Multiplexed cabinet refrigeration controllers
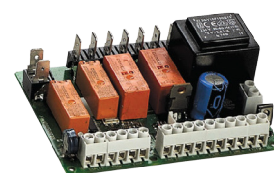
COPELAND

D, K: 8 DIN rail

100x64mm


32x74mm

K: OS/GS

L: 38x185mm

38x185mm

38x185mm

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 Copeland 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)
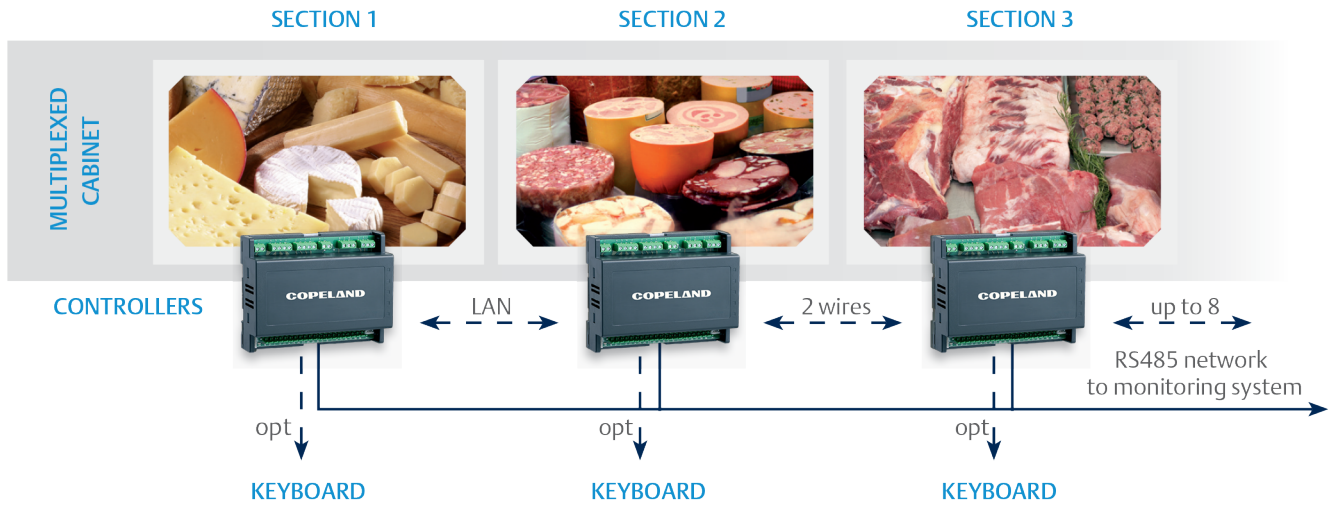
How to order

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

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

For inox version and blue display please contact Copeland

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 |

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

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

For blue display please contact Copeland

| 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

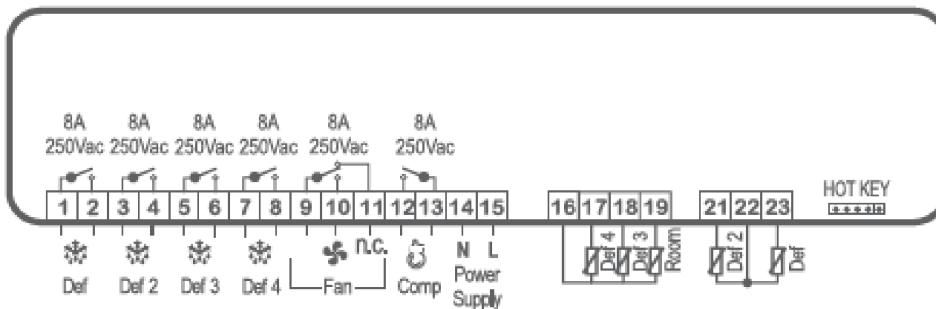# Controller for multiplexed ventilated applications

L: 38x185mm

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

FEATURES	XWEB5000
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	
Hot key/prog tool kit output	pres
Serial output	TTL
Buzzer	opt
Real time clock	opt

XM244L

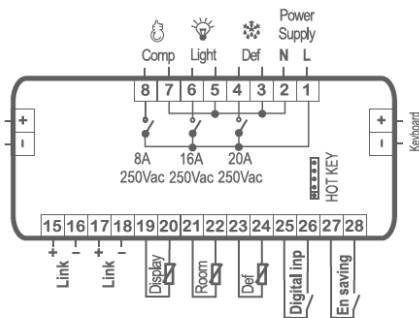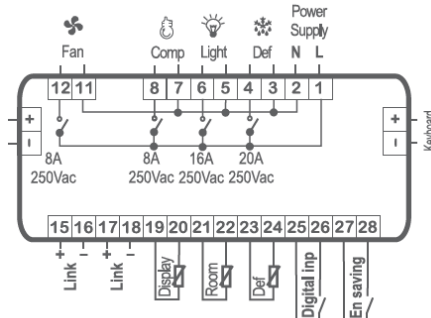## Controllers for static or ventilated multiplexed applications
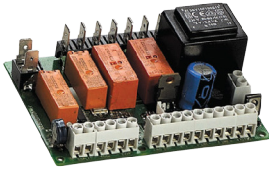
K: OS/GS

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

FEATURES	XM440K	XM460K	XM470K
Display: n° digits	on keyboard ± 3 d.p.	110, 230Vac	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			
Relay outputs			
Compressor	8A	8A	8A
Defrost	20A	20A	20A
Fans		8A	8A
Light	16A	16A	16A
Alarm			
AUX			8A
Other Hot Key			
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	opt		
PWM output			
Valve driver output			
Buzzer	on keyboard	on keyboard	on keyboard
Real time clock	opt	opt	opt
Connection kit			

XM440K
XM460K
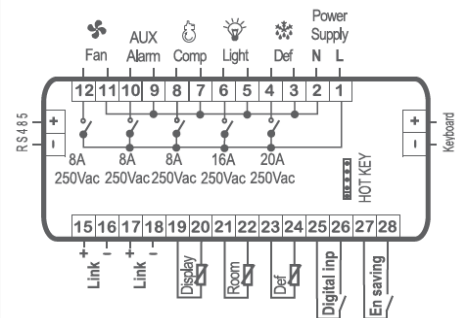### XM470K

Controllers for ventilated multiplexed applications with EEV management

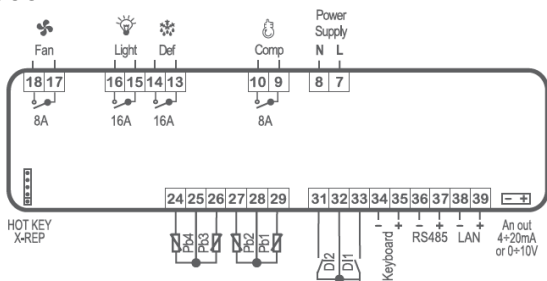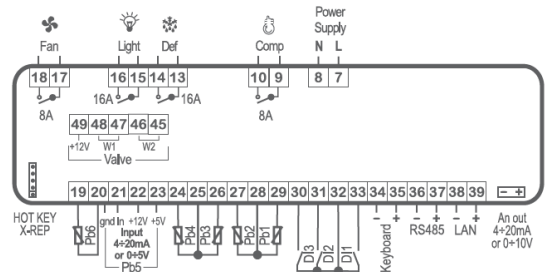**K: OS/8 DIN rail   D: 8 DIN rail**

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	2 x config	3 x config	2 x config
Energy saving			
Relay outputs			
Compressor	8A	8A	8A
Defrost	16A	16A	16A
Fans	8A	8A	8A
Light	16A	16A	16A
Alarm			
AUX			8A
Other Hot Key			
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

XM668K

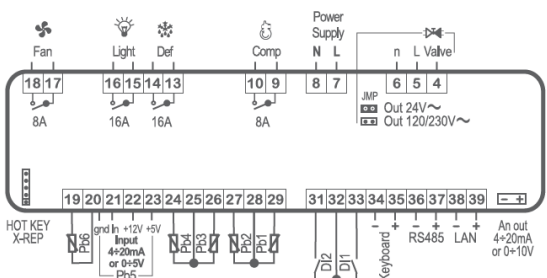### XM669K

Controllers for ventilated multiplexed applications with EEV management
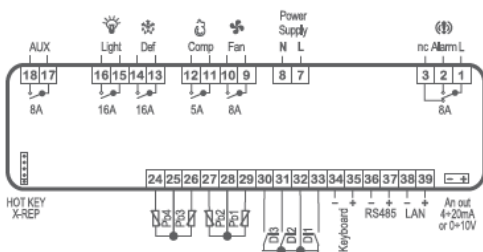

K: OS/8 DIN rail   D: 8 DIN rail

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

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	3 x config	3 x config	3 x config
Energy saving			
Relay outputs			
Compressor	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			
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

XM678K
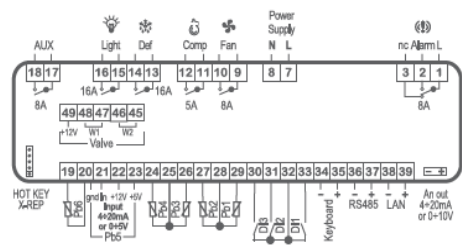
XM679K
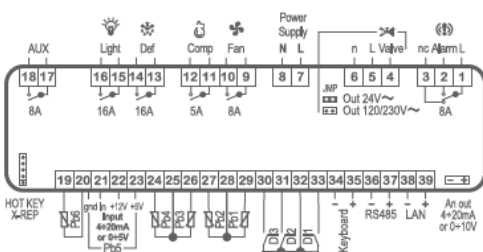
Keyboards for controllers in K format

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	T840
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				XM660K	XM660K		
				XM668D	XM668D		
	XM440K	XM440K	XM440K	XM669K	XM669K	XM470K	XM470K
	XM460K	XM460K	XM460K	XM670K	XM670K	XM470K	XM470K
				XM678D	XM678D		
				XM678D	XM678D		
				XM679D	XM679D		
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
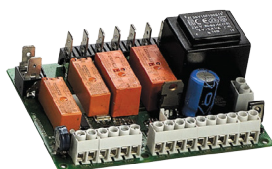
GS: standard plastic case for XM400

8 DIN rail: with plastic housing for M600

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 0

XM-FC26
Female connector kit 26 pins for XM668D and XM678D

About Copeland

Copeland is a global leader in sustainable heating, cooling, refrigeration and industrial solutions. We help commercial, industrial, refrigeration and residential customers reduce their carbon emissions and improve energy efficiency. We address issues like climate change, growing populations, electricity demands and complex global supply chains with innovations that advance the energy transition, accelerate the adoption of climate friendly low GWP (Global Warming Potential) and natural refrigerants, and safeguard the world's most critical goods through an efficient and sustainable cold chain. We have over 18,000 employees, with feet on the ground in 50 countries - a global presence that makes it possible to serve customers wherever they are in the world and meet challenges with scale and speed. Our industry-leading brands and diversified portfolio deliver innovation and technology proven in over 200 million installations worldwide. Together, we create sustainable solutions that improve lives and protect the planet today and for future generations. For more information, visit **copeland.com**.

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