

Danfoss Electronics spa



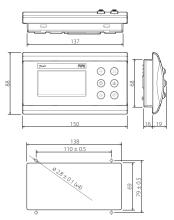
# **MMIGRS** electronic controller

MMIGRS is MCX's family remote interface. It's fitted with a graphic display that allows a complete customization of the user interface

#### **REFRIGERATION &** AIR CONDITIONING DIVISION

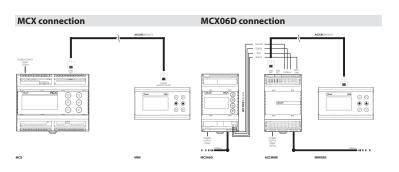


## DIMENSIONS



Drilling template

# **CONNECTION DIAGRAM**



# **GENERAL FEATURES**

The connection with every unit of the MCX range is made through the CANbus network. All the information about the user interface is loaded inside the MCX controller; that's why there is no need of programming the MMIGRS interface.

MMIGRS is powered from the controller which it is connected to and automatically shows its user interface; but it can also show the interface of any other device connect to the same network

	MMIGRS
TECHNICAL SPECIFICATIONS	
Power supply	<ul> <li>from the MCX through the RJ11 telephone connector</li> <li>12Vdc ± 20% external power supply</li> <li>12Vac ± 15% external transformers</li> <li>maximum power consumption: 1.5W</li> </ul>
USER INTERFACE	
Display	<ul> <li>graphical LCD blue transmissive</li> <li>white LED backlight with adjustable brightness via software</li> <li>display format 128x64dots</li> <li>active visible area 66.5x33.2mm</li> <li>contrast adjustable via software</li> </ul>
Keyboard	<ul> <li>- 6 keys, 3 of them with respectively green, red, orange LEDs that can be individually managed via software</li> <li>- function key configurable by means the application software</li> </ul>
Mounting	<ul> <li>panel (see the drilling template in figure), using the screws supplied in the packaging</li> <li>index of protection: IP64 ~ NEMA3R</li> </ul>
OTHERS	
CANbus	•
Modbus RS485 serial interface	
Buzzer	•
RTC clock	
Degree of protection	- IP64 ~ NEMA3R

# CONNECTIONS

CAN connector 6/6 way telephone RJ11 plug type

## **PRODUCT PART NUMBER**

CODE	DESCRIPTION
080G0174	MMIGRS, REMOTE DISPLAY, PANEL, CLOSE CONTROL

### **GENERAL FEATURES AND WARNINGS**

### PLASTIC HOUSING FEATURES

Self extinguishing V0 according to IEC 60695-11-10 and glowing/hot wire test at 960°C according to IEC 60695-2-12 Ball test: 125°C according to IEC 60730-1. Leakage current:  $\ge$  250V according to IEC 60112

#### **OTHER FEATURES**

- Operating conditions CE: -20160 / UL: 0755, 90% RH non-condensing Storage conditions: -30180, 90% RH non-condensing

- To be integrated in Class I and/or II appliances Index of protection: IP64 ~ NEMA3R only on the front cover
- Period of electric stress across insulating parts: long Suitable for using in a normal pollution environment
- Category of resistance to heat and fire: D Immunity against voltage surges: category I
- Software class and structure: class A

# CE COMPLIANCE

- This product is designed to comply with the following EU standards: Low voltage guideline: 73/23/EEC
- Electromagnetic compatibility EMC: 89/336/EEC and with the follwing norms: EN61000-6-1, EN61000-6-3 (immunity for residential, commercial and ligth-industrial environments)
- EN61000-6-2, EN61000-6-4 (immunity and emission standard for industrial environments) EN60730 (Automatic electrical controls for household and similar use)
- **UL APPROVAL**

#### UL file: E31024

### GENERAL WARNINGS

- Every use that is not described in this manual is considered incorrect and is not authorised by the
- manufacturer Verify that the installation and operating conditions of the device respect the ones specified in the manual,
- specially concerning the supply voltage and environmental conditions This device contains live electrical components therefore all the service and maintenance operations must b
- performed by qualified personnel
- The device can't be used as a safety device
- Liability for injury or damage caused by the incorrect use of the device lies solely with the user

## INSTALLATION WARNINGS

- The installation must be executed according the local standards and legislations of the country
- Always operate on the electrical connections with the device disconnected from the main power supply
- Before carrying out any maintenance operations on the device, disconnect all the electrical connections Don't expose the device to continuous water sprays or to relative humidity greater than 90%. Avoid exposure to corrosive or pollutant gases, natural elements, environments where explosives or mixes of flammable gases are present, dust, strong vibrations or chock, large and rapid fluctuations in ambient temperature that in combination with high humidity can condensate, strong magnetic and/or radio interference (e.g. transmitting antennae)
- Use appropriate data communication cables. Refer to the Fieldbus Installation Guide for the kind of cable to be used and setup recommendations Reduce the path of the probe and digital inputs cables as much as possible, and avoid spiral paths enclosing
- power devices. Separate from inductive loads and power cables to avoid possible electromagnetic noises Avoid touching or nearly touching the electronic components fitted on the board to avoid electrostatic discharges