Supervisor and Monitoring Solutions

Systems for the management of Retail environments
and HVAC/R applications

DIXELL™

EMERSON™

XWEB PRO supervisor and monitoring solution

The **XWEB PRO** is the innovative system family for the optimal management of the Retail environments and HVAC/R applications. The powerful hardware enables best performances due to high elaboration speed and great visualization experience through the Web user interface that has been developed to allow easy and fast access to the most important information whether local, remote, or mobile. Thanks to the Wi-Fi interface the system enables fast, easy and secure accessibility from your mobile device without cabled network infrastructures.

In addition to the monitoring functions, this family allows precise control on devices and dedicated algorithms to optimize site performances and reduce energy consumption. It is designed to obtain energy savings thereby reducing running costs helping to preserve the environment. Our solutions are synonymous with quality, user-friendliness, and effi ciency because they are focused on end user needs.

The scalable solutions

The Series offers maximum adaptability suitable for every kind of application, from petrol station, to hypermarket, convenience stores and restaurant chains.

Petrol stations   **Shops**   **Restaurants**   **Supermarkets**   **Hypermarkets**

XWEB300D	XWEB500D	XWEB1000D	XWEB5000
Alarm management and controlling	Monitoring, controlling and energy optimization	Monitoring, controlling also in CO_2 applications	Monitoring, controlling, energy optimization and supervision also in CO_2 applications

Wi-Fi connection and responsive web pages

XWEB PRO allows Wi-Fi connectivity through NANO-Wi-Fi dongle (optional CAB/USB15: 1,5m USB extension); it is now possible to connect XWEB PRO to an existing Wi-Fi network or to create your own Access Point to permit access through common mobile devices (Smartphone, Tablet, or PC) without the need of cabled network infrastructures. Built with maintenance technicians and system managers in mind this feature allows quick and safe connection avoiding the intrusive approach to the shop/warehouse network.

The web user interface (including graphics, HACCP report, ...) is available on devices of any screen size like smartphones, tablets and PC; thanks to the responsiveness of the pages, they automatically adapt to the device on which they are displayed. The user then always enjoys the best possible view without any need to adjust the screen size.

Simplified and empowered fieldbus

An element of characterization of the XWEB PRO family is the availability of multiple serial lines, variable according to the model (up to 4 for XWEB1000D) allowing to manage distinct instrument networks with tangible advantages for installers, maintenance technicians and plant managers.

- Speed up data communication of controllers and XWEB system
- Different configuration settings; example one network at 9200 and the other at 19200
- Reduce interferences due to possible malfunctions of one section, while guaranteeing the right operation of the remaining sections preventing a total blackout
- Simplification in the drafting and configuration of the network in the shop; example: one network for refrigeration, one HVAC and one for lighting management
- BMS communication for both parameter reading and modifications
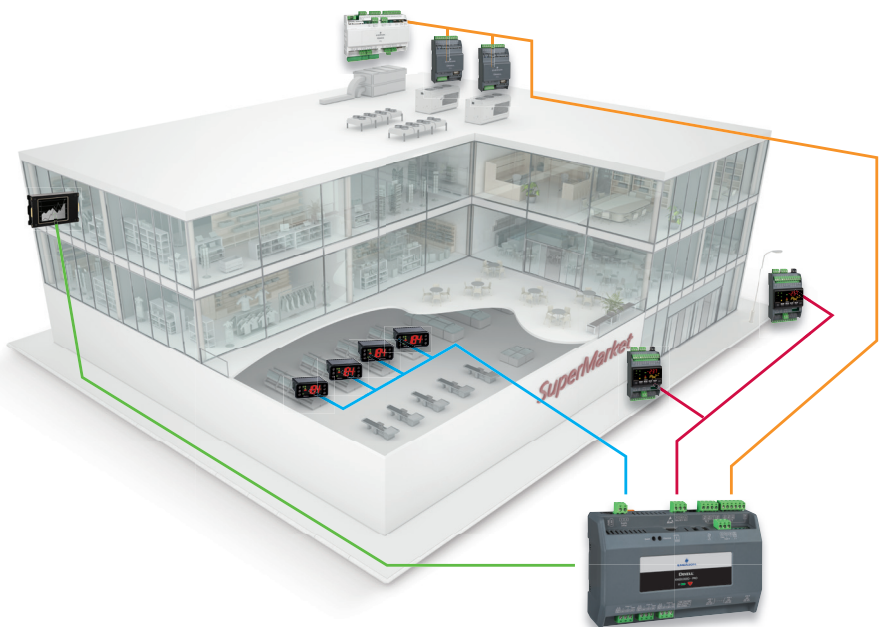
Energy saving

The XWEB PRO systems are equipped with advanced algorithms optimizing the application efficiency by increasing energy savings. The most relevant solutions are:

XeCO$_2$

$XeCO_2$ is the complete and innovative system that allows working safely with overfeed evaporators optimizing the CO_2 plant management. Thanks to the integration among the XWEB PRO and XM600 (refrigerated cabinets) and iProRACK (compressor racks), their optimized coordination is ideal to obtain both efficiency and safety improvements. It enables users to:

- obtain good results in every season also in warm climates;
- exploit the complete evaporator surface to increase the cooling capacity of the cabinet;
- increase evaporation pressure to reduce the compression ratio and the compressor energy consumption.
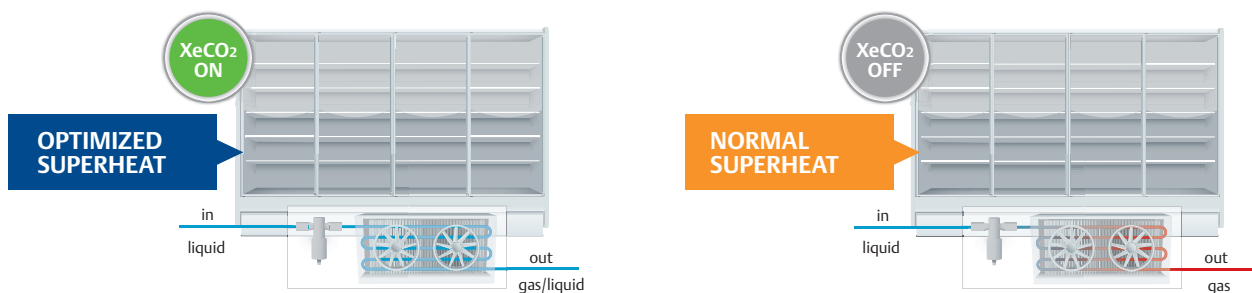
$XeCO_2$ can decrease the cabinet superheat set of medium temperature line, overfeeding evaporators, and increasing the cooling capacity of the system obtaining the maximum system security.

CRO function

The CRO algorithm (Compressor Rack Optimization), combines the complexity of cooling system with the simplicity of parameters that the user must set. It works on two basic parameters to guarantee the best possible adjustment of the refrigerator. XWEB PRO provides up to 5 CRO motors enabling a significant flexibility of the system.

Dew point for anti-sweat heater control

XWEB PRO manages smart activation of the anti-sweat heaters of the refrigeration units to reduce their electricity consumption. This algorithm calculates and distributes Dew-point temperature set-point; around which moisture on showcases counters occur due to air condensation.

Compressor safety

In centralized systems and in standard condensing units as well, the liquid formation in suction line can cause the compressor to break. Thanks to the integration among the XWEB PRO and XM600 (refrigerated cabinets) and iProRACK (compressor racks), the "Compressors Guard" function provides compressor protection against risk of liquid infiltration. The system synchronizes cabinet operations with compressors availability.
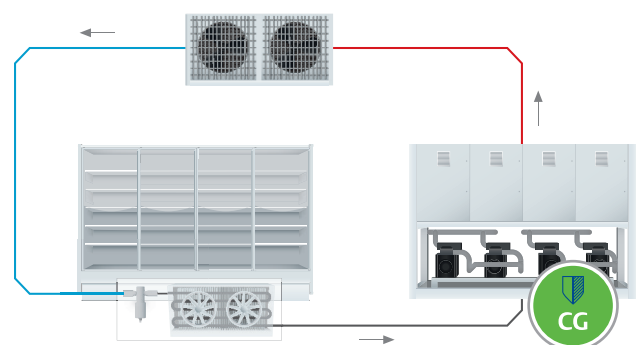
Enhanced remote analysis

Suited for the analysis of fast floating variables such as superheat or pressures, the new polling management allows recording improved sampling time (down to 1 second) for preset variables.

Enhanced data analysis is useful for the start-up of a new plant or to analyze possible critical situations. It is particularly appreciated by installers and maintenance technicians.


The advanced alarm management system is one of the XWEB PRO family strengths: it is possible to get alarm notification emails embedding the enhanced data analysis mentioned before, making it easier for the technical support staff to identify reasons of malfunction remotely once they occur.
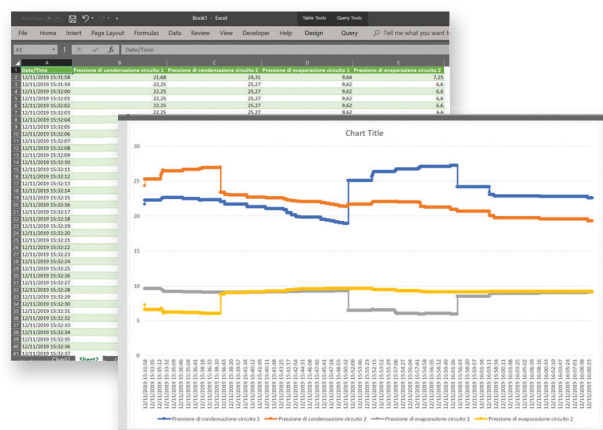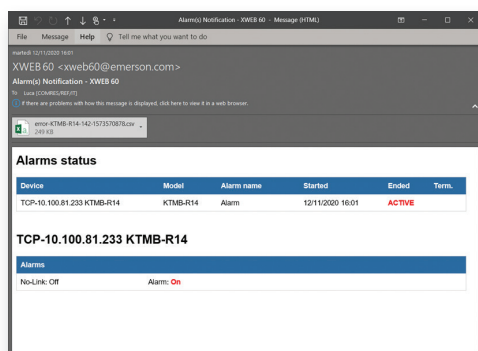
Centralized user management
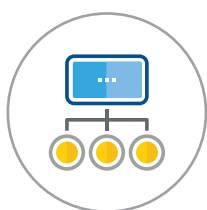
Designed for the end users who want easy and secure to all sites: this function allows management on the central server of the credentials that automatically propagate through all remote sites through the industry standard in user management service.
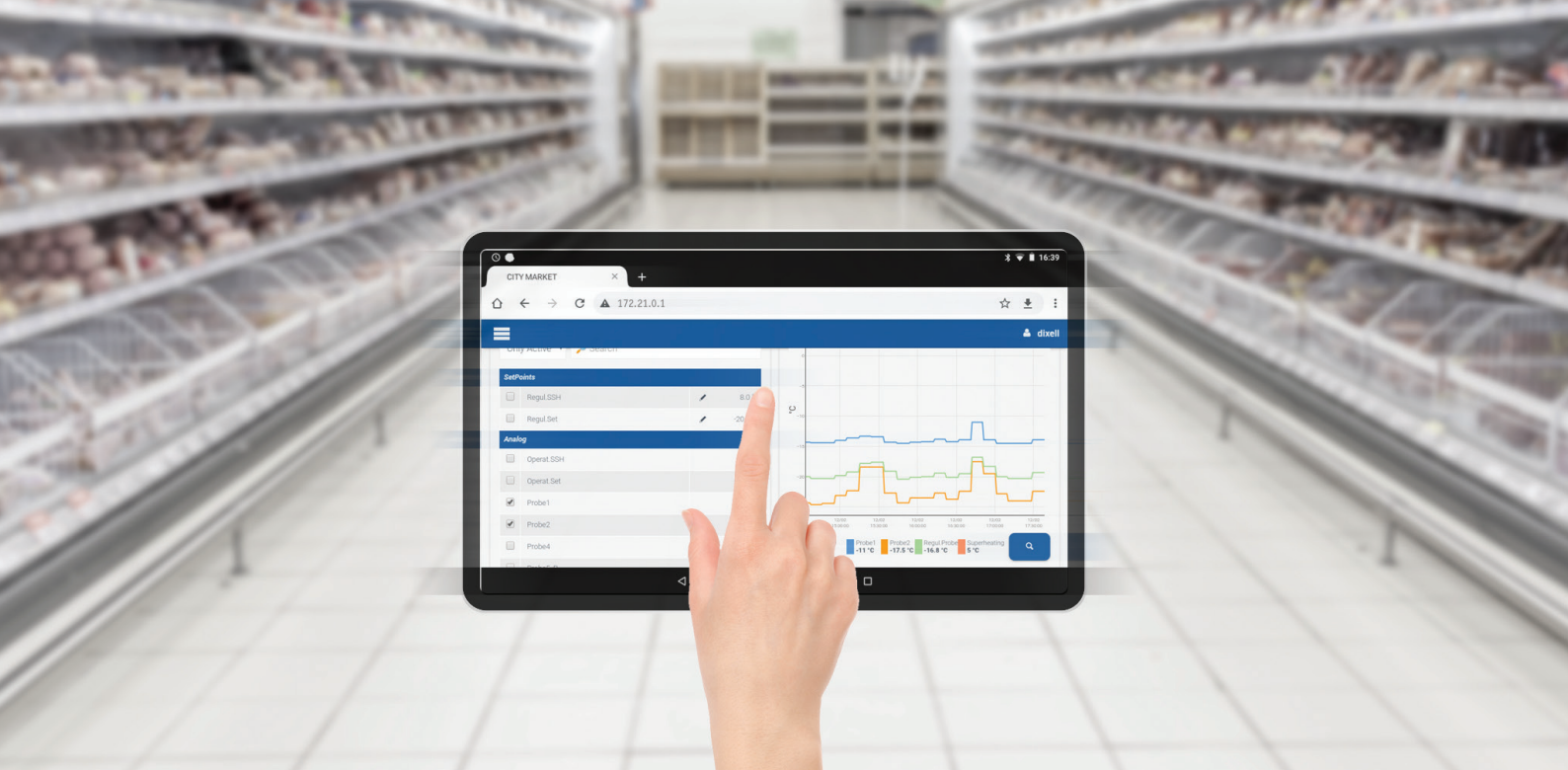
General functions

Alarm management

An effective alarm management system easily detects and signals alarm status so prompt intervention can restore optimum functioning of the application.

Commissioning

Possibility to create XWEB pre-configuration archives for even faster commissioning: devices, network, system, users, and more.

Supervision

It is possible to intervene sending commands to monitored units with algorithm made by the installer to manage, for example: the use of plant lights, internal or external signs and the battery charge/discharge.

Faster and reactive user experience

The powerful CPU and RAM provide optimal processing speed and quick access to data through report and web pages using a standard web browser. Operations such as download and parameter changes are performed quickly, making service operations easier and more efficient.

Food safety

Constant data recording, HACCP reports and timely alarm notification guarantee high quality of fresh and frozen food with consequent reduction of waste and is in compliance with the UNI EN 12830 rule.

Parameter management

It allows continuous control and quick modification of the parameters of the controllers connected to XWEB PRO for optimal and flexible management of the system.

Safety

The software is compliant with advanced safety systems and avoid unauthorized accesses, attacks or other threats thanks to dedicated algorithms for protection and control.
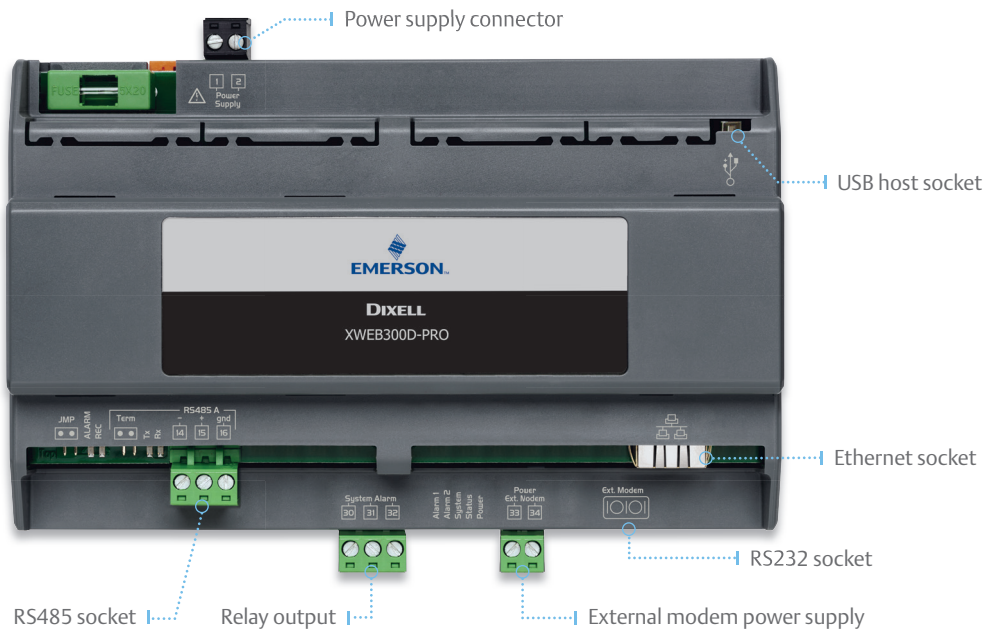
Environmentally friendly

With our eco-friendly solutions, innovation and efficiency means respecting the environment by optimizing consumption and reducing pollution, gas emissions.

XWEB300D PRO

Alarm management and controlling web server

It is extremely well suited for 6 or 18 device installations such as petrol stations, mini-market, small storage centers. It is the ideal solution for the remote assistance to the plant. XWEB300D is a 10DIN Rail module that can be mounted directly inside the control panel by brackets.
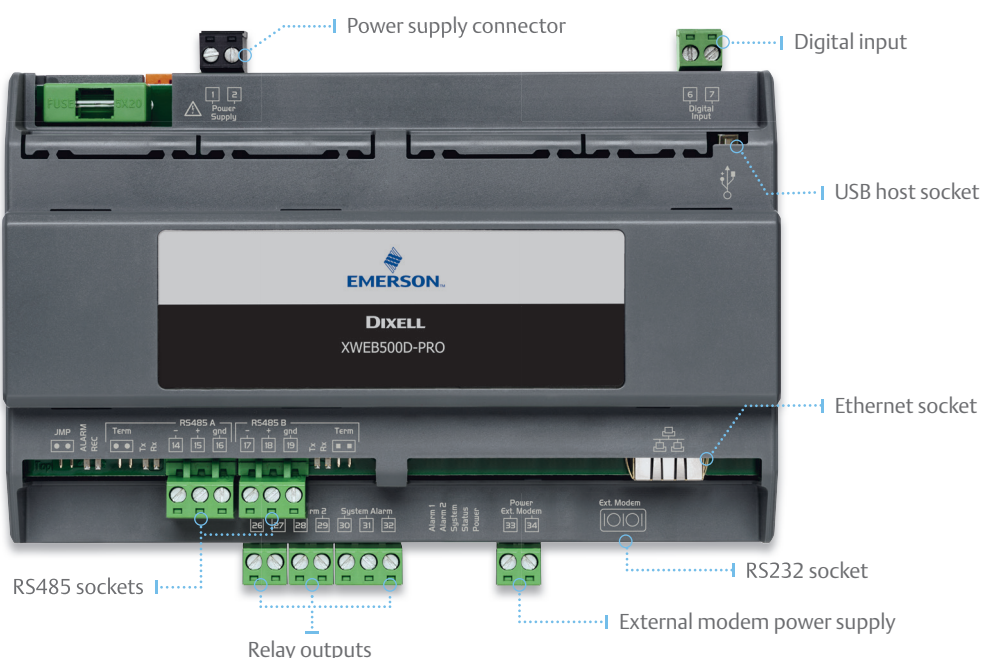
Power supply connector

USB host socket

Ethernet socket

RS232 socket

RS485 socket — Relay output — External modem power supply

CG

up to 4 engines

XWEB500D PRO

Monitoring and controlling web server

It is the ideal solution for medium installations up to 36, 50 or 75 devices, such as petrol stations, supermarkets and storage centers. Innovative and useful features make the instrument suitable for applications such as production and storage goods centers. XWEB500D is a 10DIN Rail module that can be mounted directly inside the control panel by brackets.

Power supply connector

Digital input

USB host socket

Ethernet socket

RS232 socket

RS485 sockets

Relay outputs

External modem power supply

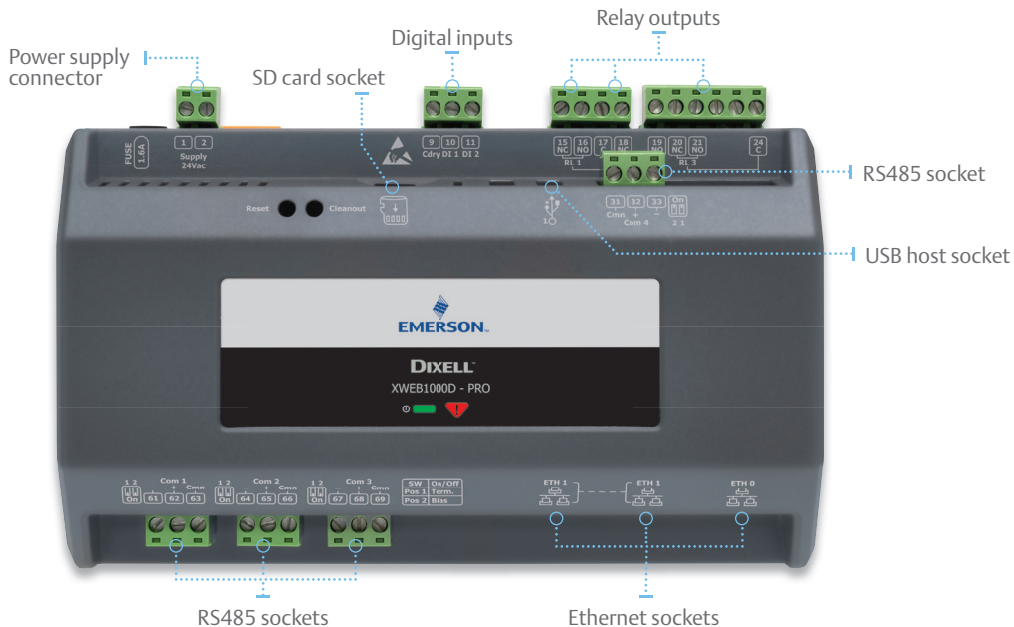**CR€**

up to 3 engines

CG

up to 4 engines

XWEB1000D PRO

Monitoring and controlling web server also suitable for CO_2 applications

It is designed for medium-large installations with up to 100 or 150 devices such as supermarkets, hypermarkets or large storage and distribution centers as well as production and storage goods processing such as fast-food, restaurants and catering applications. Optimized coordination between compressor rack and cabinets makes it an ideal solution for retail environments with CO_2 applications, obtaining both efficiency and safety improvements. XWEB1000D is a 10DIN Rail module that can be mounted directly inside the machine board or on the control panel by brackets.

Power supply connector · SD card socket · Digital inputs · Relay outputs · RS485 socket · USB host socket · RS485 sockets · Ethernet sockets

XeCO2 up to 2 engines
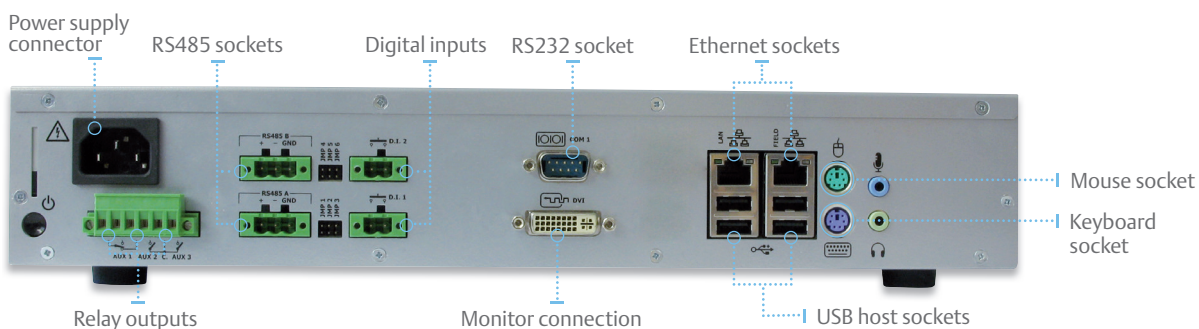
CRO up to 5 engines

CG up to 8 engines

XWEB5000 PRO

Supervisor, monitoring and controlling web server also suitable for CO_2 applications

Designed for large installations with up to 494 devices such as supermarkets, hypermarkets or large storage and distribution centers as well as production and storage goods processing such as fast-food, restaurants and catering applications. Optimized coordination between compressor rack and cabinets makes it an ideal solution for retail environments with CO_2 applications, obtaining both efficiency and safety improvements. It allows users to control the temperature, print-out reports and more, even without using a PC, but simply connecting it to a monitor, keyboard and mouse.

Power supply connector · RS485 sockets · Digital inputs · RS232 socket · Ethernet sockets · Mouse socket · Keyboard socket · Relay outputs · Monitor connection · USB host sockets

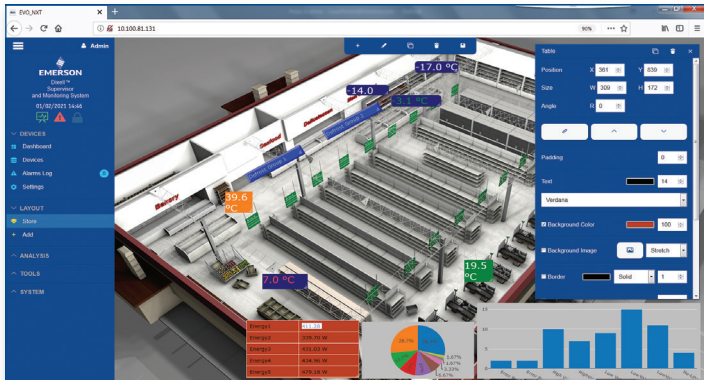**XeCO2** up to 2 engines

CRO up to 5 engines

CG up to 8 engines

Interfaces and functions

Straightforward user approach: all information is available through few intuitive clicks; plant management operations are clear and allow you to work quickly and safely.


The powerful graphic editor makes XWEB layout the ideal solution to create tailored floorplans according to customer needs. Using this function, the user can quickly access controller data and even send a command to a controller.

The device view tool allows the user to have access to the recent status of the single controller updated in real time, send commands to the controller, adjust the set point, or modify its parameters. The parameter map can be exported into various formats: CVS/XLS/WIZMATE and can be reused with other controllers within the same system or a different system.
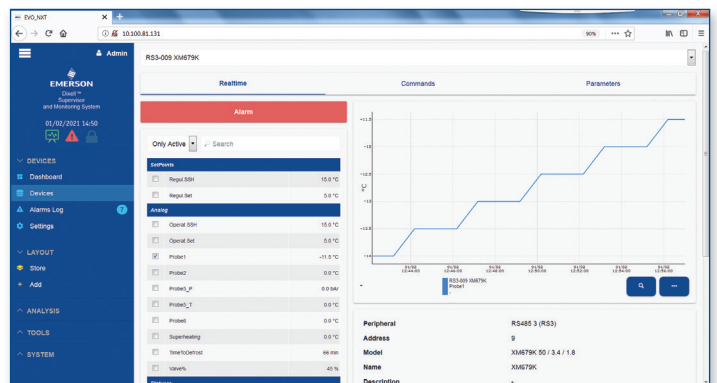
The user can easily retrieve the consumption data thanks to the bar charts and quickly analyze the plant energy efficiency.
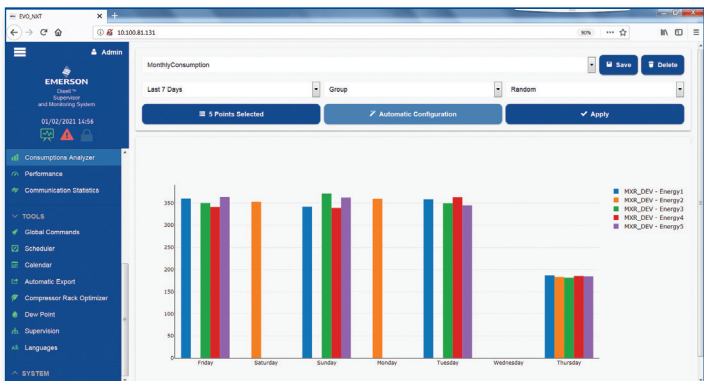
The dashboard allows the user to choose among different layout options that are available on XWEB for an easier and even more responsive navigation.
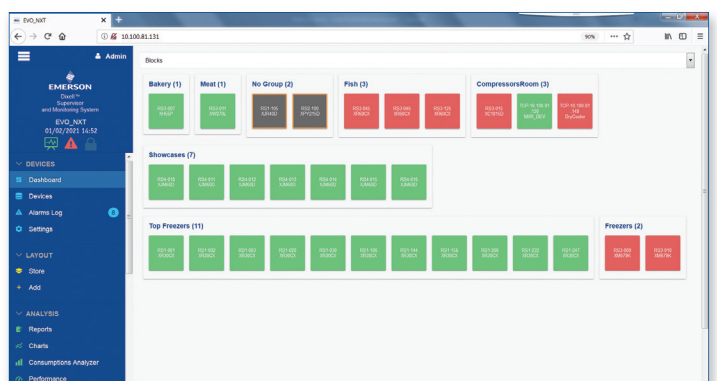
Connections

Local connections
XWEB PRO systems can be connected directly to a PC. Furthermore, XWEB5000 PRO can be used in stand-alone mode through a monitor, keyboard and mouse connection because of its complete and powerful hardware platform.

Remote connections
XWEB PRO can be remotely accessed using several methods:
- by Wi-Fi with mobile devices;
- by Ethernet network with standard net connector RJ45;
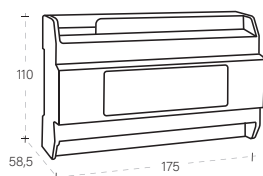- by Internet connection, once provided a public IP address.
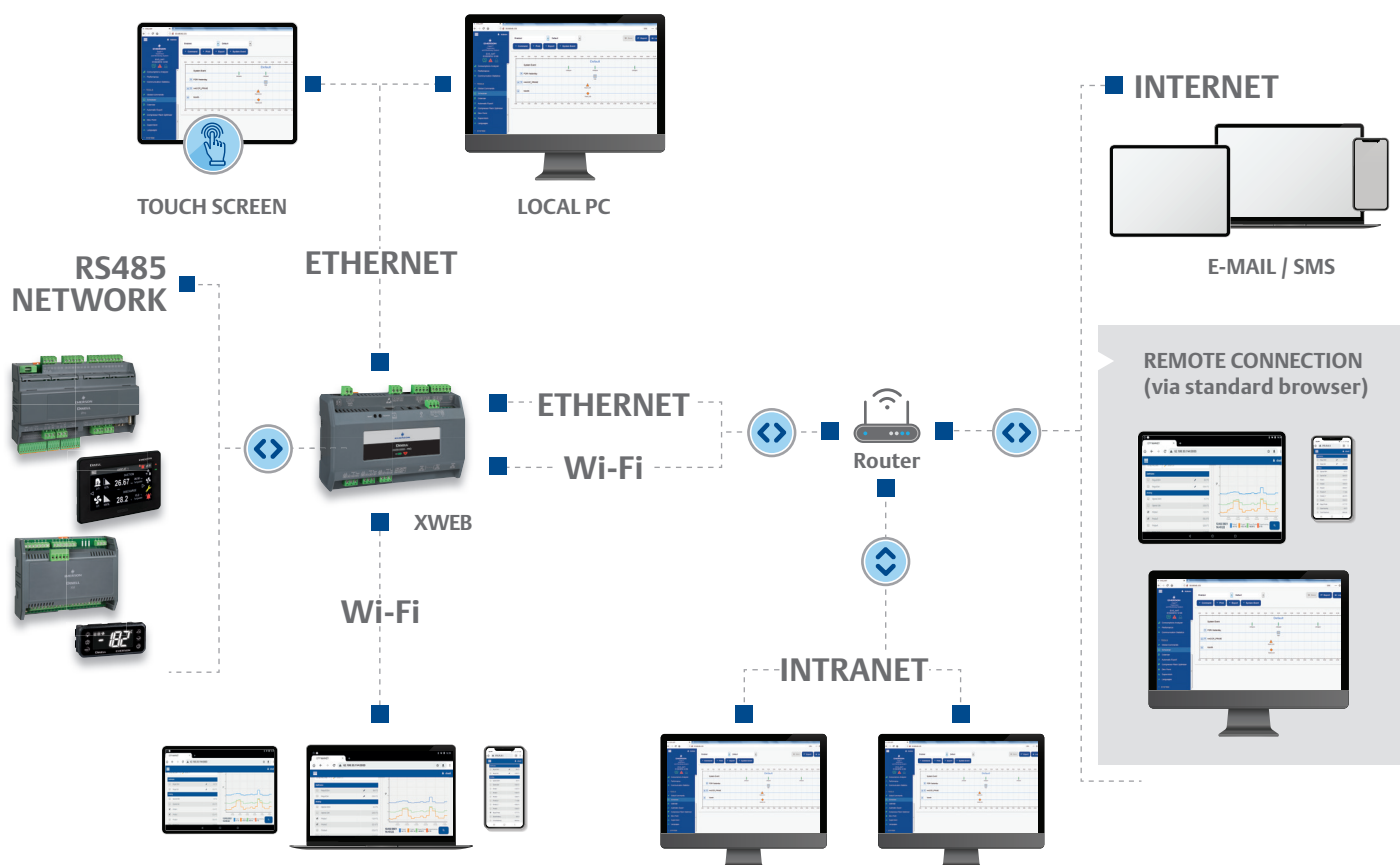
Technical features

	XWEB300D PRO	XWEB500D PRO	XWEB1000D PRO	XWEB5000 PRO
Applications	small	medium	large	large with supervision
Format	10 DIN Rail	10 DIN Rail	10 DIN Rail	370x238,5x66h
Power supply	110÷230Vac	110÷230Vac	24Vac/dc from TF20D	110÷230Vac
N° of instruments	6 - 18	36 - 50 - 75	100 - 150	494
USB host sockets	1	1	1	6
Relay outputs	1	3	3	3
Digital inputs		1	2	2
Ethernet sockets	1	1	2	2
RS485 sockets	1	2	4	2
RS232 socket	1	1		1
SD card socket			1	

Functions

Functions	XWEB300D PRO	XWEB500D PRO	XWEB1000D PRO	XWEB5000 PRO
Navigation and data secured network communication	•	•	•	•
Multi-serial port management		•	•	•
Centralized user management	•	•	•	•
Language management	•	•	•	•
Alarms on XJR40D module		•	•	•
High frequency data management	•	•	•	•
Circular graphics	6 h	6 h	6 h	48 h
Minimum interval of temperature log	1 min	1 min	1 min	30 sec
Realtime device visualization	•	•	•	•
Parameters programming, commands and setpoint modification	•	•	•	•
Alarm setup	•	•	•	•
System logs	•	•	•	•
Charts	•	•	•	•
Data Report	•	•	•	•
HACCP Report	•	•	•	•
Food quality report	•	•	•	•
Global commands		•	•	•
Consumption analysis	•	•	•	•
Performance meter		•	•	•
Diagnostic for communication quality	•	•	•	•
Management of scheduled events		•	•	•
Calendar	•	•	•	•
Automatic export module	•	•	•	•
Backup/Restore	•	•	•	•
Layout		•	•	•
Connect + compatible	•	•	•	•
ModBUS TCP/IP gateway	•	•	•	•
TCP/IP API protocol	•	•	•	•
Wireless connection with Wi-Fi dongle	•	•	•	•
Compressor Guard system	•	•	•	•
CRO system		•	•	•
XeCO2 system			•	•
Dew Point module				•
Supervision module				•

Dimensions

XWEB300D
XWEB500D

110
58,5
175

XWEB1000D

110
58,5
175

XWEB5000

66
238,5
370

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