

## Energy saving for multiplexed cabinets

From the largest supermarket to the smallest shop, research into ENERGY SAVING has already become a primary requirement in the world of refrigeration. To meet this requirement, Dixell has introduced the new **XM600 Series** to control multiplexed cabinets as well as controlling electronic expansion valves.

These controllers are designed to synchronise cooling and defrost functions correctly for this kind of application, to enable the user to increase the efficiency of their plant by means of correct superheat regulation irrespective of ambient and load conditions.

The drive valve output can supply up to 30W, so it is possible to manage ON/OFF valves of any refrigeration power and from any valve manufacturer.

Thanks to the **MULTIMASTER** concept, the XM600 Series can operate independently, indeed all the modules present on the network can and are able to control all the functions of the others in order to obtain optimal operation management and defrost synchronisation.

This feature provides the controllers with a high level of flexibility of the whole network and permits the end user to decide which instrument manages a specific function and to set-up the network to meet his precise needs. This special LAN can support up to 5 modules using a simple two-wire cable.

The XM600 series is equipped with a special regulation algorithm, for example: " **Cool Defrost** (to reduce the frost formation on the evaporator), **Fast Recovery** (to recover normal functioning after superheat alarm situations) and **Start Function** (to avoid critical start conditions)". These algorithms increase the performance of these modules, making them unique in the market place.

Thanks to RS485 connection and ModBUS-RTU protocol, the XM600 series can be connected to Dixell's own controlling and supervising systems, or any other manufacturer's ModBUS compatible 3<sup>rd</sup> Party system.

Using Dixell's XWEB5000 supervisory system in conjunction with the XM600 series controllers can improve energy saving still further by adding **Anti-sweat heaters control** to the standard cabinet regulation. The controller uses a special algorithm to modulate the anti-sweat heaters according to the prevailing dew-point.

The controllers are available in 8 DIN format and they can be connected to the new CX style keyboards (32x74mm format), which with their 6 keys and clear displays with icons provide the ideal solution for any kind of application.

The programming procedure is quick easy due to the HOT-KEY programming feature. Besides temperature probes Pt1000 or NTC, all the models can be used with 4÷20mA pressure or ratio-metric (0÷5V) transducers. The devices are configurable and further cost savings are possible because only one pressure transducer is required for a given group of controllers, it's pressure signal being repeated via the LAN to all controllers in the group.