





# XC400/600 SERIES: up to 6 COMPRESSOR/FAN OUTPUT APPLICATIONS also with INVERTER MANAGEMENT

- Electronic controllers for compact compressor racks management also with inverter
- Compressor types: Digital<sup>™</sup>, multi-stages, differing power, semi-hermetic, scroll and screw
- Proportional band or neutral zone control
- Floating condensing pressure control depending on the external temperature
- High configurability and flexibility
- Automatic switch-off of the compressors in case of high condensing pressure/temperature
- Silent mode function for fans during the night
- Correct lubrication automatic restore cycle
- Safer control with low pressure electronic pressure switch
- Type of gas setting: to control temperature or pressure
- Hot Key or Prog Tool Kit connector for quick and easy programming
- Serial connection to monitoring systems
- 5VA max power absorption
- Dual display with red LED (8.5mm high) and yellow LED (7.5mm high) and 17 icons

### **HOW to ORDER**

 XC400/600CX
 X
 C
 X
 A
 B
 C
 D
 E

 XC600D
 X
 6
 D
 A
 B
 1
 D
 E

 VC660
 V
 C
 6
 0
 0
 0
 C
 0
 0

Α	В	С	1		Е
Power supply*	Measurement unit	Buzzer	TRIAC voltage**	Analog outputs	Input
<b>0</b> = 12Vac/dc	C = °C	<b>0</b> = No	<b>0</b> = 110-230Vac	No	A = PP11 (only for XC450CX)
1 = 24 Vac/dc	<b>F</b> = °F	<b>1</b> = Yes	<b>1</b> = 110-230Vac	Yes	$\mathbf{B} = PP30$ (only for XC450CX)
<b>4</b> = 110Vac	<b>B</b> = Bar		<b>2</b> = 24Vac	No	$\mathbf{C} = NTC$
<b>5</b> = 230Vac	<b>P</b> = PSI		<b>3</b> = 24Vac	Yes	<b>E</b> = 4-20mA
	H = KPA		4 = No TRIAC	No	<b>F</b> = PP11 (suction)/PP30 (discharge)
			5 = No TRIAC	Yes	H = 0-5V (ratiometric)

<sup>\*</sup> O, 1 (only for XC400CX and XC600CX)

**<sup>4, 5</sup>** (only for XC600D)

<sup>\*\* 0, 1, 2, 3 (</sup>only for XC645) 4, 5 (not for XC645)

### TYPE of COMPRESSOR RACKS

The XC400/600 series, thanks to a powerful and complete range, ensures optimal management of compact compressor racks:

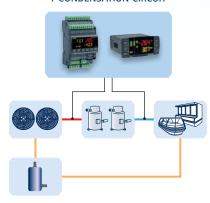
- with compressors and fans also with suction or discharge inverter;
- with 2 discharge and 1 suction also with inverter;
- with Digital<sup>™</sup> compressors.

Example of circuits managed by the XC400/600 series

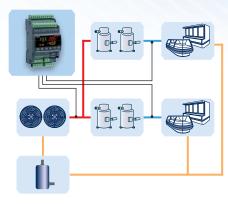
### XC645CX - XC645D APPROVED FOR



### 1 SUCTION CIRCUIT 1 CONDENSATION CIRCUIT



## 2 SUCTION CIRCUITS 1 CONDENSATION CIRCUIT



### CONNECTIONS

2 different version of terminal block are available depending on the model of the controllers:

Screws for XC400CX



Disconnectable for XC600CX

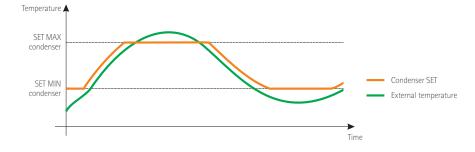


Screw disconnectable for XC600D



#### FLOATING CONDENSING

The dynamic set point guarantees excellent plant efficiency, taking real operational conditions into consideration. The condensing set point is automatically adjusted according to the external temperature, keeping the safety values, to optimize the condensing temperature. The reduction of this temperature entails a reduction of the pressure gap between suction and condensing decreasing the consumption of compressors and saving energy.



### FAN FUNCTIONING DURING NIGHT MODE

This special function allows the maximum fan speed to be decreased, which reduces plant noise. Thanks to the MES (Maximum output during Energy Saving) the maximum fan speed is reduced during the night.



**SETF**: supply pressure setting to be maintained

Pb/2: regulation band centred around the setting

**AOM**: minimum allowed speed for the fans

inF: relay set as fan inverter

P2: condensing pressure (temperature) probe

 ${f V}$ : analogical output value set as 0-10V

ESF: energy saving differential for fan regulation

## XC400/600

## Up to 5 COMPRESSOR/FAN COMPRESSOR RACK CONTROLLERS also with INVERTER MANAGEMENT



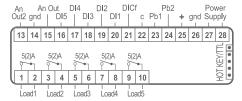


CX: 32x74mm D: 4 DIN Rail

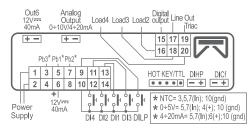
XC450CX	Digital controller for managing up to 5 compressors or fans
XC640D	Digital controller for simultaneous management of up to 4 compressors and fans
XC645CX XC645D	Digital controllers for Digital™ compressor management

FEATURES	XC450CX	XC640D	XC645CX	XC645D
First display: n° digits Second display: n° digits Power supply	± 4 d.p. ± 4 d.p. 12, 24Vac/dc	± 4 d.p. ± 4 d.p. 110, 230Vac	± 4 d.p. ± 4 d.p. 12, 24Vac/dc	± 4 d.p. ± 4 d.p. 110, 230Vac
Probe inputs				
Suction Suction 2 Condensing	0-5V, 4-20mA, NTC 0-5V, 4-20mA, NTC	0-5V, 4-20mA, NTC	0-5V, 4-20mA, NTC	0-5V, 4-20mA, NTC
Configurable		NTC	NTC	NTC
Digital inputs				
Low pressure switch High pressure switch Alarm Configurables	5	1 1 4 2	1 1 4 1	1 1 5 2
Relay outputs				
Loads	5 x 5A	4 x 5A	4 x 5A	4 x 5A
Other outputs				
Digital <sup>™</sup> compressor Inverter-compressor Inverter-fans Load Hot Key/Prog Tool Kit Serial	pres TTL	4-20mA/0-10V opt 4-20mA/0-10V opt pres RS485	TRIAC  4-20mA/0-10V opt 12V/40mA pres TTL	TRIAC 4-20mA/0-10V opt 4-20mA/0-10V opt pres RS485
Other				
Remote keyboard Alarms Buzzer Connection kit	last 10 opt	VC660 last 10 pres	last 10 opt CWC15-KIT, CWC30-KIT, CAB/CJ15, CAB/CJ30	VC660 last 10 pres

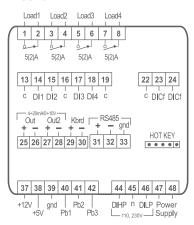
### XC450CX



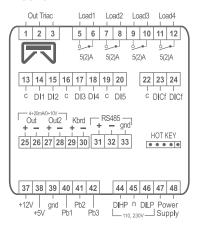
### XC645CX



#### XC640D



### XC645D



### Up to 6 COMPRESSOR/FAN COMPRESSOR RACK CONTROLLERS and KEYBOARD also with INVERTER MANAGEMENT

## **XC600**

XC650CX	Digital controller for simultaneous management of up to 5 compressors and fans
XC652CX	Compressor rack digital controller with 2 suctions
XC660D	Digital controller for simultaneous management of up to 6 compressors and fans
VC660	Keyboard for XC600D controllers







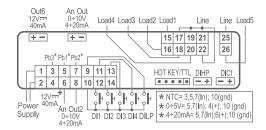
CX: 32x74mm

D: 4 DIN Rail

100x64mm

FEATURES	XC650CX	XC652CX	XC660D	VC660
First display: n° digits Second display: n° digits Power supply	± 4 d.p. ± 4 d.p. 12, 24Vac/dc	± 4 d.p. ± 4 d.p. 12, 24Vac/dc	± 4 d.p. ± 4 d.p. 110, 230Vac	$\pm$ 4 d.p. $\pm$ 4 d.p. from controller
Probe inputs Suction Suction 2 Condensing Configurable	0-5V, 4-20mA, NTC 0-5V, 4-20mA, NTC NTC	0-5V, 4-20mA, NTC 0-5V, 4-20mA, NTC NTC	0-5V, 4-20mA, NTC 0-5V, 4-20mA, NTC 0-5V, 4-20mA, NTC	
Digital inputs  Low pressure switch  High pressure switch  Alarm  Configurables	1 1 4 1	1 1 4 1	1 1 6 2	
Relay outputs Loads	5 × 5A	5 x 5A	6 x 5A	
Other outputs  Digital™ compressor Inverter-compressor Inverter-fans Load Hot Key/Prog Tool Kit Serial	4-20mA/0-10V opt 4-20mA/0-10V opt 12V/40mA pres	4-20mA/0-10V opt 4-20mA/0-10V opt 12V/40mA pres TTL	4-20mA/0-10V opt 4-20mA/0-10V opt pres RS485	
Other  Remote keyboard  Alarms  Buzzer  Connection kit	last 10 opt CW15-KIT, CW25-KIT, CAB/CJ15, CAB/CJ30	last 10 opt CW15-KIT, CW25-KIT, CAB/CJ15, CAB/CJ30	VC660 last 10 pres	opt

### XC650CX - XC652CX



### XC660D

