

XC600

New functions in the 3.4 version

PN 11/17 AUGUST





ENVIRONMENTALLY FRIENDLY

NATURAL REFRIGERANT COMPATIBLE

XC600 controllers in **4DIN** and **32x74mm** formats, are even more performant with new important features in **3.4 version**. The changes ensure an elevated safety of the compressors management in medium compressor racks. The focus is more and more on environmental friendly solutions, and this version features the compatibility with 7 “Low GWP Refrigerants”.

Following the increase of CO_2 applications, our controllers are now provided with a wider probe working range in order to be used in subcritical plants.

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1. Compatible gases

The XC600 family is now compatible with the gases listed below that are selectable by parameter **FtyP**.

FtyP PARAMETER	REFRIGERANT	OPERATING TEMPERATURE	NOTE
r22	r22	-50÷60°C/-58÷120°F	
r134	r134A	-70÷60°C/-94÷120°F	
404A	r404A	-50÷60°C/-58÷120°F	
407A	r407A	-50÷60°C/-58÷120°F	
407C	r407C	-50÷60°C/-58÷120°F	
407F	r407F	-50÷60°C/-58÷120°F	
r410	r410	-50÷60°C/-58÷120°F	
r507	r507	-70÷60°C/-94÷120°F	
CO2	r744 - CO2	-50÷30°C/-58÷86°F	
r32	r32	-70÷60°C/-94÷120°F	New
r290	r290 - Propane	-50÷60°C/-58÷120°F	New
r448	r448A	-45÷60°C/-69÷120°F	New
r449	r449A	-45÷60°C/-69÷120°F	New
r450	r450A	-45÷60°C/-69÷120°F	New
r513	r513	-45÷60°C/-69÷120°F	New
1234	r1234ze	-18÷50°C/0÷122°F	New

2. New features

2.1 Optimization for Subcritical CO_2 plants



Refrigeration plants are increasing the use of the CO_2 as natural gas with excellent thermodynamic properties and a low environmental impact. Thanks to a wider probe working range (60bar), it is now possible to operate in almost all subcritical plants.

2.2 Increased safety for compressors

“Feedback compressor ON” is a new function introduced to increase the compressor’s security. This new function check the status of the compressors (on/off) through the controller. The controller detects the problems on the contactor for the compressor activation or on the compressor itself, reporting all critical situations. The compressor reporting anomalies will be removed and the regulation continues with the remaining resources.

2.3 More flexibility on plant data collection

All digital inputs can be configured to ensure the maximum flexibility on the plant management. The controller can detect the compressor safeties, high and low pressure switches, the status of the liquid level, possible external alarms (ex. phase sequence). Each critical situation is shown on the display and through the monitoring system if any Service operation is needed.

The regulator operates according to the warnings; for example, with high pressure switch ON, compressors are switched off and fans are activated.

2.4 De-superheater function

This function allows to manage the variable speed fans used on the de-superheaters. The fan speed depends on the external temperature or on the pressure value.

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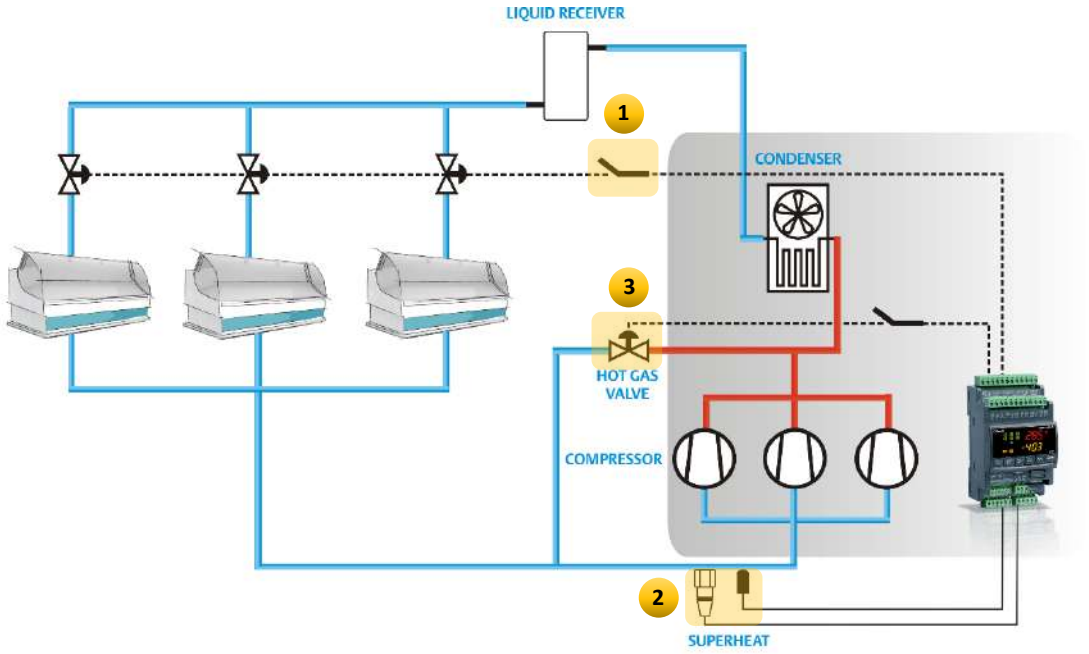
2.5 Flood protection function

To ensure the maximum safety of the plant, a relay is activated when the compressors can't be switched on since they are blocked due to safety times or for other problems. This output can be used to block the liquid injection to the cabinets in order to avoid to flood the suction collectors.
The relay will be disabled once the compressors can restart *(see scheme* 1*)*.

2.6 Suction superheat management with hot-gas injection valve

The controller can detect the suction superheat (see scheme 2). Low superheat conditions are immediately reported in order to stop the compressors and ensure the maximum safety of the plant.
It is also possible to use a hot-gas injection valve to increase the superheat and avoid critical situations *(see scheme* 3*)*.

Here is a simplified scheme of the refrigeration circuit.



3. New codification

Here below the list of new codes which will substitute the current ones:

	CURRENT CODE	NEW CODE v. 3.4
XC650CX-0C05F	X0SFSPCMC1N0-S00	X0SFSPCMC1**10**-S00
XC650CX-0C15F	X0SFTPCMC1N0-S00	X0SFTPCMC1**10**-S00
XC650CX-1C15F	X0SFTPCMC3N0-S00	X0SFTPCMC3**10**-S00
XC645CX-0C01F	X0SFYMCMC100-I00	X0SFYMCMC1**10**-**S**00
XC645CX-1C01F	X0SFYMCMC300-I00	X0SFYMCMC3**15**-**S**00
XC645CX-1C03F	X0SFYNCMC300-S00	X0SFYNCMC3**10**-S00
XC645CX-0C11F	X0SFZMCMC100-S00	X0SFZMCMC1**10**-S00
XC640D -7C21F	X0SIGPAMG600-S00	X0SIGPAMG6**10**-S00
XC645D -5C11F	X0SIJQAMC500-S00	X0SIJQAMC5**10**-S00
XC660D -5C11F	X0SINSAMC500-S00	X0SINSAMC5**10**-S00
XC660D -7C21F	X0SINSAMG600-S00	X0SINSAMG6**10**-S00

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4. Prices

Please contact our sales department for prices and further information.

5. Availability and orders

The XC600 series version 3.4 will be available from the end of September. Previous versions will be phasing out from the end of December 2017.
Please contact our sales department for delivery time.

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