

# ***iProRACK*** ***Compressor Rack Controllers***

**Belluno / Italy**

**20.11.2013**

**dixell<sup>®</sup>**

  
**EMERSON<sup>™</sup>**  
Climate Technologies

# iProRACK



# iPro.RACK



## IPR200

Advanced Controllers for Compressor Racks Designed to Manage even the most Complex Installation

# For...

## Market Target:

- Installers & OEMs
- Retrofit Market

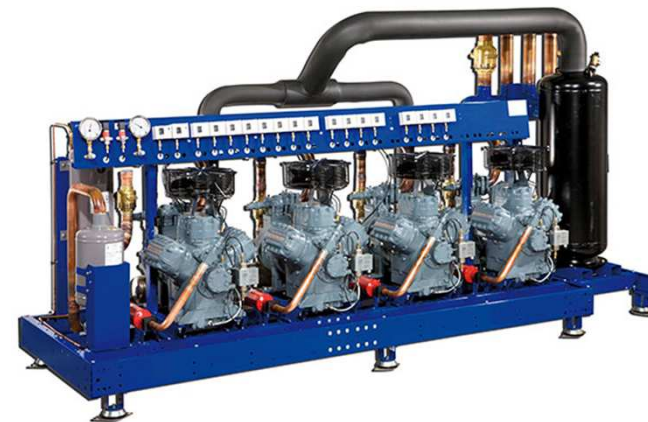


## Controllers for Large Compressor Racks (MT/LT) with:

- Up to 2 Circuits and 12 Compressors per Circuit
- 2 Circuits with 2 Inverters

## Kind of Compressors:

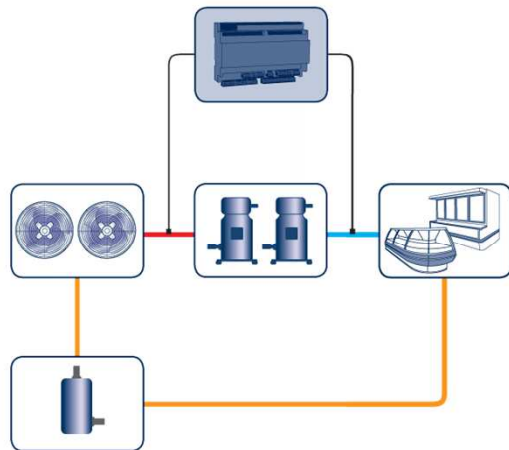
- Scroll
- Semi-hermetic (Reciprocating)
- Multi-stages
- Screw



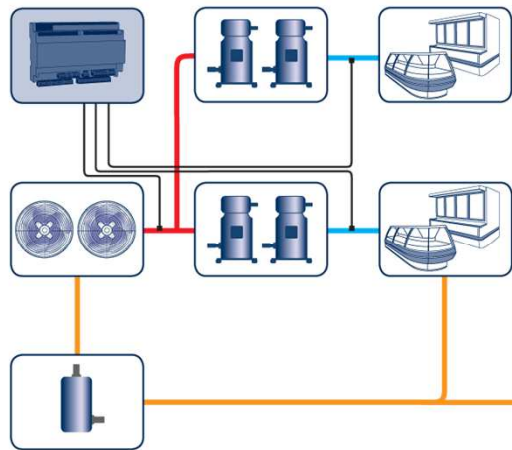
# Applications

## KINDS of CIRCUIT

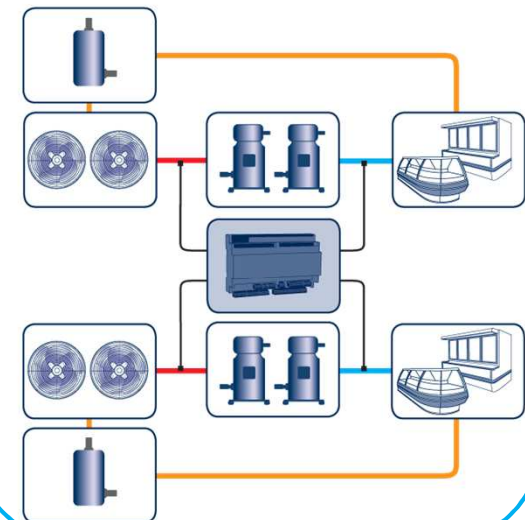
**1 SUCTION CIRCUIT,  
1 CONDENSATION CIRCUIT**



**2 SUCTION CIRCUITS  
1 CONDENSATION CIRCUIT**



**2 SUCTION CIRCUITS  
2 CONDENSATION CIRCUITS**



**MODULATING SUCTION : inverter or digital compressors in conjunction with XEV02D**

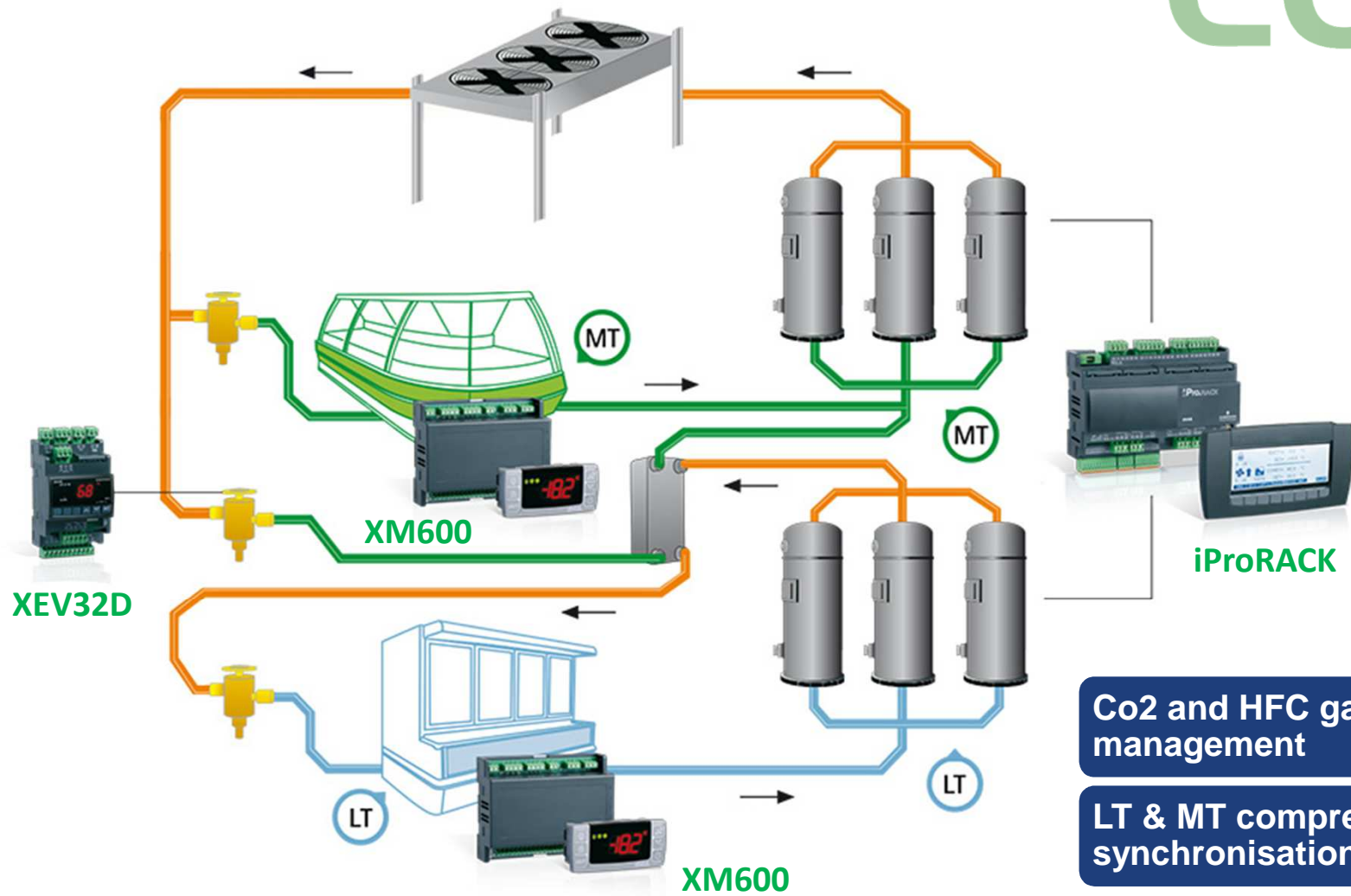
**MODULATING CONDENSER: ECI fan or inverter or chopped phase device**

# Applications

## SUBCRITICAL CO<sub>2</sub> APPLICATION

### SUBCRITICAL SYSTEM (Cascade Solution)

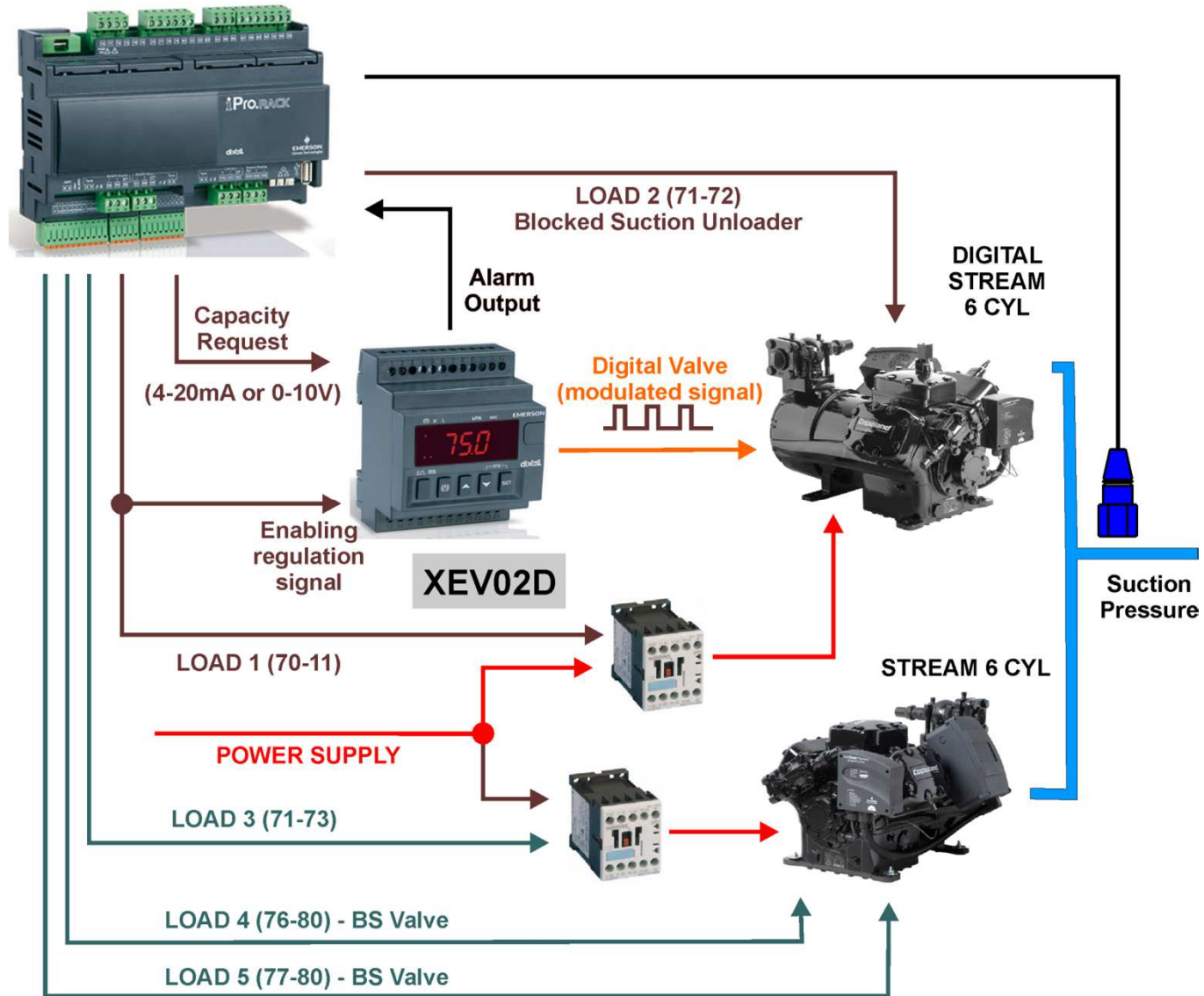
CO<sub>2</sub>



- Co2 and HFC gas management
- LT & MT compressors synchronisation

# Applications

## COPELAND STREAM 6D MANAGEMENT



# Plus



## ENVIRONMENTAL FRIENDLY

### Optimized for energy savings

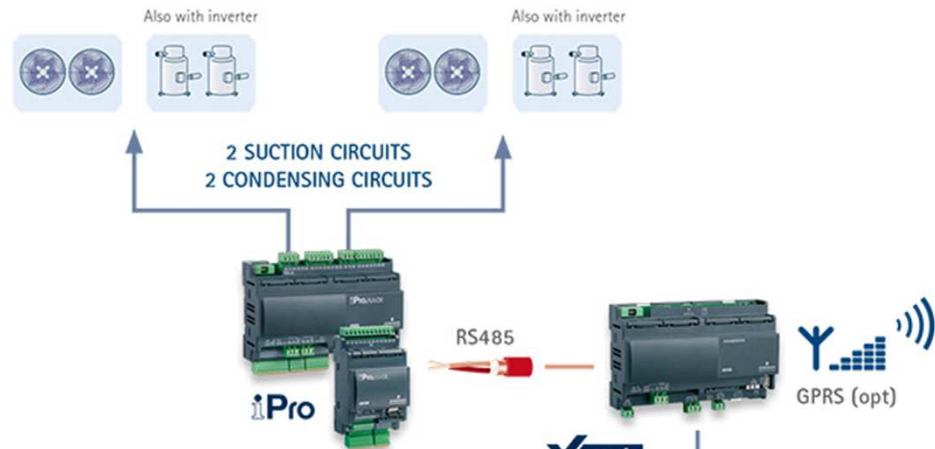
- Management of modulating devices both in suction and delivery for 2 circuits
- Floating set point for condenser according to external temperature

**Refrigerant CO<sub>2</sub>, R407C and R407F: to include the new low environmental impact assessment refrigerants**



# Plus

## ✓ COMMUNICATION & FLEXIBILITY



Software update via PC or USB

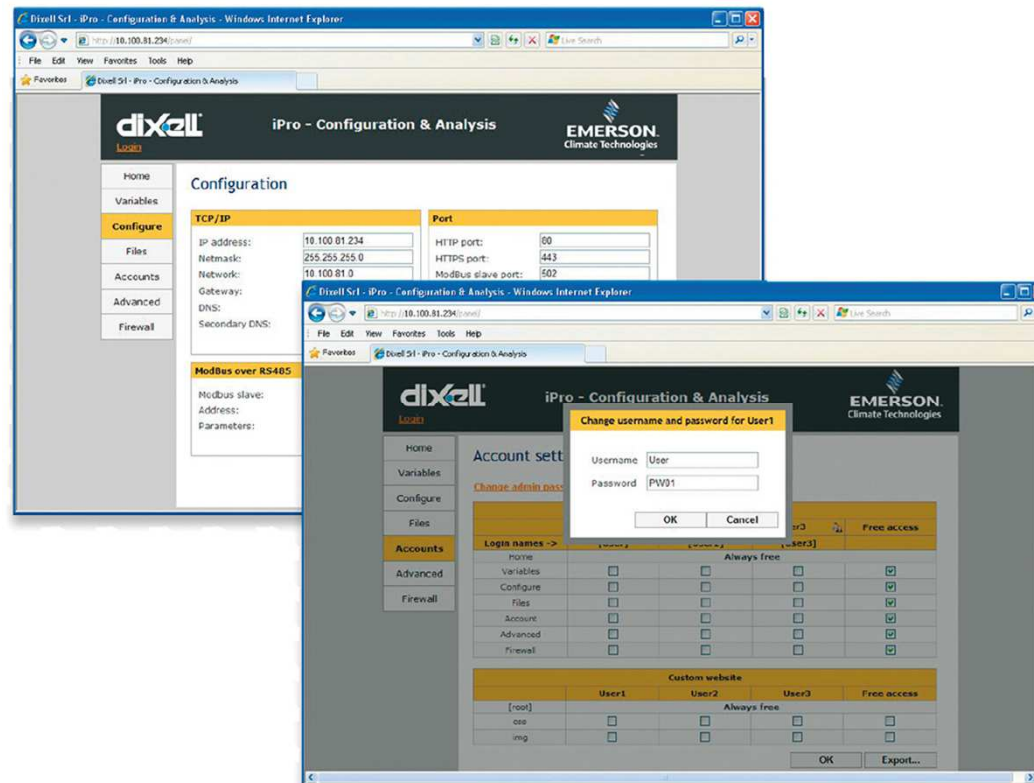
Up to 2 VGIPG

# Plus



## INTERNAL WEB SITE

The iProRACK controllers have an integrated web site that can be easily reached through a standard browser. This instrument is very useful to configure the controller and to display and change the machine variables.



# Plus

- ✓ **USER FRIENDLY INTERFACE**  
The Visograph with LCD display, gives concise information about the variables of the compressor rack
- ✓ **GREAT VERSATILITY**  
Parametric solution that maintain all the iPro features: flexibility, scalability, configurability
- ✓ **HIGH INTEGRATION LEVEL**  
iProRACK is designed for Stream Digital 6D-4D with XEV02D and can communicate with Copeland Stream Coresense®
- ✓ **LOW ENERGY CONSUMPTION**  
Thanks to the advanced algorithm, the iProRACK reduces the power consumption



# Family Overview

## MAIN FEATURES

- **MAIN HW**
  - High I/O flexibility
  - RS485 Serial MST&SLAVE and Ethernet communication Line
- **MAIN FUNCTIONS**
  - Management of 2 circuits with different gases
  - Optimized management of
    - Dynamic set point for condenser
    - Dynamic set point for suction
  - RTC for energy saving
  - Neutral zone or proportional band
  - Up to 4 inverters management both for compressors and fans



# Family Overview

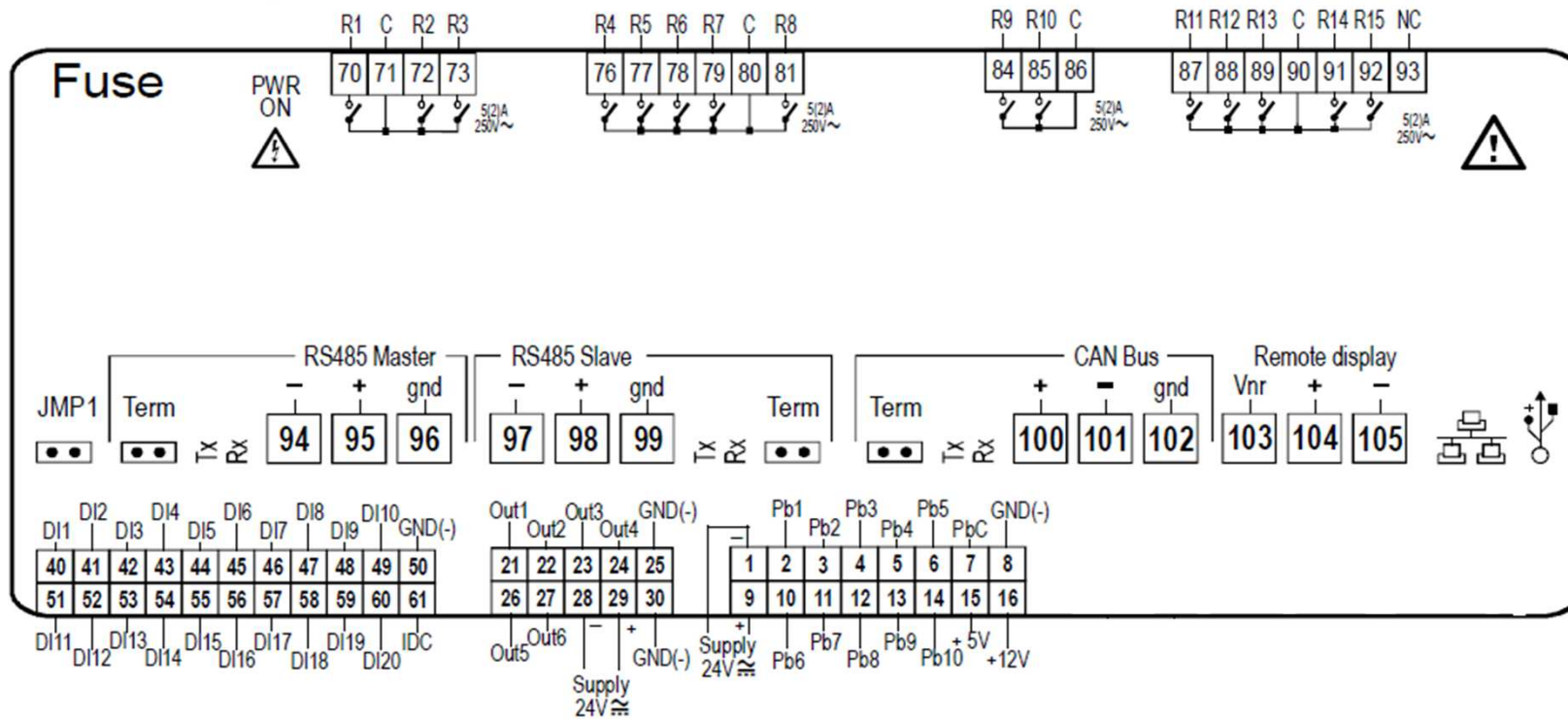
## TECHNICAL FEATURES

Characteristics	IPR215D
Display	LCD on VGIPG (240x96pixels)
Power supply	24Vac/dc from TF20D
Probe inputs	10 x config (NTC, PTC, 4÷20mA, 0÷10V, 0÷5V, DI)
Digital inputs	20 x optoisolated (Free voltage or 24V)
Relay outputs	15 x config (5A)
Analog outputs	6 (4÷20mA, 0÷10V)
Remote display connection	1
USB port	Present
RS485 master	Present
RS485 slave	Present
LAN port	Present



# Family Overview

## WIRING DIAGRAM

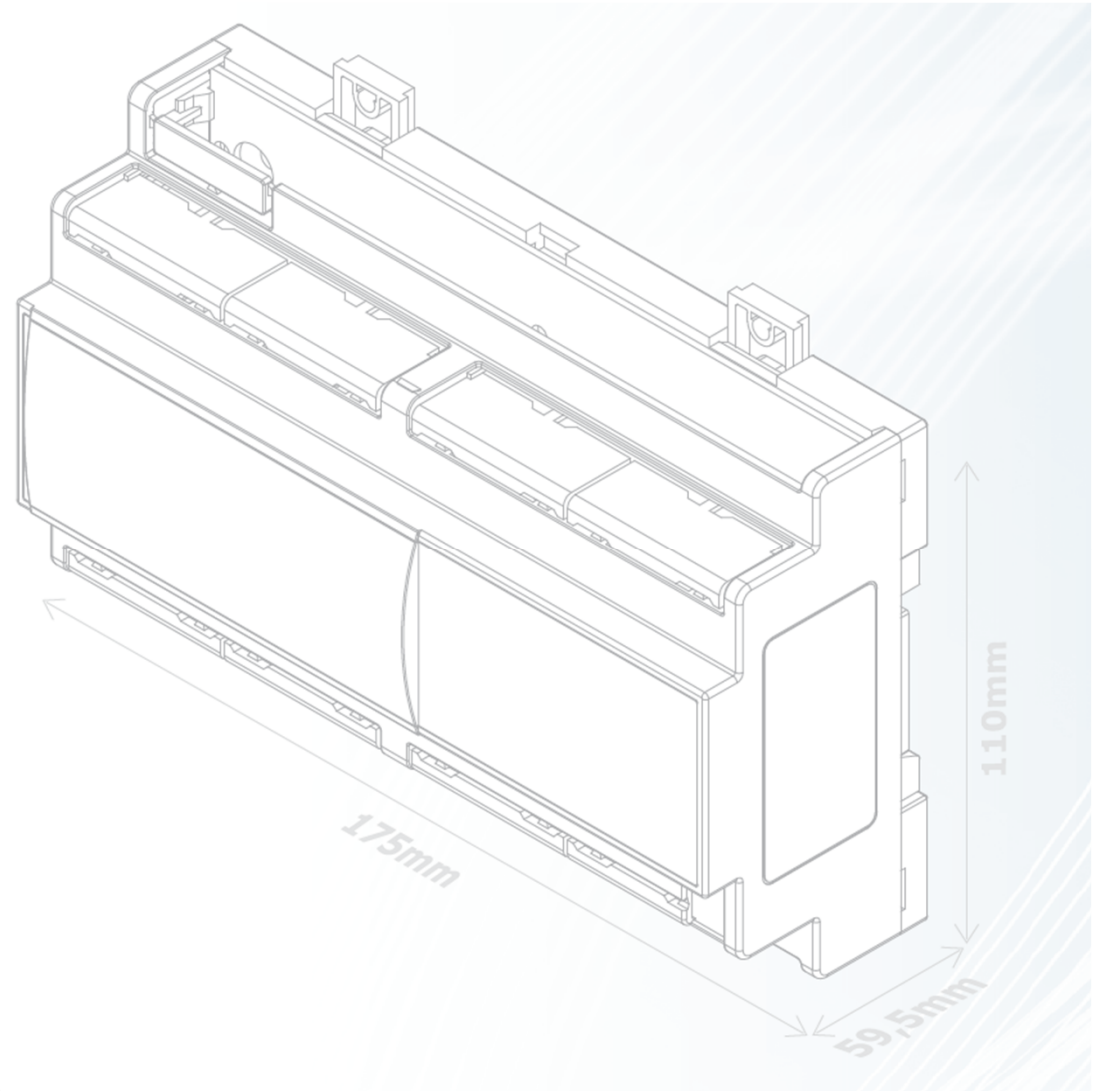
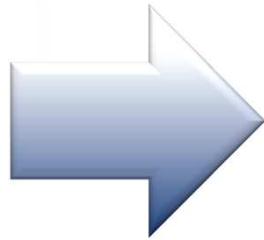


# ***Family Overview***

## ***DIMENSIONS***

**10 DIN RAIL Format**

**Wall or DIN Rail mounting**



# Family Overview

## ACCESSORIES

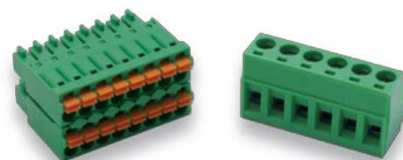


### TF20D

The TF20D (DIN Rail mounting) 20VA model is available in the following versions: 230/24Vac and 110/24Vac. 3 DIN Rail format

### IP-FC215CP

6 screw female connectors, 2-3(x2)-6-7-8 pins and 3 bayonet female connectors 10-16-22 pins



### XJ485USB-KIT

The USB to RS485 serial converter (2 wires) is the perfect choice to interface any computer, equipped with WIZMATE software and a USB port, to a network of instruments. XJ485USB is only 78x40x22mm and supports different communication speeds in the range from 300 to 19200bps. The kit includes the USB cable type A-B, 1,5m and a USB with the drivers for the main operative systems (Microsoft Windows, Linux, MAC OS) and a WIZMATE software version