Technologies Group**, is a dynamic Company that from the year 1996 to present has positioned itself among world leaders of electronic Regulation and Control in **Industrial and Commercial Refrigeration, Conditioning and Cooking** fields thanks to continuous **Technologic Innovation** and a **focus on Energy Saving** issues.

SALES, TRAINING

Worldwide, our products are distributed and supported in **over 70 countries**, by a sales network of experienced and **qualified personnel**, guaranteeing the correct selection of controllers and an efficient after sales service. Competence, professionalism, and courtesy make our Customer Service Dept exemplary. It provides our distributors and customers alike with technical support, solutions and concise answers to issues that may arise. Constant **technological development and innovation** of our products make us stand out in the market as the strategic choice for most users. This and the continuous growth of our product range requires constant training for our own staff and our distributors. To meet this challenge a fully equipped training facility with the most advance computer technology has been developed at our Belluno base.

iPro Academy
Education & More...

IPRO ACADEMY

A center of excellence that combines innovation requests received from the HVAC/R market combined with technological opportunities, in this way guaranteeing continuous **iPro programmable platform** growth.

RESEARCH, DEVELOPMENT, PRODUCTION

Continuous **research and development** means that all of our controllers feature the latest generation of microprocessors. Giving due consideration to the actual needs of many users has lead us to develop Dixell's fast and simple programming methods. Most operating features are carefully developed through listening closely to the requirements of our many users. Our "Research and Development" and our "Production" departments are highly flexible, which means they can respond quickly to specific customer requirements and offer appropriate solutions, now even more competitive and flexible thanks to China bases. Highly sophisticated equipment is now employed in the development and control of manufacturing. Here delicate and repetitive tasks are mostly carried out by "state of the art" **automatic systems**.

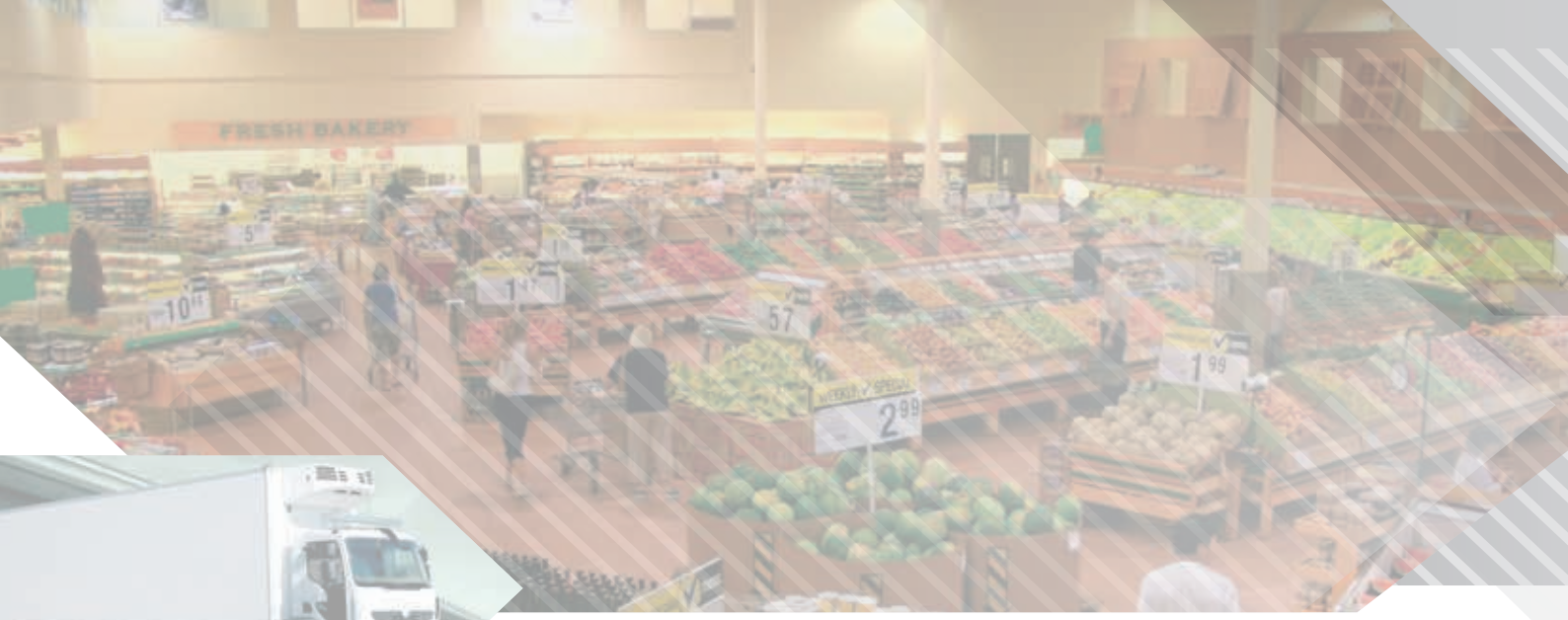
QUALITY

Dixell has been awarded with ISO9001 certificate and it constantly commits itself to quality in everything it does. The quality system of Dixell conforms to the Quality System Standard **UNI EN ISO 9001:2008**.

ENVIRONMENT

Dixell firmly believes in the **respect and safeguard of the environment**, with particular attention to all industrial processes and to the research and development of new products.

Dixell's strengths are the realization of regulators that combine high performance with high **energy savings** and the use of eco-friendly components, in full compliance with all Italian and International laws and standards. To this end Dixell complies with the Material Compliance Program of Emerson respecting the **RoHS** directive (**2002/95/EC**) and the **REACH** regulation (**CE n. 1907/2006**), asking its suppliers accurate analysis on all purchased components. Furthermore packing materials are in accordance with **2004/12/CE European Directive**.



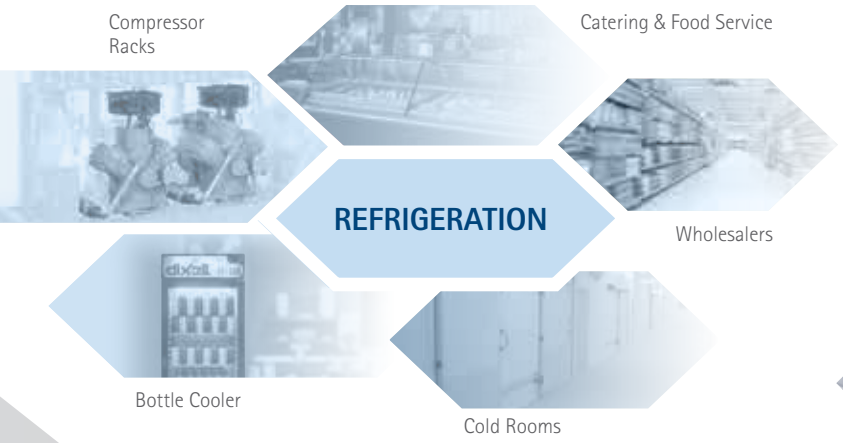
APPLICATIONS

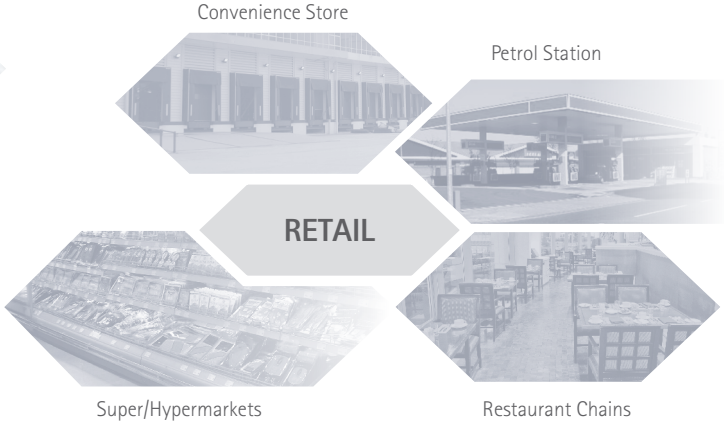
REFRIGERATION

Refrigeration requires the control of many different conditions to guarantee that products are processed and stored correctly. Temperature, pressure and humidity must be monitored with reliable devices that are also simple to manage. Whether we are dealing with a **compressor rack controller** or the **smallest refrigerator** or **refrigerated transport**, controllers must provide total solutions that provide complete control.

Often, hidden behind a **bottle cooler** or **pharmaceutical cabinet**, lies the electronic technology which is nowadays required, which is becoming more important and plays a decisive role, both for the designer and for the consumer. The concepts of integration, remote access, energy savings, functional aesthetics and connectivity are important considerations on which even the **wholesaler** can always rely on.

Even regarding **catering** and **food service**, Dixell has years of experience in offering products with excellent performance and durability including special applications such as **blast chiller** processes used in freshly-cooked food conservation. Dixell's solutions to the introduction of food hygiene regulations (HACCP) offer immediate advantages in terms of cost, time and system operation.





RETAIL

The complete solution that Dixell offers for the Retail field is a solution for every kind of application, from **petrol station** to **hypermarket** up to **convenience stores**. If there is an alarm, it is necessary to be advised quickly in order to intervene without delay. Depending on the application, Dixell provides remote assistance systems for local monitoring, for supervising or remote control including via Internet. Where there are many points of sale, such as **restaurant chains** or **distribution centers**, centralized management software for the Call Center is available.

CONTRACTING

Experience, combined with innovation, allows our products to be used in the most diverse **industrial applications**; alarm management is very important for safety and this is why all the controllers are designed to supply effective diagnostics whether at local level or by connection to remote assistance system. Dixell devices are particularly adaptable and make the application easy to use even in the **industrial automation** field, thanks to the wide range of products available and their compatibility with current safety standards.

INFO

For **further information** about all Dixell products please check out our Web Site **www.dixell.com**.

RANGE

PARAMETRIC CONTROLLERS

Different needs that crowd the refrigeration world are satisfied with a complete series of parametric controllers with an innovative design and intuitive interfaces. Intelligent algorithms, most of those are oriented toward the **energy saving**, and **innovative functions** mark a range of products that includes different fields of cooling world giving a wide range of general purpose solution, for multiplexed cabinets, cabinets and rooms, bottle cooler, blast chiller, compressor racks and refrigerated trucks. Specific solutions that are used also in applications such as pharmaceutical or fan speed, food warming cabinets and ovens control and in temperature, humidity and pressure regulation.

PROGRAMMABLE CONTROLLERS

The iPro family of controllers, whether dedicated for HVAC/R units or for general purposes, is characterized by the most advanced technology in **connectivity** and processing speed.

iPro controllers are based on a powerful platform that includes one hardware configuration that is able to expand the actual solution in the market, and software that, thanks to the ISaGRAF® development environment, allows the development through standard programming languages.

An **easy** and **useful HMI** is also guaranteed through graphic displays and the touch screen, as the **expandability** and the solution to many applications are satisfied with a complete range of accessories, including I/O expansion modules, proportional electronic valve management, modem, wirings, and more.

SYSTEMS

The XWEB System family is based on web technology used to satisfy monitoring and supervising requirements in Commercial and Industrial Refrigeration fields from small shops to hypermarkets, and refrigerated warehouses to food production centers. Other potential fields are: chemical-pharmaceutical, oenological, naval, museums, hospital, etc. Dixell Systems conform to **HACCP** rules; the **CRO** (compressor rack optimization) reduced Set-point, anti-sweet heaters, lights and the power peaks are used with the result of having an optimize **energy savings**. It is also important to have the possibility to have integration with air conditioning machines that are equipped with iCHILL and iPro Dixell controllers. For retrofitting we offer ICOOLL **wireless** (RF) modules plus relay and acquisition module families for probe inputs and alarm outputs. All XWEB's can be connected anywhere with XCENTER, the program for the centralized management for a modern and organized **Call Center**, dedicated to alarm management and for a pro-active Service based on the Oracle database.

PROBES and ACCESSORIES

A complete series of probes & transducers for temperature, humidity, and pressure ensures that for every application the end user has the right level of accuracy and the appropriate lead time.

A family of useful accessories such as modems, wirings, serial interfaces, programming kits, and protections makes it easy, fast, and accurate to use each instrument in every situation, especially with a remote connection or for energy analysis.

CORPORATE and HOMOLOGATIONS

All the production conforms to **CE** norms with regards to low voltage and electromagnetic compatibility. For many models, Dixell has the voluntary mark at approval Authority (**ENEC**, **usULc**) ensuring a reliable international rules conformance.

CE mark

It indicates conformity to the European Directives issued to guarantee the safety of the users and the environment. It is obligatory for all products distributed within the European Community.
It does not replace the voluntary Quality Mark.

ENEC mark

Voluntary quality mark recognised as equivalent to the single national marks of the Countries adherent to the accord. It certifies that a product conforms to the European norms EN, and that it has been manufactured by a company with quality systems conforming to ISO 9000 norms.

UL mark

Voluntary quality mark, valid for the American Market. It certifies conformity of a product to the American safety directives, which sometimes differ from European ones.

GOST-R

Voluntary certificate valid for the Russian Market. It certifies quality of supplied goods and their conformity with norms and standards Russian Federation.

GENERAL PURPOSE REFRIGERATION CONTROLLERS

SECTION INDEX

THERMOMETER: TEMPERATURE DISPLAY

- Measurement unit integrated on the display
- Hot Key or Prog Tool Kit connector for quick and easy programming (XA100C and XT11CX)
- 3VA max power absorption
- Display with red LED 11,5mm high (S format) or 13,2mm high (C and CX formats)
- Temperature alarm (XT11CX)

HOW to ORDER

XT11S | X | T | 1 | 1 | S | - | A | B | C | 0 | N | -17.8 For blue display please contact Dixell

A	B	C
Power supply	**Digits n°-measurement unit**	**Display update delay**
0 = 12Vac/dc	**0** = °C - integer	**0** = No delay
1 = 24Vac/dc	**1** = °F - integer	**1** = 1 min
4 = 110Vac	**2** = °C - decimal point	**2** = 3 min
5 = 230Vac		

XT11CX | X | T | 1 | 1 | C | X | - | A | B | C | D | 0 | -17.8 For blue display please contact Dixell

A	B	C	D
Power supply	**Inputs**	**Display update delay**	**Measurement unit**
4 = 110Vac	**P** = PTC	**0** = No delay	**C** = °C
5 = 230Vac	**N** = NTC	**1** = 1 min	**F** = °F
		2 = 3 min	

XA100C | X | A | 1 | 0 | 0 | C | - | A | B | 0 | D | U | -17.8 For blue display please contact Dixell

A	B	D
Power supply	**Measurement unit**	**Input**
0 = 12Vac/dc	**C** = °C	**P** = PTC (NTC)
1 = 24Vac/dc	**F** = °F	**T** = PTC (NTC, Pt100, TcJ, TcK, TcS)
4 = 110Vac	**B** = Bar	**A** = 4÷20mA, 0÷1V, 0÷10V
5 = 230Vac	**P** = PSI	**B** = PP07 (-0.5÷7bar)
	H = %RH	**C** = PP30 (0÷30bar)
	N = No measurement unit	**D** = PP11 (-0.5÷11bar)
		H = XH10/20P

THERMOMETER

XT11S
XT11CX — Digital thermometers with max and min log, powered directly by main voltage

XA100C — Configurable digital indicator

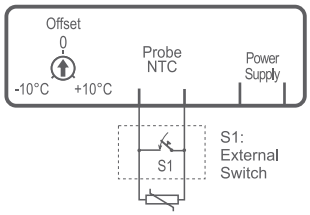
CX: 32x74mm

S: 31x64mm

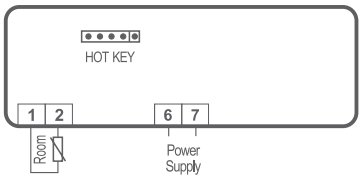
C: 32x74mm

FEATURES	XT11S	XT11CX	XA100C
Display: n° digits	± 3 d.p.	± 3 d.p.	± 3 d.p.
Power supply	12, 24Vac/dc 110, 230Vac	110, 230Vac	12, 24Vac/dc 110, 230Vac
Measurement range	-40÷50°C -40÷122°F	probe dependent	probe dependent
Inputs			
Probe	NTC included	NTC, PTC	NTC, PTC, Pt100 TcJ, TcK, TcS 4÷20mA, 0÷1V, 0÷10V
Other			
Temperature alarm		pres	
Hot Key/Prog Tool Kit output		pres	pres
Digital input			pres
Serial output			TTL
Buzzer			opt
Offset adjustment	back side trimmer	via keyboard	via keyboard

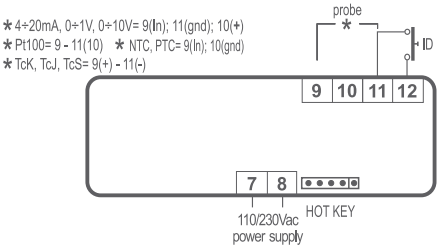
XT11S

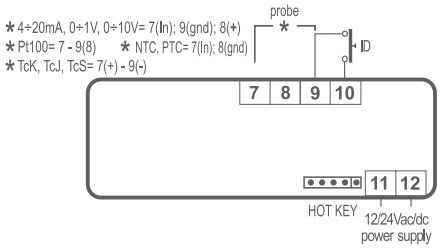


XT11CX



XA100C



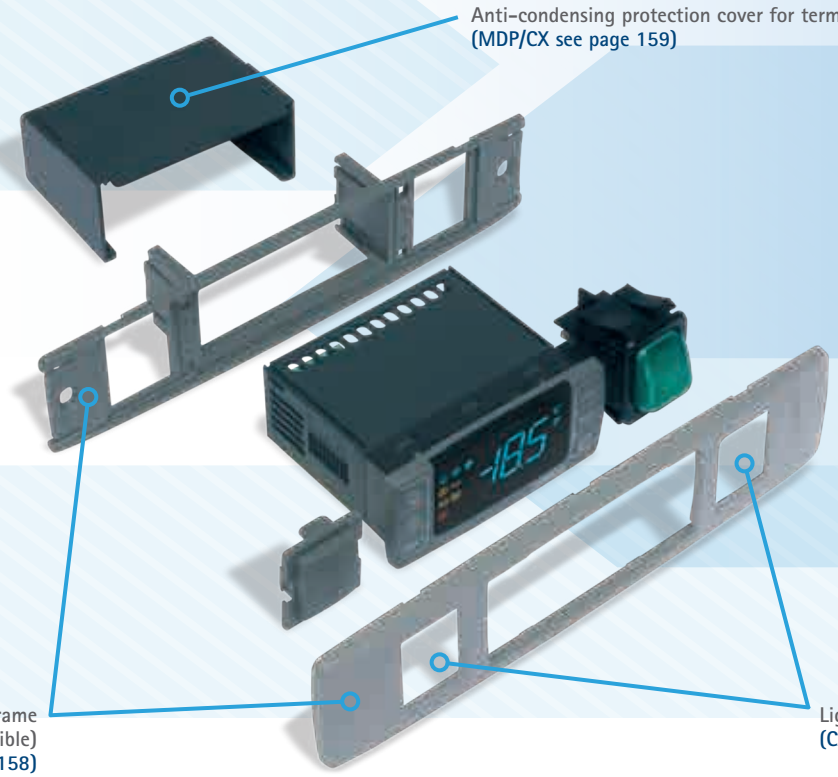


CX: 32x74mm

Prime

PRIME CX SERIES: NT and LT APPLICATIONS

- Innovative digital controllers dedicated to heat and NT and LT refrigeration
- Easy and intuitive programming mode
- On/off key
- Energy saving cycles through digital input
- Fast freezing with dedicated set point
- Outputs restart with door open alarm
- Temperature Max and Min functions
- Configurable digital input also as probe
- Virtual probe management
- Cycles for milk cooling and storage systems
- Functions for refrigerated air dryers in automation processes
- Condenser temperature management to prevent critical plant situations
- Hot Key or Prog Tool Kit connector for quick and easy programming
- Serial connection to monitoring systems (direct for XR35/75/77CX or via XJ485CX)
- Connection for X-REP remote display (alternative to TTL output)
- 3VA max power absorption
- Display with red LED (10,5mm high) and icons



HOW to ORDER

PRIME CX

X R | | C X - A B C D E

-17.8 For blue display please contact Dixell

A	B	C		D		E	
Power supply	Inputs	Buzzer	X-REP output (excludes TTL output)	Measurement unit	RTC	Compressor output	Connections
0 = 12Vac/dc	**N** = NTC	**0** = No	No	**C** = °C	No	**0** = 8A	Screw
1 = 24Vac/dc	**P** = PTC	**1** = Yes	No	**F** = °F	No	**1** = 20A	Screw
2 = 24Vac		**2** = No	Yes	**H** = °C heating (only for XR10CX)	No	**3** = 16A	Screw
4 = 110Vac		**3** = Yes	Yes	**L** = °F heating (only for XR10CX)	No	**6** = 8A	Faston
5 = 230Vac				**I*** = °C	Yes supercap	**7** = 20A	Faston
				M* = °F	Yes supercap	**8** = 16A	Faston
				* Only for XR30/70CX			

XR35/75/77CX

X R | | C X - A B C D E

-17.8 For blue display please contact Dixell

A	B	C	D		E
Power supply	Inputs	Buzzer	Measurement unit	RTC	Compressor output
0 = 12Vac/dc (only for XR77CX)	**N** = NTC	**6** = No	**C** = °C	No	**0** = 8A
1 = 24Vac/dc (only for XR77CX)	**S** = Pt1000	**7** = Yes	**F** = °F	No	**3** = 16A
4 = 110Vac			**I** = °C	Yes supercap	
5 = 230Vac			**M** = °F	Yes supercap	

XR80CX

X R 8 0 C X - A B C D E

-17.8 For blue display please contact Dixell

A	B	C	D	E
Power supply	Inputs	Buzzer	Measurement unit	Compressor output
0 = 12Vac/dc	**N** = NTC	**0** = No	**C** = °C	**0** = 8A
4 = 110Vac	**P** = PTC	**1** = Yes	**F** = °F	**3** = 20A
5 = 230Vac				

PRIME CX

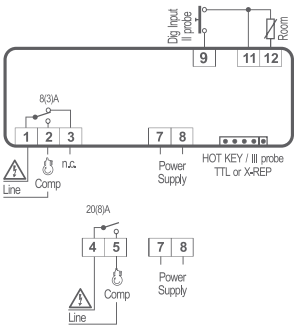
THERMOSTAT and CONTROLLERS with "OFF CYCLE" DEFROST for STATIC APPLICATIONS

CX: 32x74mm

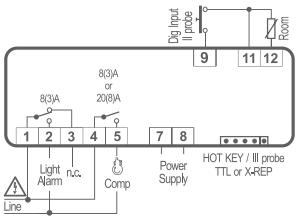
XR10CX	Digital thermostat with heating or cooling action
XR20CX	Digital controller for NT with "off cycle" defrost
XR30CX	Digital controller for NT with "off cycle" defrost and additional configurable relay
XR35CX	Digital controller for NT with "off cycle" defrost, additional configurable relay and RS485
XR40CX	Digital controller for NT and LT with electrical or hot gas defrost

FEATURES	XR10CX	XR20CX	XR30CX	XR35CX	XR40CX
Display: n° digits	± 3 d.p.	± 3 d.p.	± 3 d.p.	± 3 d.p.	± 3 d.p.
Power supply	12, 24Vac/dc 24, 110, 230Vac	12, 24Vac/dc 24, 110, 230Vac	12, 24Vac/dc 24, 110, 230Vac	110, 230Vac	12, 24Vac/dc 24, 110, 230Vac
Probe inputs					
Thermostat	NTC, PTC	NTC, PTC	NTC, PTC	NTC, Pt1000	NTC, PTC
Thermostat 2					
Defrost				NTC, Pt1000	NTC, PTC
Defrost 2					
Condenser	NTC, PTC on HOT KEY	NTC, PTC on HOT KEY	NTC, PTC on HOT KEY	NTC, Pt1000	NTC, PTC on HOT KEY
Digital inputs					
Alarm, start defrost, AUX, door switch, pressure switch, probe	config	config	config	config	config
Alarm, start defrost, AUX, door switch, pressure switch				config	
Relay outputs					
Compressor	8A, 20A	8A, 20A	8A, 20A	8A, 16A	8A, 20A
Compressor 2					
Thermostat 2					
Defrost					8A
Defrost 2					
Fans					
Light or alarm			8A	8A	
Anti-sweat					
Agitator					
Other					
Hot Key/Prog Tool Kit output	pres	pres	pres	pres	pres
Remote display output	X-REP opt	X-REP opt	X-REP opt	X-REP	X-REP opt
Serial output	TTL	TTL	TTL	RS485	TTL
Buzzer	opt	opt	opt	opt	opt
Real time clock			opt	opt	

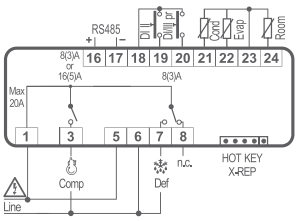
XR10CX – XR20CX



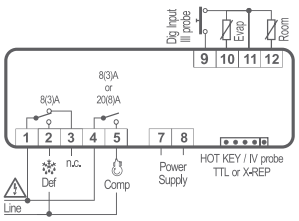
XR30CX



XR35CX



XR40CX



CONTROLLERS for STATIC or VENTILATED APPLICATIONS

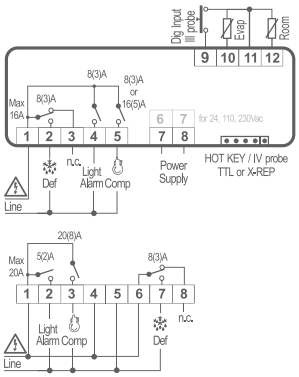
PRIME CX

XR50CX	Digital controller for NT and LT static applications with electrical or hot gas defrost and auxiliary relay
XR60CX	Digital controller for NT and LT ventilated applications with dual humidity function
XR64CX	Digital controller for NT and LT ventilated applications with dual evaporators

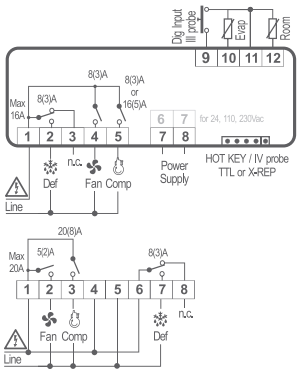
CX: 32x74mm

FEATURES	XR50CX		XR60CX		XR64CX	
Display: n° digits	± 3 d.p.	± 3 d.p.	± 3 d.p.	± 3 d.p.	± 3 d.p.	± 3 d.p.
Power supply	12, 24Vac/dc 24, 110, 230Vac	110, 230Vac	12, 24Vac/dc 24, 110, 230Vac	110, 230Vac	110, 230Vac	12Vac/dc
Probe inputs						
Thermostat	NTC, PTC	NTC, PTC	NTC, PTC	NTC, PTC	NTC, PTC	NTC, PTC
Thermostat 2						
Defrost	NTC, PTC	NTC, PTC	NTC, PTC	NTC, PTC	NTC, PTC	NTC, PTC
Defrost 2					NTC, PTC	NTC, PTC
Condenser	NTC, PTC on HOT KEY	NTC, PTC on HOT KEY	NTC, PTC on HOT KEY	NTC, PTC on HOT KEY	NTC, PTC on HOT KEY	NTC, PTC on HOT KEY
Digital inputs						
Alarm, start defrost, AUX, door switch, pressure switch, probe	config	config	config	config	config	config
Alarm, start defrost, AUX, door switch, pressure switch						
Relay outputs						
Compressor	8A, 16A	20A	8A, 16A	20A	8A, 16A	16A
Compressor 2						
Thermostat 2						
Defrost	8A	8A	8A	8A	8A	16A
Defrost 2					8A	16A
Fans			8A	5A	5A	16A
Light or alarm	8A	5A				
Anti-sweat						
Agitator						
Other						
Hot Key/Prog Tool Kit output	pres	pres	pres	pres	pres	pres
Remote display output	X-REP opt	X-REP opt	X-REP opt	X-REP opt	X-REP opt	X-REP opt
Serial output	TTL	TTL	TTL	TTL	TTL	TTL
Buzzer	opt	opt	opt	opt	opt	opt
Real time clock						

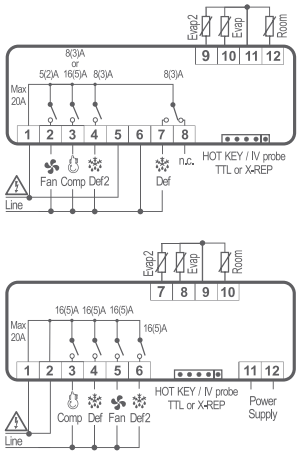
XR50CX



XR60CX



XR64CX



PRIME CX

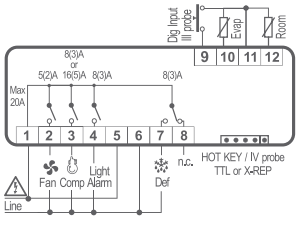
CONTROLLERS for VENTILATED APPLICATIONS

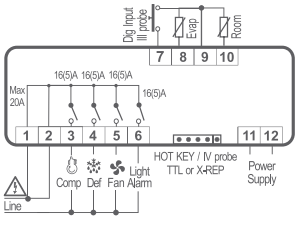
CX: 32x74mm

XR70CX	Digital controller for NT and LT with auxiliary relay and dual humidity function
XR71CX	Digital controller for NT and LT with anti sweat heater management
XR72CX	Digital controller for NT and LT with dual compressor management

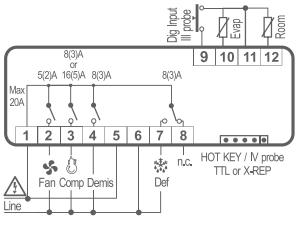
FEATURES	XR70CX		XR71CX		XR72CX	
Display: n° digits	± 3 d.p.	± 3 d.p.	± 3 d.p.	± 3 d.p.	± 3 d.p.	± 3 d.p.
Power supply	110, 230Vac	12Vac/dc	110, 230Vac	12Vac/dc	110, 230Vac	12Vac/dc
Probe inputs						
Thermostat	NTC, PTC	NTC, PTC	NTC, PTC	NTC, PTC	NTC, PTC	NTC, PTC
Thermostat 2						
Defrost	NTC, PTC	NTC, PTC	NTC, PTC	NTC, PTC	NTC, PTC	NTC, PTC
Defrost 2						
Condenser	NTC, PTC on HOT KEY	NTC, PTC on HOT KEY	NTC, PTC on HOT KEY	NTC, PTC on HOT KEY	NTC, PTC on HOT KEY	NTC, PTC on HOT KEY
Digital inputs						
Alarm, start defrost, AUX, door switch, pressure switch, probe	config	config	config	config	config	config
Alarm, start defrost, AUX, door switch, pressure switch						
Relay outputs						
Compressor	8A, 16A	16A	8A, 16A	16A	8A, 16A	16A
Compressor 2					8A	16A
Thermostat 2						
Defrost	8A	16A	8A	16A	8A	16A
Defrost 2						
Fans	5A	16A	5A	16A	5A	16A
Light or alarm	8A	16A				
Anti-sweat			8A	16A		
Agitator						
Other						
Hot Key/Prog Tool Kit output	pres	pres	pres	pres	pres	pres
Remote display output	X-REP opt	X-REP opt	X-REP opt	X-REP opt	X-REP opt	X-REP opt
Serial output	TTL	TTL	TTL	TTL	TTL	TTL
Buzzer	opt	opt	opt	opt	opt	opt
Real time clock	opt	opt				

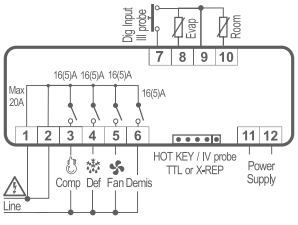
XR70CX



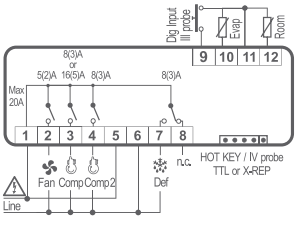


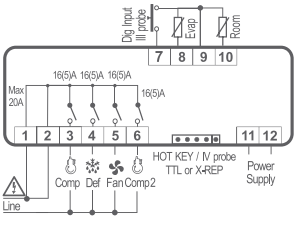
XR71CX





XR72CX





CONTROLLERS for VENTILATED APPLICATIONS or for MILK COOLING and AIR DRYERS

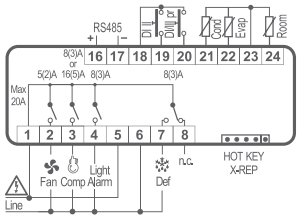
PRIME CX

XR75CX	Digital controller for NT and LT ventilated applications with auxiliary relay, dual humidity function and RS485
XR77CX	Digital controller for NT and LT ventilated applications with auxiliary relay, dual humidity function, RS485 and relay with separated common lines
XR80CX	Digital controller for storage, milk cooling, and for refrigerated air dryers

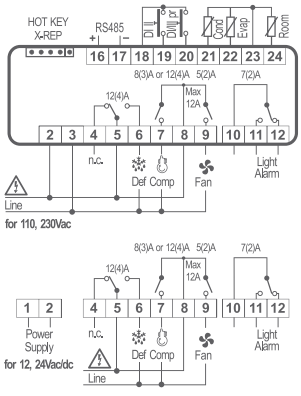
CX: 32x74mm

FEATURES	XR75CX	XR77CX	XR80CX
Display: n° digits	± 3 d.p.	± 3 d.p.	± 3 d.p.
Power supply	110, 230Vac	12, 24Vac/dc 110, 230Vac	12Vac/dc 110, 230Vac
Probe inputs			
Thermostat	NTC, Pt1000	NTC/Pt1000	NTC, PTC
Thermostat 2			
Defrost	NTC, Pt1000	NTC, Pt1000	
Defrost 2			
Condenser	NTC, Pt1000	NTC, Pt1000	
Digital inputs			
Alarm, start defrost, AUX, door switch, pressure switch, probe	config	config	
Alarm, start defrost, AUX, door switch, pressure switch	config	config	config
Relay outputs			
Compressor	8A, 16A	8A, 12A	8A, 20A
Compressor 2			
Thermostat 2			
Defrost	8A	12A	
Defrost 2			
Fans	5A	5A	
Light or alarm	8A	7A	
Anti-sweat			
Agitator			8A
Other			
Hot Key/Prog Tool Kit output	pres	pres	pres
Remote display output	X-REP	X-REP	
Serial output	RS485	RS485	TTL
Buzzer	opt	opt	opt
Real time clock	opt	opt	

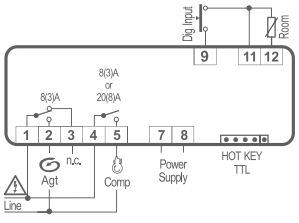
XR75CX



XR77CX



XR80CX



D: 4 DIN Rail

PRIME D SERIES: NT and LT APPLICATIONS

- Innovative digital controllers dedicated to normal and low temperature refrigerated applications
- Direct line power supply 230 (110)Vac. No external transformer required
- Direct driving of compressors up to 1,2HP, (20A relay inside)
- Pre-programming of the main control variables, easy and intuitive programming mode
- Keyboard lock, alarm signalling by relay, display or buzzer
- Configurable digital input for door swtich, defrost, general or serious alarm
- Auxiliary relay activated through keys or digital input
- Hot Key connector for quick and easy programming
- HACCP function
- 3VA max power absorption
- Display with red LED (13,2mm high)

HOW to ORDER

PRIME D | X | R | | | D | - | A | B | C | D | E |

-17.8 For blue display please contact Dixell

A	B	C	D	E
Power supply	**Inputs**	**Buzzer**	**Measurement unit**	**Compressor output**
2 = 24Vac	**P** = PTC	**0** = No	**C** = °C	**0** = 8A
4 = 110Vac	**N** = NTC	**1** = Yes	**F** = °F	**1** = 20A
5 = 230Vac			**H** = °C heating only for XR10D	
			L = °F heating only for XR10D	

THERMOSTAT and CONTROLLERS for STATIC or VENTILATED APPLICATIONS or for MILK COOLING

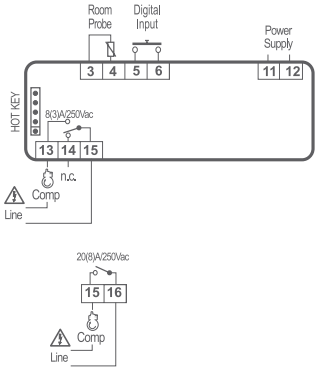
PRIME D

XR10D	Digital thermostat with heating or cooling action
XR20D	Digital controller for NT with "off cycle" defrost
XR30D	Digital controller for NT with "off cycle" defrost and additional configurable relay
XR60D	Digital controller for NT and LT ventilated applications with door switch capability
XR70D	Digital controller for NT and LT ventilated applications with door switch capability and auxiliary relay
XR80D	Digital controller for milk cooling with agitation cycle capability

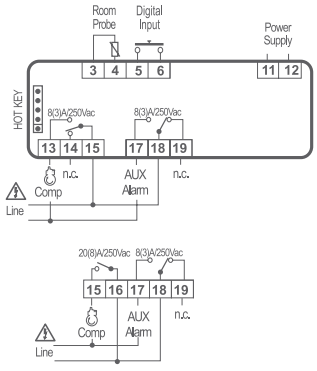
D: 4 DIN Rail

FEATURES	XR10D	XR20D	XR30D	XR60D	XR70D	XR80D
Display: n° digits	± 3 d.p.	± 3 d.p.	± 3 d.p.	± 3 d.p.	± 3 d.p.	± 3 d.p.
Power supply	24, 110, 230Vac	24, 110, 230Vac	24, 110, 230Vac	24, 110, 230Vac	24, 110, 230Vac	24, 110, 230Vac
Probe inputs						
Thermostat	NTC, PTC	NTC, PTC	NTC, PTC	NTC, PTC	NTC, PTC	NTC, PTC
Defrost				NTC, PTC	NTC, PTC	
Digital inputs						
Alarm, start defrost, AUX, door switch, pressure switch	config	config	config	config	config	
Relay outputs						
Compressor	no 8A/nc 5A, 20A	no 8A/nc 5A, 20A	no 8A/nc 5A, 20A	no 8A/nc 5A, 20A	no 8A/nc 5A, 20A	no 8A/nc 5A, 20A
Defrost				no 8A/nc 5A	no 8A/nc 5A	
Fans				8A	8A	
Alarm					no 8A/nc 5A	
Agitator						no 8A/nc 5A
Alarm or auxiliary			no 8A/nc 5A			
Other						
Functions	HACCP	HACCP	HACCP	HACCP	HACCP	min/max
Hot Key output	pres	pres	pres	pres	pres	pres
Buzzer	opt	opt	opt	opt	opt	opt

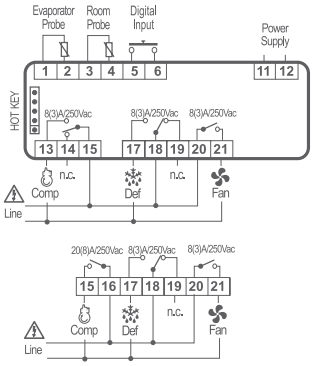
XR10D – XR20D



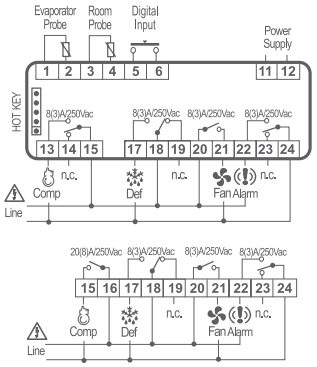
XR30D



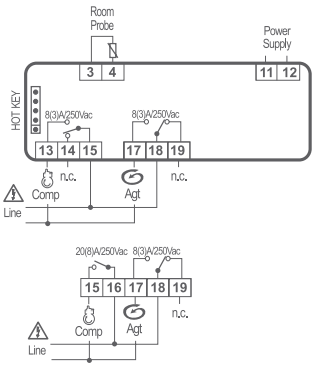
XR60D



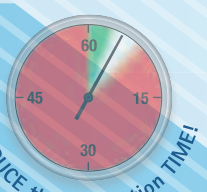
XR70D



XR80D



CX: 32x74mm



UNIVERSAL-R: HEATING APPLICATIONS, NT and LT
7 PRE-CONFIGURED MAPS

- Designed to replace over 150 models of refrigeration/heating controllers in 32x74mm format
- Easy and quick installation
- Rapid set-up in 3 simple steps
- Dual voltage power supply 12Vac/dc and 230Vac
- Specific functions to control twin evaporator defrost
- Automatic probe detection
- Complete condenser management
- Hot Key or Prog Tool Kit connector for quick and easy programming
- 3VA max power absorption
- Display with red LED (10,5 mm high) and icons
- 7 pre-configured applications selectable from parameter **tC**
  - **tC1** = on/off thermostat – cooling
  - **tC2** = thermostat with off cycle defrost
  - **tC3** = thermostat with electric/hot gas defrost, time initiated and time terminated
  - **tC4** = thermostat with electric/hot gas defrost, time initiated and temperature terminated
  - **tC5** = thermostat with electric/hot gas defrost, time initiated and temperature terminated and evaporator fan
  - **tC6** = twin evaporator defrost applications
  - **tC7** = on/off thermostat - heating

HOW to ORDER

UNIVERSAL-R	U	N	I	V	-	R	4	-	6	B	1	D	0

B	D
Inputs	**Measurement unit**
P = PTC	**C** = °C
N = NTC	**F** = °F

UNIVERSAL CONTROLLER for SERVICE REPLACEMENT

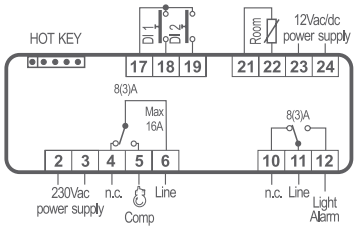
UNIVERSAL-R

UNIV-R4 | Controller for service replacement of refrigeration and heating controllers with 7 pre-configured maps

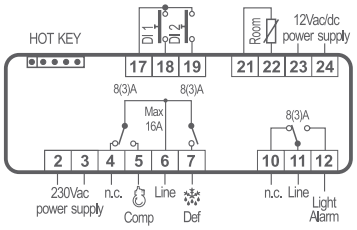
CX: 32x74mm

FEATURES	UNIV-R4 (tC=1)	UNIV-R4 (tC=2)	UNIV-R4 (tC=3)	UNIV-R4 (tC=4)	UNIV-R4 (tC=5)	UNIV-R4 (tC=6)	UNIV-R4 (tC=7)
Display: n° digits	± 3 d.p.	± 3 d.p.	± 3 d.p.	± 3 d.p.	± 3 d.p.	± 3 d.p.	± 3 d.p.
Power supply	12Vac/dc 230Vac	12Vac/dc 230Vac	12Vac/dc 230Vac	12Vac/dc 230Vac	12Vac/dc 230Vac	12Vac/dc 230Vac	12Vac/dc 230Vac
Probe inputs							
Thermostat	NTC, PTC	NTC, PTC	NTC, PTC	NTC, PTC	NTC, PTC	NTC, PTC	NTC, PTC
Defrost				NTC, PTC	NTC, PTC	NTC, PTC	
Defrost 2						NTC, PTC	
Digital inputs							
Alarm, defrost, AUX, door switch, pressure switch, ON/OFF, energy saving	2 x config	2 x config	2 x config	2 x config	2 x config	1 x config	2 x config
Relay outputs							
Compressor	8A	8A	8A	8A	8A	8A	
Defrost			8A	8A	8A	8A	
Defrost 2						8A	
Fans					8A	8A	
Light or alarm	8A	8A	8A	8A	8A		8A
Heating							8A
Other							
Hot Key/Prog Tool Kit output	pres	pres	pres	pres	pres	pres	pres
Buzzer	pres	pres	pres	pres	pres	pres	pres

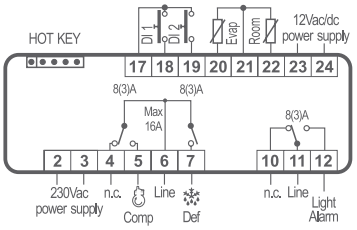
UNIV-R4 (tC 1-2)



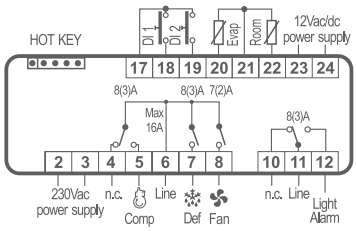
UNIV-R4 (tC 3)



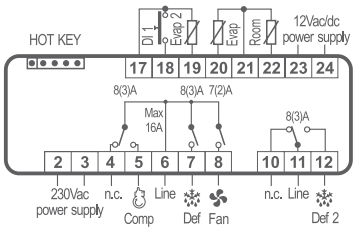
UNIV-R4 (tC 4)



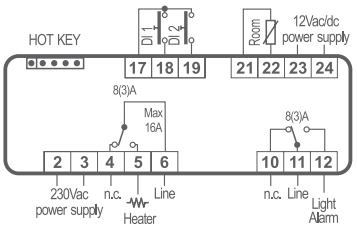
UNIV-R4 (tC 5)



UNIV-R4 (tC 6)



UNIV-R4 (tC 7)



WING: INNOVATIVE AESTHETICAL SOLUTIONS

The WING family, characterized by a high aesthetical value, presents a series of solutions able to satisfy every need in refrigeration field especially when the design becomes a fundamental, such as for cream freezers or pastry refrigerators etc... This series is available in classic formats, Compact (L and V) and Split (K), with vertical or horizontal keyboard. In particular, horizontal format is divided in 2 macro families:

- **WING TOUCH**;
- **WING STANDARD** (available also INOX or BACK-PANEL with POLYCARBONATE).

Great versatility and customization are given to these models thanks to the reduced space (LR) and to the display with icons that, depending on the model, can be white, red or blue.

WING TOUCH

- Capacitive TOUCH technology
- Frontal backlit
- Standard or back-panel front mounting

IP65

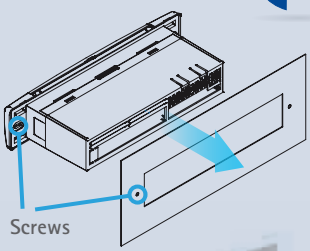
Standard front mounting

Back-panel mounting
with PM-WLT bracket
(surface thickness 0.8÷1.0mm)

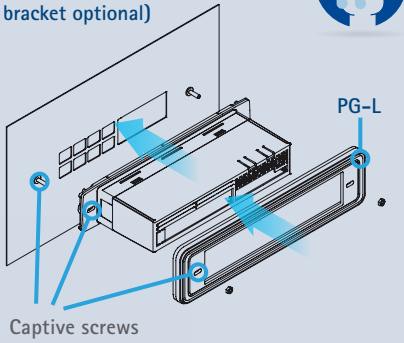
MOUNTING OPTIONS

Depending on the model, Dixell gives different mounting solutions. High protection, great aesthetic value, easy and quick fixing mode are guaranteed by the solutions below:

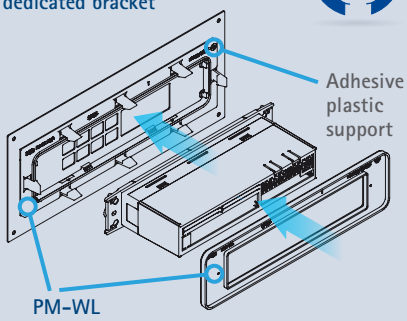
STANDARD mounting with screws



BACK-PANEL mounting with captive screws (PG-L bracket optional)



BACK-PANEL mounting with PM-WL(T) dedicated bracket



The PM-WL (PM-WLT for WING TOUCH) bracket, developed by Dixell, is the ideal solution for back-panel mounting without using captive screws. The fixing system is composed of 2 parts: one adhesive to be put on the panel, and one movable to hold the instrument.

WING STANDARD

- Frontal glass frame to protect the keys
- Standard front mounting

IP65

WING INOX option

IP65

- Bright or satinized steel front
- Standard or back-panel front mounting

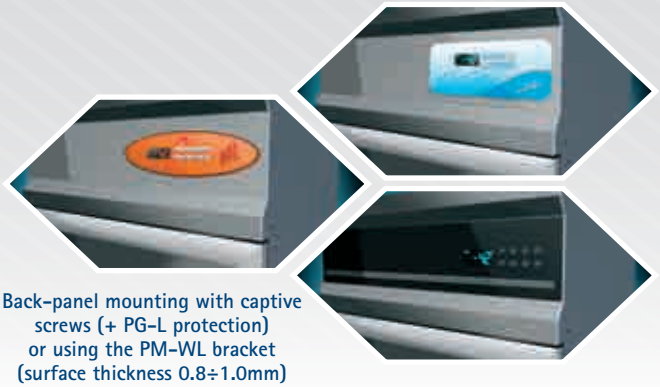
Standard front mounting

Back-panel mounting with captive screws (+ PG-L protection) or using the PM-WL bracket (surface thickness 0.8÷1.0mm)

BACK-PANEL with POLYCARBONATE option

- Front polycarbonate that can be easily customized
- Back-panel mounting

IP65



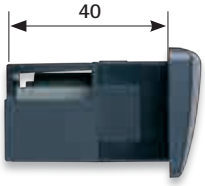
Back-panel mounting with captive screws (+ PG-L protection) or using the PM-WL bracket (surface thickness 0.8÷1.0mm)

	Formats	Front mounting	Back-panel mounting with captive screws	Back-panel mounting with bracket
WING TOUCH	LT, LRT, TOUCH keyboards	yes	no	yes with PM-WLT bracket
WING STANDARD	L, LR, T keyboards	yes	no	no
INOX option	L, LR, T keyboards	yes	yes with PG-L bracket optional	yes with PM-WL bracket
POLYCARBONATE option	L, LR, T keyboards	no	yes with PG-L bracket optional	yes with PM-WL bracket

WING SERIES: NT and LT APPLICATIONS – COMPACT/SPLIT FORMAT

- Innovative controllers with different aesthetic solutions that enhance the final product
- Direct live and neutral load connections for reduction of wiring costs
- Direct driving of compressors up to 1,2HP (20A relay inside)
- Direct line power supply. No external transformer required
- Up to 8 push buttons with direct action for user friendly interface
- Maximum and minimum temperature recording
- High and low humidity control simple or floating
- Smart defrost
- Integrated functions for energy saving
- Continuous cycle with a dedicated set point
- Virtual probe management
- Hot Key or Prog Tool Kit connector for quick and easy programming
- Connection for X-REP remote display
- Serial connection to monitoring systems
- 7VA max power absorption
- LED display (10,5mm high) and icons

LR and **VS** formats are the specific solution for all applications with a reduced space



LR

VS

Controllers are provided with a wide display with integrated icons of the real time situation and the measurement unit, for clear and continuous monitoring.

HOW to ORDER

WING L

X	W			L	-	A	B	C	D	E	-	N

inox -17.8 For inox, blue display, back-panel with polycarbonate version please contact Dixell

A	B			C		D	E
Power supply	Inputs		Light relay	Buzzer	RTC	Measurement unit	X-REP
2 = 24Vac	**N** = NTC		8A	**0** = No	No	**C** = °C	**0** = No
4 = 110Vac	**P** = PTC		8A	**1** = Yes	No	**F** = °F	**1** = Yes
5 = 230Vac	**L** = NTC		16A	**2** = No	Yes supercap		
	M = PTC		16A	**3** = Yes	Yes supercap		
	Q = NTC		16A neon				
	R = PTC		16A neon				

WING LT

X	W			L	T	-	A	B	C	D	E

WING LT back-panel mounting

X	W			L	T	-	A	B	C	D	E	-	R

A	B	C	D		E
Power supply	Inputs	RTC	Measurement unit	Display	X-REP
2 = 24Vac	**N** = NTC	**1** = No	**W** = °C	White	**0** = No
4 = 110Vac	**P** = PTC	**3** = Yes supercap	**Y** = °F	White	**1** = Yes
5 = 230Vac			**C** = °C	Red	
			F = °F	Red	
			D = °C	Blue	
			G = °F	Blue	

WING LR

X	W			L	R	-	A	B	C	D	0	-	N

inox -17.8 For inox, blue display, back-panel with polycarbonate version please contact Dixell

A	B	C		D
Power supply	Inputs	Buzzer	RTC	Measurement unit
4 = 110Vac	**N** = NTC	**0** = No	No	**C** = °C
5 = 230Vac	**P** = PTC	**1** = Yes	No	**F** = °F
		2 = No	Yes supercap	
		3 = Yes	Yes supercap	

HOW to ORDER

WING LRT | X | W | | | L | R | T | - | A | B | C | D | 0 |

WING LRT back-panel mounting | X | W | | | L | R | T | - | A | B | C | D | 0 | - | R |

A	B	C	D	
Power supply	**Inputs**	**RTC**	**Measurement unit**	**Display**
4 = 110Vac	**N** = NTC	**1** = No	**W** = °C	White
5 = 230Vac	**P** = PTC	**3** = Yes supercap	**Y** = °F	White
			C = °C	Red
			F = °F	Red
			D = °C	Blue
			G = °F	Blue

WING V | X | W | | | V | - | A | B | C | D | E |

WING VS | X | W | | | V | S | - | A | B | C | D | 0 |

For blue display please contact Dixell

For blue display please contact Dixell

A	B	C	D	E
Power supply	**Inputs**	**Buzzer**	**Measurement unit**	**Compressor output**
2 = 24Vac	**N** = NTC	**0** = No	**C** = °C	**0** = 8A
4 = 110Vac	**P** = PTC	**1** = Yes	**F** = °F	**1** = 20A
5 = 230Vac				

WING K | X | W | | | K | - | A | B | C | D | E |

A	B	C	D	E
Power supply	**Inputs/light relay**	**Housing**	**Measurement unit**	**RTC**
2 = 24Vac	**N** = NTC	**0** = Open board "OS"	**C** = °C	**0** = No
4 = 110Vac	**P** = PTC	**1** = Open board + 8 DIN Rail base	**F** = °F	**2** = Yes supercap
5 = 230Vac	**L** = NTC/16A neon	**2** = 8 DIN Rail		**4** = Battery
	M = PTC/16A neon	**3** = "GS" housing		

CX/TX/VX KEYBOARDS | | X | | 2 | 0 | - | A | 0 | 0 | N | 0 |

For inox and back-panel with polycarbonate version on TX keyboards please contact Dixell

For blue display please contact Dixell

A
Buzzer
0 = No
1 = Yes

TOUCH KEYBOARDS | T | | 2 | 0 | T | - | 1 | 0 | 0 | D | 0 |

TOUCH KEYBOARDS back-panel mounting | T | | 2 | 0 | T | - | 1 | 0 | 0 | D | 0 | - | R |

D
Display
N = Red
R = Blue
W = White

CONTROLLERS for STATIC APPLICATIONS

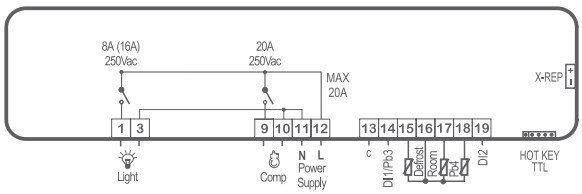
XW20L	Digital controller for NT with "off cycle" defrost
XW20LT	Digital controller for NT with "off cycle" defrost, TOUCH interface and red, white or blue display
XW20LR	Digital controller for NT with "off cycle" defrost and reduced depth
XW20LRT	Digital controller for NT with "off cycle" defrost, reduced depth, TOUCH interface and red, white or blue display

L, LR: 38x185mm

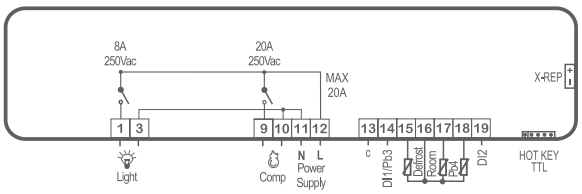
LT, LRT: 38x185mm

FEATURES	XW20L	XW20LT	XW20LR	XW20LRT
Display: n° digits	± 3 d.p.	± 3 d.p.	± 3 d.p.	± 3 d.p.
Keyboard: push buttons	6	6	6	6
Power supply	24, 110, 230Vac	24, 110, 230Vac	110, 230Vac	110, 230Vac
Probe inputs				
Thermostat	NTC, PTC	NTC, PTC	NTC, PTC	NTC, PTC
Defrost	NTC, PTC	NTC, PTC	NTC, PTC	NTC, PTC
Condenser	NTC, PTC	NTC, PTC	NTC, PTC	NTC, PTC
Display	NTC, PTC	NTC, PTC		
Digital inputs				
Alarm, start defrost, door switch, pressure switch, probe	config	config	config	config
DI 2	config	config	config	config
Relay outputs				
Compressor	20A	20A	20A	20A
Defrost				
Fans				
Light	8A, 16A	8A	8A	8A
Alarm, AUX				
RL 6 configurable				
Other				
Hot Key/Prog Tool Kit output	pres	pres	pres	pres
Remote display output	X-REP opt	X-REP opt		
Serial output	TTL	TTL	TTL	TTL
Triac output				
Buzzer	opt	pres	opt	pres
Real time clock	opt	opt	opt	opt

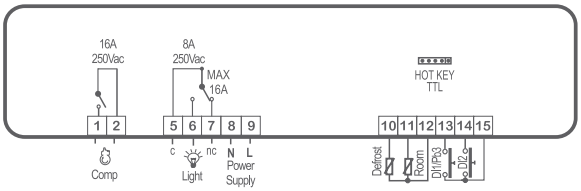
XW20L



XW20LT



XW20LR - XW20LRT



WING

CONTROLLERS for STATIC APPLICATIONS

L: 38x185mm

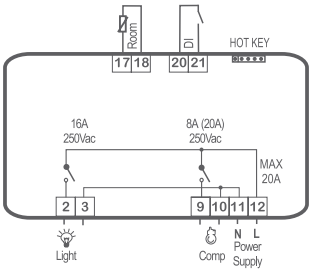
V, VS: 100x64mm

K: OS/GS/8 DIN Rail

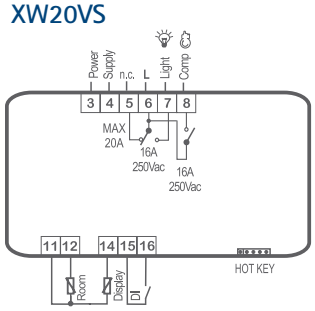
XW20V	Digital controller for NT with "off cycle" defrost
XW20VS	Digital controller for NT with "off cycle" defrost and reduced depth
XW20K	Digital controller in split format for NT with "off cycle" defrost
XW40L	Digital controller for NT and LT with electrical or hot gas defrost function
XW40K	Digital controller in split format for NT and LT with electrical or hot gas defrost function

FEATURES	XW20V	XW20VS	XW20K	XW40L	XW40K
Display: n° digits	± 3 d.p.	± 3 d.p.	on keyboard ± 3 d.p.	± 3 d.p.	on keyboard ± 3 d.p.
Keyboard: push buttons	6	6	6 (on CX620, TX620, T620T, VX620)		6 (on CX620, TX620, T620T, VX620)
Power supply	24, 110, 230Vac	24, 110, 230Vac	24, 110, 230Vac	24, 110, 230Vac	24, 110, 230Vac
Probe inputs					
Thermostat	NTC, PTC	NTC, PTC	NTC, PTC	NTC, PTC	NTC, PTC
Defrost				NTC, PTC	NTC, PTC
Condenser			NTC, PTC	NTC, PTC	NTC, PTC
Display		NTC, PTC	NTC, PTC	NTC, PTC	NTC, PTC
Digital inputs					
Alarm, start defrost, door switch, pressure switch, probe	config	config	config	config	config
DI 2				config	
Relay outputs					
Compressor	8A, 20A	16A	20A	20A	20A
Defrost				8A	16A
Fans					
Light	16A	16A	16A	8A, 16A	16A
Alarm, AUX					
RL 6 configurable					
Other					
Hot Key/Prog Tool Kit output	pres	pres	pres	pres	pres
Remote display output				X-REP opt	
Serial output			TTL	TTL	TTL
Triac output					
Buzzer	opt	opt	on keyboard	opt	on keyboard
Real time clock			opt	opt	opt

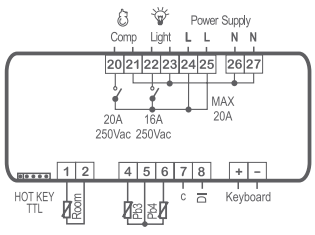
XW20V



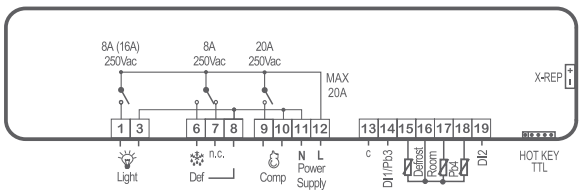
XW20VS



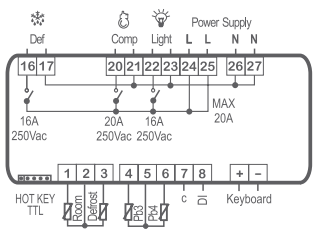
XW20K



XW40L



XW40K



CONTROLLERS for VENTILATED APPLICATIONS

WING

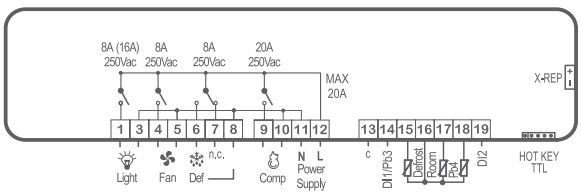
XW60L	Digital controller for NT and LT with electrical or hot gas defrost function and fans
XW60LT	Digital controller for NT and LT with electrical or hot gas defrost function and fans, TOUCH interface and red, white or blue display
XW60LR	Digital controller for NT and LT with electrical or hot gas defrost function and fans and reduced depth
XW60LRT	Digital controller for NT and LT with electrical or hot gas defrost function and fans, reduced depth, TOUCH interface and red, white or blue display
XW60V	Digital controller for NT and LT with electrical or hot gas defrost function and fans
XW60VS	Digital controller for NT and LT with electrical or hot gas defrost function and fans and reduced depth

L, LR: 38x185mm

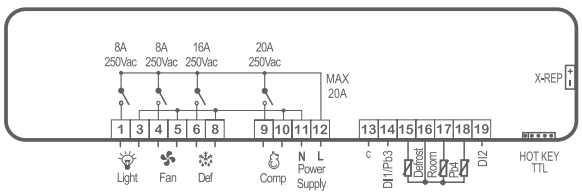
LT, LRT: 38x185mm **V, VS**: 100x64mm

FEATURES	XW60L	XW60LT	XW60LR	XW60LRT	XW60V	XW60VS
Display: n° digits	± 3 d.p.	± 3 d.p.	± 3 d.p.	± 3 d.p.	± 3 d.p.	± 3 d.p.
Keyboard: push buttons	6	6	6	6	6	5
Power supply	24, 110, 230Vac	24, 110, 230Vac	110, 230Vac	110, 230Vac	24, 110, 230Vac	24, 110, 230Vac
Probe inputs						
Thermostat	NTC, PTC	NTC, PTC	NTC, PTC	NTC, PTC	NTC, PTC	NTC, PTC
Defrost	NTC, PTC	NTC, PTC	NTC, PTC	NTC, PTC	NTC, PTC	NTC, PTC
Condenser	NTC, PTC	NTC, PTC	NTC, PTC	NTC, PTC		
Display	NTC, PTC	NTC, PTC				NTC, PTC
Digital inputs						
Alarm, start defrost, door switch, pressure switch, probe	config	config	config	config	config	config
DI 2	config	config	config	config		
Relay outputs						
Compressor	20A	20A	20A	20A	8A, 20A	16A
Defrost	8A	16A	8A	8A	8A	16A
Fans	8A	8A	5A	5A	8A	8A
Light	8A, 16A	8A	5A	5A	16A	
Alarm, AUX						
RL 6 configurable						
Other						
Hot Key/Prog Tool Kit output	pres	pres	pres	pres	pres	pres
Remote display output	X-REP opt	X-REP opt				
Serial output	TTL	TTL	TTL	TTL		
Triac output						
Buzzer	opt	pres	opt	pres	opt	opt
Real time clock	opt	opt	opt	opt		

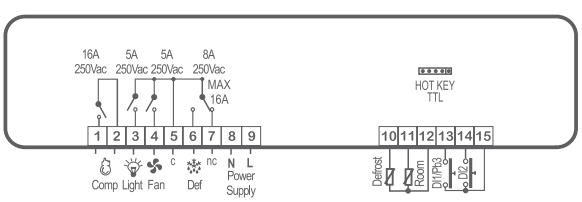
XW60L



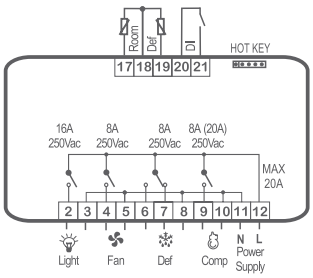
XW60LT



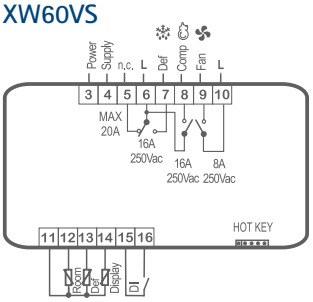
XW60LR – XW60LRT



XW60V



XW60VS



WING

CONTROLLERS for VENTILATED APPLICATIONS

L: 38x185mm

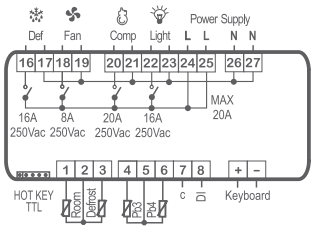
LT: 38x185mm

K: OS/GS/8 DIN Rail

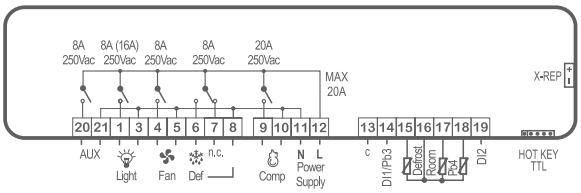
XW60K	Digital controller in split format for NT and LT with electrical or hot gas defrost function and fans
XW70L	Digital controller in split format for NT and LT with electrical or hot gas defrost function, fans and auxiliary relay
XW70LT	Digital controller for NT and LT with electrical or hot gas defrost function, fans and auxiliary relay, TOUCH interface and red, white or blue display
XW70K	Digital controller in split format for NT and LT with electrical or hot gas defrost function, fans, auxiliary relay and triac (ON/OFF)

FEATURES	XW60K	XW70L	XW70LT	XW70K
Display: n° digits	on keyboard ± 3 d.p.	± 3 d.p.	± 3 d.p.	on keyboard ± 3 d.p.
Keyboard: push buttons	6 (on CX620, TX620, T620T, VX620)	8	8	8 (on TX820, T820T, VX820)
Power supply	24, 110, 230Vac	24, 110, 230Vac	24, 110, 230Vac	24, 110, 230Vac
Probe inputs				
Thermostat	NTC, PTC	NTC, PTC	NTC, PTC	NTC, PTC
Defrost	NTC, PTC	NTC, PTC	NTC, PTC	NTC, PTC
Condenser	NTC, PTC	NTC, PTC	NTC, PTC	NTC, PTC
Display	NTC, PTC	NTC, PTC	NTC, PTC	NTC, PTC
Digital inputs				
Alarm, start defrost, door switch, pressure switch, probe	config	config	config	config
DI 2		config	config	config
Relay outputs				
Compressor	20A	20A	20A	20A
Defrost	16A	8A	16A	16A
Fans	8A	8A	8A	8A
Light	16A	8A, 16A	8A	16A
Alarm, AUX		8A	8A	
RL 6 configurable				
Other				
Hot Key/Prog Tool Kit output	pres	pres	pres	pres
Remote display output		X-REP opt	X-REP opt	
Serial output	TTL	TTL	TTL	TTL
Triac output				2A
Buzzer	on keyboard	opt	pres	on keyboard
Real time clock	opt	opt	opt	opt

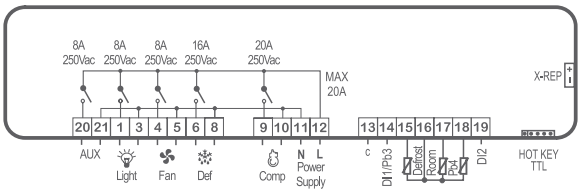
XW60K



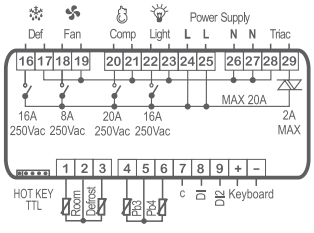
XW70L



XW70LT



XW70K



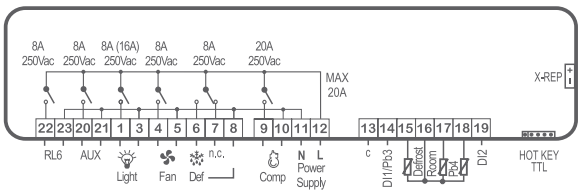
XW90L	Digital controller for NT and LT with electrical or hot gas defrost function, fans, auxiliary relay and sixth relay configurable
XW90LT	Digital controller for NT and LT with electrical or hot gas defrost function, fans, auxiliary relay and sixth relay configurable, TOUCH interface and red, white or blue display

L: 38x185mm

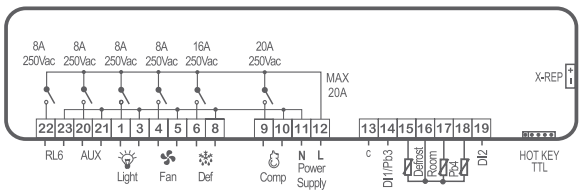
LT: 38x185mm

FEATURES	XW90L	XW90LT
Display: n° digits	± 3 d.p.	± 3 d.p.
Keyboard: push buttons	8	8
Power supply	24, 110, 230Vac	24, 110, 230Vac
Probe inputs		
Thermostat	NTC, PTC	NTC, PTC
Defrost	NTC, PTC	NTC, PTC
Condenser	NTC, PTC	NTC, PTC
Display	NTC, PTC	NTC, PTC
Digital inputs		
Alarm, start defrost, door switch, pressure switch, probe	config	config
DI 2	config	config
Relay outputs		
Compressor	20A	20A
Defrost	8A	16A
Fans	8A	8A
Light	8A, 16A	8A
Alarm, AUX	8A	8A
RL 6 configurable	8A	8A
Other		
Hot Key/Prog Tool Kit output	pres	pres
Remote display output	X-REP opt	X-REP opt
Serial output	TTL	TTL
Triac output		
Buzzer	opt	pres
Real time clock	opt	opt

XW90L



XW90LT



WING

KEYBOARDS for CONTROLLERS in K FORMAT

32x74mm

38x185mm

38x185mm

100x64mm

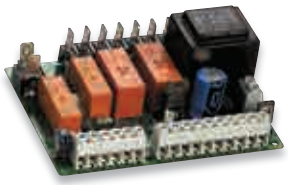
CX620	6 key keyboard (32x74mm) for controllers in K format
TX620	6 key keyboard (horizontal WING) for controllers in K format
T620T	6 key keyboard for controllers in K format with TOUCH interface and red, white and blue display
VX620	6 key keyboard (vertical WING) for controllers in K format
TX820	8 key keyboard (horizontal WING) for controllers in K format
T820T	8 key keyboard for controllers in K format with TOUCH interface and red, white and blue display
VX820	8 key keyboard (vertical WING) for controllers in K format

FEATURES	CX620	TX620	T620T	VX620	TX820	T820T	VX820
Display: n° digits	± 3 d.p.	± 3 d.p.	± 3 d.p.	± 3 d.p.	± 3 d.p.	± 3 d.p.	± 3 d.p.
Keyboard: push buttons	6	6	6	6	8	8	8
Power supply	from controller	from controller	from controller	from controller	from controller	from controller	from controller
Slave module	XW20K XW40K XW60K	XW20K XW40K XW60K	XW20K XW40K XW60K	XW20K XW40K XW60K	XW70K	XW70K	XW70K
Buzzer	opt	opt	pres	opt	opt	pres	opt

The keyboards CX, TX and VX are provided with a wide display with integrated icons of real time situation and measurement unit, for clear and continuous monitoring.

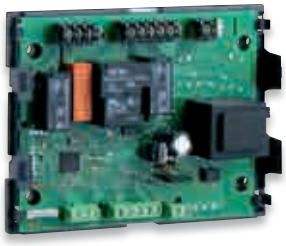
The POWER MODULES in K FORMAT are AVAILABLE in 4 DIFFERENT VERSIONS

OS: open board



GS: with plastic housing 225x180x84mm

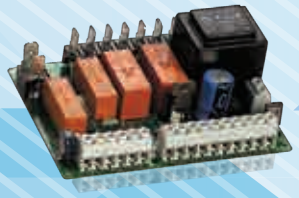
8 DIN Rail base: open board with 8 DIN bottom



8 DIN Rail: with 8 DIN plastic housing

MULTIPLEXED CABINET REFRIGERATION CONTROLLERS

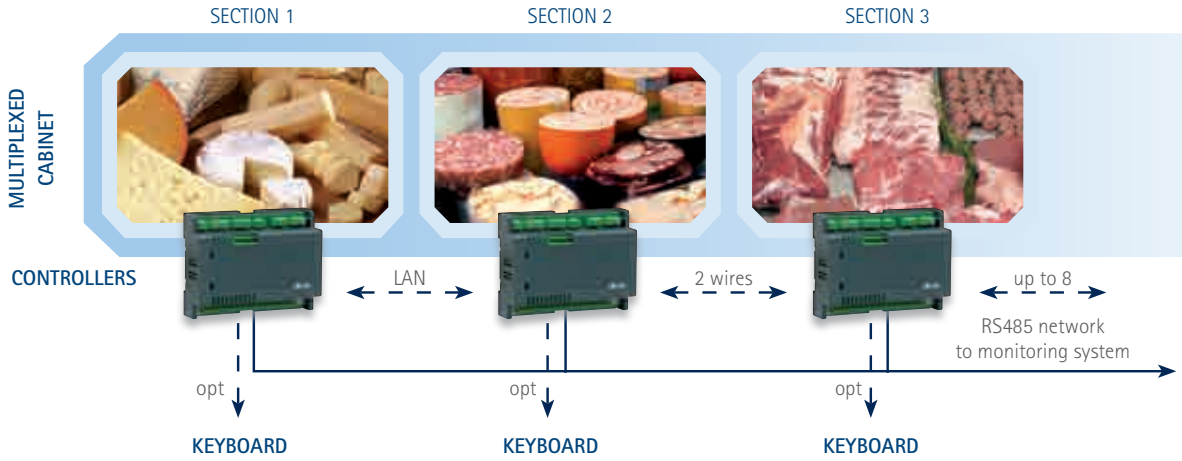
SECTION INDEX



XM200/400/600 SERIES: NT and LT APPLICATIONS

- Multifunction controllers for multiplexed applications
- Multi-master devices (XM400/600)
- Up to 5 controllers linked for XM400 series and up to 8 for XM600 series
- Internal Real Time Clock
- Superheat adaptive control (XM600)
- Integrated ON/OFF or stepper electronic expansion valve drive (XM600)
- Anti-sweat heater management through a "DEW POINT" (XM600)
- Virtual probe management (XM600)
- Evaporating fans speed management via PWM or 4÷20mA/0÷10V (XM600)
- XM668D and XM678D models certified by Alco to be used combined with EX4, EX5, EX6 valves
- Keyboard with direct access to the main functions (also with TOUCH interface)
- Hot Key or Prog Tool Kit connector for quick and easy programming
- Serial connection to monitoring systems
- 10VA max power absorption
- Display with red LED (13,2 mm high), (10,5mm and icons for CX format and WING TOUCH)

MULTIPLEXED CABINET APPLICATIONS with CONTROLLERS in K FORMAT



HOW to ORDER

XM200L | X | M | 2 | 4 | 4 | L | - | A | B | C | D | 0 |

For inox version and blue display please contact Dixell

A	B	C	D
Power supply	**RTC**	**Buzzer**	**Measurement unit**
4 = 110Vac	**0** = No	**0** = No	**C** = °C
5 = 230Vac	**1** = Yes	**1** = Yes	**F** = °F

XM400K | X | M | 4 | | | K | - | A | B | C | D | E |

A	B	C	D	E
Power supply	**RTC**	**Housing**	**Measurement unit**	**RS485 output**
4 = 110Vac	**0** = No	**0** = Open board "OS"	**C** = °C	**0** = No
5 = 230Vac	**1** = Yes	**1** = "GS" housing	**F** = °F	**1** = Yes

XM600D | X | M | 6 | | 8 | D | - | 2 | B | C | D | E |

B	C		D	E	
Inputs	**RTC**	**RS485**	**Measurement unit**	**Modulating output**	**Connections**
N = NTC/4÷20mA	**0** = No	No	**C** = °C/Bar	**0** = No	Disconnectable + screw
O = NTC/0÷5V	**1** = No	Yes	**F** = °F/PSI	**1** = No	Screw
P = Pt1000/4÷20mA	**2** = Yes	No		**2** = 4÷20mA/0÷10V	Disconnectable + screw
Q = Pt1000/0÷5V	**3** = Yes	Yes		**3** = 4÷20mA/0÷10V	Screw
				4 = PWM	Disconnectable + screw
				5 = PWM	Screw

XM600K | X | M | 6 | | | K | - | A | B | C | D | E |

A	B	C			D	E	
Power supply	**Inputs**	**RTC**	**RS485**	**Housing**	**Measurement unit**	**Modulating output**	**Connections**
4 = 110Vac	**N** = NTC/4÷20mA	**0** = No	No	8 DIN Rail	**C** = °C/Bar	**0** = No	Disconnectable + screw
5 = 230Vac	**O** = NTC/0÷5V	**1** = No	Yes	8 DIN Rail	**F** = °F/PSI	**1** = No	Screw
	P = Pt1000/4÷20mA	**2** = Yes	No	8 DIN Rail		**2** = 4÷20mA/0÷10V	Disconnectable + screw
	Q = Pt1000/0÷5V	**3** = Yes	Yes	8 DIN Rail		**3** = 4÷20mA/0÷10V	Screw
		4 = No	No	Open board		**4** = PWM	Disconnectable + screw
		5 = No	Yes	Open board		**5** = PWM	Screw
		6 = Yes	No	Open board			
		7 = Yes	Yes	Open board			

T/V KEYBOARDS | | | 4 | 0 | - | A | 0 | 0 | D | 0 |

CX KEYBOARDS | C | X | 6 | | 0 | - | A | 0 | 0 | N | 0 |

For inox version and blue display on T keyboard please contact Dixell

For blue display please contact Dixell

A	D
Buzzer	**Measurement unit**
0 = No	**C** = °C
1 = Yes	**F** = °F

TOUCH KEYBOARDS | T | 6 | 6 | 0 | T | - | 1 | 0 | 0 | D | 0 |

TOUCH KEYBOARDS back-panel mounting | T | 6 | 6 | 0 | T | - | 1 | 0 | 0 | D | 0 | - | R |

D
Display
N = Red
R = Blue
W = White

XM200

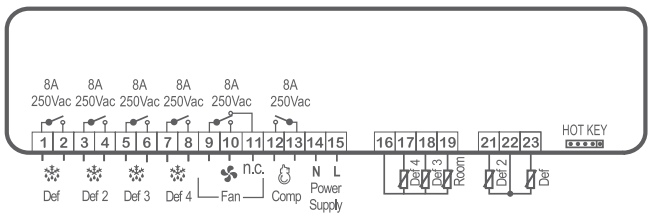
CONTROLLER for MULTIPLEXED VENTILATED APPLICATIONS

L: 38x185mm

XM244L | Digital controller in compact format for NT and LT ventilated applications with 4 defrost management

FEATURES	XM244L
Display: n° digits	± 3 d.p.
Keyboard: push buttons	5
Power supply	110, 230Vac
Probe inputs	
Thermostat	NTC
Defrost	NTC
Defrost 2	NTC
Defrost 3	NTC
Defrost 4	NTC
Relay outputs	
Compressor	8A
Defrost	8A
Defrost 2	8A
Defrost 3	8A
Defrost 4	8A
Fans	8A
Other	
Hot Key/Prog Tool Kit output	pres
Serial output	TTL
Buzzer	opt
Real time clock	opt

XM244L



CONTROLLERS for STATIC or VENTILATED MULTIPLEXED APPLICATIONS

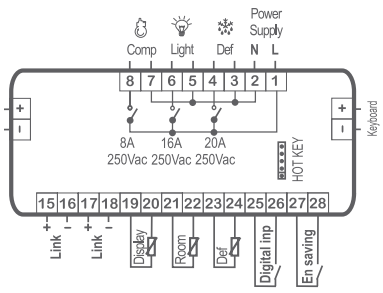
XM400

XM440K	Digital controller for NT and LT static applications
XM460K	Digital controller for NT and LT ventilated applications
XM470K	Digital controller for NT and LT ventilated applications with auxiliary output

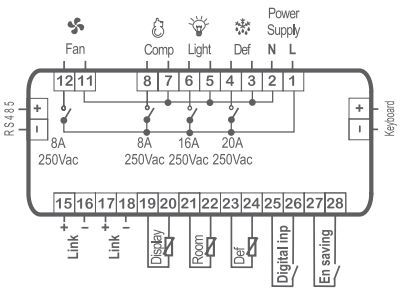
K: OS/GS

FEATURES	XM440K	XM460K	XM470K
Display: n° digits	on keyboard ± 3 d.p.	on keyboard ± 3 d.p.	on keyboard ± 3 d.p.
Keyboard: push buttons	6 (on CX640, T640, V640)	6 (on CX640, T640, V640)	8 (on T840, V840)
Power supply	110, 230Vac	110, 230Vac	110, 230Vac
Probe inputs			
Thermostat	NTC	NTC	NTC
Defrost	NTC	NTC	NTC
Display	NTC	NTC	NTC
AUX			
Suction pressure			
Condensing pressure			
Digital inputs			
Start defrost, pressure switch, AUX, generic alarm, serious alarm mode, light, ON/OFF, holiday	config	config	config
Energy saving	pres	pres	pres
Relay outputs			
Compressor	8A	8A	8A
Defrost	20A	20A	20A
Fans		8A	8A
Light	16A	16A	16A
Alarm			
AUX			8A
Other			
Hot Key/Prog Tool Kit output	pres	pres	pres
Remote display output	X-REP	X-REP	X-REP
Serial output	TTL, RS485 opt	TTL, RS485 opt	TTL, RS485 opt
4÷20mA/0÷10V output			
PWM output			
Valve driver output			
Buzzer	on keyboard	on keyboard	on keyboard
Real time clock	opt	opt	opt
Connection kit			

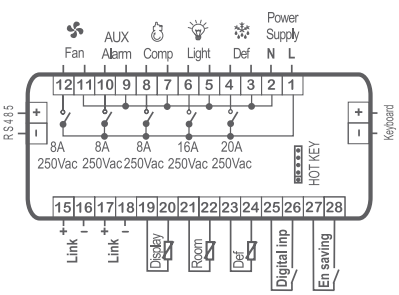
XM440K



XM460K



XM470K



XM600

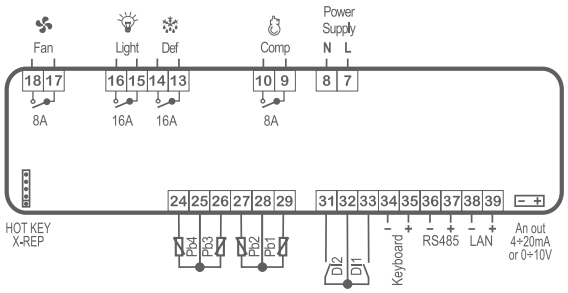
CONTROLLERS for VENTILATED MULTIPLEXED APPLICATIONS with EEV MANAGEMENT

K: OS/8 DIN Rail **D**: 8 DIN Rail

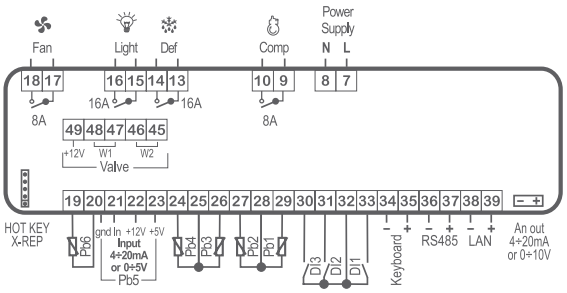
XM660K	Digital controller for NT and LT ventilated applications with high performance defrost
XM668D	Digital controller for NT and LT ventilated applications with high performance defrost and stepper electronic valve management
XM669K	Digital controller for NT and LT ventilated applications with high performance defrost and ON/OFF electronic valve management

FEATURES	XM660K	XM668D	XM669K
Display: n° digits	on keyboard ± 3 d.p.	on keyboard ± 3 d.p.	on keyboard ± 3 d.p.
Keyboard: push buttons	6 (on CX660, T660T)	6 (on CX660, T660T)	6 (on CX660, T660T)
Power supply	110, 230Vac	24Vac	110, 230Vac
Probe inputs			
Thermostat	NTC, Pt1000	NTC, Pt1000	NTC, Pt1000
Defrost	NTC, Pt1000	NTC, Pt1000	NTC, Pt1000
Display	NTC, Pt1000	NTC, Pt1000	NTC, Pt1000
AUX	NTC, Pt1000	NTC, Pt1000	NTC, Pt1000
Suction pressure		NTC, Pt1000, 4÷20mA, 0÷5V	NTC, Pt1000, 4÷20mA, 0÷5V
Condensing pressure		NTC, Pt1000	NTC, Pt1000
Digital inputs			
Start defrost, pressure switch, AUX, generic alarm, serious alarm mode, light, ON/OFF, holiday Energy saving	2 x config	3 x config	2 x config
Relay outputs			
Compressor/Valve	8A	8A	8A
Defrost	16A	16A	16A
Fans	8A	8A	8A
Light	16A	16A	16A
Alarm			
AUX			
Other			
Hot Key/Prog Tool Kit output	pres	pres	pres
Remote display output	X-REP	X-REP	X-REP
Serial output	RS485 opt	RS485 opt	RS485 opt
4÷20mA/0÷10V output	opt	opt	opt
PWM output	opt	opt	opt
Valve driver output		stepper	ON/OFF up to 30W
Buzzer	on keyboard	on keyboard	on keyboard
Real time clock	pres	pres	pres
Connection kit	XM-FC16	XM-FC26	XM-FC21

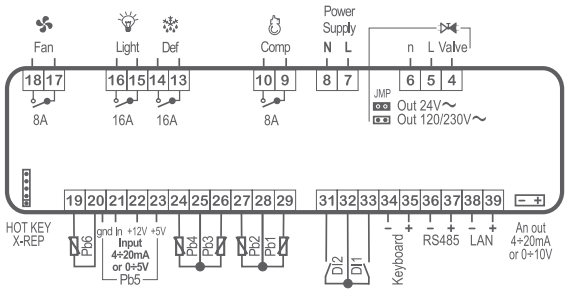
XM660K



XM668D



XM669K



CONTROLLERS for VENTILATED MULTIPLEXED APPLICATIONS with EEV MANAGEMENT

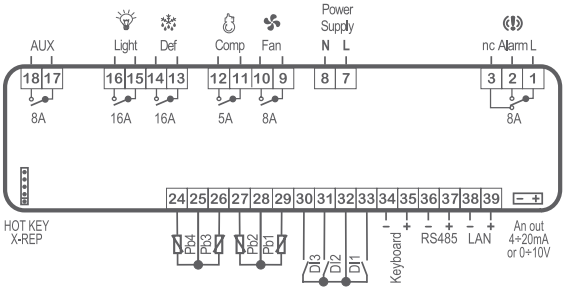
XM600

XM670K	Digital controller for NT and LT ventilated applications with high performance defrost and auxiliary and alarm outputs
XM678D	Digital controller for NT and LT ventilated applications with high performance defrost, stepper electronic valve management and auxiliary and alarm outputs
XM679K	Digital controller for NT and LT ventilated applications with high performance defrost, ON/OFF electronic valve management and auxiliary and alarm outputs

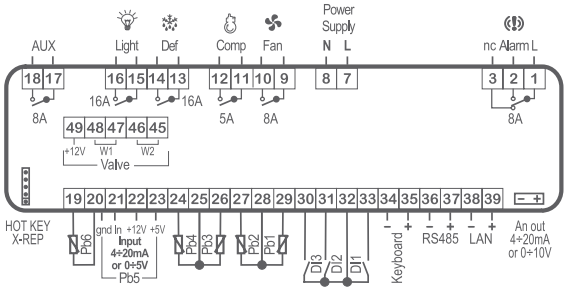
K: OS/8 DIN Rail **D**: 8 DIN Rail

FEATURES	XM670K	XM678D	XM679K
Display: n° digits	on keyboard ± 3 d.p.	on keyboard ± 3 d.p.	on keyboard ± 3 d.p.
Keyboard: push buttons	6 (on CX660, T660T)	6 (on CX660, T660T)	6 (on CX660, T660T)
Power supply	110, 230Vac	24Vac	110, 230Vac
Probe inputs			
Thermostat	NTC, Pt1000	NTC, Pt1000	NTC, Pt1000
Defrost	NTC, Pt1000	NTC, Pt1000	NTC, Pt1000
Display	NTC, Pt1000	NTC, Pt1000	NTC, Pt1000
AUX	NTC, Pt1000	NTC, Pt1000	NTC, Pt1000
Suction pressure		NTC, Pt1000, 4÷20mA, 0÷5V	NTC, Pt1000, 4÷20mA, 0÷5V
Condensing pressure		NTC, Pt1000	NTC, Pt1000
Digital inputs			
Start defrost, pressure switch, AUX, generic alarm, serious alarm mode, light, ON/OFF, holiday Energy saving	3 x config	3 x config	3 x config
Relay outputs			
Compressor/Valve	5A	5A	5A
Defrost	16A	16A	16A
Fans	8A	8A	8A
Light	16A	16A	16A
Alarm	8A	8A	8A
AUX	8A	8A	8A
Other			
Hot Key/Prog Tool Kit output	pres	pres	pres
Remote display output	X-REP	X-REP	X-REP
Serial output	RS485 opt	RS485 opt	RS485 opt
4÷20mA/0÷10V output	opt	opt	opt
PWM output	opt	opt	opt
Valve driver output		stepper	ON/OFF up to 30W
Buzzer	on keyboard	on keyboard	on keyboard
Real time clock	pres	pres	pres
Connection kit	XM-FC16	XM-FC26	XM-FC21

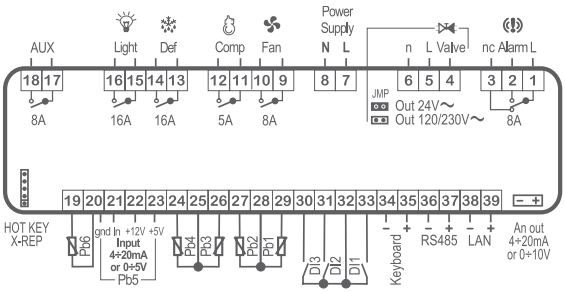
XM670K



XM678D



XM679K



XM400/600

KEYBOARDS for CONTROLLERS in K FORMAT

32x74mm

38x185mm

38x185mm

100x64mm

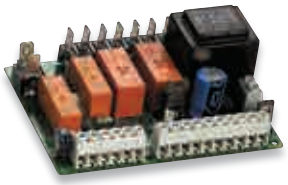
CX640	6 key keyboard (32x74mm) for XM400 controllers
T640	6 key keyboard (horizontal WING) for XM400 controllers
V640	6 key keyboard (vertical WING) for XM400 controllers
CX660	6 key keyboard (32x74mm) for XM600 controllers
T660T	6 key keyboard for XM600 controllers with TOUCH interface and red, white or blue display
T840	8 key keyboard (horizontal WING) for XM400 controllers
V840	8 key keyboard (vertical WING) for XM400 controllers

FEATURES	CX640	T640	V640	CX660	T660T	T840	V840
Display: n° digits	± 3 d.p.	± 3 d.p.	± 3 d.p.	± 3 d.p.	± 3 d.p.	± 3 d.p.	± 3 d.p.
Keyboard: push buttons	6	6	6	6	6	8	8
Power supply	from controller	from controller	from controller	from controller	from controller	from controller	from controller
Slave module	XM440K XM460K	XM440K XM460K	XM440K XM460K	XM660K XM668D XM669K XM670K XM678D XM679K	XM660K XM668D XM669K XM670K XM678D XM679K	XM470K	XM470K
Buzzer	opt	opt	opt	opt	pres	opt	opt

CX and TOUCH keyboards are provided with a wide display with integrated icons of real time situation and of measurement unit, for clear and continuous monitoring.

The POWER MODULES in K FORMAT are AVAILABLE in 3 DIFFERENT VERSIONS

OS: open board for XM400 and XM600



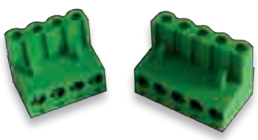
GS: standard plastic case for XM400

8 DIN Rail: with plastic housing for XM600

ACCESSORIES

XM-RTC
Real time clock standard board for XM400

XM-FC16
Female connector kit 16 pins for XM660K and XM670K
XM-FC21
Female connector kit 21 pins for XM669K and XM679K
XM-FC26
Female connector kit 26 pins for XM668D and XM678D



ELECTRONIC EXPANSION VALVE DRIVERS

SECTION INDEX

D: 4 DIN Rail

100x64mm

XEV SERIES: SUPERHEAT REGULATION

- Drivers for ON/OFF (pulsed) and stepper electronic expansion valve management
- ON/OFF (pulsed) expansion valve support with 30W max power and coil c.a.
- Temperature analog inputs (NTC, PTC, Pt1000)
- Pressure analog inputs (0÷5V, 4÷20mA)
- Possibility to broadcast via LAN the pressure signal to multiplexed cabinets
- Alarm management (visual, relay)
- Cool Defrost for defrost time reduction
- Superheat adaptive control
- Sub-cooling management (XEV32D)
- Hot Key or Prog Tool Kit connector for quick and easy programming
- Serial connection to monitoring systems
- 20VA max power absorption
- Display with red LED (10,5mm high) and icons

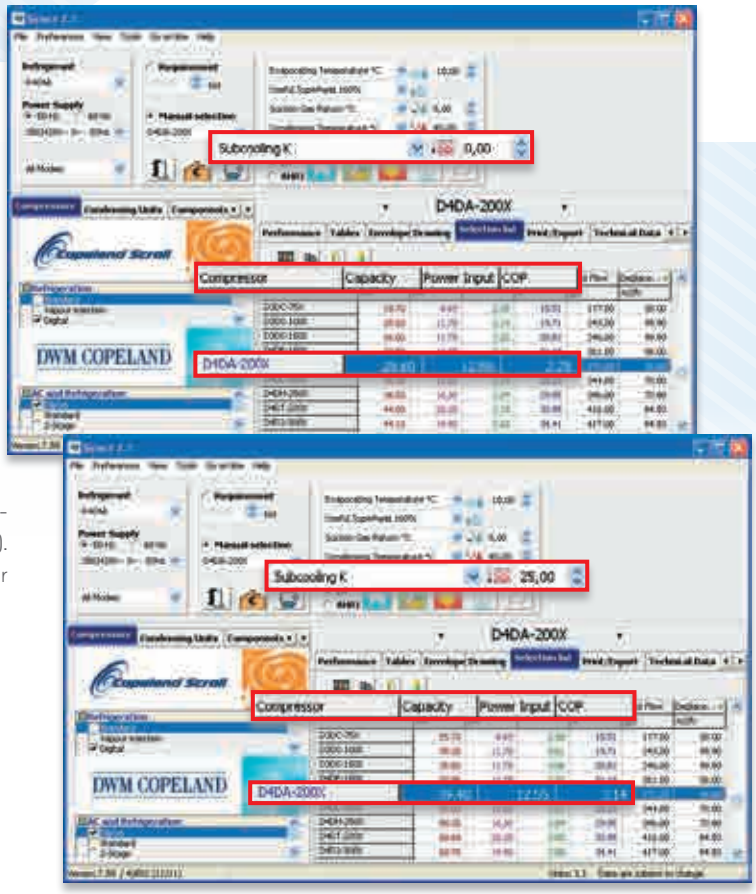
HOW to ORDER

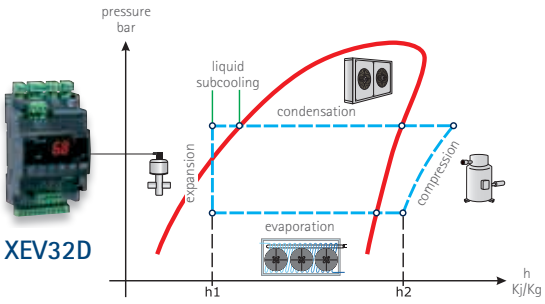
XEV11/12D	X	E	V	1		D	-	A	B	C	D	E
XEV21/22/32D	X	E	V			D	-	1	B	C	D	0

A	B	C	D	E
Power supply	Temperature probe	Pressure probe	Measurement unit	Buzzer
2 = 24Vac	**P** = Pt1000	**0** = 0÷5V	**C** = °C/Bar	**0** = No
4 = 110Vac	**N** = NTC	**1** = 4÷20mA	**F** = °F/PSI	**1** = Yes
5 = 230Vac		**2** = PP11		
		3 = PP30		
		4 = PPR15		
		5 = PPR30		

SUB-COOLING

During the refrigeration cycle shown in the following diagram, the temperature of the liquid refrigerant entering by the thermostatic valve is important. Decreasing this value results in many economic advantages because it increases the "refrigerating effect" (h2-h1). For this reason it's important to introduce the concept of sub-cooling of the refrigerating fluid as "saturated liquid". This process, if properly managed, can improve LT plant operation (also more than 25%), against a meagre power of the NT compressor rack (about 8%) and an appropriate exchanger. The XEV32D driver, thanks to special algorithms, ensures the sub-cooling optimization, which increases the plant COP (Coefficient Of Performance). Screens show as, with the same compressor, the sub-cooling management increase the refrigeration power (COP increasing). For this reason it's possible to consider the use of a smaller compressor (less absorbed power).





XEV32D

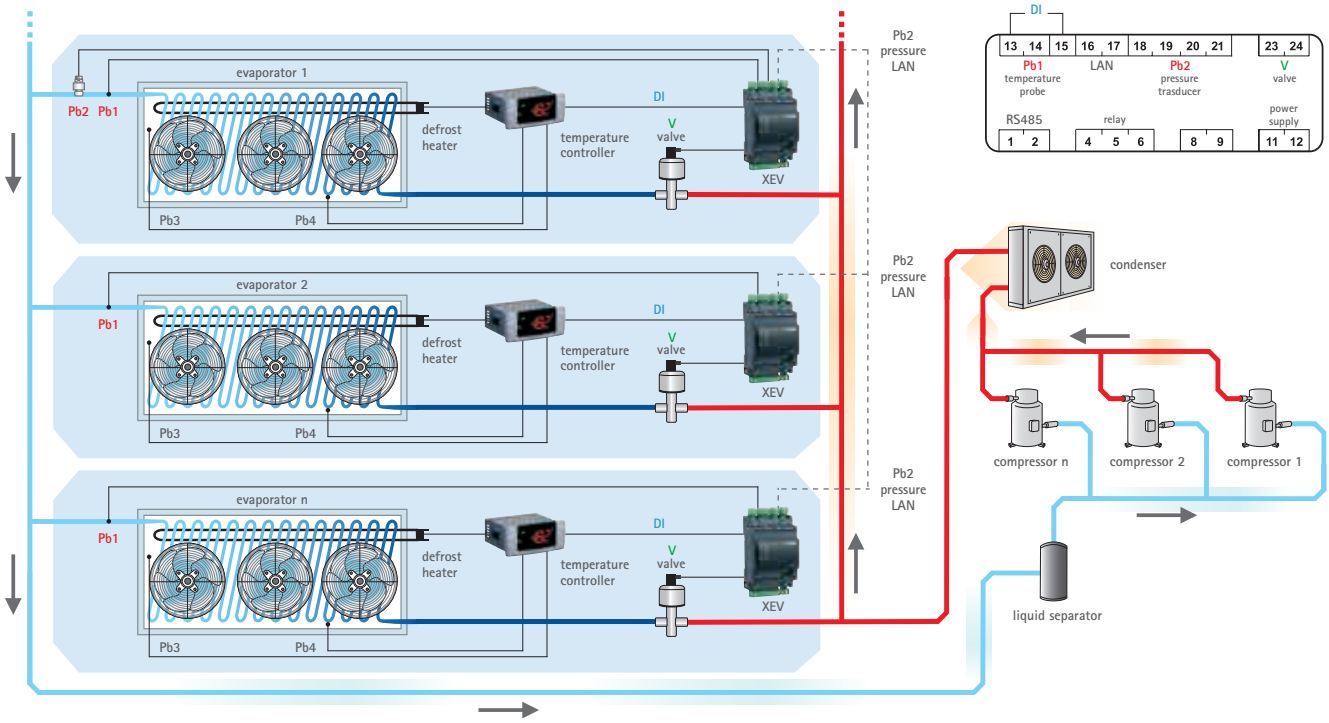
Pressure-enthalpy diagram shows the refrigeration cycle and the sub-cooling zone.

REFRIGERATION CIRCUIT

The diagram shows the different ways to connect the XEV drivers to a generic application like a single cooling unit or multiplexed cabinet. The valve is driven by the XEV module that is in turn commanded, by the activation of the digital input, from the temperature controller.

SINGLE SYSTEM: section 1 of the schematic diagram shows how connections would be arranged for a single cooling system.

MULTIPLEXED CABINET: to reduce installation costs, it is possible to use a single suction pressure transducer as shown in the overall schematic diagram. This transducer's pressure signal is repeated to the other controllers across a digital LAN connection that guarantees optimal noise immunity.



XEV

KEYBOARD and DRIVERS for ON/OFF and STEPPER ELECTRONIC EXPANSION VALVE MANAGEMENT

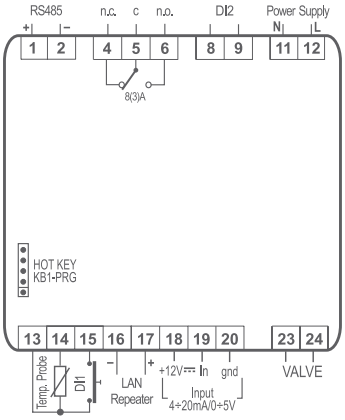
D: 4 DIN Rail

100x64mm

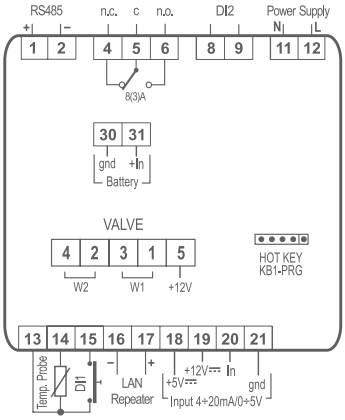
XEV11D	ON/OFF electronic expansion valve driver
XEV12D	ON/OFF electronic expansion valve driver with integrated display
XEV21D	Stepper electronic expansion valve driver
XEV22D	Stepper electronic expansion valve driver with integrated display
XEV32D	Stepper electronic expansion valve driver with integrated display and sub-cooling management
KB1 PRG	Programming keyboard for XEV11D and XEV21D modules

FEATURES	XEV11D	XEV12D	XEV21D	XEV22D	XEV32D	KB1 PRG
Display: n° digits		± 3 d.p.		± 3 d.p.	± 3 d.p.	± 3 d.p.
Keyboard: push buttons		3		3	3	6
Power supply	24, 110, 230Vac	24, 110, 230Vac	24Vac/dc	24Vac/dc	24Vac/dc	from controller
Probe inputs						
Suction pressure	4÷20mA, 0÷5V	4÷20mA, 0÷5V	4÷20mA, 0÷5V	4÷20mA, 0÷5V	4÷20mA, 0÷5V	
Suction temperature	NTC, Pt1000	NTC, Pt1000	NTC, Pt1000	NTC, Pt1000	NTC, Pt1000	
Output liquid temperature					NTC, Pt1000	
Digital inputs						
Free of voltage	pres	pres	pres	pres	pres	
High voltage	pres	pres	pres	pres	pres	
Relay outputs						
Alarm	8A config	8A config	8A config	8A config	8A config	
Other						
Valve driver output	ON/OFF up to 30W	ON/OFF up to 30W	stepper	stepper	stepper	
Hot Key/Prog Tool Kit output	pres	pres	pres	pres	pres	
Remote keyboard output	KB1 PRG		KB1 PRG			
Serial output	RS485	RS485	RS485	RS485	RS485	
Alarm recovery by LAN	pres	pres	pres	pres	pres	
Buzzer	opt	opt				
Battery backup input			pres	pres	pres	

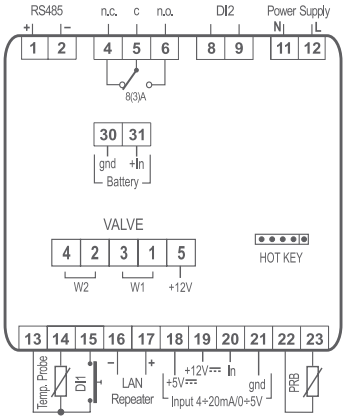
XEV11D - XEV12D



XEV21D - XEV22D



XEV32D



ACCESSORY

CAB/KB11
Cable for the connection between the keyboard and the XEV driver, 1m